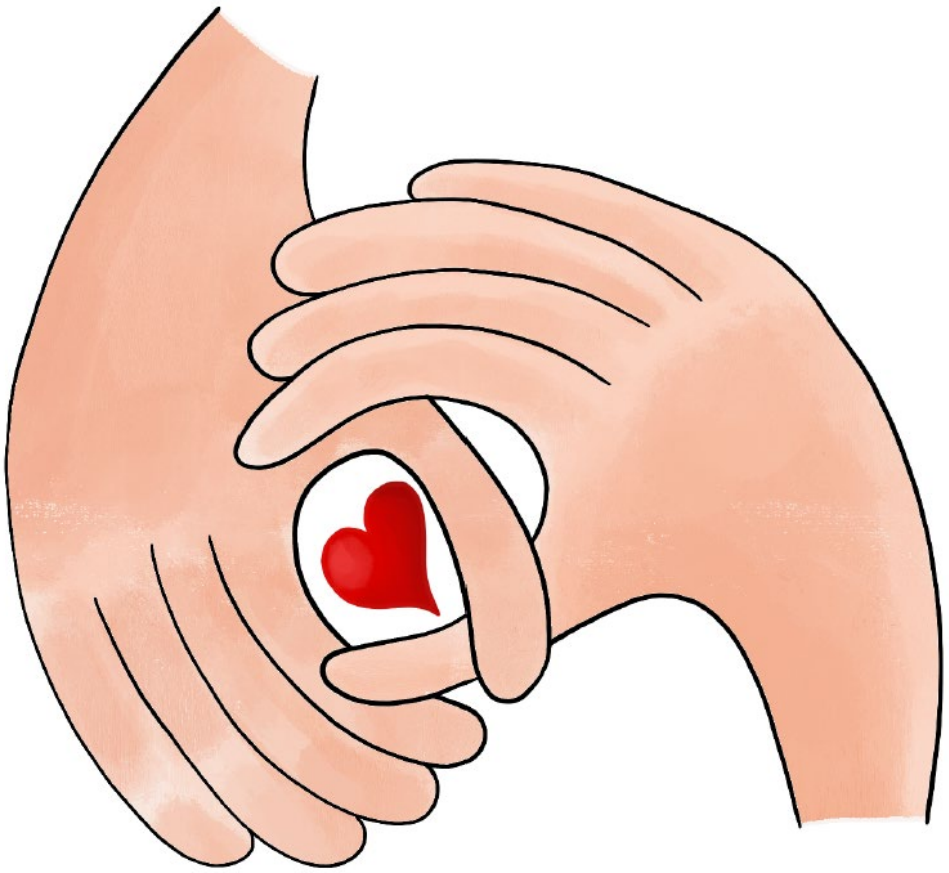
lifeforce

Teacher's Handbook



Co-funded by the
Erasmus+ Programme
of the European Union

This publication is prepared within the scope of the project

“Learning Initiative For Elementary school Fun Oriented Resuscitation Coaching Europewide” (2020-1-EL01-KA201-079184), which has been co-financed by the Erasmus+ Programme of the European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

The publication is a collaborative work of the six partner organizations to the project. The names of the organizations partnering in the project, in alphabetical order, are as follows:

European University Cyprus, Cyprus

Hellenic Society of Emergency Prehospital Care, Greece

Italian Resuscitation Council, Italy

KIDS SAVE LIVES – Τα Παιδιά Σώζουν Ζωές, Greece

Uniklinik Köln, Germany

University of Thessaly, Greece

AUGUST 2021

Teacher's Handbook

A short information guide for teachers

AUTHORS

Hellenic Society of Emergency Pre Hospital Care
Sevasti Etmektsoglou
Theodoros Kalyvas
Dr. Konstantinos Fortounis
Dr. Varbara Fyntanidou
Sophia-Chrysovalantou Zagalioti

University Clinic Cologne
Professor Bernd W. Böttiger
Nadine Rott
Simon R. Finke
Katharina Zajackowski
Dr. Hannes Ecker

Italian Resuscitation Council
Dr. Federico Semeraro
Dr. Andrea Scapigliati
Alessandra Carenzio
Sara Lo Jacono

University of Thessaly
Dr. Ioannis Kozaris
Dr. Ioannis Pechtelidis
Aggeliki Botonaki

Kids Save Lives – Τα Παιδιά Σώζουν Ζωές
Anastasios Stefanakis
Professor Ioanna Etmektsoglou
Dr. Christiana Adamopoulou
Evgenia Douvara
Anastasia Claroumenou

European University Cyprus
Dr. Maria Prodromou
Dr. Marios Georgiou
Nikoletta Palli

Mascot design: Katerina Panagou
Cover, Layout: Thanos Palatos
Graphics: Thanos Palatos and Katerina Panagou
Layout: Nicoletta Palli, Sevasti Etmektsoglou and Theodoros Kalyvas
Edited by: Sevasti Etmektsoglou and Theodoros Kalyvas

Table of contents

1 Introduction

Development of the LIFEFORCE algorithm

Simon R. Finke, Katharina Zajackowski, Nadine Rott, Hannes Ecker, Bernd W. Böttiger

The following work contains recommendations for a Basic Life Support (BLS) – Training Algorithm for School children aged 6-10 years. The goal of this chapter was to break down the ERC algorithm for BLS into simple steps. The following BLS-items were evaluated by explaining the different steps, presenting the relevant literature and giving a recommendation for teaching:

1. Chain of Survival
2. Safety
3. Check for Response
4. Check for Breathing
5. Call for Help
6. CPR
7. Ventilation
8. AED-Deployment
9. Recovery Position
10. Other First Aid Topics

Criteria to evaluate the LIFEFORCE algorithm against ERC guidelines, by the Italian Resuscitation Council and the European University Cyprus.

An independent assessment of compliance of LIFEFORCE algorithm has been carried out by each of the aforementioned partners. Following is a list of criteria to evaluate the algorithm against ERC guidelines:

- General adequacy with respect to the target (age issues)
- Step definition (number of steps and internal organization)
- Difficulty and adaptation to age levels
- Adaptation to school environment and pupils with special needs
- Completeness
- Prerequisites
- Compliance with the ERC guidelines

Theoretical framework and educational methodology for pupil training

Angeliki Botonaki

Based on the transnational overview of nursery and primary school educational systems (IO1) in European countries, we develop the theoretical framework for the development of Educational Methodology to pre-train children in resuscitation and other aspects of first Aid, the expansion of methodology to cover special learning groups and the classification of selected skills into distinct difficulty levels specifically tailored to the development of children aged 6-10 years. Pedagogy, which lies at the heart of the LIFEFORCE program, aims to connect the BLS-Algorithm with the most avant-garde and effective ways of learning to ensure the operational qualification and the success of this project.

The use of music in LIFEFORCE

Christiana Adamopoulou & Ioanna Etmektsoglou

Music has always been a popular teaching tool for kindergarten and elementary school teachers. Songs, music mnemonics and activities involving music and movement are only a few examples of how music is used to help children learn in the classroom. There are many reasons for that: Music is fan activity, it is highly connected with movement -which is vital for learning

especially in younger ages- it helps students to focus, concentrate and stay motivated. It is also a group activity that promotes bonding and cooperation.

The use of music in L.I.F.E.F.O.R.C.E pre-training educational material aims in fostering a wide range of skills that elementary students need to develop as part of their preparation for future training in CPR. Abilities like critical thinking, creativity, collaboration, communication, flexibility, adaptability, and initiative need to be developed and acquired throughout the pre-training. Music is a stimulus that may influence factors related to learning (Ferreri & Verga, 2016), ranging from attracting students' interest to supporting the memorisation of BLS key concepts.

In addition to ensuring that the children will build an accurate and durable memory of the L.I.F.E.F.O.R.C.E materials and skills, the music embedded activities are intended to facilitate access to learning for all students; students experiencing a wide spectrum of differences and disabilities, making thus the L.I.F.E.F.O.R.C.E training a more inclusive educational paradigm.

The implementation of social-emotional skills on the LIFEFORCE BLS-algorithm

Evgenia Douvara

Social-emotional skills refer to the abilities that regulate one's thoughts, emotions and behavior and determine how well people adjust to their environment and how much they achieve in their lives (OECD, 2017). How children express and regulate their emotions often depends on their cultural background, the manifestation of a developmental delay/ disability or their experience of a stressful situation at home/ community. When dealing with stressful situations, like an emergency, several social-emotional skills are activated. After careful research and analysis of the steps of the LIFEFORCE BLS-algorithm, we came up with the most commonly activated skills. These are the following: Emotional Awareness, Empathy and Self-Regulation. All of them play a significant role in Daniel Goleman's theory of emotional intelligence (1999). Teaching social-emotional skills is crucial not only in cases of offering basic life support, but also when children struggle with adjusting to sensory input due to prenatal stress, early childhood trauma or sensory processing disorder. If a child struggles in managing their emotions, it's hard to open up their brain in order to be able to receive the content that they are trying to learn.

Taxonomy of the selected perceptual and cognitive skills

Evgenia Douvara, Sevasti Etmektsoglou, Konstantinos Fortounis, Barbara Fyntanidou, Anastasis Stefanakis

From a very young age, children are capable of performing the first step in the ‘‘chain of survival’’, namely, to recognize a cardiac arrest and call for help to activate the Emergency Medical Services (EMS). When training children we need to be aware of the perceptual and cognitive skills they must possess to implement the LIFEFORCE – B.L.S. algorithm steps. It is also important to take into consideration the characteristics of their physical and emotional developmental stage.

In this section are presented the perceptual and cognitive skills that are essential for implementation of the LIFEFORCE – B.L.S. algorithm steps. The skills that have been selected are analyzed into building blocks. Each building block is matched to the corresponding algorithm steps. As shown in the table, some of the skills are found in all steps, while other skills are found in some of the steps.

Classification of selected skills into distinct difficulty levels specifically tailored to the developmental level of children aged 6-10 year

Angeliki Botonaki, Anastasia Klaroumenou.

During this part of the report, attention will be drowned on the selected skills for the implementation of the LIFEFORCE BLS-Algorithm on children aged 6-10. At first we shall mention some of the goals and objectives of ISCED 0 and ISCED 1 as concluded from IO1, which concur with the classification of the selected skills. The skills will be classified according to the developmental level of the children (based on Developmental Psychology) and also the basic level of each skill that is required in order to fulfill the needs of the LIFEFORCE BLS-Algorithm. Some general developmental thesis which should be taken into consideration for this classification will be mentioned too. To facilitate the comprehension of the classification, a scheme will include all the above information.

Expansion of methodology for other taught subjects and special learning groups

Angeliki Botonaki, Sevasti Etmektsoglou

In this section, we will present a variety of ways aiming to facilitate learning for all students and promote inclusiveness. In particular, firstly, we will refer to the appropriate adaptations, accommodations, and modifications for special learning groups. Then, we will focus on ways leading to effective teamwork with these groups. Next, we continue with grading and evaluation of students in special education, and finally we give the reasons why children might refuse to use accommodations. Last but not least, we explain how this methodology is used in the activities, in order to cover other taught subjects using helpful examples.

Pupils' assessment

Alessandra Carenzio, Sara Lo Jacono

An Observation checklist of the Algorithm for children (6-10 years old) was created for the evaluation of pupil knowledge before, during and after the pretraining. Among the tools that we used to evaluate pupil knowledge were Bloom's taxonomy - used to evaluate pupils' skills of understanding, remembering, analyzing, creating, and applying the knowledge.

The checklist format was based on the BLS assessment record by the European Resuscitation Council.

References

1. Ferreri L, Verga L. Benefits of Music on Verbal Learning and Memory. *Music Perception* 2016; 34: 167–82.
2. Goleman, D., 1999. Working with emotional intelligence. *Bloomsbury.*
3. OECD. Social and Emotional Skills: Well-being, Connectedness and Success. *OECD Skills Studies* 2017.

2 Development of the LIFEFORCE algorithm

Simon R. Finke, Katharina Zajackowski, Nadine Rott, Hannes Ecker, Bernd W. Böttiger

Basic Life Support – European Resuscitation Council (ERC)

Basic life support (BLS) and, when possible, use of an Automated External Defibrillator (AED) is the first level of care for a person in cardiac arrest. Learning to perform basic life support and to use an automated external defibrillator is an interactive process that requires both knowledge and skills. BLS is fundamental to all cardiopulmonary resuscitation.

Based on current scientific evidence, published by the International Liaison Committee on Resuscitation (ILCOR), the guidelines of the European Resuscitation Council (ERC) have been updated in 2021. Among other things, the guidelines contain important information on Basic Life Support.[1]

The ERC BLS algorithm for Basic Life Support consists of aspects such as cardiac arrest recognition, alerting emergency services, chest compressions, rescue breaths, automated external defibrillation (AED) and cardiopulmonary resuscitation (CPR) quality measurement etc.[1]

The short version of the ERC BLS algorithm consists of[1]:

- Unresponsive with absent or abnormal breathing
- Call emergency services
- Give 30 chest compressions
- Give 2 rescue breaths
- Continue CPR 30:2
- As soon as AED arrives – switch it on and follow instructions

For the more detailed step-by-step algorithm, evidence and guidelines please visit the following homepage: https://www.cprguidelines.eu/

Foreign body airway obstruction is also mentioned, meaning someone who is suddenly unable to speak or talk, particularly while eating. The algorithm consists of[1]:

- Encourage the victim to cough

- If the cough becomes ineffective, give up to 5 back blows
- If back blows are ineffective, give up to 5 abdominal thrusts
- If choking has not been relieved after 5 abdominal thrusts, continue alternating 5 back blows with 5 abdominal thrusts until it is relieved, or the victim becomes unconscious
- If the victim becomes unconscious, start CPR

LIFEFORCE BLS algorithm

The LIFEFORCE BLS algorithm was created, based on the ERC BLS algorithm. The intent here was to adapt the ERC algorithm specifically for children, so that even the young members of our society from age six to ten could learn the important skills of Basic Life Support.

The LIFEFORCE BLS algorithm, which is thus the result, consists of seven stages each with two to eight steps. The stages that are included in the algorithm are as follows: Safety, Check for Response, Check for Breathing, Call for Help, Chest Compressions, Ventilation, and AED Deployment. Chain of Survival and Foreign Body Airway Obstruction are herein not part of the algorithm for resuscitation. The former is an introduction to how to deal with a cardiac arrest, and the latter is an addendum, to demonstrate the efficiency of the LIFEFORCE methodology and tools to other first aid subjects, as an added value to the project.

In addition, recommendations are provided as to whether the teaching of the various categories should be more theoretical or practical. There are also suggestions as to whether the categories can be taught to children with learning disabilities.

Starting with the Chain of Survival, this is rather a separate step, which should give an introduction to the algorithm and should inform the children that they are able to save a life together with others, by recognising a cardiac arrest, by calling for help and by starting CPR. Next, the Safety stage is designed to ensure that children first protect themselves and other people present before approaching and checking the response of the victim in cardiac arrest. The Check for Breathing stage includes the important aspects of assessing breathing: look, listen, and feel. Furthermore, the Call for Help stage explain how to dial 112 and activate the speaker function of the phone, as well as an indication that someone can be dispatched to bring an AED. This is expanded on in the AED Deployment stage, as well. These stages are followed by a more detailed explanation of the stages about Chest Compressions and Ventilations. Finally, after the algorithm ends, the addendum Foreign Body Airway Obstruction is presented, which explains the action in another emergency than resuscitation and which focuses on encouraging the choking person to cough and applying blows on the back if really needed.

To get a detailed overview of the steps of the algorithm, it is visualized in the following table on the next page:

Suggestions for the L.I.F.E.F.O.R.C.E. BLS-Algorithm for school children (age 6-10 years)

	CHAIN OF SURVIVAL	SAFETY	CHECK FOR RESPONSE	CHECK FOR NORMAL BREATHING	CALL FOR HELP	CHEST COMPRESSIONS	VENTILATION	AED DEPLOYMENT	FOREIGN BODY AIRWAY OBSTRUCTION
Visual abstract									
	This is not a separate Step in the BLS-Algorithm but more an introduction to the children, that they, by recognising a cardiac arrest, by calling for help and starting CPR are able to save a life together with others (EMS, doctors etc.)!								
STEP 1	Early recognition and call for help to prevent cardiac arrest and to activate the EMS.	Ask yourself: "Is the situation safe for me?" (e.g. traffic, electricity, fire, a hards)	Kneel by the side of the victim.	If the victim is not reacting (for example speaking or reacting to you), check for normal breathing.	If the victim is unresponsive and/or not breathing, or is breathing abnormally, ask a helper to call the emergency services or call them yourself.	Place the heel of your hand on the center of the victim's chest.	After 30 compressions, open the airway again, pinch the soft part of the nose closed, using the index finger and thumb of your hand on the victim's forehead. Allow the victim's mouth to open.	Look around you for the AED sign.	If you see a person holding their hand around their throat and coughing,
STEP 2	Early bystander CPR - to slow down the damage of the brain and heart, and to buy time to enable AED and EMS arrival.	Ask yourself: "Is the situation safe for those around me?"	Gently shake/touch shoulders and ask "Are you alright?"	Place your hand on the forehead and the fingertips of your other hand under the point of the chin.	Stay with the victim while calling for help, if possible.	Place the heel of the other hand on top of the first hand and interlock your fingers.	Take a normal breath and place your lips around the victim's mouth, making sure that you have an airtight seal.	If there is a second helper, one of you should get an AED, the other should continue CPR on the victim.	then encourage that person to cough.
STEP 3	Early defibrillation - to restart a heart.	Ask yourself: "Is the person in need a help?"		Gently tilt the victim's head backwards, lifting the chin to open the airway.	Call 112.	Keep your arms straight.	Blow steadily into the mouth whilst watching for the chest to rise for about 1 second.	If no AED is available, continue CPR.	If the person is unable to speak and is struggling or unable to breathe,
STEP 4				Place your head over the victim's head.	Activate the speaker function of the phone, if possible.	Position yourself vertically above the victim's chest and press down on the sternum, 5cm-6cm.	Take another normal breath and repeat it once more (2 breaths in total)!		then support that person's chest with one hand, lean the person forward and apply 5 blows between their shoulder blades with the heel of your other hand.
STEP 5				LOOK if the chest is moving.	Say your name, your location and what happened, and answer the questions that are asked on the phone.	After each compression, release the pressure on the chest, without losing contact between your hands and the sternum.	Continue with chest compressions and rescue breaths at a ratio of 30:2 until help arrives!		
STEP 6				LISTEN with your ear for respiratory sounds.	Stay on the phone, don't hang up.	Repeat at a rate of 100-120 compressions per minute.			
STEP 7				FEEL the victim's breath on your cheek.	Send a helper to bring an AED, if applicable. If you are alone, do not leave the victim, but start CPR.				
STEP 8				Having looked, listened and felt, for up to 10 seconds, ask yourself "Is this normal breathing OR is it only coughing, moaning, snorting?" A victim who is barely breathing, or taking infrequent, slow, and noisy gasps, is not breathing normally.					
OUR RECOMMENDATION FOR TRAINING OF AGE 6-11 YEARS	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED ALTHOUGH WITH LESSER IMPORTANCE IN THE TRAINING OF CHILDREN	NOT RECOMMENDED	NOT RECOMMENDED	RECOMMENDED

References

1. Olasveengen TM, Semeraro F, Ristagno G et al. European Resuscitation Council Guidelines 2021: Basic Life Support. Resuscitation. 2021. 161:98-114. https://doi.org/10.1016/j.resuscitation.2021.02.009.

lifeforce

Basic Life Support algorithm

1 SAFETY

Ask yourself: "Is the situation safe for me, for those around me and for the victim?"

2 CHECK FOR RESPONSE

Shake the victim's shoulders gently and ask: "Are you all right?"

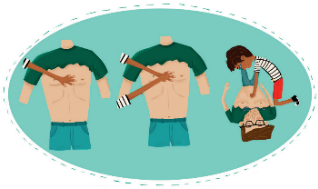
3 CHECK FOR NORMAL BREATHING

Look, listen and feel for normal breathing for no more than 10 seconds

4 CALL FOR HELP

Dial 112 to call the emergency services. Send a helper to bring an AED.

5 CHEST COMPRESSIONS



Place your hands on the center of the victim's chest. Perform 30 chest compressions at a depth of 5-6 cm. Maintain a rate of 100-120 compressions per minute.

6 VENTILATION

Open the victim's airway and deliver 2 normal breaths. Continue at a rate of 30 compressions and 2 breaths until help arrives.

7 AED DEPLOYMENT

If an AED arrives, switch it on and follow the spoken and visual directions.

3 Pedagogical Frame of LIFEFORCE

Angeliki Botonaki

Educational Methodology of Lifeforce

Creative Movement

Creative movement is a combination of kinetic and verbal activities and is considered to be part of holistic learning. Holistic learning is a method that uses both the body and mind as a way for understanding (Griss, 1998). Especially, in the Lifeforce BlS-Algorithm that training includes both theory and practice, children should involve both their mind and their body in order to understand or construct their knowledge and also get fully and evenly trained in every required level.

Every child should have access to multivariable approaches and the capacity to learn in many different ways. Bodily-kinesthetic intelligence is unfortunately one of the most undervalued in schools although it is recognized as one of our multiple intelligences (Gardner, 1983).

Drama games/ Drama-based Pedagogy

Dramatic play is familiar to children as one of the basic ways in which they learn even before attending school. Drama games use ingrained skills (such as imaginative thought, role-play, make-believe) to internalize children's comprehension of subjects and topics through active and fun engagement with their peers (Farmer, 2021). Hence, drama games, besides from being child-friendly, are also an effective way of learning as children express themselves without fear, something that accelerates learning (Caine & Caine, 1994).

Drama games include: creative speech (activating dialogue, role-play) movement, dance and imitation. All these teaching tools but especially *role-playing* and *real life BLS scenarios* will have a central part in Lifeforce program, thus the BLS-Algorithm training will be based on a great scale on these, as they make up of a great pathway to an automatized response for children to a crucial situation. Scenario simulation is also suggested by ERC as an educational way of learning skills to provide high-quality resuscitation (R. Greif, et al., 2021).

DBP appeals to a wide range of children and encourages them to take fully part in learning while using several of Gardner's multiple intelligences, meaning engaging their bodies/senses,

minds, and emotions (Farmer, 2021), which they do by demonstrating and observing in a non-threatening environment (Edmiston, 2013).

Kids Yoga & Mindfulness

Kids Yoga is a form of modern yoga designed for children. It is a holistic system of practices that includes exercises/poses, breaths, philosophy, team spirit and play. Kids yoga is intended to be fun and may include age-appropriate games, animal sounds and creative names for poses (Saraswati, 1999).

Mindfulness, is closely related to yoga and refers to the art of paying attention with intention. Kids mindfulness, includes age-appropriate fun games which connect children to either of their senses and therefore to the present moment, turning them into conscious and attentive (Greenberg & Harris, 2012).

Kids yoga is a fun way for children to cultivate important cognitive, social-emotional and physical/movement skills in a non-competitive environment. Recent researches have shown positive effects on several factors.

Through the philosophy of yoga, children will internalize useful values for the Lifeforce BLS-Algorithm such as the respect for the value of life of oneself and others and the acceptance of unfortunate situations that may occur to them, which in sequence leads to enhancing willingness to perform CPR and reinforcing the chain of survival. These are also mentioned by ERC as key-points in resuscitation education in order to provide high quality resuscitation (Greif, Lockey, Breckwoldt, et al, 2021).

Researchers generally recommend an early start on healthy mind-body practices especially during the potential developmental “windows of opportunity”, as such practices lead to forming habits encouraging to learning, health and well-being.

The use of music in LIFEFORCE: Methodology and tools

Christiana Adamopoulou & Ioanna Etmektsoglou

The use of music in LIFEFORCE pre-training educational material aims in fostering a wide range of skills that elementary students need to develop as part of their preparation for future training in CPR. Abilities like critical thinking, creativity, collaboration, communication, flexibility, adaptability, and initiative need to be developed and acquired throughout the pre-training. Music is a stimulus that may influence factors related to learning (Ferreri & Verga, 2016), ranging from attracting students' interest to supporting the memorization of BLS key concepts.

Research findings with considerable relevance to the present program are:

a. Songs may facilitate verbatim text recall (Wallace, 1994) when the melody is simple and easy to learn, the song is symmetric in terms of its melodic contour and when the music material is characterized by balance between novelty and predictability.
b. Music training may lead to better tapping performance (Thompson et al., 2015) and therefore children's inherent skills of "keeping the beat" can be maintained and reinforced through listening, accompanying music, and performing easy body percussion activities.
c. Rhythm is a strong organizer for learning and memory, and music provides a temporal scaffolding framework that attracts attention, allows direct anchoring between words and the musical stimulus, thus facilitating learning (Fererri & Verga, 2016; Thaut, Peterson & McIntosh, 2005).
d. The harmonic accompaniment functions as a generator of emotional engagement (Gabrielsson & Wik, 2003; Schwartzberg & Silverman, 2012) which in turn may facilitate learning.

Music -as an integral part of the LIFEFORCE program- has been applied in the service of essential perceptual, cognitive and emotionally infused tasks. Some examples related to the perceptual and cognitive tasks which are addressed here, are the facilitating function of music and song in learning and performing the steady heartbeat, in learning basic human anatomy, in memorizing sequential actions such as the steps in BLS, in directing and keeping the attention on relevant auditory information and in making repetition more available and

enjoyable. Regarding music's functions in relation to emotions, examples presented in the report include the use of songs as 'containers' for memory and emotions, as an effective tool for the development of empathy in children and as an emotional regulator.

Educational objectives such as orientation in space through sound, sound source identification, sound discrimination in noisy environments, perception and long term memory of the steady beat of 110-120 b/m, stable knowledge of left and right etc, could be approached through various musical games as proposed in this handbook.

The implementation of Social-Emotional skills in the LIFEFORCE BLS Algorithm

Evgenia Douvara

Social-emotional skills refer to the abilities that regulate one's thoughts, emotions and behavior and they differ from cognitive abilities, because they mainly concern how people manage their emotions, perceive themselves and engage with others. Social-emotional skills determine how well people adjust to their environment and how much they achieve in their lives. The development of these skills is important not only for the well-being of individuals, but also for wider communities and societies as a whole (OECD, 2017).

Each child comes with a unique set of experiences, abilities and needs. How children express and regulate their emotions often depends on their cultural background, the manifestation of a developmental delay/ disorder or their experience of a stressful situation at home/ community. It is quite surprising that according to the analysis of ten education systems, the focus of measures for immigrant students was mainly on academic needs, whereas emotional and support needs were highlighted only in Spain (Noorani, S., Baïdak, N., Krémó, A. & Riiheläinen, J., 2019).

When children deal with an emergency, they need to observe cues from their bodies (posture, heart rate, breathing), as well as recognize and make sense of their own emotions. This ability is called Emotional Awareness. More specifically, it's important for children to distinguish safe from unsafe situations, because this information will affect their behavior while approaching the scene of the incident.

Apart from that, it is crucial to have the capacity to place themselves in another's position, to understand or feel what another person is experiencing from within their frame of reference and what the person needs at that time. This is the definition of an important skill, called **Empathy**. The development of empathy starts early in people's lives, as described by McDonald and Messinger (2011). This capacity is related to altruistic behaviors and offering help. It is also essential in order to make decisions incorporating both emotional and cognitive components and act effectively; so, children might ask the people around the scene to stay away from the victim for safety reasons or call an ambulance before starting chest compressions. It must be noted here that empathy becomes a real challenge for children that manifest impairments in theory of mind skills, such as autistic children.

Furthermore, the child has to self-regulate in order to be able to offer help and basic life support. **Self-regulation** is the ability to express thoughts, feelings and behaviors in socially appropriate ways. Learning to calm down when angry or excited and persisting at difficult tasks, such as dealing with an emergency, are examples of self-regulation. A very interesting and helpful guide for teaching regulation in children comes from Leah Kuypers and it's called *The Zones of Regulation* (Kuypers, 2011). Self-regulation is strongly related to well-being (Di Fabio and Kenny, 2016) and alongside with Emotional Awareness and Empathy plays a significant role in Daniel Goleman's theory of emotional intelligence (1999).

Training in self-regulation should definitely include teaching **fight, flight or freeze (FFF) response**, which is activated when people recognize danger. It's a survival response, but it's not a voluntary one. Thus, it's crucial to help children to become aware of that mechanism and avoid blaming themselves about the way their body responds and the way they feel. For example, they need to know that it is completely normal to freeze when they are in shock.

Learning Theories of LIFEFORCE

The learning theories of our approach are Bloom's Taxonomy and Universal Design for Learning (UDL). The basic reasons we chose them are because:

- of the cognitive-critical thinking gradation which satisfies the knowledge gradation in our approach of the BLS concepts in different children age stages.
- there are multiple educational opportunities for different teaching/learning styles in inhomogeneous groups in the context of inclusive learning.

they are methods which can successfully and effectively be applied in all the curriculum thematic sections.

Bloom's Taxonomy

Bloom's Taxonomy is a pedagogical framework applied in learning. It is a multi-tiered model, a pyramid of classification of thinking behaviors that are considered significant in learning and correspond to different cognitive levels of learning. There are six levels of Bloom's Taxonomy: Remembering, Understanding, Applying, Analyzing, Evaluating and Creating (Anderson & Krathwohl, 2001). The concept is that each category is based on the previous one and constructs one level higher in complexity of abstraction.

Revised pyramid of Bloom's Taxonomy (2001)

(Armstrong, 2010)

- Create: Compose a free choreography with lyrics to present the steps of the algorithm
- Evaluate: different environments in which the algorithm may occur
- Analyze: Break the steps into smaller parts and examine each part thoroughly
- Apply: the steps of the algorithm by demonstration
- Understand: the steps of the algorithm
- Remember: the steps of the algorithm

On the first scale, children should be able to remember and just name the steps of the Algorithm in the right sequence: Safety, Response, Check for breath, Call 112, Circulation.

Then, they should be able to explain the steps of the Algorithm and what is happening in their own words (understand).

Next, children should apply the steps of the Algorithm by demonstrating them.

We should note that the first three levels of Bloom's Taxonomy (Remember, Understand, Apply) are known to be the LOTS, meaning the Lower-Order Thinking Skills, in comparison to the next three levels (Analyze, Evaluate, Create), the HOTS, meaning the Higher-Order Thinking Skills. The HOTS differentiate in difficulty from the LOTS and therefore will be adapted accordingly for younger children (6-8) in the planned activities.

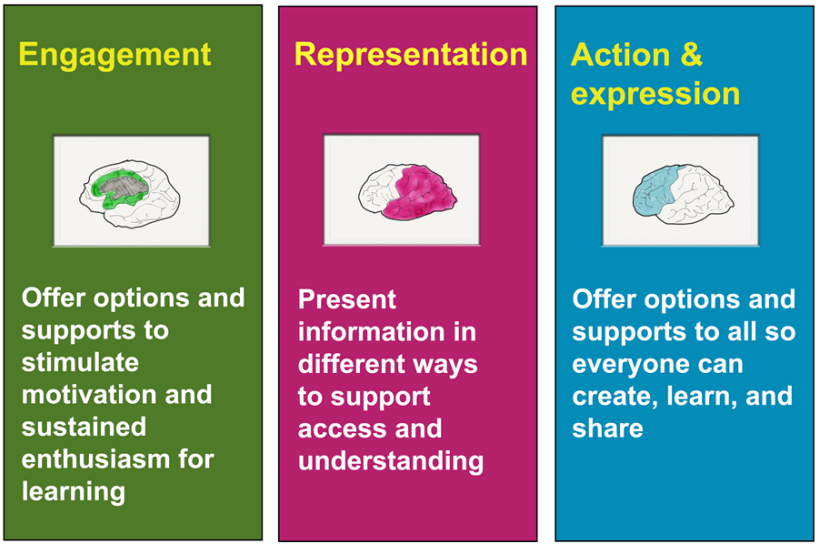
Children should then be able to break the steps of the Lifeforce BLS-Algorithm into smaller parts and examine each part by identifying their causes (analyze).

Next level, children should be able to evaluate different environments in which the algorithm may occur by making the right decisions and justifying their opinions.

Finally, children reach the last level, creation, which, in this case could be to compose a free choreography with their own lyrics, in order to present the steps of the Algorithm.

UDL (Universal Design for Learning Guidelines)

UDL offers learning guidelines aiming to effective ways of inclusive learning. UDL uses three main principles: Engagement, Representation and Action & Expression and each one corresponds to the activation of a specific learning brain network (i.e. the Affective, the Recognition and the Strategic network). So, to apply UDL in the classroom, teachers should make sure they follow these principles.



Universal Design for Learning: 3 principles

(CAST, 2011; Meyer, Rose, & Gordon, 2014)

Affective networks answer the "why" of learning, aiming to provide multiple means of engagement to children and control their emotional involvement with learning.

Recognition networks are responsible for the "what" of learning and aim to provide multiple means of representation to the children to help them form their own concepts of knowledge.

Strategic networks are about the "how' of learning and aim to provide multiple means of action and expression to help children plan, execute and watch over their actions (http://udlresource.ca/2017/12/udl-core-principles-and-the-brain/).

Pedagogical tips to be applied in all subjects

(Rooted in Constructivism, Bloom's Taxonomy & UDL)

In this part, you can find ways to incorporate some really helpful pedagogical tips in your activities!

1. Tips of Constructivism

Lifeforce's basic pedagogical approach is **constructivism**. You could use it too! As long as you incorporate as much of the following you can in your activities:

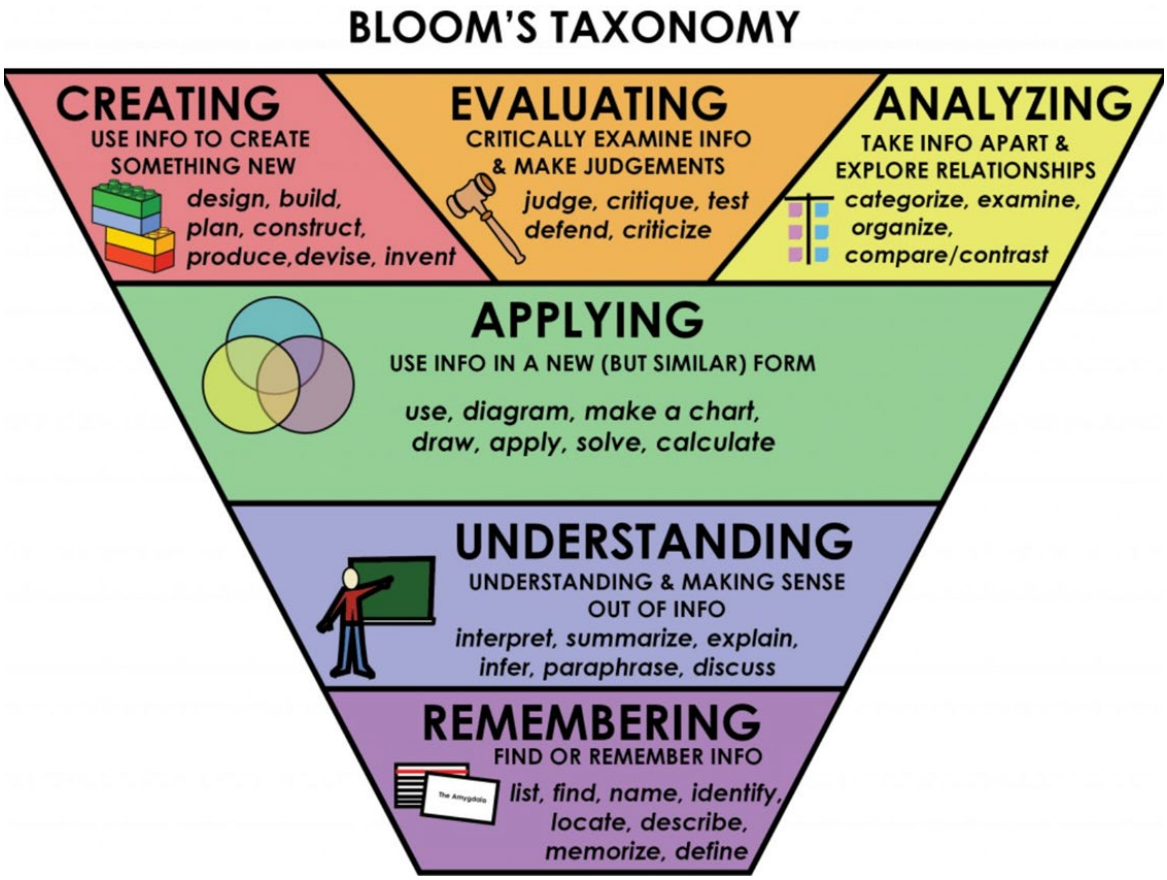
- **Activate children's prior knowledge**, e.g. by asking questions: What do they already know? Have they read about this topic in a book? Have they seen this topic on television or in a movie? What would they like to learn about this topic? Does this topic remind them of any experiences they had?
- **Give real and authentic problems**, like the LIFEFORCE BLS-Algorithm, to stimulate the active participation of learners in problem solving and critical thinking. (e.g. rich and realistic video material about the BLS)
- Incorporate **cognitive conflict**. For children to realize that only one of the two contradictory perspectives that they hold (about a situation) is true and which. (e.g. I know it's wrong to hurt someone by pushing on their chest but then I know that there are specific and approved ways to save a life)

2. Tips of Bloom's Taxonomy

It is utterly suggested that you take a look at the following brilliant and most explanatory videos, before you go any further:

- Bloom's Taxonomy: Structuring the learning journey. https://youtu.be/ayefSTAnCR8
- Bloom's Taxonomy: Inside Out. https://youtu.be/G40ANGIDGcw
- Bloom's Taxonomy: Friends. https://youtu.be/pqzkCFL3ZUY?t

The following chart contains a description of each stage of Bloom's Taxonomy with the appropriate verbs to be used. It is helpful for involving the stages in your activities, wherever you can.



And to be more specific, you can take a look at the following Suggested Bloom's Taxonomy Activities. Please feel comfortable to incorporate any of them into your activities. You could also use them as an inspiration to create something similar!

Level 1-3 **Lower Order Thinking Skills (LOTS)**

- Arrange scrambled story scenes in sequence
- Identify most important attributes of main ……
- Create a chart / picture / diagram of the information
- Write a summary of the main events (8-10 years old)
- Retell the story in your own words

- Predict what could happen next in the story
- Make a scenario to show how it works
- Rewrite/describe the scene according to how you would react
- Transfer the main character/situation to a different setting
- Produce examples from real life based on the central problem in the story

Level 4-6 **Higher Order Thinking Skills (HOTS)**

- Select the parts of the story that were the most exciting, happiest, saddest, believable, fantastic etc.
- Distinguish between events in the story that are critical and less important
- Compare and contrast two important characters/situations
- Assess the value of the story
- Compare and contrast this story with another you have experienced
- Judge the main characters and their actions
- Judge the main characters and their actions from a moral or ethical point of view
- Compose an internal monologue for the main character during a pivotal moment
- Imagine you are one of the characters and write a diary entry
- Create a new character and explain how they would fit into the story
- Changing the setting and the characters, retell the story in your own words

3. TIPS OF UDL!

Finally, concerning UDL, take a look first at these helpful short videos for your better understanding!

- What is Universal Design for Learning? https://youtu.be/AGQ_7K35ysA
- Seeing UDL in action in the classroom. https://youtu.be/B7qYJY62X2s?t
- Using UDL in your lesson planning to enhance your teaching. https://youtu.be/B5JWvCaXk-8?t

To apply UDL in your classroom, select and adopt some of the following (which correspond to each of UDL's 3 principles: Engagement, Representation and Action & Expression):

For **Engagement**:

- Use music &/or video
- Let children choose the level of challenges & the types of rewards or recognition
- Set goals (with children's help)
- Provide tasks that allow for active participation
- Invite personal response, evaluation and self-reflection to content and activities
- Include activities that foster the use of imagination to solve novel and relevant problems, or make sense of complex ideas in creative ways
- Variation in the presence of background noise or visual stimulation, noise buffers, number of features or items presented at a time
- Variation in pace of work, length of work sessions, availability of breaks or time-outs, or timing or sequence of activities
- Involve all participants in whole class discussions
- Vary activities and sources of information so that they can be:
    - Personalized and contextualized to learners' lives
    - Age and ability appropriate
    - Appropriate for different racial, cultural, ethnic, and gender groups

For **Representation**:

Display information in a flexible format so that the following perceptual features can be varied:

- The size of text, images, graphs, tables, or other visual content
- The contrast between background and text or image
- The color used for information or emphasis
- The speed or timing of video, animation, sound, simulations, etc.
- The font used for print materials

Offer alternatives for auditory information:

- Provide visual diagrams, charts, notations of music or sound
- Provide written transcripts for videos or auditory clips
- Use visual analogues to represent emphasis and prosody (e.g., emoticons, symbols, or images)
- Provide visual or tactile (e.g., vibrations) equivalents for sound effects or alerts
- Provide visual and/or emotional description for musical interpretation

Offer alternatives for visual information:

- Provide descriptions (text or spoken) for all images, graphics, video, or animations
- Provide physical objects and spatial models to convey perspective or interaction
- Provide auditory cues for key concepts and transitions in visual information

For **Action & Expression**:

- Use multiple media for communication
    - Compose in multiple media such as text, speech, drawing, illustration, comics, storyboards, design, film, music, dance/movement, visual art, sculpture, or video
- Guide appropriate goal-setting
    - Post goals, objectives, and schedules in an obvious place
- Enhance capacity for monitoring progress
    - Ask questions to guide self-monitoring and reflection

- Show representations of progress (e.g., before and after photos, graphs and charts showing progress over time, process portfolios)
- Prompt learners to identify the type of feedback or advice that they are seeking
- Use templates that guide self-reflection on quality and completeness
- Provide differentiated models of self-assessment strategies (e.g., role-playing, video reviews, peer feedback)
- Use of assessment checklists, scoring rubrics, and multiple examples of annotated student work/performance examples

References

1. Di Fabio A. and Kenny M.E., 2016. Promoting Well-Being: The Contribution of Emotional Intelligence. *Front. Psychol*. 7:1182.
2. Goleman, D., 1999. Working with emotional intelligence. *Bloomsbury.*
3. Kuypers, L., 2011. Zones of regulation. *Think Social Publishing.*
4. McDonald, N. M., & Messinger, D. S. (2011). The Development of Empathy: How, When, and Why. Free Will, Emotions, and Moral Actions: Philosophy and Neuroscience in Dialogue, 23, 333-359.
5. Noorani, S., Baïdak, N., Krémó, A. & Riiheläinen, J. (2019). Integrating students from migrant backgrounds into schools in Europe: national policies and measures. Eurydice Brief. Education, *Audiovisual and Culture Executive Agency*.
6. OECD (2017). Social and Emotional Skills: Well-being, Connectedness and Success. OECD Skills Studies, oe, Paris.
7. Griss S, Merecki V. *Minds in motion: A kinesthetic approach to teaching elementary curriculum*. Portsmouth, NH: Heinemann, 1998.
8. Gardner H. *Frames of mind: The theory of multiple intelligences*. New York, N.Y.: Basic Books, 1983.
9. Goleman D. *Emotional intelligence*. New York NY u.a.: Bantam Books, 1996.
10. Farmer D. *Drop of a hat. Drama Resource*, 2021.
11. Caine RN, Caine G. *Making connections: Teaching and the human brain*. Ann Arbor, Mich.: UMI Books on Demand, 1994.
12. Greif R, Lockey A, Breckwoldt J, et al. European Resuscitation Council Guidelines 2021: *Education for resuscitation*. Resuscitation 2021; 161: 388–407.

13. Edmiston B. *Transforming Teaching and Learning through Active Dramatic Approaches*. Hoboken: Taylor and Francis, 2013.
14. Saraswati, S., S. *Yoga education for children (Vol.1). Munger,* Bihar: Yoga Publications Trust, 1999.
15. Greenberg MT, Harris AR. *Nurturing Mindfulness in Children and Youth: Current State of Research.* Child Development Perspectives 2012; 6: 161–6.
16. Ferreri L, Verga L. *Benefits of Music on Verbal Learning and Memory*. *Music Perception* 2016; 34: 167–82.
17. Wallace WT. *Memory for music: Effect of melody on recall of text. Journal of experimental psychology. Learning, memory, and cognition* 1994; 20: 1471–85.
18. Thompson EC, White-Schwoch T, Tierney A, Kraus N. *Beat Synchronization across the Lifespan: Intersection of Development and Musical Experience.* PloS one 2015; 10: e0128839.
19. Gabrielsson A, Wik SL. *Related to Music: Adescriptive System. Musicae Scientiae* 2003; 7: 157-217.
20. Schwartzberg ET, Silverman MJ. *Effects of pitch, rhythm, and accompaniment on short- and long-term visual recall in children with autism spectrum disorders. The Arts in Psychotherapy* 2012; 39: 314–20.
21. Armstrong P. *Bloom's Taxonomy. Vanderbilt University Center for Teaching*. June 10, 2010. cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/ (accessed 20/05/2021).
22. Thaut, M.H., Peterson, D.A., & McIntosh, G.C. (2005). *Temporal entrainment of cognitive functions: Musical mnemonics induce brain plasticity and oscillatory synchrony in neural networks underlying memory*. Ann. N.Y. Acad. Sci., 1060: 243-254
23. Meyer, A., Rose, D.H., & Gordon, D. (2014). *Universal design for learning: Theory and Practice*. Wakefield, MA: CAST Professional Publishing.

4 Specifications of required perceptual & cognitive skills for LIFEFORCE BLS algorithm

Taxonomy of the selected perceptual & cognitive skills

Evgenia Douvara, Sevasti Etmektsoglou, Konstantinos Fortounis, Barbara Fyntanidou, Anastasis Stefanakis

Perceptual and cognitive skills activated in the LIFEFORCE – BLS algorithm

Evgenia Douvara, Sevasti Etmektsoglou, Konstaninos Fortounis, Barbara Fyntanidou, Anastasis Stefanakis

From a very young age, children are capable of performing the first step in the ‘‘chain of survival’’, namely, to recognize a cardiac arrest and call for help to activate the Emergency Medical Services (EMS). When training children we need to be aware of the perceptual and cognitive skills they must possess to implement the LIFEFORCE – BLS algorithm steps. It is also important to take into consideration the characteristics of their physical and emotional developmental stage.

The steps of the LIFEFORCE – BLS algorithm are the following ones:

- safely approach the scene of the incident,
- check for response and breathing,
- call for help and start compression-only Cardiopulmonary Resuscitation (CPR).

Ventilation and the use of Automated External Defibrillator (AED) will only be taught theoretically and not practically.

The following table illustrates the perceptual and cognitive skills that are essential for implementation of the LIFEFORCE – BLS algorithm steps.

The skills that have been selected are analyzed into building blocks. Each building block is matched to the corresponding algorithm steps. As shown in the table, some of the skills are found in all steps, while other skills are found in some of the steps.

Table 1. LIFEFORCE – BLS algorithm skills activated in specific steps.

Skills	Building blocks	Safe approach	Check for response	Check for breathing		Call for help	CPR	Ventilation	AED
				Full	Covid				
Visual perception	Visual discrimination	✔	✔	✔	✔	✔	✔	✔	✔
	Visual figure ground	✔				✔			✔
	Visual attention	✔	✔	✔	✔		✔	✔	
	Visual closure	✔		✔	✔	✔			✔
	Visual-spatial relations	✔				✔			✔
	Visual form constancy					✔			✔
Auditory perception	Auditory discrimination	✔	✔	✔	✔	✔	✔		
	Auditory figure ground	✔	✔	✔	✔	✔	✔		
	Auditory closure	✔	✔			✔			
	Auditory synthesis and analysis								
Attention	Sustained	✔	✔	✔	✔	✔	✔	✔	✔

	Focused	✔	✔	✔	✔	✔	✔	✔	✔
	Divided	✔	✔	✔	✔	✔	✔	✔	
Memory	Working	✔	✔	✔	✔	✔	✔	✔	✔
	Visual	✔	✔	✔	✔	✔	✔	✔	✔
	Semantic	✔				✔	✔		
	Visual sequential			✔		✔	✔	✔	
	Auditory		✔	✔	✔	✔			
	Procedural			✔		✔	✔	✔	
	Auditory sequential					✔		✔	
Critical thinking	Cause-effect	✔	✔	✔	✔	✔	✔	✔	
	Decision making	✔	✔	✔	✔	✔	✔		✔
	Logical reasoning					✔	✔		✔
	Argumentation		✔				✔		✔
	Problem solving					✔	✔		✔
	Compare and contrast	✔	✔	✔	✔			✔	
Orientation	Spatial	✔				✔			✔
	Temporal			✔	✔	✔	✔	✔	✔

As it emerges from the table above, certain skills are activated more frequently, while others do not appear so often. Some building blocks do not appear at all.

Other skills activated in LIFEFORCE – BLS algorithm

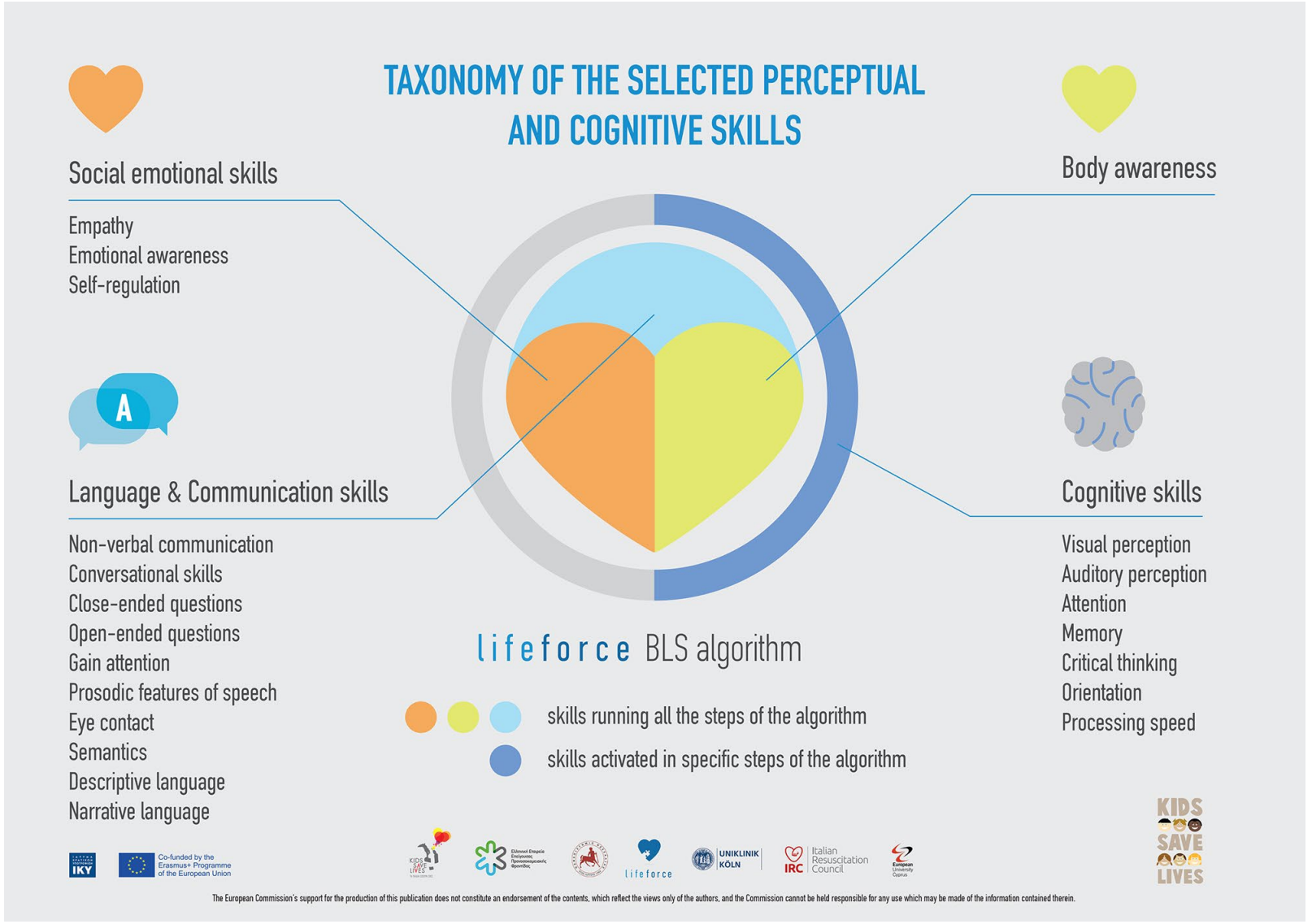
Apart from the perceptual and cognitive skills that have been presented, we have selected the most often encountered communication, language and social-emotional skills that are required when implementing the whole LIFEFORCE-BLS Algorithm task. These skills coupled with educational work on body awareness and processing speed, complete the learning process of the algorithm and are illustrated in the table below.

The activation of these skills has not been analyzed into building blocks neither have been studied/examined in every step of the LIFEFORCE – B.L.S algorithm as they were present throughout its steps. This group of skills is listed in the table below:

Table 2. LIFEFORCE – BLS algorithm skills activated in every steps.

Skills	Building blocks
Communication skills	Non-verbal
	Conversational
	Close-ended questions Open-ended questions
	Gain attention
	Prosodic features of speech
	Eye contact
Language skills	Semantics
	Descriptive language
	Narrative language
Social – emotional skills	Empathy
	Emotional awareness
	Self-regulation
Body awareness	
Processing speed	Visual processing
	Verbal/auditory processing
	Motor speed

As it is presented in the table above, the following communication skills are important when implementing the LIFEFORCE – BLS algorithm: Non-verbal, Conversational, Close-ended questions and Open-ended questions, Gaining attention, Prosodic features of speech and Eye contact.



Classification of selected skills into distinct difficulty levels specifically tailored to the developmental level of children aged 6-10 years

Angeliki Botonaki, Anastasia Klaroumenou

To begin with, we will present the skills which we have selected to be of vital importance in the learning process of the algorithm for ages 6-10. These are: Visual perception, Auditory perception, Memory, Attention, Communication skills, Language skills, Critical thinking, (Time and Space) Orientation, Body Awareness, Social-Emotional skills and Processing speed. The selected skills classification will happen in two steps and will be presented with a bottom-up difficulty level.

As a first step for this classification, we have taken into consideration the goals and objectives of ISCED 0 and ISCED 1, as they have occurred from the Intellectual Output 1 "Transnational overview of nursery and primary school educational systems in European countries" and have underlined the following.

In ISCED 0 it is expected from children to:

- Understand what can affect health and well-being
- Develop reflexive skills, observe, explore, compare, build structured thinking, develop decision making, understand emotions and care
- Enable learning of cognitive, social, affective and psychomotor skills

In ISCED 1 it is expected from children to:

- Learn how to learn
- Develop critical thinking, logical reasoning, problem solving, abstract thinking, capacity for judgment, space/time awareness, health education and language of the body
- Think independently and critically and show creativity
- Achieve cognitive, emotional and psychomotor skills
- Respect their own development level and rhythm

In brief

In early childhood age (here 6-7), children are expected to have acquired visual and auditory perception at a fine level. Also, memory and communication skills at a basic level and moving on, body awareness and space & time orientation. Therefore, there are some skills that children at 6 to 7 years of age have already acquired at a satisfactory level.

In middle childhood age (here 7-10), children are expected to improve and develop even further these already acquired skills. Additionally, they are expected to develop in a higher scale their attention along with their social-emotional and language skills, moving on to critical thinking and processing speed development.

The LIFEFORCE BLS-Algorithm activities that will be implemented throughout our 6-10 children's target group will promote all of the above-mentioned skills with the required developmental adaptations in each age. For example, critical thinking which is of a greater difficulty for 6 year old children, as it is mostly developed in middle childhood age, will be also taught to 6 year old children but at a distinctly lower scale of difficulty. All skills will be taught at each age in fully agreement with the developmental stage the children are at.

Representation of classification

In our attempt to represent this classification, we will combine the sequence of the skills' development with the attainment of the basic level of the skills that is necessary in order for the children to accomplish adequately the steps of the LIFEFORCE BLS-Algorithm. Thus, we suggest the following classification of the selected skills, which concurs with the requirements of the LIFEFORCE BLS-Algorithm and with both the goals and objectives of the ISCED 0 and ISCED 1 and the contemporary Developmental Psychology's thesis.

In the following timeline scheme, we indicate the developmental stages where the level of each acquired skill meets the requirements of the LIFEFORCE program. To emphasize that children's selected skills develop about at the same time but in different rhythms in all time periods, we present the time period from 0-6 with all the selected skills included and coexisting, developing in different rhythms, in the scheme below. The classification that follows then, shows the most important and rapid improvements of specific children's skills in

combination with the LIFEFORCE BLS-Algorithm basic level of skills needed for the implementation of the program, through the timeline of 6-10. This information will be used in order to make the appropriate adaptations in the teaching activities.

We should not forget that:

- Each developmental stage is built on the previous
- Stages are used only as guides
- Each child has its own rhythm of development
- Development takes place simultaneously in many development areas and
- Development takes place unevenly (Lehalle & Mellier 2005).

Classification showing the age stages where the development of selected skills meets the basic requirements of skills in the LIFEFORCE-BLS algorithm.

References

1. Lehalle H, Mellier D. *Psychologie du développement: Enfance et adolescence* (3rd ed.). Paris: Dunod, 2005.

5 LIFEFORCE Lesson Structure

Angeliki Botonaki

Lesson structure synopsis

Begin

- **Introduction**: LIFEFORCE song, Mascots, Posters (Only for the first lesson)
- **LIFEFORCE Principles** [5'-10']
- **Warm-up activities***. Choose one of the following: [5'-10']

    - Introductory Breathing Games
    - Warm up (Physical, Personal, Team & Yoga)
    - Unblocking & cognitive games
    - Confidence games

Main session Choose one or some of the following:

- Body Anatomy*
- Vocabulary
- Social-Emotional skills**
- Breathing games*
- LIFEFORCE BLS Algorithm
- Foreign Body Airway Obstruction
- LIFEFORCE BLS scenarios
- LIFEFORCE Music (Songs, music activities - games)**
- LIFEFORCE BLS Yoga poses & games*
- Language-Communication skills
- Cognitive-Perceptual skills

End

- Closing activities*. Choose one of the following:
    - Memory and Concentration games [5'-10']
    - Relaxation [3'-5']
- Reflection & Team Goal [5'-10']

* Body awareness is a section that is most crucial to the program, as LIFEFORCE BLS-Algorithm is totally connected with the body and the sense of the body, which is why it covers almost every aspect of the program.

Body Awareness consists of the following thematic sections: Warm-up Activities, Body Anatomy, Breathing Games, LIFEFORCE Yoga Poses and Closing Activities.

** These two thematic sections can be used in any or even all three parts of the lesson structure (Begin, Main, End).

Lifeforce Thematics & Body Awareness

Angeliki Botonaki

Body Awareness

Body awareness is a section that is most crucial to the program, as Lifeforce BLS-Algorithm is totally connected with the body and the sense of the body, which is why it covers almost every aspect of the program.

Specifically, body awareness refers to: a. the ability to recognize the position and movement of body parts in relation to muscles and joints and b. how conscious and connected children are to their own bodies.

“Body Awareness” is considered to be the basis of the following Lifeforce thematics: Warm-up Activities, Body Anatomy, Breathing Games, Lifeforce Yoga Poses and Closing Activities.

BEGIN

As regards to the beginning of the lessons, an “Introduction” set on a pedagogical base as well as a “Warm-Up” session are proposed. The main concept of the “Beginning” session is the release of energy and also peak of awareness of the students. This way, they reach the maximum level of readiness to accept new information and construct their own knowledge.

Introduction

A general introduction will be applied only for the first lesson. This is more of an acquaintance with the Mascots, the LIFEFORCE song and the main purpose of this course, which will be outlined through the two comprehensive LIFEFORCE posters.

Lifeforce Principles

You can begin with a **small discussion on LIFEFORCE principles**, such as the “Respect for the value of life of oneself and others” or the “Acceptance of unfortunate situations that may occur to them”. This, in sequence, leads to enhancing the children’s willingness to perform CPR and reinforcing the chain of survival. You can use more than one lesson to talk about each of them.

Here, you can use the pedagogical tip mentioned earlier and based on constructivism, i.e. activating children's prior knowledge by giving them space to speak.

By the end of this discussion you and your students could come up with a two-line rime that connects the main idea of the discussion with the target that as a class you have set for this lesson, put some rhythm on and then, repeat it at the end of the lesson. This is supposed to unite you as team, reinforce the children and remind them of their goal. If this doesn't happen here, you can use it in the end of the lesson.

Warm-Up Activities

You can choose one of the thematics below to continue (all of them would be ideal but due to lack of time you need to pick only one):

Introductory Breathing Games

Help the students let go of their tension while setting their levels of concentration higher.

Activity 1: Hero's/ Heroine's Suit

Description

Explain to the children that you will do something different, which is a breathing game. So, prompt them to focus and concentrate on your directions.

- Let's imagine we are superhero(in)es (whoever you like) and we are ready to put on our suit because someone needs us for help right now! Are you ready? Ok.
- So, imagine a zipper beginning from under the belly button reaching up to the nose (we show the route with our hands).
- Breathe in, zip up to the nose and hold breath. Put the other hand on the belly to feel how it is expanding while breathing.
- Breathe out, zip down to the navel and exhale, feeling now the belly going in.

Repeat 3-5 times

Notes: Children imagine they put on the superhero/ superheroine suit, ready for action. Now they need to zip it up. While breathing in, children are getting full of oxygen, in other words power, which they need. While breathing out, they spread some of this power as far as they can.

Aim

To understand the way their abdomens a) expand while inhaling and b) get in while exhaling, through a fun game. To concentrate on their breathing. The time of children's concentration is going to increase each time a little more.

Levels

Level 1: For 6-8, instead of "breathe in" use the expression "have a smell". You can be more theatrical in this age group.

Level 2: For 8-10, after the last time children breathe out, they can also rise to their toes like superheroes/ superheroines taking off, pretending they begin to fly.

Extension

You can use the same exercise but maybe with a different theme to adopt it to any of your subjects, in the beginning of them, to help your students concentrate and be more focused on the lesson afterwards.

Learning difficulties

It is best to keep the class as quiet as possible in order to help other children to concentrate.

Warm up

Gets both their body and mind in a state ready for learning, releasing the extra energy.

Activity 2: Yoga Warm Up

Description

- Squat sitting. Hands on the knees. Children begin right turns with their trunk. The trunk circles are gradually expanding, with head and shoulders relaxed. In the first half children are inhaling and then exhale. Repeat from the other side. Stretch arms forward, touching the ground.
- Squat sitting. Palms are touching each shoulder. Begin trunk turns to the left and to the right, making the noise of a washing machine.
- Standing position. Begin jumps to the front and backwards, to the left and to the right (cross).
- Standing position. Children put two arms together stretched over the head. They inhale and while exhaling, they bend their trunk to the right. They inhale in the center again and while exhaling, they bend to the left (repeat 4 times).
- Children hold their ankles and walk forward and backwards.
- They make small steps on their toes forwards and backwards with their eyes shut.
- Children are standing in a circle holding hands. The teacher picks a child which lifts its right arm above head and the rest of the children continue the same movement like a wave. When the wave reaches the child that begun, it drops the arm and touches the ground. The wave gets quicker and quicker.
- From a standing position, children rub their palms and place them in front of their eyes, like cups. They are left to feel the warm energy for a few seconds. Then, they stretch their right arm with the thumb up in front of them. The arm makes a quarter of a circle to the right and without moving the head, their eyes are following the thumb. They repeat the movement to the left.
- Children lie down with their knees bent and hands next to their body. They hit both hands and feet to the ground rhythmically while setting free emotions of anger, fear, doubt and sorrow. The rhythm goes slow, faster, louder. They leave the position and

rest for a few seconds lying. Note: the teacher has to ask the children to think of a reason why they are angry, afraid, etc., or give specific descriptions depending on the age level, i.e. angry: your brother broke your toy/ afraid: the room is dark/ doubtful: you are not sure you are good enough /sad: your friends don't play with you.

- Children sit on their knees and move their ankles away from each other so that they finally sit in the middle of them, on the ground. They stretch their arms up above head to reach an imaginary vase of laughter crème. They put down the vase in front of their hearts. They open it and spread crème to their faces. Every time they touch their faces, they laugh aloud.

Aim

To use some easy yoga poses in a row, in order to warm children up, help them connect their mind and bodies, feel more concentrated and ready for learning.

Levels

Level 1**:** For 6-8, explain the steps in a slower pace of voice. Show and then implement together with the children. Step No7 might be a little tricky but let the children do their best. Do not insist on the perfection of the exercises here. Have fun!

Level 2: For 8-10, show and implement together with the children. Have fun!

Extension

It can be applied in the beginning of any subject in order to get the children warmed up, concentrated and ready for learning.

Learning difficulties

It applies to all children as long as the teachers explain and makes sure they show the movements in a clear and comprehensive way.

Unblocking & Cognitive games

Help the students feel more relaxed and comfortable with each other, lift their mood up and make them more acceptable.

Activity 3: Blind and leader

Description

Half of the children take the role of the blind (A) and the other half the role of the leader (B). Children work in pairs, as a blind and a leader. The blind has no initiative while the leader has complete control. The leader holds either the blind's hand or waist and after giving a little time to the blind to get used to the darkness, leads them forwards, backwards, sideways, to any direction.

Notes: The teacher reminds that the leaders are responsible for their blind and have to keep them safe from crushing into another child. They also have to make sure before they move faster their blind that they have enough space. Some minor crushes are allowed. The teacher takes action only if considered absolutely necessary. It would be best if half team worked and the rest observed, for the sake of space and observation.

Aim

To let their co-students drive them carefully (and use their senses) but also be responsible as drivers for them. It awakens children's senses (except for the sight) and boosts their self-confidence as well as their having confidence to others.

Levels

Level 1: For 6-8, teachers should be more aware and ready to help in case needed.
Level 2: For 8-10, teachers could suggest students to walk backwards.

Extension

It can be applied in the beginning of any subject, ideally after a small discussion or warm-up activity, in order to help the children feel more self-confident before proceeding with the

lesson. It can also be applied as a confidence game in dictation, showing confidence to a classmate to correct one's writings.

Learning difficulties

If a child lacks too much in self-confidence and is too intimidated with the exercise, s/he could have two "drivers" to hold on to while moving.

Confidence games

Help the students feel more confident with their self, believe more in their own strength and abilities and get ready for learning.

Activity 4: Catch me, catch me

Description

The children are standing forming a circle. Inside the circle, there are two children. The one has its eyes closed and the other is calling the first child's name so that s/he comes and catches him/her. In other words, the first child is being directed by the other child's voice. Each round lasts about a minute and then the couple changes.

Aim: To follow the voice with the eyes shut in order to catch one's pair. Children build confidence and feel safe (being in a protected circle) while positive feelings are promoted as the game provokes children's laughter.

Levels

Level 1: For 6-8, please follow the above instructions.

Level 2: For 8-10, if the teacher wants to add a higher level of difficulty, the rest of the children forming the circle can call the child's name too, in order to mislead the child whose eyes are closed.

MAIN

In Main Session, teachers have a variety of choices in order to build children's basic knowledge regarding the CPR information that children need to know and comprehend in an as much of a holistic way is possible, through multiple different thematics and elements.

More specifically, teachers can choose one or some of the following thematics to apply in their lesson:

- Body Anatomy
- Vocabulary
- Social-Emotional skills
- Breathing games
- LIFEFORCE BLS Algorithm
- Foreign Body Airway Obstruction
- LIFEFORCE BLS scenarios
- LIFEFORCE Music (Songs, music activities - games)
- LIFEFORCE BLS Yoga poses & games
- Language-Communication skills
- Cognitive-Perceptual skills

Body Anatomy

These two main session activities are divided into “Learning” and “Games” and the first makes a prerequisite for the second. You can assure you have understood all body parts correctly as well as “Tilt head” position which are mentioned in the Learning Activity by watching carefully the LIFEFORCE BLS educational videos.

Activity 1: Sticker Game

Description

Children are divided in two groups. The teacher writes on the table the body parts the children learned in the previous lesson. Then, each child from each group copies a different word-body part on a white sheet. Every group should have every word of the board written once. The words are written in large, bold and capital letters, which they cut with their scissors, in order to stick them to the other group.

Each group, making pairs with the other, has to stick (with sticking tape) the word they previously cut, on the corresponding body part of their pair. The two groups rotate, so that all children have stuck their body part on their pair.

Aim To identify the body parts on a real human body.

Levels

Level 1: For 6-8, pupils can get acquainted with body parts such as chest, forehead, index finger, chin, shoulder, cheek, palm, heart, foot, knee.

Level 2: For 8-10, pupils can get also get acquainted with body parts such as abdomen, elbow, lung, shoulder blades, navel.

Learning difficulties: If a child doesn’t know on which body part to stick the written word, then the teacher can ask for the help of other children to let the child decide and have the final word.

Vocabulary

Theoretical framework

Sevasti Etmektsoglou, Theodoros Kalyvas

Vocabulary development is directly related to the cognitive development of children. It appears that children must first come in contact with words-concepts, in order to conquer and then assimilate them. Studies focus on the fact that there is a direct relationship between vocabulary development and the semantic development of children. It is easier for children to introduce to their vocabulary new words which are contextually relevant to the ones they already know. Vocabulary development of children differentiate between the two genders (vocabulary size, concept comprehension, size and type of semantic categories). This realization differentiates the communicational and social development of the two genders, as well as their educational needs.

The aim of the activities is to conquer, integrate and generalize on the new vocabulary, so as to use it functionally in all conversational situations.

The steps of vocabulary development are universal and can be applied to any thematic topic, by developing the respective semantic category.

- Learning

Introduce up to 5 words/concepts each time. Describe in detail the characteristics of each image. Ask all the pupils in turn to describe them. Explain the use of objects and the action of the heroes. Connect the vocabulary to the pupils´ experiences by asking them if they know some objects/heroes. Let the pupils describe their experience.

- Identification

Match the images with the names of the items-concepts (with a visual aid). Find different image forms and let the pupils match them to the already known ones.

- Semantic development

Identification of objects/concepts, based on their attributes-characteristics. Give a definition of the words and/or talk about the target word in a circumlocutory way. Let the pupils guess the name of the word.

- Visualization

Visualize the meaning of the word with gestures and pantomime.

- Connect the image with the word

Play games on the whiteboard or verbally, with syllable/letter synthesis and analysis, in order to create the target word. After you have synthesized the word, ask the pupils to write it down on their handbooks and to draw the respective images (captions to images)

- Thematic classification

Depending on the stage you are teaching, introduce the already known respective vocabulary, as well. Ask questions and encourage the pupils to use the specialized vocabulary when answering

- Written language production

Pupils write the definition of the word they choose and they describe the object/hero, respectively

- Generalization of new concepts

Classification of objects-heroes, based on the classification of their characteristics and creation of new categories. (without visual aid)

Controlled rate of repetition, for the consolidation of words.

Enhancement of vocabulary use, with classification activities (odd one out). By expanding to the wrong use of tools or objects and to wrong actions by persons.

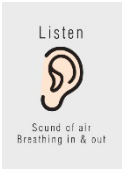
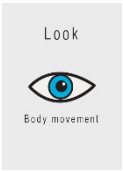
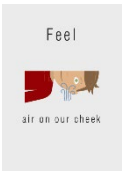
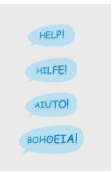
- Vocabulary automation

Expansion of the use of words to varying communication circumstances. Use of vocabulary through pupil practice in simulation scenarios of emergencies.

Body awareness vocabulary

Βασικό λεξιλόγιο	**Basic Vocabulary**
Μάγουλο	Cheek
Μέτωπο	Forehead
Πιγούνι	Chin
Ώμος	Shoulder
Θώρακας	Chest
Καρδιά	Heart
Παλάμη (βάση)	Palm (heel)
Δάχτυλο	Finger
Δείκτης	Index finger
Εκτεταμένο λεξιλόγιο	**Extended Vocabulary**
Ωμοπλάτες	Shoulder blades
Πνεύμονες	Lungs
Κοιλιά (άνω/κάτω)	Abdomen (upper/lower)
Ομφαλός	Navel
Αγκώνας	Elbow
Γόνατο	Knee
Πέλμα	Foot*

LIFEFORCE BLS ALGORITHM VOCABULARY-ICONS

Activity 1: Acronym game

Split your class into small groups (4-5 students per group). Each group has to think of an acronym about what they have learned so far. When they found an acronym the groups have to use their bodies to spell the letters. Other groups have to discuss what the letters stand for. Afterwards, you write the words on a paper. You pass them around the classroom and refer to them in the rest of your lesson.

Activity 2: Verbal Analogy

The first two words in the sentences below go together in a certain way. Choose the answer that goes with the third word in the sentence the same way that the first and second words go together.

Harbor is to boat, what ……..is to car

Lemon is to lemonade, what orange is to …….

Activity 3: Sentence Completion

Choose the word that best completes the sentences.

The victim is not responding. You must perform …….

Check Call Breath Check for breathing

Activity 4: What Am I?

This game is about finding the words to explain something. It will expand your child's vocabulary of adjectives and verbs.

Your pupils close their eyes and you choose any object in the classroom.

You must describe the object while the pupils guess what it is

Use riddle phrases such as "I am long, I am shiny, I am used to eat with, I hold liquids, What am I?" Give as many clues as you need, until they guess the object.

Activity 5: Odd One Out

Choose a category (without saying it out loud)

Say a list of 4 or 5 words, all belonging to the category, except one word which should not belong to that category (we can also choose steps from one of the BLS stages and one additional step not belonging to the same stage. We can also simply use verbs).

Your pupils must spot the word that doesn't belong.

Activity 6: Keep It Going

It's a game for learning nouns and thinking fast.

As you see things in the classroom, take turns naming as many things as you can.

Try to keep an unbroken chain of words.

(It can also be a group activity. When the pupil has no more words to say tags another team member who must continue the chain without break. The team to say the most words within 1 minute is the winner).

Social-Emotional skills

Evgenia Douvara

The teaching of social-emotional skills helps students to:

- use strategies to adapt to the classroom sensory frenzy and become active learners in the classroom
- cooperate effectively with respect to their different backgrounds, needs and difficulties
- act safely in stressful situations and offer important help in saving lives
- realize early in life that they are part of a chain, but not in the center of the world (egocentric thinking leading to guilt).

Material:

- **Emotion cards:** 4 large cards, each one depicting 1 basic emotion (front) and 4 emotions (back), all categorized in zones of self-regulation.
  - Green card/zone presents emotions of joy (front), happiness, peace, safety and satisfaction (back).
  - Red card/zone presents emotions of anger (front), irritation, dislike, aggressiveness and panic (back).
  - Yellow card/ zone presents emotions of fear (front), annoyance, anxiety, stress and jealousy (back).
  - Blue card/ zone presents emotions of sadness (front), disappointment, pain, tiredness and boredom (back).
- **Fight-Flight-Freeze cards:** 3 large cards depicting the FFF response (front) and related questions (back).
- **LIFE FORCE-map of emotions:** a poster with 40 emotions, which can be used not only throughout the activities and games of this section, but also in other sections of the program and in everyday school life.

Additional tools:

- **Emotions Board Game:** a board game with its instructions and two color cards, focusing on children's emotions and dealing with a series of imaginary situations.
- **Social-emotional skills Scenarios:** 8 large cards with scenarios inspired by events of everyday life, their brief descriptions, related questions and indicative answers.

Emotional awareness

Emotional awareness means identifying what we are feeling from moment to moment. Developing emotional awareness needs practice and starts early in life. Like building muscles in the gym, the more we flex our emotions, the more "emotional muscle" we'll build. We cannot expect to be a bodybuilder after just five minutes exercise. In addition, the earlier we start identifying what we feel, the more possible for us to experience happiness and completeness.

People quite often claim that they have no feelings or that they cannot describe them. Some people find it even annoying to answer questions about their feelings, while others' vocabulary is restricted to phrases like "I'm fine" or "I don't feel very well". However, when we try to avoid pain and discomfort, we not only shut down difficult emotions, like sadness, anger and fear, but we also shut down emotions of joy, love and happiness. Apart from that, strict controlling or avoiding emotions is strongly related to manifestations of psychosomatic symptoms.

The more we become detached from our feelings, the more distant we become from others, as well as ourselves. We probably feel exhausted and our relationships are damaged. Simultaneously, this situation blocks the flow of our energy and leads us to internal conflict.

So, by recognizing our feelings, we get to know who we are, what we like, what we don't like and what we need. This is very important not only for us, but also for the people around us with whom we are in constant interaction.

Our emotional awareness affects the way we:

- understand and empathize with others,
- communicate and participate in different systems/ groups,

- make decisions,
- get motivated and take action to meet our goals,
- build relationships.

In everyday life, we all need to be aware of our inner state of feelings, in order to successfully deal with demanding situations. In particular, when dealing with an emergency, we need to observe cues from our bodies (posture, heart rate, breathing), recognize and make sense of our emotions in order to act safely for ourselves and provide appropriate help to someone else.

Activity 1: Introducing myself differently!

Description

This game can be done at the beginning of training for social-emotional skills as a warm-up. We scatter Emotion cards upside down on the floor. When we give the signal, children move in the classroom, take a card and then sit in a circle. Afterwards, all children one by one are introducing themselves to the others representing the emotion that is depicted in their card, e.g. “Hello, I’m Maria!, says Maria smiling while holding the happy card or “I’m George!”, shouts George, who picked the angry card etc.

Levels

Level 1: We use the 4 large Emotion cards (both front and back sides). So, children pick up cards depicting 20 different emotions.

Level 2: We use cards depicting emotions from the map of emotions. Every child before introducing himself/herself, greets the previous child while imitating his/her emotion, e.g. “Hello, Maria (while smiling), I’m George (while shouting angrily)!”, said George after Maria’s turn and so on.

Learning Disabilities: In children with mental retardation or autism we can simplify our instructions by asking them to represent the emotion depicted on the card, without being introduced or being introduced without emotional representation.

Activity 2: Target game

Description

We ask all children to make balls out of cut paper and one after the other to aim for the map of emotions. After that, they are asked to represent the emotion that their ball came across.

Levels

Level 1: Each child represents the emotion their ball came across.

Level 2: Each child after representing the emotion, shares a situation in which they experienced the specific emotion. Then, children are asked to state the stage of the algorithm that this emotion can be experienced at. It can be more than one stage.

Learning Disabilities: If a child has difficulty representing the emotion or describing a situation in which he/ she experienced the specific emotion, he/ she can choose a classmate to help him/ her.

Activity 3: The happy-sad butterfly

Description

We suggest children to draw a butterfly and fold it in half. They choose colors and paint one half with colors depicting joy and the other half with colors depicting sadness. At the end, all butterflies can be glued to a large piece of paper on the wall.

Suggested Questions

Q (level 2): Can we have opposite emotions for a person/ animal/ situation?

Q (level 2): Do you remember a situation in which you found yourself having opposite emotions for a person/ animal? Can you describe what happened?

Levels

Level 1: Children cut their butterflies and join their halves with the corresponding ones of the other children, thus making happy and sad butterflies.

Level 2: Children work in pairs from the beginning of the game and draw the butterflies on both sides together. We can also ask them to name other opposite emotions and combine them in order to draw other butterflies, such as love-hate/ disgust-pleasure/ anger-peace butterfly etc. After finishing their butterflies, we ask them to observe and name/ point to those that can be related to an emergency.

Activity 4: Share your nightmare with me

Description

We divide children into pairs and ask them to recall a dream they saw that scared them a lot. In case they cannot recall a nightmare, they can recall a scary experience instead.

Suggested questions

Q (level 1): How were you feeling when you had that nightmare/ experience?

A: fear/ terror/ stress/ guilt/ anxiety/ pain

Q (level 2): Was there anything that helped you feel better? Describe it!

A: I thought it's only a dream or that it will pass/ I asked someone to comfort me (parent, friend, teacher) / I focused my attention on something nice/ I shared my experience with other people in order to find someone who had experienced something similar to mine.

Levels

Level 1: We ask children to draw their nightmare/ scary experience and share it in pairs. Then, we show them the map of emotions and ask them to name the emotions that they were feeling while having the nightmare/ scary experience.

Level 2: We ask children to share their nightmare/ scary experience in pairs. Then, each child shares with the other what made him/her feel better. Optionally, some couples can share their experiences in plenary.

Notes to Remember!

- Emotions look like weather. They are always present.
- Each one of us experiences a situation differently, even though there are some similarities.
- There are no good and bad emotions. There are pleasant and unpleasant ones. As we grow older, we have to learn to open ourselves to all of them.
- Developing emotional awareness needs practice and starts early in life.
- Controlling or avoiding emotions is strongly related to psychosomatic symptoms.
- By recognizing our feelings, we get to know who we are, what we like, what we don't like and what we need.
- Our emotional awareness affects the way we communicate, make decisions, get motivated and build relationships.
- When dealing with an emergency, we need to recognize and make sense of our emotions in order to act safely for ourselves and provide appropriate help to someone else.

Empathy

Empathy can be defined as the ability to feel or imagine another person's emotional experience. Empathy is the link between knowing the thoughts and feelings of others, experiencing them and responding to others in caring, supportive ways. In other words, I'm empathic whenever "I put myself in someone else's shoes".

Daniel Goleman identifies three types of empathy:

- Cognitive Empathy: the ability to understand another's perspective and think about their feelings.
- Emotional Empathy: the ability to physically feel what another person feels, as if their emotions were contagious. It enables us to feel others' emotions quickly without thinking deeply.
- Empathic Concern: the ability not only to understand the other person's predicament, but also to sense what another needs from you and spontaneously move to help him/ her. This kind of empathy enables you to connect with the intellectual situation of another person through your felt senses without losing your center.

Research has shown that children can become very empathetic, even when their verbal expressiveness is limited. Young infants tend to become overwhelmed with others' unpleasant emotions and may engage in behaviors, such as self-comforting to reduce their own distress. During the second year of life, however, there appears to be a transformation from concern for the self to a capability for concern for the other. By 18 to 20 months, toddlers are capable of a wide variety of helping behaviors, such as verbal comfort and advice. In addition, they share and distract the person in distress. By the third year of life, young children are capable of a variety of empathy related behaviors, including expressing verbal and facial concern and interest in another's distress and continue to engage in a variety of helping behaviors.

As stated above, empathy includes both emotional and cognitive components. Emotional empathy is experienced in some form by children as early as infancy and toddlerhood. In contrast, cognitive empathy, which is also sometimes referred to as theory of mind, is being developed while children enter the preschool and elementary school years. This is mainly

explained due to children's increased language capacities, which facilitates empathic reflection as well as the measurement of such empathic abilities.

Empathy is related to various biologically and environmentally based factors. These are: genetics, facial mimicry and imitation, sub serving areas of the brain such as the mirror neuron system and the limbic system, child temperament, parenting factors such as warmth, parent-child synchrony and other qualities of the parent-child relationship. There are several cases in which empathy has not been developed properly, such as in children with pervasive developmental disorders.

From a mental health perspective, when we have high levels of empathy, we are more likely to:

- function well in society,
- engage in altruistic behaviors,
- develop social competence,
- build successful & meaningful interpersonal relationships in the family unit,
- school, workplace and beyond.

In addition, the capacity to place ourselves in someone else's position, to understand and feel what they feel from within their frame of reference, is an important skill when dealing with stressful situations in order to decide how to act more effectively. For example, we might ask the people around the victim to stay away for safety reasons or call an ambulance before starting chest compressions.

Activity 1: Same and different

Description

We ask children to form a circle and give them successive instructions, e.g. "Those who have brown hair, take a step forward!" or "Those who struggle waking up in the morning, clap your hands!". In case this activity provokes discussion about the specific features of some children

in the classroom, such as their different cultural background, learning difficulties or deviant behaviors, we welcome all children's comments and keep a safe and warm environment for sharing thoughts and emotions.

Suggested questions:

Q: How would our life be if we were all the same/ if we thought and acted the same way?

A: It would be boring / We would not have disagreements / There would be no progress.

Q: How would our life be if we were completely different from each other/ if we thought and acted in a completely different way?

A: We would have constant conflicts / Our communication would be difficult / We would not be able to make decisions.

Levels

Level 1: Our instructions refer to children's external features, such as their hair color/ height/ weight/ sex or general preferences, such as their favourite food/ toys/ places etc.

Level 2: Our instructions refer to children's internal features, such as their character/ emotions/ relationships etc.

Activity 2: Storytellers

Description

Children stand in a circle. While listening to low background music, we ask them to walk in the classroom and choose an object. Then, they place their objects in the center of the circle and subsequently, each child chooses an object - preferably not the one they brought -. After that, they form groups of 4-5 and compose a short story, based on the objects they have chosen. When they finish their story, they share it in plenary.

Suggested questions:

Q (level 1): What made you choose this object?

Q (level 2): What made you choose this emotion card?

Q (level 1 & 2): What were the difficulties you/ your team faced while making the story?

Q (level 1 & 2): What did you enjoy most while making the story?

Levels

Level 1**:** Children are asked to choose objects from the classroom in order to compose their story.

Level 2: Children are asked to choose objects from the classroom alongside one emotion card, in order to compose their story. We can use all emotion cards.

Activity 3: Interview

Description

We divide children into groups of 5. In each group, a child plays the role of a person that made an achievement, e.g. fireman who took part in an operation / rescuer who saved someone's life/ champion who won a medal at the Olympics / scientist who discovered a new treatment, while the other children of the group take on the role of journalists. Children can propose other scenarios as well.

Suggested questions

Q (level 1): How are you feeling about your achievement?

Q (level 1): What difficulties did you face while making your effort?

Q (level 1): What thoughts did you make in order to overcome the difficulties?

Q (level 1): Did you have someone helping you? What did he/she do for you?

Levels

Level 1: Children are given the questions of the interview. At the end of the interview, we ask them to talk about situations during which they felt proud of themselves.

Level 2: Children are instructed to write their own questions. At the end of the interview, we ask them to talk about situations during which they felt proud of themselves.

Activity 4: Can you help me?

Description

Children are divided into groups of 4-5. One child from each group has a problem and asks his/ her peers to say or do something in order to help him/her dealing with that. Attention! The goal of this activity is not to provide solutions to the child's problem, but to make him/her feel better through connection, understanding and acceptance.

Levels

Level 1: We give children prepared scenarios, such as "making mistakes in an exercise", "being teased by peers", "losing a game", "sick parent/ grandparent/ pet", "first day at my new school", "no money for participation in school trip", "my friend doesn't want to play with me", "my birthday party was cancelled", "facing an emergency while having / not having had CPR training" etc.

Level 2: Children are asked to think and write their own scenarios. Then, they exchange their scenarios inside their group and each child writes his/her encouraging words under the other child's scenario. After that, each child gets back his/her scenario, reads the encouraging words of his/her team members and shares his/her emotions with them.

Activity 5: I like your…!

Description

Children are sitting in a circle. Each child turns to the next one on the left and says something good about their appearance, character or behavior. The other children listen carefully. After all children have spoken, the game starts again towards the opposite direction of the circle.

Suggested questions

Q: How did you feel when you said something good for your classmate?

Q: What do you think about the other child's emotions after your sharing? Try to guess his/ her emotions!

Q: How did you feel when you heard something good for you?

Q: What did you like most (hearing or saying)?

Levels

Level 1: We ask younger children to provide a positive comment on the other child's appearance.

Level 2: We ask older children to provide a positive comment on the other child's character or behavior.

Learning Disabilities: It is very important to involve all children in this activity. We may start the game by giving them ideas and inspiration or intervene during the game in order to facilitate the process. If they encounter any difficulties while trying to find something good in a classmate, then we can stop and talk about their difficulties, the reasons why this is happening and how they feel about it.

Notes to Remember!

- Empathy is the ability to feel or imagine another person's emotional experience.
- There are three types of empathy: cognitive empathy, emotional empathy and empathic concern.
- Children can become very empathetic even when their verbal expressiveness is limited.
- Emotional empathy is experienced in some form by children as early as infancy and toddlerhood, whereas cognitive empathy, which is also sometimes referred to as theory of mind or perspective taking, is being developed while children enter the preschool and elementary school years.
- Empathy is related to various biologically and environmentally based factors.
- There are several cases in which empathy has not been developed properly, such as in children with pervasive developmental disorders.
- When we have high levels of empathy, we are more likely to function well in society, engage in altruistic behaviors, develop social competence and build successful and meaningful interpersonal relationships in the family unit, workplace and beyond.
- Being empathic is very important when dealing with stressful situations in order to offer our help and decide how to act more effectively.

Self-regulation

Self-regulation is the ability to express thoughts, feelings and behaviors in socially appropriate ways. Learning to calm down when angry or excited and persisting at difficult tasks, such as dealing with an emergency, are examples of self-regulation. For instance, a cashier who stays polite and calm when an angry customer is shouting at him or a girl who accepts the fact that she can't have the toy she desperately wants. It's like a thermostat, which kicks on or off to keep a room at a certain temperature or a "set point".

It is quite obvious that we constantly have to self-regulate in order to be able to be part of a team or a system, starting from our family or school class. Self-regulation is strongly related to well-being and alongside with Emotional Awareness and Empathy plays a significant role in Daniel Goleman's theory of emotional intelligence. So, we can imagine how important is teaching children to self-regulate. Imagine how different the lives of most of us might have been, if we had had this education during our childhood!

For the purposes of our program, we were inspired by the Zones of Regulation created by Leah Kuypers. This is a tool, which helps children's training in self-regulation. In other words, children are being taught good coping and regulation strategies in order to deal with stress and anxiety. Having kept this model's important principles and after adjusting them to our needs, we made a new categorization of frequently experienced emotions, which students can easily identify during their everyday life and especially when dealing with an emergency. More specifically, there are four distinct colored zones: the blue, the green, the yellow and the red. There is no "good" or "bad" zone and all of them are expected to be experienced by all children at one time or another. The basic criterion for this categorization is the sense of one's level of emotional alertness.

- Blue zone: includes emotions of low alertness, such as disappointment, tiredness, pain and boredom.
- Green zone: includes regulated emotions, such as happiness, peace, contentment and safety.
- Yellow zone: includes elevated emotions of annoyance, anxiety, stress and jealousy.
- Red zone: includes intense emotions of irritation, dislike, aggressiveness and panic.

As you can notice, higher levels of emotional alertness are to some degree related to lower sense of internal control and vice versa.

The model presented above provides children with the opportunity to observe themselves within a situation, increase their emotional vocabulary, better describe how they and the people around them feel, learn how to change or stay in the zone they are in, understand their emotions and thus, seek for help or offer help more effectively. They can also plan their further actions with safety and develop problem-solving skills and resilience. Last but not least, teaching self-regulation provides children with useful techniques in order to stay focused and feel safe when dealing with an emergency or return to their initial emotional state after dealing with a crisis.

*It must be noted here that before introducing children in training of self-regulation, we should definitely present them the above model. A good idea is to start with Activity 1 and then, move on to the next activities depending on our available time.

Activity 1: Zones in rolls

Description

Ask children to draw rolls of toilet paper with acrylic colors or crayons, according to the colors in the zones of self-regulation (blue, green, yellow, red). Keep in mind that acrylic colors, unlike crayons, need time to dry. Then, ask children to write emotions or draw facial expressions on the corresponding roll zone. Finally, children can be divided in groups according to the zone of self-regulation in which their current emotional state belongs to.

Suggested Questions

Q: What emotions belong to the blue zone of self-regulation?

A: Disappointment, pain, tiredness, boredom.

Q: What emotions belong to the green zone of self-regulation?

A: Happiness, peace, contentment, safety.

Q: What emotions belong to the yellow zone of self-regulation?

A: Annoyance, anxiety, stress, jealousy.

Q: What emotions belong to the red zone of self-regulation?

A: Irritation, dislike, aggressiveness, panic.

Q: What is your current emotional state and in which zone of self-regulation belongs to?

Q: Bring in mind the stages of the algorithm and state this/those that is/are related to the zone of self-regulation in which your current emotional state belongs to, e.g. "I feel anxious, so my zone of self-regulation is the yellow one and I guess that I may be in that zone after noting the victim's not breathing normally".

Activity 2: Spoon game

Description

We ask children to draw facial expressions on plastic spoons with colorful or black markers and then, place the plastic spoons in a bag or box. Then, children sit in a circle and grab, one after the other, one spoon out of the bag, imitate the facial expression depicted in the spoon and accordingly, decide which zone it belongs to. Every time a child makes a correct match, he/ she gains the specific spoon. At the end, children count their spoons.

Levels

Level 1: Children have optical access to the cards depicting zones of self-regulation.

Level 2: Children do not have access to the cards depicting zones of self-regulation, but they can ask for another's child help, if they want to.

Activity 3: Abandon ship!

Description

We divide children into three large groups. The scenario is the same for all of them. Each group is on a sinking ship and has a life boat in which they are allowed to take only ten items from the ship. At the end, all children answer the suggested questions and discuss their experience in plenary.

Suggested Questions

Q (level 1 & 2): How were you feeling while dealing with this situation?

Q (level 1 & 2): Which zone of self-regulation best described your emotions?

Q (level 1 & 2): What emotion did you feel first? Did your emotion change afterwards?

Q (level 2): Have you seen a similar situation on TV/ movie or somewhere else?

Q (level 2): What did you learn from this experience?

Levels

Level 1**:** Every group discusses in order to decide which ten items they will eventually take together on the lifeboat.

Level 2**:** Every group discusses in order to decide which ten items they will eventually take together on the lifeboat. All three groups meet and negotiate on the ten items they will take together on the lifeboat, until they reach a final list of them.

Activity 4: What a mess!

Description

All children -apart from two- stand and hold hands creating a chain. The first child of the chain begins to tangle it by passing over or under the other children's arms, legs, etc., without

breaking the chain. The others follow his/her lead without talking to each other. After all children are tangled together, the two children try to untangle the chain by giving verbal instructions. They are not allowed to touch the chain.

Suggested questions

Q: What were the major difficulties you faced during this game?

Q: What did you think/ do in order overcome them?

Q: Can you think of any similarities between the difficulties faced here and those when offering first aid? What can you do to overcome them?

Notes to Remember!

- Self-regulation is the ability to express thoughts, feelings and behaviors in socially appropriate ways.
- Learning to calm down when angry or excited and persisting at difficult tasks, such as dealing with an emergency, are examples of self-regulation.
- We constantly have to self-regulate in order to be able to be part of a team or a system, starting from our family or school class.
- Self-regulation is strongly related to well-being and emotional intelligence.
- Students can easily identify four distinct colored zones of self-regulation: blue, green, yellow and red, based in their level of emotional alertness.
- Teaching self-regulation provides children with the opportunity to observe themselves within a situation, increase their emotional vocabulary, seek for help or offer help more effectively, as well as stay focused and return to their initial emotional state after dealing with a crisis.

Fight-Flight-Freeze response

Fight, flight or freeze (FFF) response is activated when people recognize danger. It's a survival response, but it's not a voluntary one. The FFF response, sometimes referred to as the stress response, comes from the part of our brain called the amygdala, located in the limbic region. When we perceive a stressful situation, almost instantaneously our bodies get a surge of stress hormones and we experience a sequence of physiological changes – our heart may race, beads of sweat may appear, our muscles may tense, our tummies may churn and we may also feel shaky-. Our responses depend on the situations we experience and the severity of our reactions varies as well. A very interesting presentation of the FFF response, which is also suitable for children, can be found in the following link:

https://www.youtube.com/watch?v=FfSbWc3O_5M&ab_channel=AnxietyCanada.

It is important to be aware of the different behavioral manifestations of children's FFF response. More specifically, their most common presented behaviors are described below:

- Fight can look like kicking, screaming, spitting, pushing, throwing anything children can get their hands on, hands clasped in fists, ready to punch, glaring and gasping for breath. In other words, their behavior seems aggressive either verbally or physically.

- Flight can look like darting eyes, restlessness, excessive fidgeting, doing anything to get away and running without concern for their own safety. Sometimes, their reaction can be much more subtle, such as not engaging in a conversation or lesson, while physically staying in the place where the incident occurred.

- Freeze can look like holding their breath, heart pounding and/or decreased heart rate, shutting down, feeling unable to move, feeling numb, whining and daydreaming. They may refuse to follow instructions or complete work.

It is worth noting that there are some children who struggle with adjusting to sensory input while being in the classroom and show distracted behaviors, outbursts, fidgeting and missed learning opportunities. When a child can't properly process sensory input, there are observable overreactions or underreactions that result in anxiety, insecurities or an urgency to make the sensory system "seem right" by seeking out sensory stimulation or avoiding certain sensations.

For some kids, the system is faulty and transmits false alarms, sending them into full blown fight, flight or freeze mode weekly, daily or even multiple times a day. Often, this faulty alarm system is because of increased cortisol levels due to prenatal stress or early childhood trauma. More specifically, if a child has been exposed to a serious stressful experience previously or repeatedly, they may manifest a FFF response as a reaction to their memory of that experience and not to the present experience itself. For example, a bang on the table might provoke the freeze response, because this sound triggers the memory of a traumatic event. Similarly, FFF response can be activated due to conditions such as SPD (sensory processing disorder), where sensory triggers cause alarm sensors to sound when no real danger is present.

We need to help children to become aware of that mechanism and avoid blaming themselves about the way their body responds and the way they feel. The earlier they realize that mechanism, the better their concentration and actions become while dealing with an emergency. Apart from that, it is important to keep in mind that if a child struggles in managing their emotions, it's hard to open up their brain in order to be able to receive the content that they are trying to learn.

To sum up, it is crucial to help children spend less time in survival responses and more time in play, effective learning and connection. Thus, teaching social-emotional skills is completed by incorporating some ideas on children's observing and recognizing these survival responses. Accordingly, through this training children can feel more secure and confident in dealing with emergency situations, as well as their unexpected outcomes.

Activity 1: FFF pose!

Description

Children are divided into 3 groups and each one takes a FFF card. So, there is the Fight-group, the Flight-group and the Freeze-group. We discuss with children the ways each response is manifested using the suggested questions. Then, we ask them to take a pose that represents it best. Each group votes internally for the best pose.

Suggested questions

Q: Do you remember an incident in which someone had a fight/ flight/ freeze response?

Q: How does someone feel when he/she has a fight/ flight/ freeze response?

Q: Can you describe the way fight/ flight/ freeze response is manifested physically?

Q: If someone could express verbally his/her fight/ flight/ freeze response, what words would he/ she use?

Activity 2: What if…?

Description

Children stand in a circle. In the middle of the circle we have placed 3 hula hoops/ ribbons, each of which represents a different way of reacting to a dangerous situation. Thus, we have the fight-hula hoop, the flight-hula hoop and the freeze-hula hoop. Each time we give our instruction "What if …?", children run and enter the hula hoop that represents best their response to the situation we describe, e.g. storm, darkness, spider, bear, building top, cliff edge, accident, blood etc.

Suggested questions

Q: Have you ever had a fight/ flight/ freeze response? If yes, what happened?

Q: What if someone collapsed in front of you?

Q: What parameters might influence your reaction to it? (relationship, CPR training, place, presence of adults etc)

Levels

Level 1: We present children different situations and ask them to decide about their possible response to them.

Level 2: After presenting several situations, we ask children to volunteer in presenting their own imaginary situations. So, whoever wants to presents his/ her own imaginary situation and then, invites his/ her classmates to react to it. At the end, we ask children to share in plenary if they noticed something regarding their own or their peers' responses, eg a repetitive response occurred.

Activity 3: My FFF!

Description

We scatter FFF cards from the opposite side on the floor. Then, we invite all children to pick one and sit in pairs. After that, we ask them to share with each other experiences in which they had the response depicted on the card. After listening carefully their partner, children share his/her experience in plenary.

Levels

Level 1: Children talk in pairs about their experiences.

Level 2: Children write their experiences and give them a title. Then, they can read them in plenary and listen to other children's comments about them.

Activity 4: Rafts and crocodile

Description

We ask children to form three groups and then, we lay newspapers on the floor in three areas, each one representing a different raft. We inform children that the newspapers are rafts. After that, we lead them verbally to imagine that they walk somewhere in Africa while keeping their eyes closed. They enter a dirty road, avoid a snake, pick a fruit, arrive in a river and swim, until they see the rafts and go into them. And the journey begins! At first, all seem normal, but they suddenly see a crocodile coming towards them! The crocodile is surrounding their rafts… Their

rafts one after the other are being cut by the crocodile. Children have to find ways to survive, while the crocodile keeps cutting pieces from their rafts. What will happen next?... Children play the rest of the story. At the end, we discuss their reactions, physical, verbal and emotional.

Suggested Questions

Q: How were you feeling when you saw the crocodile coming towards the rafts?

Q: What was your physical reaction to that?

Q: What was your first response to the danger, fight, flight or freeze?

Q: How was your group affected your emotions and behaviors?

Q: Did you have any similar to that experience in the past? What happened then?

Notes to Remember!

- Fight, flight or freeze (FFF) response is activated when people recognize danger. It's a survival response, but it's not a voluntary one.
- The FFF response, sometimes referred to as the stress response, comes from the part of our brain called the amygdala, located in the limbic region.
- There are different behavioral manifestations of children's FFF response.
- For some kids, FFF response is activated weekly, daily or even multiple times a day. This happens because of increased cortisol levels due to prenatal stress or early childhood trauma.
- It's crucial to help children to become aware of that mechanism and avoid blaming themselves about the way their body responds and the way they feel.
- If a child struggles in managing their emotions, it's hard to open up their brain in order to be able to receive the content that they are trying to learn.

Teaching social-emotional skills includes activities and games for promoting children's emotional awareness, empathy, self-regulation as well as their understanding of fight-flight-freeze (FFF) response. Nevertheless, we thought it is also important to create useful tools that incorporate all these thematics and contribute uniquely to the consolidation of the children's acquired knowledge and skills. As a result, we came up with the design and creation of the **Emotions Board Game** and the **Social-emotional skills Scenarios** alongside their related questions and indicative answers.

Emotions Board Game

Preparation: This game can be played by 2 or more teams. Each team consists of 4-5 pupils. Before starting the game, we need as many pawns as the teams playing, a dice, orange and purple cards, as well as pencils and small papers in order to write more questions during the game.

Instructions: Shuffle and place the cards face down in a stack so that all players can reach them. Cards with orange color ask questions related to emotional awareness, as in "How would you feel if …?", while cards with purple color ask questions related to emotional self-regulation, as in "What would you do if …?". Each team chooses a pawn and places it in the START square. The team with the **lowest** roll plays first. When a team's pawn lands on a question mark, the other team draws a card and reads out loud the question, which must then be answered by the players of the first team. If the pawn lands on a square with an arrow, it moves forward or goes backwards as many squares as the arrow says. When a team's pawn lands on a square with an exclamation mark, its players must answer a question related to emotional awareness or self-regulation created by the other team's players. The team whose pawn reaches the FINISH square **second/last** wins!

Ideas for CPR training: There are some questions that can serve as a guide in creating questions related to the LIFE FORCE BLS-Algorithm. Here, we provide an example of those, provided that children deal with an emergency.

- How would you feel if…

-you saw someone collapse?

-you knew how to provide CPR?

-you were asked to help someone provide CPR?

-you saw the paramedics reaching the place where the incident occurred?

-you realized that there is no AED nearby?

-you saw a lot of people around the person who collapsed?

-you did not have a mobile phone?

- What would you do if…

-you wanted to reach the person who collapsed safely?

-you saw someone in fight response getting closer to the victim?

-you wanted to check the person's response?

-the person was not breathing normally?

-you were informed that the paramedics will arrive after ½ an hour?

-you felt very tired while doing chest compressions?

Tips for extra fun: Depending on the number of pupils, the game can be played by more than two teams. Apart from that, we can encourage children to write their own cards with questions after playing the game a few times, so as to keep their interest and focus on it. We can also change the rules of the game, after we discuss them with all teams in order to make the game more entertaining and our cooperation more effective, eg the use of a stopwatch.

Goal: Our goal is to invite and sensitize children to observe, experience and manage their emotions through a series of imaginary situations, less and more serious ones. We do not follow a traditional way of playing, eg the first that reaches the finish square wins. We provoke children's curiosity, imagination and flexibility as much as we can, instead.

Social-emotional skills Scenarios

The Social-emotional skills Scenarios presented here are inspired by events of everyday life, which children and adults are constantly confronted with.

Preparation: At first, we decide whether children work individually or in groups and then, we present them the selected Scenario.

Description: After we give children the written description, we ask them the relevant questions. It's better to start from the easier ones and then, go on to the more difficult and complex ones. The answers written below are indicative. Hopefully, children will come up with many more.

Tips for extra benefits: It is important for children not to dwell on the obvious answers and to think about motivations / intentions / thoughts / emotions of the people presented in the scenarios. It is also beneficial to invite children make their own questions.

Goal: We aim to raise children's awareness and promote their training in developing social and emotional skills, which are necessary for their lives in general, but also in emergency situations. These scenarios provide children with the opportunity to imagine themselves in different situations and thus, get ready for future experiences or deal better with the present ones.

Scenario 1: Street in neighborhood

Description

A shabby man walks on the sidewalk and bends down to pick up a bill (distrust). A girl (Anne) is holding her broken skateboard (sadness, disappointment), while a couple is standing next to boxes outside the house they just moved (happiness) with a cat in a transport cage. A car driver is shouting and raising her hands (irritation) as she is standing in line behind other cars.

Emotions: distrust, sadness, disappointment, happiness, irritation.

Questions

1) Why is the female driver shouting? (irritation due to traffic jam) (L1)

2) How is Anne feeling? (sadness, disappointment) (L2)

3) Can you name a reason why Anne's skateboard broke? (hit hard on an object or sidewalk/ due to low quality material) (L2)

4) How is the old man in the picture feeling? (distrust) (L2)

5) What would you have done if you were in the same situation as the old man in the picture? (I would have taken the banknote and have kept it for myself / I would have taken it and would have asked passers-by if someone had lost it / I would not have taken it / I would have taken it and would have given it to someone else, eg a poor guy, a sick person, a friend etc.) (L3)

6) How are the man and the woman talking to each other feeling? (happiness) (L2)

7) Why do you think there is traffic jam on the road? (rush hour / accident / damaged traffic light ahead) (L4)

8) Why do you think the female driver is feeling irritated? (rushes to go on a date / finds it difficult to wait/ spends time on something useless) (L4)

9) What is the best solution to Anne's problem? (walking home / buying a new skateboard / contacting someone to repair her broken skateboard) (L5)

10) What would you recommend to the couple who just moved into the neighborhood to do? (talking to neighbors / arranging furniture and decoration / shopping / resting / walking in the new neighborhood) (L6)

Scenario 2: Courtyard of school

Description

A student is covering his ears (annoyance) while being teased by two of his classmates (dislike) - a girl who is obese and a boy who has pimples on his face-. A group of children – Kate, a very tall girl and Marco – is cheering for their victory in the middle of the volleyball court (excitement, contentment). A boy is sitting alone (loneliness) and the teacher walks in the courtyard (safety).

Emotions: annoyance, dislike, excitement, contentment, loneliness, safety.

Questions

1) Why is the boy covering his ears? (noise annoyance / peer teasing) (L1)

2) How are Kate, Marco and the girl in the volleyball court feeling? (excitement, contentment) (L2)

3) What can you say about the child sitting alone? (he has no friends / no desire to play / his team lost a game / he's been punished / he was hit and hurts) (L2)

4) How are the children looking at the boy who shields his ears feeling? (dislike) (L2)

5) What would you do if you were in the same situation as the boy being teased? (I would tell those who were bothering me to stop / I would ask for teacher's help / I would do nothing / I would go to a friend / I would do something I like) (L3)

6) Can you name a reason why the teacher walks around the courtyard during the break? (students' safety / crisis management) (L2)

7) Why do you think the two children are making fun of the third? (they reject his special features / they think that they are better at something / they do not know how to make

friends / others make fun of them and this is how they vent of their anger, eg for their extra weight/obesity or their pimples) (L4)

8) Why are the three children cheering in the stadium? (their team won / they are preparing for a game / they really like volleyball / they are happy to be in the same team) (L4)

9) Suppose you could be in the courtyard too, what would you do with children who feel lonely and annoyed? (approaching and getting acquainted / suggesting to play together / discussing about the problem / sharing similar experiences) (L5)

10) What would you recommend the teacher to do with the children in the picture? (talk to the lonely child about the reasons of isolation / talk to the children who are making fun of the third child / find out why the children are happy on the field and share their joy) (L6)

Scenario 3: Department Store

Description

A colored boy is alone in a hallway (terror) while his mother -colored- is looking for him in another hallway (panic). A girl -from India- has fallen down and she is crying while showing the snack she wants (anger, stubbornness). Her father -white- is looking around (guilt), whereas an employee is placing products on the shelves (peacefulness).

Emotions: terror, panic, anger, stubbornness, guilt, peacefulness.

Questions

1) What happened before the boy of color found himself alone in the hallway? (something attracted his attention and left his mother's side / she left him alone for a while, but he left the spot and they lost each other) (L1)

2) Why is the woman of color feeling panic? (she lost her child/ she is thinking that her son is in real danger) (L1)

3) What do you think will happen next between the man and the girl in the picture? (the father will buy the snack and the girl will calm down / the father will not buy the snack and the girl will continue to cry / they will stay there until the girl stops crying and then they will leave / the father will pick her up and take her home) (L2)

4) How is the girl lying on the floor feeling? (anger, stubbornness) (L2)

5) What would you do if you were in the same situation as the woman of color? (searching hallways/ ask staff assistance in order to search for her child / loudspeaker announcement that the boy is missing, a description of his external features and instructions on where to take him when found) (L3)

6) What if a customer complained to the father about the noise of the girl crying? (the father would feel angry and would not answer / the father would answer him angrily "Mind your own business!"/ the father would calmly answer that he was right or would apologize for the inconvenience / the father would feel guilty and take the girl home as quickly as possible) (L3)

7) What are the causes of the girl's crying? (her father does not allow her to take the snack she wants/ he does not allow her to eat the snack right away/ she showed him the snack she wanted, but he did not respond immediately to her request) (L4)

8) Why do you think the employee is feeling peaceful? (he concentrates on his work / likes what he does / works in good conditions) (L4)

9) What would you do if you were a customer who listens on loudspeakers that a child was lost in the department store? (nothing / while shopping, I would look for the child around me/ I would stop shopping and start looking for the child in the hallways / I would discuss it with someone next to me / I would go to find the mother to see if she needs further help) (L5)

10) What would you suggest the manager of the department store to do so that the employees are peaceful? (create a calm working environment/ give them a satisfactory salary / discuss their problems in order to solve them / reward or praise the best employees) (L6)

Scenario 4: Restaurant

Description

A man of color has his mouth stuffed with food (delight, pleasure), while a woman is looking at the plate in front of her (disgust) and is shouting at the Chinese waitress, who is approaching (shame).

Emotions: delight, pleasure, disgust, shame.

Questions

1) Why does the man of color have his mouth stuffed with food? (gluttony) (L1)

2) How is the man of color feeling? (delight, pleasure) (L2)

3) What do you think will happen next to the man in the picture? (swallow food / spit food / choke) (L2)

4) How is the old woman in the picture feeling? (disgust) (L2)

5) What would you do if you were in the same position as the old woman? (call the waitress / complain to the chef / do nothing / leave the restaurant / order something else / leave that dish and eat the rest) (L3)

6) How is the waitress feeling? (shame) (L2)

7) What would happen if the waitress approached the woman angrily? (the woman would feel angry as well/ verbal conflict between the two of them/ physical violence) (L3)

8) Why do you think the waitress is ashamed? (she is about to apologize / she had a previous similar experience) (L4)

9) What would you do if you were the waitress? (discussion with the customer about the problem / offer another dish or meal free of charge / referral to the restaurant manager to handle the situation) (L5)

10) What judgement would you make about this restaurant based on customers' reactions? (there are some good dishes on its menu, but not all of them are good/ it needs some improvements in the kitchen and/or customer service) (L6)

Scenario 5: Home

Description

A boy (Mike) offers a bouquet of flowers to his grandfather, who is sitting in an armchair (joy, tenderness, surprise), while a man and a woman are embracing (love) and a dog is hugging among their legs (jealousy).

Emotions: joy, tenderness, surprise, love, jealousy.

Questions

1) Why is Mike offering a bouquet of flowers to his grandfather? (due to his grandfather's birthday or name day / he was discharged / he's celebrating an anniversary / Mike wants to thank him for something) (L1)

2) How would you describe the relationship between Mike and his grandfather? (warm, tender, sweet, close, loving) (L1)

3) How is the grandfather in the picture feeling? (joy, tenderness, surprise) (L2)

4) How are the man and woman in the picture feeling? (love) (L2)

5) What other way would you plan to show your love to a loved one, other than offering flowers and making a hug? (tender caress / offer chocolate / drawing / gift / verbally, eg "I love you" / kiss) (L3)

6) What conclusions can you draw from the behavior of the man and the woman? (they have intimacy / they are a couple or siblings or good friends or close relatives / they express their love / they are happy to know each other and have a good time) (L4)

7) What motive is there under the dog's behavior? (wants a hug / wants to go for a walk / is jealous of the relationship between the two adults / wants to be given attention) (L4)

8) What would you have done if you were in the same situation as the dog? (I would do the same / I would bark loudly with joy / I would bring my favorite toy to play / I would jump wagging my tail) (L3)

9) What would you have done with the dog if you were in the position of man and woman? (I would hug it too / I would touch it tenderly / I would play with it for a while / I would tell it that in a little while we would go for a walk / I would do nothing / I would push it to go away / I would shout at it in order to stop it from behaving like this) (L5)

10) Can you compose a song about the boy's love for his grandfather? (L6)

Scenario 6: Beach

Description

A girl (Anne) dives off a cliff and her friends - two boys (one is Nick) and a girl (Kate)- applaud her (admiration), while a young man with physical disability is entering the sea using a ramp (strength). Two preschool aged children –a boy and a girl- are playing with the sand, when suddenly the boy grabs the rake from the girl (anger, jealousy, aggression).

Emotions: admiration, strength, anger, jealousy, aggression.

Questions

1) Why are children applauding Anne? (they encourage her in her first attempt to dive off a cliff / reward her risky dive / are impressed by her dive) (L1)

2) What can you say about the young man with the physical disability? (he likes the sea / has a strong will / is active and has interests) (L2)

3) Can you say a reason why the boy grabs the rake from the girl in the picture? (wants to play with this specific rake / wants to take back his rake / cannot talk and ask for the rake / wants to tease the girl about something that happened earlier) (L2)

4) How is the preschool boy in the picture feeling? (anger, jealousy, aggression) (L2)

5) What would you do if you were in the same situation as the preschool girl in the picture? (I would grab the rake from the boy / hit him / calmly tell him to give it back to me / cry or shout / go to my mom to ask for help / take another rake or play another game) (L3)

6) What is the relationship that connects the four children in the picture? (friends/ relatives / siblings / classmates / may have met on holidays) (L4)

7) What could be done to maximize the number of people with physical disabilities who have access to the sea? (increase ramp construction on main beaches / information on the locations of ramps / volunteers accompanying disabled people at sea) (L5)

8) What would happen if the ramp broke while the young man was using it? (the man would feel panicked / call for help / accident / intervention of a bather or his attendant for assistance / informing the competent authorities to repair the damage) (L3)

9) What would happen if the preschool girl did not let the boy take the rake? (physical violence between them / the boy would retreat / the two children would shout and argue verbally / a parent or caregiver would intervene) (L5)

10) How do you think Nick feels while watching Anne dive? (shame / joy / jealousy / admiration/ stubbornness / pride / anxiety / curiosity / terror) (L6)

Scenario 7: School class

Description

Students are writing a test. One of them is looking out of the window (boredom), while another (Marco) is looking at his watch (anxiety, stress). At the same time, a student tries to copy from her classmate (curiosity) and a girl has fallen asleep on her desk (tiredness).

Emotions: boredom, anxiety, stress, curiosity, tiredness.

Questions

1) Why is the boy looking out of the window? (due to boredom / thinks of something irrelevant to the lesson / something outside the class caught his attention / due to tiredness / imagines to be somewhere else) (L1)

2) How is Marco feeling while looking at his watch? (anxiety / stress) (L2)

3) What do you think will happen after the student tries to copy from her classmate? (his classmate will realize it and get angry / his classmate will help him with the answers / the teacher will see him and remark on him / he will stop trying if he does not manage to copy) (L2)

4) How is the student who has fallen asleep on her desk feeling? (tiredness) (L2)

5) What questions would you ask someone who was looking elsewhere and was not paying attention to you during your conversation? (I would ask him if he was well / if something concerned him / if I could help him/ if he was interested in the topic we were talking about / if he wanted us to talk about something else) (L3)

6) Can you take Marco to another scene, in which he would also look at his watch and feel anxious or stressed? (national exams / participation in a competition or race / waiting in hospital or in doctor's office / appointment with a girl he likes) (L3)

7) Why do you think the student is trying to copy from his classmate? (due to insufficient preparation for the test / does not know any answers, because he didn't study for the test / wants to confirm his answers) (L4)

8) What would happen if the teacher saw the student who had fallen asleep on her desk? (wake her up / ask her to answer several questions in order to keep her awake / talk to her privately in order to find out the reasons for her behavior/ call her parents to inform them about the incident and discuss possible causes and solutions) (L5)

9) Assuming you could help Marco have less stress, what would you do? (I would suggest him not to look at his watch / I would tell him that it is important to think positively and concentrate on trying to write what he knows / I would tell him that if he does not do well in this test, he will have the opportunity to write better in the next one/ I would hug him and share encouraging words) (L5)

10) What opinion would you form about the students in this class? (each student reacts differently to the same situation / each student has different needs and requires different treatment) (L6)

Scenario 8: Hospital waiting area

Description

A pregnant woman is sitting, while her husband is touching her belly (optimism). An elderly man is standing outside the doctor's door while holding papers with medical results (sadness) and a crying girl is holding her belly (pain).

Emotions: optimism, sadness, pain.

Questions

1) Why is the girl crying while holding her belly? (due to pain) (L1)

2) How are the man and the pregnant woman in the picture feeling? (optimism) (L2)

3) Can you tell a reason for the sadness of the elderly man in the picture? (bad medical results or diagnosis for himself or a loved one/ waiting for a loved one with a severe illness to exit the doctor's office/ bad thoughts about the course of his health or his scheduled medical appointment) (L2)

4) What questions would you ask someone who is holding his belly while crying? (I would ask him to show me exactly where he feels pain / if he hit and how that happened / if he took any medicine / if it is something that has happened to him again before and if so, what he had done / if I can offer him my help) (L3)

5) What would you do if you were in the same situation as the elderly man in the picture? (I would try to make positive thoughts / I would cry / I would talk to the doctor or a loved one about how I feel and what I can do / I would not talk to anyone and I would sit alone) (L3)

6) What is the motivation behind the behavior of the man in the picture? (feel the fetus in the woman's belly / show his love to the woman / express his love to the fetus / relax the pregnant woman before her physical examination) (L4)

7) What is the relationship between the pregnant woman and the man touching her belly? (they are a couple / they are two close relatives / they are very good friends) (L4)

8) What could be done to reduce the pain that the girl in the picture feels? (take a painkiller / go to the operating room for surgery / physical examination and doctor's treatment suggestion) (L5)

9) What would you have done if you were the girl's parent? (sit next to her and support her with positive words/ search for a good doctor to physically examine her as soon as possible/ hug and kiss her) (L5)

10) Create a new character and describe his/ her reasons for being in the hospital waiting area. (L6)

Breathing Games

Angekiki Botonaki

This is also a fun way for the students to gain knowledge and practical experience on the different breathing types (normal, slow, fast, agonal and noisy), on the breathing recognition signs (look, listen and feel), to strengthen their breath and to get used to counting to 10 for their exhalation (like the time they need in the algorithm to check for breathing).

Activity 1. Breathing Recognition Game

Description

- The teacher splits the children into three groups.
- In each round, two out of the three groups are getting off their seats to play and the other one is watching until its turn comes.
- The children of the first group lie down, pretending to have collapsed, and the second group is checking on their breathing in pairs. (Each child breaths normally, with no effort).
- Then, the third group takes the place of the first.
- The second group now lies down and the third is checking (while the first is watching).
- The same happens once more with the first group taking the place of the second and checking on their breathing, so that all children have passed from both positions (victim's & checking).
- The teacher focuses mainly on the checking group.
- **Checking happens in three levels, according to the "Look, Listen & Feel" ways of CPR checking.**
- To be more specific, on the first round, the checking group uses its eyes (**Look**) and focus on the chest, abdominal or shoulder movement to find any body movement as a breathing hint.
- On the second round, the checking group uses its ears (**Listen**) and focus on the sound of breathing.

- On the third round, the checking group uses its touch and tries to **feel** the air of the other group's breath on their cheek.
- Note: The teacher asks in every round the checking group if there is any of the students that hasn't seen, listened or felt the breath the way described. It is very important to make sure that they have all experienced another person's breathing with their senses.

Aim

For every child to experience how it is like to see, listen and feel the breath of another person.

Suggested Questions

Q (level 2): "Can you describe what you just felt? Did you find any difficulty? Was there anything peculiar in doing so? Why is this so important?"

Levels

Level 1: For 6-8, the higher the number of the pupils is, the more times it should be repeated, to make sure everyone has a thorough experience.

Level 2: For 8-10, pupils can share their experience and/or difficulties that might occurred in a "feedback circle".

LIFEFORCE BLS-Algorithm

Educational Cards

Nadine Rott, Anastasis Stefanakis

In this section, the designed cards are presented, which support the learning of lay resuscitation skills, according to the age groups of the children. The learning effect is achieved through illustrations, questions and activities, according to the stages and steps of the LIFEFORCE BLS algorithm.

The Educational Cards consist of divider cards, large cards and small cards, with the front and back sides drawn and labelled. The small cards were developed for pupils and the large cards for teachers. All small cards are set in a dyslexia-friendly font to be readable by all pupils, including children with learning disabilities.

Divider Cards

Divider Cards are large cards. There is one Divider card per stage. Consequently, there are nine divider cards in total. On the front, there is the name of the stage and the corresponding illustration. On the back are listed all the steps that belong to the stage.

Large Cards

There is one large card per stage. On the large cards, all questions belonging to the particular stage are listed, which are also included on the Small cards of the Educational Cards. First the questions from Step 1 card with the indication S1 are listed, then the questions of Step 2 card (S2) and so on. Also, the respective Bloom's level has been added after the questions with the suffices L1, L2, L3, L4, L5 or L6.

Small Cards

Of the small cards, one card exists per (nearly every) step. On the front of the small cards there is an illustration, suitable for the respective step. In addition, on the lower section of the front of the card, there is the description of the step (i.e. Ask yourself “Is the situation safe for me?”). On the back of each small card there are three questions, which relate to the corresponding step. The first question is of lower order thinking skills (LOTS) from levels 1-3 (Remember,

Understand, Apply) of Bloom's taxonomy. Questions two and three are questions that test higher order thinking skills (HOTS) from levels 4-6 (Analyze, Evaluate, Create) of Bloom's taxonomy. The classification into LOTS and HOTS, as well as into the different levels, corresponds to the Bloom's Taxonomy (Armstrong P., 2010)

LIFEFORCE BLS Algorithm card activities

Following are activities with the Brain Educational LIFEFORCE BLS Algorithm cards.

Educational Tips!

- If no pupil raises his/her hand, the teacher should not give the correct answer, but give a cue which will help the pupils.
- If a pupil answers incorrectly, the teacher can involve the rest of the classroom in the discussion without allowing the other pupils to judge the answer. The teacher may ask:
    - Who can help us?
    - What do the instructions say?
    - What does the LIFEFORCE algorithm say?
- Phonological/semantic cues for each activity:
    - Indicative cues (verbal and non-verbal prompts) would be to give the initial letter /syllable/word of the target-answer.

Activity 1

Description

- The stack of cards is lying in the middle of the table.
- In turn, cards are drawn by the students and answered.
- If the question is too difficult, (the teacher can direct the answer and provide helpful hints describing the answer, or asking the rest of the class for help) either a new card is drawn or the question is passed on to the whole class.
- The pupil who answers correctly the most questions is the winner.

Activity 2

Description

- Every pupil receives a set of cards, so that it is also possible to play in groups.
- The pupils have to think together about the answers to the questions. At the end they put together what they have worked out.
- If the question is too difficult for one pupil of the team, he or she can give the cards to another team member.

Activity 3

Preparation

Team game/class game. One set of cards per 8 pupils/ one set of cards per pupil.

Description

The aim of the game is to be the fastest in finding the correct card in a pair of cards, (the teacher can give the scenario to each team and then ask which of the two step cards is the

correct one. The team to answer quicker wins. Alternatively, the whole class is asked the question and each pupil answers individually.

Activity 4

Preparation

Team game (class is divided into two groups). Two sets of all algorithm cards.

Description

- The aim of the game is to be the fastest team to collect the most points
- The cards are on the teacher's desk or on two front-row desks without any pupils sitting in them.
- The teacher says the name of one stage and one pupil from each team must put the corresponding steps in the correct order. The fastest one wins and gains one point for his/her team.

Activity 5

Preparation

Class/individual game. One set of cards per pupil.

Description

The teacher says the name of one stage and its steps, but either omits one step or adds one step from another stage. Pupils must perform the sequencing they hear and to locate and correct the error as fast as they can.

Activity 6

Preparation

Classroom game-individual/team. One set of cards per pupil/per team.

Description

The teacher or a member of one team begins to describe a realistic scenario and draws some scenario elements on the whiteboard, as the description unfolds. The description is interrupted suddenly and each pupil or each member of the group in sequence must continue the description step-by-step, following the algorithm. The teacher or the group can add elements that increase the difficulty in the scenario (sudden rainfall, the phone battery is empty, one of the bystanders slips and falls, it is discovered that a third person who was asked to call for help didn't do so, there is a fight, a medical doctor appears suddenly, etc.).

Activity 7

Preparation

Team game. One set of cards per team.

Description

- Each group must create its own scenario or card game (games from other countries, scenarios from the everyday life of migrants/refugees should be included, to portray realistic everyday situations of children.
- One team says the scenario and the other team must act it (like role playing game).
- Team games are played in a cyclic fashion. The team which makes fewer mistakes/ logs the fastest time/ends up with more cards, etc. wins.
- Each team keeps notes about the other team and, at the end, they discuss about errors and omissions, and one team must suggest to the other ways to practice on the specific errors they made.

Activity 8

Preparation

Team game. One set of cards per team.

Description

- The aim of the game is to correctly guess cards. The team which correctly guesses the most cards wins.
- Each team chooses one card and one pupil to present the card using pantomime. The other group must guess the stage the card belongs to and which card it is. The same can be done by drawing on the whiteboard. Stages and steps are drawn and the pupils in the other team guess.

Activity 9

Preparation

Classroom activity. Either on the blank pages in the Pupil's handbook or in a notebook.

Description

Pupils are asked to draw and depict the steps of one or more stages using visual diagrams, and to use color markers to color the algorithm stages.

Activity 10

Preparation

Classroom activity. One set of cards per class.

Description

- All the pupils together compose a scenario using cards.

- Each pupil has a specific role in the scenario and performs a specific action. All the pupils act the scenario. There is a helper who holds the cards and when the pupils forget the step they must take, the helper shows them the respective card.
- When the scenario is over, each pupil discusses what he/she found difficult, how he/she felt, what (if anything) scared him/her, and what he/she liked about his/her role, as well as which role he/she would like to play next time.

Activity 11

Preparation

Classroom activity. One empty 1.5 liter plastic water bottle, one old t-shirt, 3 rubber bands, one old newspaper and/or magazine for filler per pupil.

Description

- Ensure that the water bottle is completely empty with its cap screwed on tightly. Each pupul should insert the water bottle into the shirt in the center of where a person's chest would be on their breastbone.
- Then the pupil should take the paper they will use for filler and insert it into the shirt around the bottle, ensuring that the bottle stays aligned down the front center of the shirt.
- The pupil should then take their old t-shirt and tie a rubber band around each of the two arms and the bottom of the shirt. They can paint on the t-shirt, and write its name.

Activity 12

Preparation

Team activity/ two teams. One set of cards per team.

Description

- With the help of the cards, the pupils can compose a rap song with the stages of the algorithm and the other team can make the choreography.
- Together they can present the algorithm at a school event.
- They can ask for the help of the Physical education teacher and the Music teacher.

Activity 13

Preparation

Classroom activity.

Description

In the art class, pupils can represent the stages and steps of the algorithm through painting, collage, sculpture, etc. Each collective work can then be posted on school hallways.

Activity 14

Preparation

Team activity/ two teams. For 6-8 year olds (4 sets of Stage cards), 8-10 year olds (1 set of Stage and Step cards) per team.

Description

- A card game, reminiscent of the 3rd educational stage of ERC.
- The teacher first mentions the rules of the game:
  He/she describes a scenario with a victim who has fallen to the ground (an easier to understand word can be used). For ages 6-8, pupils form teams of 4 and are distributed the Stage cards. For ages 6-8 both Stage and Step cards are distributed to pupils individually. The teams/pupils will have to decide if their Stage/step card is the next

right card to save the victim. The teacher will run the script helping everyone with the right cards so that they can all save the victim together!

- The teacher asks the pupils if they have any questions regarding the procedure, answers any questions and then distributes all the cards randomly, until all Stage/Stage and Step cards are distributed.
- The teacher starts the scenario, up to the point where a victim (man, woman, child – the age and gender can vary every time to avoid predictability) collapses on the ground. At this point, the teacher asks the teams/pupils who believe they have the correct card based on the LIFEFORCE algorithm to raise their hands. The teacher corrects any teams/pupils who have erroneously raised their hands. All teams/pupils who show the correct card, get to sing the respective verses from the LIFEFORCE song.
- The game goes on until all cards have been played in the correct order. There are no rewards given. Instead, the teacher emphasizes that πdealing with an emergency situation usually involves TEAM WORK!!

Foreign Body Airway Obstruction

Simon R. Finke, Katharina Zajackowski, Nadine Rott, Hannes Ecker, Bernd W. Böttiger

Foreign Body Airway Obstructions is included as an addendum to the LIFEFORCE BLS algorithm, in order to demonstrate the expansion of LIFEFORCE in other First Aid topics, besides Basic Life Support. It is being demonstrared using cause-effect.

The cause-effect relation affects all aspects of our lives. It pervades our thinking and motivates our rational actions. Knowledge of cause and effect provides the basis for rational decision-making and problem-solving. It is important in all areas. Predicting multiple possible causes and consequences is part of what helps us make decisions about the correct response to make.

LIFEFORCE BLS scenarios

Dr. Federico Semeraro, Dr. Andrea Scapigliati, Alessandra Carenzio, Sara Lo Jacono

PART A (6-8 years old)

These scenarios are very close to real life experiences of children and correspond to the place where training is based, so to avoid confusion: school is the main environment.

Scenario 1

We are in the playground in front of the school, where usually children spend their time with mates after school time. A woman collapses and children can notice the event easily as it happens close to the swing.

People in the scenario: children, a nanny, a group of 3 adolescents talking around the benches, a grandfather and a mother, the woman who collapses.

Objects: There is a fountain, from the park you see a small street and school can be easily seen and reached, there are two litter bins, benches and playground facilities (2 slides, 2 swings, a small castle to jump…), and a small kiosk in the park.

Questions for scenario 1 (6-8):

Safety

1. Can you list 3 things you should do? L1

2. How would you test that the situation is safe for you? L1

3. What would you recommend to other children if they come close to the woman? L6

Check for response

1. Shaking the woman´s shoulders and talking to her a good idea. True or false? L1

2. How could you place yourself to assess what is happening to the woman? L3

3. Why is it so important to assess if she is still responsive? L5

Check for breathing

1. How would you describe the position of your hands and fingertips? L1

2. How could you realize if the woman is breathing? L3

3. Can you identify the main senses you use? L4

Call for help

1. Do you remember the emergency number? L1

2. Who is the best person to call for help? (Choose from the picture) L2

3. What info would you use to explain to the emergency operator what's happening? L4

Chest compression

1. Do you remember what to do with your hands, while waiting for the ambulance? L1

2. Describe what happens when you have to do chest compressions L1

3. What makes chest compressions successful? L5

Ventilation

1. Do you remember how to combine compressions and ventilations? L1

2. Can you give a reason for ventilation? L2

3. What choice would you have made, if you were unable to perform mouth to mouth ventilation? L6

AED deployment

1. What does an AED look like? L1

2. Defibrillation should be done within 3-5 minutes of collapse. True or false? L1

3. Can you assess the importance of using an AED? L6

Scenario 2

We are at school, right during class time and the teacher collapses. Pupils are sitting at single desks, there are school bags on the shelves and three big windows on the left side of the room, a door on the right.

People in the scenario: there are 20 pupils, the teacher who collapses, two janitors in the corridor and a teacher passing by the corridor close to the door (close to the classroom, he/she can easily listen to noises or calls). The teacher is carrying a lot of papers and books.

Objects: singles desks, a shelf for school bags, a table in the back of the room, teacher's desk is close to the first window in front of desks rows (4 rows, 5 students in each row), an interactive board and a blackboard, a medicine cabinet and a small shelf with tissues and a bottle of water with plastic glasses for children to drink.

Questions for scenario 2 (6-8):

Safety

1. What are the questions you should ask yourself to check for safety? L1

2. Can you distinguish any potential hazard in the picture? L2

3. How would you test that the situation is safe for you? L5

Check for response

1. What is the first thing to check when you kneel by the teacher? L1

2. How would you test if the teacher is still responsive? L5

3. Why was it so important to assess if the teacher was still responsive? L5

Check for breathing

1. Do you remember where you should place your hands? L1

2. Can you explain to your new schoolmate how to act? L2

3. Can you identify the main senses to use to check for breathing? L4

Call for help

1. Who is better to involve to call for help? (Choose from the picture) L2

2. What should you do if the person next to you didn't have a phone in order to call for help? L3

3. Why is it important to turn the speakerphone on? L5

Chest compression

1. Describe what happens when you do chest compressions L1

2. Can you explain what happens when you put your hands in the middle of the teacher's chest? L2

3. What makes chest compressions successful? L5

Ventilation

1. How would you explain the ventilation? L1

2. Can you list the main actions for performing ventilation? L1

3. How would you determine if the teacher was breathing? L6

AED deployment

1. Do you remember the symbol of AED? L1

2. Can you give a reason for the importance of AED use? L2

3. Can you identify who could use the AED? Why? L4

PART B (8-10 years old)

These scenarios are very close to real life experiences of children but they make a step forward including public places in the city/village, not just devoted to children - as it happens with playgrounds - and home as a place where they spend time much more independently.

Scenario 1

We are in the small square of the village/city neighborhood when a young man collapses. A small group of 3 children notice the scene, as they are queuing at the ice cream kiosk in the square. They are queuing with a parent, accompanying the three friends.

People in the scenario: ice cream man, a parent, 3 children, the young man who collapses, a couple waiting at the bus stop close to the kiosk, a man with a dog passing in the square.

Objects: the kiosk in the square, the bus stop (with a bus coming to the stop), few cars in the adjoining street, two benches, a small fountain, a public case with the AED (donated to the community), there are few other shops like a flower shop, a pharmacy, a newsagent.

Questions for scenario 1 (8-10):

Safety

1. What does danger look like? L1

2. What could be done to reduce the hazards present in this situation? L5

3. Determine who could help you in making the scene safe. L5

Check for response

1. Can you list the main actions for checking the man's response? L1

2. What evidence can you find to understand if the man is responding or not? L4

3. What is the next step to take if the man is not responding? L5

Check for breathing

1. Can you explain to your friends how to act? L2

2. Can you identify how to use your senses to check for breathing? L4

3. What makes checking for breathing difficult? L5

Call for help

1. Can you describe to nearby people how to call for help ? L1

2. Can you elaborate why it's very important to call for help? L5

3. What information would you use to describe the place where you are? L6

Chest compression

1. Can you remember how you should press on the man's chest? L1

2. How are chest compressions related to saving the man's life? L4

3. What makes chest compressions more effective? L5

Ventilation

1. Can you recall how long each ventilation should last? L1

2. What is the function of ventilations? L4

3. Based on what you know, can you explain how to perform ventilations? L6

AED deployment

1. Can you describe an AED? L1

2. Where would you find an AED? L2

3. What is the function of an AED? L4

Scenario 2

We are at home, in the living room, where a mother is smart-working and her two siblings are playing video games. The mother loses consciousness and lays on the floor, so her children immediately notice the scene.

People in the scenario: mother, two siblings

Objects: living room furniture, a telephone, a tv set with gaming console, a window and the smart-working table where the mother is sitting, some pillows on the sofa.

Questions for scenario 2 (8-10):

Safety

1. Can you list dangerous objects in the room? L1

2. Can you decide if it is safe to go near the mother? L4

3. If there are no hazards around, what is the next thing to do? L6

Check for response

1. Can you recall the main actions you should take? L1

2. How would you check the the mother's response? L5

3. Based on what you know, how would you explain to your sibling what's happening? L6

Check for breathing

1. How could you use your hands to open the mother's airway? L3

2. What evidence can you find to identify if there is normal breathing? L4

3. Suppose you could not verify if breathing is normal. What would you do? L5

Call for help

1. Can you recall the emergency number? L1

2. Why do you think the operator asks you to stay on the phone? L4

3. What information would you give to explain what is happening? L6

Chest compression

1. Can you recall how deep you should press on the mother's chest? L1

2. What makes chest compressions more effective? L5

3. How would you prioritize chest compressions if an AED arrived? L6

Ventilation

1. How many ventilation attempts can you perform before resuming chest compressions? L1

2. What makes mouth ventilations successful? L5

3. How can you help, if you can't perform ventilations? L6

AED deployment

1. What can you do while waiting for the AED to arrive? L1

2. Defibrillation should be done after 10 minutes of collapse. True or false? L1

3. Why is the use of the AED so important? L2

LIFEFORCE Music (Songs, music activities - games)

Christiana Adamopoulou, Ioanna Etmektsoglou

In the context of the LIFEFORCE program, music activities and songs have been developed in order to fulfil a large number of the program's educational objectives. Some of the skills that we aim for the students to develop through the following music activities and songs, relate to the information that the students would have to provide to the medical staff in the emergency call. The perception and secure learning of laterality (right and left) as it refers to their own body as well as to the body of a person facing them or standing with his/her back to them, is a skill needed when a child describes the condition of the person on the floor and the whereabouts of the scene. To that end we propose the song "Right and left for me and you".

Another set of activities focusses on developing awareness of sound in the environment such as sound localisation. Perceiving from which direction a sound is coming from, or discriminating between an approaching and a moving away sound are essential skills for a young person's safe approach and being in the scene of the accident. An equally important skill is the perception of one or more target sounds among many sounds that might be acting as maskers. This skill would be important in trying to listen for a breath, or talk on the phone with the emergency staff while there is heavy traffic or other sources of noise around.

Four of the five LIFEFORCE songs have as their main aim the establishment in students' long term memory of the steady beat of 110-120 b/m (for CPR) and the memorisation of a set of steps (actions) that they would have to perform with no delay and in the correct order. In these instances, the songs act as memory facilitators but at the same time as motivators and emotional regulators. They may turn a timely and challenging learning activity into a playful fun act, especially if combined with movements and accompaniment played along by the students themselves. Last but not least is considered the songs' emotional impact. Their strong trace in memory along with the reassuring melodic, rhythmic and harmonic continuity and stability, act as wave breakers against the emotional sock that follows witnessing a person being in serious danger. Such a shock, typically interferes with memory and might lead the witness to a condition of freezing and memory loss. During these difficult times, the songs come easier to memory and along with them, the steps of the process unfold one after the other.

General music-pedagogical tips for the teacher

The classroom teacher may find below a short list of general teaching-learning tips for the successful application of the suggested music activities or games.

- Start your teaching with sounds not with notes on the music staff!
- From sounds move to icons (images, drawings) and lastly to symbols (notes on the staff)
- Remember Bruner's three modes of representation in the correct order: embodied, iconic, symbolic (MacBlain, 2018).
- Closing the eyes might help some children to concentrate on sounds and listening.

When teaching a new song:

- Let the students listen to the whole song before working on its phrases.
- When singing the same melody, all students must start their singing on the same note.
- Play or sing the first note of a song, let the students listen carefully and then ask them to match it internally before starting to sing together.
- Prepare the group for starting to sing in time together,
    - by raising your arms,
    - making eye contact with everyone and
    - making a silent hand movement (get ready and) before the decisive movement that calls them to sing.
- Most but not all times a song begins on its tonic note (first note of its scale), and almost all times it ends on its tonic. Tonic is the sound where the song feels at rest, at home, as if having completed its melodic journey.
- If students—especially older ones—hesitate to sing, you could allow them to use expressive rhythmic chanting, like in rap. This could increase participation and motivation.
- Add accompaniment to singing! It tends to increase motivation.
- Even simple body percussion such as clapping, snapping or stamping may increase interest and student involvement.

- Developing accompanying movements that correspond with the lyrics and the music of a song, could facilitate students' learning and long term memory of the lyrics, the melody and the form of the song.
- Don't sing the whole song at the same level of loudness. Softer and louder sections, accents and silences add expressiveness and interest to the song. They also add variety. They increase its appeal to the singers and listeners.
- Students need to repeat a song many times so they would learn the lyrics and melody well. Make repetitions appealing and interesting and not BORING! Achieve that by adding something new every time. Call and response, turn taking, loud and soft, singing like papas, singing like mamas, singing the first verse fast and the second slow etc.

Music activities - games

Activity 1: Is it approaching or going away? Auditory localization and Doppler effect.

Description

In an open space such as the school yard, a group of participants stand close to each other at one end of the space keeping their eyes closed. At the opposite end of the space one participant at a time takes the role of the 'sound machine'. While holding a clicking metronome or a mobile phone which plays a song at a steady volume, moves either towards the group or away from the group. The group members have to say 'ee' when they think that the 'sound machine' is approaching and 'oo' when they think it goes away.

The teacher can ask the students to do the following:

- Make with your voice the sound of an approaching child who is talking
- Make with your voice the sound of a moving away child who is talking.
- Make with your voice the sound of an approaching motorcycle.
- Make with your voice the sound of a moving away motorcycle
- Make with your voice the sound of an approaching ambulance
- Make with your voice the sound of a moving away ambulance

Suggested questions for the students

Q. How can we tell only by listening if something that makes sound is approaching us or moving away?

A. When something that makes sound approaches us, its sound becomes louder and louder and also higher and higher (meaning sounding gradually more like the voice of a soprano).

When something that makes sound moves away from us, its sound becomes softer and softer and also lower and lower (meaning sounding gradually more as a bass).

Levels

Level 1: The activity takes place inside the classroom or in a limited area where it is easier for the students to locate the sound.

Level 2: The activity takes place in larger areas such as the school yard or even a park near the school or a place where other noises are audible in the background, adding to the level of difficulty.

Extensions

The activity can be applied to the teaching-learning of basic concepts of sound in the subject of physics, such as sound localisation, amplitude and frequency of auditory signals as well as the doppler effect.

Learning difficulties

This is a useful activity for students with problems in auditory perception due to learning difficulties or/and other developmental disorders. It can be performed in small groups of four to six students as the participation of the whole class can be overstimulating for children with sensory impairments or/and learning difficulties.

Activity 2. Auditory Synthesis and Analysis (Brain Box-style activity)

Description

In groups of 5-6, the students experiment with the following types of paper sounds. Then, as a team, they compose a music piece using these sounds in any order or combination they decide. After finalising their music composition, they create an accompanying iconic score using their team's simple drawing for each type of sound. They may use the music score they have created to teach another team how to play their composition.

- Types of paper sounds:
    - crumbling
    - blowing – flying
    - tearing
    - throwing it against the floor, in the form of a paper-ball
    - rubbing two parts of the paper together
    - hitting against a hard object
    - hitting with force in the air

Levels

Level 1: The activity is run by the teacher who is responsible to “collect” the sounds and help the students to draw the sounds on pieces of paper (one piece of paper for each sound). After gathering all the scores, students are asked to decide how to combine them.

Level 2: The students in their respective groups draw the sounds on pieces of paper (one piece of paper for each sound). After gathering all the sound icons, students are asked to decide how to combine them. They rehearse their composition and in the end every group presents their own composition to the class.

Extensions:

The activity can be transferred in other teaching subjects like physics or environmental studies. For example, the students can make a synthesis about the “cycle of the water”. Sounds inspired

by the stages in the water cycle (evaporation, condensation, precipitation and collection) form a synthesis. Another example is a synthesis about the four seasons.

Learning difficulties:

The use of drawings could be too abstract for children with learning difficulties. Drawings can be substituted by cards or photos of the suggested movement-sounds. If the teacher makes use of photos or cards, she could work in advance with children with learning difficulties or other special educational needs, individually or in pairs, by providing exercises of matching the sound photos/cards with the sound produced, sound which the child/children would be guided to perform. After this preparation, the child/children could join a level 1 group.

Activity 3. Auditory figure-ground: Message hunting

Description

The group forms two rows facing each other. One row is identified as the “message carriers” and the other the “message maskers”. The “message carriers” have to pass a sentence of text from person to person in the same direction, decided in the beginning of the game (either left or right), without turning to look at the face of the message receiver. On the contrary they look at the face of the “message masker” in the opposite line. While the “message carriers” are trying to pass on the message so that it finally reaches the last person in their row, the “message maskers” produce concurrently a type of sound that is given by the game leader. Possible masking sounds are included in the following list.

List of possible masking sounds

- mouth sounds
  - any sounds of consonants in the students‘ language, any tongue or lip sounds, excluding any vowels
- hand sounds
  - any sounds with fingers on other fingers including clapping the palm of hands, hand rubbing or patting on legs, on chest or abdomen

- shoe sounds
  - gliding or rubbing sounds
- pen sounds
  - holding two pens/pencils each, and hitting or rubbing them one against the other.

Suggested questions for the students

Questions to discuss as part of the game are:

- How far does the message go each time?
- How different it becomes?
- Which sounds of the 'message maskers' did the most damage to the message?
- What would be the difference in the masking effect if the message masking sounds were another verbal message in the same language?
- What if they were another verbal message in a foreign language?
- Which message masking sounds do the group members remember to have experienced in their everyday life?

Levels

Level 1: The activity can be performed with smaller number of students ("message carriers" and "message maskers"). The length of the sentence can be short (3 or 4 words). The students could be given a limited choice of masking sound categories (i.e. they would have to choose between shoe sounds and pen sounds only).

Level 2: As it is described in the initial description of the activity.

Extensions:

The phrase that each student "passes" to the person next the him/her can be a grammar/math/physics rule or a brief description of a historical event.

Students could make two short recordings from two locations, one at an urban setting with traffic and another at a nearby park. They would listen carefully in class to each recording and

write down all sounds they hear. What sound sources do they recognise in each? Do they identify certain sounds which might be masking other sounds? What might be the consequences? What might be the possibilities for improvement?

Learning difficulties

Students with learning difficulties can participate in the beginning of the chain.

Activity 4. Tone colour recognition and quick movement response to auditory stimuli

Description

The teacher presents to the class four different instruments each with distinct tone colour, for example: maracas, hand drum, cymbal, and woodblock. Each instrument' s sound corresponds with a specific body movement like step forward, step back, jump and shake. The students originally may have visual and audible access to the sound making and after a few times, they may turn their back to the teacher so they can only listen. The students who do not respond appropriately to the sounds become silent listeners-viewers until one (or more) student/s win.

Levels

Level 1: As it is described above or with only two instruments and two kinds of corresponding body movements.

Level 2: The activity can be performed with more instruments and movements.

Extensions

The activity can be transferred to physical education. The teacher can introduce a variety of new movements (like stretching with hands, legs, head, etc)

Learning difficulties

Students with learning difficulties can have visual contact with the instruments played.

The game could be also played with pairs in the group, and the students having any kind of difficulties could be paired by the teacher with students who do not appear to have difficulties in responding to this game.

Activity 5. Fingers or Palms? (Brain Box-style activity, small card 1)

Description

A SIDE of the Card

Fingers or Palms?

- Experiment clapping in the two following ways. Then the teacher could give you visual or verbal commands of clapping patterns to perform as a group.
    - with two fingers of one hand hitting two fingers of the other or
    - with cupped palms of both hands

B SIDE of the Card

Fingers or Palms?

- Stand back to back. Which of the following patterns is your friend clapping?
    1. fingers, fingers, palms, palms
    2. palms, palms, fingers, fingers
    3. fingers, palms, fingers, palms
    4. palms, fingers, palms, fingers

Levels

Level 1: Originally, the activity can be performed with a combination of three claps (e.g. fingers, palms, palms/ fingers, palms, fingers)

Level 2: The activity can be performed with a combination of five or six claps.

Extensions

In the music class, students could substitute the two kinds of claps with two notes on the piano or xylophone and construct melodic patterns of groups of 4 as above. The silence could be added in the choices in forming the 4 beat patterns.

The activity could be also transferred to math and arts education, introducing the concepts of patterns and motifs.

Learning difficulties

Students with learning difficulties can chose the right pattern from cards which show clearly the action that produces the sound.

The teacher could prepare cards with added levels of abstraction, starting with photos of corresponding movements, then moving on to using drawings and finally the words (symbolic level) of sound producing movements. After having practiced at these three levels, students with learning difficulties could possibly participate more effectively in the group game.

Activity 6. Where is the Clapper? (Brain Box-style activity, small card 2)

Description

A SIDE of the Card

- You are in the center of the circle made by all members of your group. They stand side by side, facing you.
- Close your eyes for a moment so that the leader can point to the participant who will be the “clapper”.

B SIDE of the Card

- Open your eyes. All participants sing a song together and pretend to clap their hands behind their back.
- Only the clapper is actually clapping.
- Listen carefully, can you find the clapper?

Levels

Level 1: Initially, the activity can be performed without singing, only with the clapper who is clapping with his/her hands behind his/her back, while the rest of the students in the group pretend clapping. When and if the students perform the game with ease, the song could be added.

Level 2: The activity can be performed with more than one clapper (maximum 3).

Extensions

The activity can be transferred to the subject of physics, specifically to the sources and nature of sound and sound waves. In environmental studies or in biology class, students could be introduced to the hearing organs and mechanisms of different species which make possible the perception of sound sources at the horizontal level.

Learning difficulties

The activity can be performed in smaller groups (not more than 5-6).

Activity 7. Locate the sound! (Brain Box-style activity, large card 2, Side A)

Description

A SIDE of the Card

- Ask one of the students to leave the room. The rest of the class decides where to hide a kitchen timer or a metronome (set to 120 b/m) or a mobile phone making sound (playing a song, ringing, etc).
- The student who was outside returns to the room with eyes closed. Being supported by a helper for safety reasons, he/she moves towards the place he/she thinks the sound is coming from.
- Will he/she find the hidden sound? How long would it take?

For increased difficulty, group members make sounds at the same time, causing partial masking to the target sound.

Levels

Level 1: Initially, the sound of the metronome or the kitchen timer can be loud, and group members are asked to be quiet while the student with the eyes closed is looking for it.

Level 2: Group members are encouraged to produce a variety of sounds (not loud ones) to increase difficulty. An even higher level of difficulty could be introduced if the students would choose as maskers, instruments that produce a similar sound with the metronome of kitchen timer (i.e. claves).

Extensions

The activity can be transferred to the subject of physics, specifically focussing on the sources and nature of the sound and the travelling of sound waves in space.

Learning difficulties

Students with learning difficulties might have a limited number of choices (e.g. the four corners of the room) when searching for the metronome or the kitchen timer. If there would be a student with hearing disability, the metronome could be placed on the surface of a large drum, close to the rim. The student with closed eyes, will touch with his hand the surface of the drum in the center and will guess where the metronome is.

Activity 8. Who is the Instrument player? (Brain Box-style activity, large card 2, side B)

Description

B SIDE of the Card

- Make a circle, with all students facing the center. They sing a LIFEFORCE song and steadily clap to the beat with hands behind their back.
- One student -the leader- walks outside the circle and secretly places a small instrument (i.e. maracas, bells, claves) in the hands of one of the students.
- The instrument player plays his/her instrument and continues to sing along with the singing and clapping of the rest.

- At the end of the song the leader asks another student: Who is the instrument player?
- Once discovered, the instrument player becomes the leader and the game continues with a different song.

Levels

Level 1: Initially, the activity can be performed without singing, only with the student who is playing the instrument with his/her hands behind his back while the rest of the students pretend clapping.

Level 2: The activity can be performed with more than one students who play instruments (maximum 3).

Extensions

The activity can be performed with different small instruments (like maracas, shakers, bells). New instruments can be introduced in the subject of music.

In a literature class, two students read the same poem. One reads it sitting on a chair, then the other reads it while moving around the room as he/she feels appropriate in order to communicate best its meaning. The audience listens with eyes closed. After both performances, the group discusses the effects of movement on what they learned and/or felt about the poem.

Learning difficulties

The activity can be performed in smaller groups (not more than 5-6) so the student can easily spot the instrument player.

SONG 1: “LIFEFORCE BLS Algorithm song”

Someone is lying, lying on the floor
I want to help, something must be wrong
I approach with safety and get on my knees
I ask 'are you fine?’ and wait to see…

I don’t get an answer, I check for normal breathing
by looking, listening and by feeling.
I call one one two from my phone
and I turn the speaker on, turn the speaker on.

Life is precious and it's sad if it’s lost
so join the team of L.I.F.E.F.O.R.C.E.
Help save lives, you can do it too
call one one two, call one one two
call one one two, call one one two.

I say my name and where I am
I describe the situation, I don't hang up
I stay by the person, I don't leave the scene
and I ask somebody to bring an AED.

I should not wait for the ambulance to come
The sooner the better, to start CPR.
I compress thirty times, blow two times
and repeat the cycle till the help arrives.

Life is precious, and it's sad if it's lost
so join the team of L.I.F.E.F.O.R.C.E.
Help save lives, you can do it too
call one one two, call one one two
call one one two, call one one two.

This is the main song of the program and it was composed with the purpose to facilitate the memorization of all steps of the LIFEFORCE BLS algorithm. Several skills may be developed through this song.

More specifically the NON-MUSICAL SKILLS that would be developed through this song include:

1. Reinforcement of memory regarding the sequence of steps that have to be followed during the rescue process according to the LIFEFORCE algorithm. The lyrics of the song are used for this purpose. While other songs might focus in parts of the algorithm, this particular song functions as a summary of steps, as a memory enhancer for remembering the steps of the whole process in their correct order, preventing mistakes or hesitations.

2. Learning and internalizing the speed (110-120 bpm) and stability with which the compressions have to be performed during CPR. The song is performed repeatedly in the above tempo. This could be reinforced visually and aurally by the use of a metronome application (open software) which could be downloaded from the internet and set to the prescribed speed.

Regarding the MUSICAL SKILLS that would be developed through this song, these include:

1. Keeping a steady beat. When playing music alone or with others, keeping a steady beat is an essential musical skill, which could be reinforced through the repeated steady-time performance of this song.

2. Perceiving the direction of melodic patterns. This could be done with an exercise based on the last line of the song which is repeated resulting in the following: "Call one one two, call one one two. Call one one two, call one one two". While the lyrics are the same, the corresponding melodic patterns differ. In the first and third melody of "Call one one two", the notes stay the same, while in the second and forth melody they take a downward direction to reach the tonic note of the song (home). In the exercise, the students could label the two phrases (1 & 3) as AIR (staying up steady) and (2 & 4) as

LAND (going down a mountain). They could be directed to sing these two phrases again and again and when they hear a clap by a student-leader to stop immediately and have to say AIR or LAND based on which phrase they just stopped at. Alternatively they could show the melodic direction by moving their arms upwards or downwards.

SONG 2: "LIFEFORCE THREE STEPS" (Safety, check for response, check for breathing)

If you spot somebody on the ground

Take a deep breath, ask yourself aloud:

"Is it safe to approach, is it safe to approach?"

Check around you carefully and watch,

Check around you carefully and watch.

If it's safe for you to approach

kneel next to the person on the ground.

Shake their shoulders and ask, shake their shoulders and ask

"are you alright?", that's the right task,

"are you alright?", that's the right task.

If the person does not say a thing,

touch the forehead and gently raise the chin.

Place your ear near their mouth, place your ear near their mouth.

Listen, feel and watch for normal breathing now

Listen, feel and watch for normal breathing now.

This song was composed with the aim to facilitate the memorization of the first three steps of the LIFEFORCE algorithm. Several skills may be developed through this song.

More specifically the NON-MUSICAL SKILLS that would be developed through this song include:

1. Reinforcement of memory regarding the initial steps that have to be followed during the rescue process according to the LIFEFORCE algorithm. The lyrics of the song are used for this purpose. The repetitive, melodic and rhythmic structure of the song reinforce memory encoding and retrieval.

2. Emotional regulation during stressful situations. Witnessing an accident or a person being seriously injured, ill, or unconscious, could cause such a psychological shock that the child might experience a fight, flight or freeze response. Bringing to memory the song, could help regulate the strong emotions and at the same time facilitate memory.

3. Learning and internalizing the speed (110-120 bpm) and stability with which the compressions have to be performed during CPR. As all other songs in this program, the Three Steps song is performed repeatedly in the above tempo. This could be reinforced visually and aurally by the use of a metronome application (open software) which could be downloaded from the internet and set to the prescribed speed.

Regarding the MUSICAL SKILLS that would be developed through this song, these include:

1. Keeping a steady beat. When playing music alone or with others, keeping a steady beat is an essential musical skill, which could be reinforced through the repeated steady-time performance of this song.

2. Playing by ear melodies. The song is composed using 5 notes of the pentatonic scale. An easy way to play a pentatonic scale is to play melodies using only the black keys of the piano. If you have a music keyboard in class, or a keyboard application which you could show to the class projected on a screen, ask the students to start

on the black key that is the first of two (next to each other) on the keyboard. Using this note and the next four black keys to its right, students should try to reconstruct the first melody of the song. If they do this easily, they could attempt to reconstruct the second melody which begins with the words: “Is it safe to approach?” An extension could be to reconstruct the whole song phrase by phrase, deciding as a group for every phrase of the lyrics whether it is sung with the first or second melody.

SONG 3: “LIFEFORCE CALL FOR HELP AND BRING AN AED”

After having checked the person's breath

I call for help, I call for help.

If somebody else is there too,

I ask them to call one one two.

If I am alone I call from my phone

and I turn the speaker on, turn the speaker on.

I start CPR, I must not wait

while I'm speaking on the phone, I compress and ventilate.

I say my name and where I am,

I say the breathing is not normal,

I ask a bystander to search for AED

to find it, to fetch it, and bring it to the scene.

I answer all the questions, I listen and respond

and I am never the first to hung-up the phone

and I am never the first to hang-up the phone.

This is the second song which focusses on particular steps of the LIFEFORCE algorithm, and particularly on calling for help and asking someone to bring an AED. Several skills may be developed through this song.

More specifically the NON-MUSICAL SKILLS that would be developed through this song include:

1. Reinforcement of memory regarding the process of calling for help and asking someone to find an AED according to the LIFEFORCE algorithm. The lyrics of the song are used for this purpose. The repetitive, melodic and rhythmic structure of the song reinforces memory encoding and retrieval. The song lyrics and its music reinforce especially the memorization of the Emergency call number 112.

2. Emotional regulation during stressful situations. Witnessing an accident or a person being seriously injured, ill, or unconscious, could cause such a psychological shock that the child might experience a fight, flight or freeze response. Bringing to memory the song, could help regulate the strong emotions and at the same time facilitate memory.

3. Learning and internalizing the speed (110-120 bpm) and stability with which the compressions have to be performed during CPR. As all other songs in this program, the Call for Help and Bring an AED song is performed repeatedly in the above tempo. This could be reinforced visually and aurally by the use of a metronome application (open software) which could be downloaded from the internet and set to the prescribed speed.

Regarding the MUSICAL SKILLS that would be developed through this song, these include:

1. Keeping a steady beat. When playing music alone or with others, keeping a steady beat is an essential musical skill, which could be reinforced through the repeated steady-time performance of this song.

2. Developing and performing a rhythmic accompaniment. Students could experiment with a rhythmic accompaniment for this song, using either body percussion or two different sounds produced by handmade instruments or by sound producing objects

found around them in class, such as pens, notebooks etc. They could learn the repeated rhythmic accompaniment using a short segment of the lyrics such as the phrase: “say my name”. Initially they could just clap. They would clap three times and move the hands apart for one time (no sound), such as bellow:

1	2	3	4
say	my	name	
clap	clap	clap	open hands

They would repeat this pattern with a steady time between claps. For an added level of difficulty the students would choose two different sounds, one sound for clap 1 and clap 3 and a different one for clap 2. For example they could make the pattern:

Stamp, snap, stamp, silence - Stamp, snap, stamp, silence - Stamp, snap, stamp, silence....

Students' attention should be pointed to keeping the silence as long as the other sounds. At least initially, this could be achieved by accompanying the silent beat with a silent movement. When the length of silence would be internalized, the movement that accompanied it could remain be withdrawn based on students' preferences.

Students in small groups could form their own rhythmic accompaniment by changing the order of the two different sounds and the one silence in the 4-beat rhythmic pattern which was proposed here. i.e. snap, silence, stamp, stamp or pencil, notebook, silence, notebook. Two of the small groups could start playing their rhythmic accompaniment together and keep repeating it while at the same time the rest of the class sings the song. When the song ends they could change roles.

SONG 4: “LIFEFORCE CPR SONG - THIRTY AND TWO” (compressions and ventilations)

Don't you find a normal breath?
Call for help!
But do not wait,
immediately start
to compress and ventilate.

Press/release with hands
thirty times,
raise the chin,
pinch the nose
and blow two times.

Compress and ventilate
till the medics come.
Thirty and two
you can do it too
yes, thirty and two.

I do CPR
I press and press and press and press,
yes I do CPR I do not stop,
I do CPR
getting ready to blow!

I do CPR
I press and press and press and press,
yes I do CPR I do not stop,
I do CPR
getting ready to blow!

The song Thirty and Two refers to the actual performance of CPR including the repeated cycles of thirty compressions-releases and two breaths. It is designed to reinforce several non musical and musical skills.

In the Non-Musical Skills are included the following:

1. Reinforcement of memory regarding the specific actions that have to be performed during the particular step of CPR in the rescue process. The lyrics of the song are used for this purpose.

2. Learning and internalizing the speed (110-120 bpm) and stability with which the compressions have to be performed during CPR. The song is performed repeatedly in the above tempo. This could be reinforced visually and aurally by the use of a metronome application (free) which could be downloaded from the internet and set to the prescribed speed.

3. Keeping track of the number of compressions and breaths during the process and especially under stress. Each phrase of the second part of the song, which begins at: "I do CPR..." lasts for ten beats and therefore the three of these phrases in a row add up to thirty beats which correspond to the thirty compressions that the child would have to remember. Time is devoted also in the song for the two breaths that must follow the thirty compressions.

4. Emotional regulation during stressful situations. Witnessing an accident or a person being seriously injured, ill, or unconscious, could cause such a psychological shock that the child might experience a fight, flight or freeze response. Bringing to memory the song, could help regulate the strong emotions and at the same time facilitate memory.

In the Musical Skills are included the following:

1. The perception, performance and establishment in the long term memory of the steady beat in the range of tempo between 110 and 120 beats per minute. This could be achieved by repeated listening and singing along the song while paying close attention to the tempo and its stability (see above the facilitating use of a metronome). The involvement of the body in performing the beat in addition to singing is considered essential. This could be achieved through corresponding rhythmic movements as well as by accompanying the song with body percussion and/or a variety of instruments (commercially available or handmade) or by the use of found objects in the students' environment which could be used as musical instruments.

2. The choice, making and performance of appropriate musical instruments that could be used to stress the steady beat in this song, could be by itself a skill to be developed. Students would be advised to choose or make instruments that produce a beat with a clear and sharp attack (initial sound) and a short duration of sound, which would stress the steady beat. A cymbal or a maraca, for example, would not be as appropriate for this purpose as a pencil hitting a hard object such as the top of a table. Students could experiment with different found sounding objects at school, at home and even during their excursions in nature. This exercise would reinforce the development of aural perception and sensitivity to different sound qualities.

3. The performance of the steady beat through body percussion (i.e. repeated stamping or clapping along) at the same time with singing would be a skill that could be developed at the first level. For students that might find the coordination of singing and i.e. clapping at the same time difficult, an alternative would be to have them do one of the two, at least initially. If the teacher wishes to address this difficulty at the level of the group, she could divide the class in half and ask one half to clap and the other to sing.

At a second - more advanced level, the students could learn to accompany the song using a rhythmic pattern, such as the one played in the song by the claves (sound sound silence

silence). If claves are not available in the class, the students could use perhaps two round stones from the sea that could fit in their palm, or two dry pieces of wood that make a sharp, clear sound. If an old, unused broom stick is available at school or at home, the teacher or family member could help the students cut two even pieces (about 20 cm each) and make thus their own claves. The older students could learn to use a small saw with safety under the supervision of an adult. In the performance of the rhythmic pattern they should keep in mind that the sound and silences of the claves are twice as fast as the beat. That means that in every clap of the beat fit two sounds of the claves or two silences. If the claps and claves are played together, it would be easier for the students who play the claves to stay at tempo. As a help in keeping the time during the two silences, the students who play the claves, after hitting them twice, could pretend to hit them two more times, by making a small movement but not hitting them.

SONG 5: “RIGHT AND LEFT FOR ME AND YOU”

When we face each other,
my right hand is your left hand,
my left hand is your right hand.

Face to face cross to find the same
right hands cross and shake, shake, shake
left hands cross and shake, shake, shake.
Right cross, left cross....
right, left, right, left
right and left and right and left and STOP.
Right cross, left cross....
right, left, right, left
right and left and right and left and STOP.

When I see your back side
our right hands are the same,
our left hands are the same.

Make a train, all move the same
jump to the right and HOP HOP HOP
jump to the left and HOP HOP HOP.
Walk straight, walk straight....
run straight... run straight
run and run and run and run and STOP.
Walk straight, walk straight....
run straight... run straight
run and run and run and run and STOP.

The song 'Right and left for me and you' was composed with the main aim to assist children who might have a difficulty in correctly using the words right and left (lateralization), in reference to their own body or to that of a person whom they face or see their back. Being able to have a secure memory of right and left as relates to oneself or the other, depending on the perspective of the viewer, is an important skill for the telephone communication with the medics regarding the situation (victim's condition and information about the environment and the specific place of the accident).

More specifically the NON-MUSICAL SKILLS that would be developed through this song include:

1. The perception and establishment in long term memory of the concepts of right and left, a) as they relate to the students own body, and b) as they relate the other person's body, under the two conditions of facing the front or back side of the other (perspective). The lyrics of the song make this information clear. The song itself provides motivation and the context for a pleasurable, game-like repetition of this developing skill. The learning process is very important to be accompanied by the movements suggested by the lyrics of the song.

2. Large movement coordination is reinforced as the students attempt to coordinate their arm and leg movements in time with the commands of the song.

3. Socialization, cooperation & taking the other's view. As the students collaborate in pairs and at the second part of the song as a group forming a train, they have the opportunity for socialization, cooperation, coordination, taking the other's view at a somatic and emotional level.

Regarding the MUSICAL SKILLS that would be developed through this song, these include:

1. The aural memory of the quarter rest, as a time of silence that corresponds to one beat in this song. Students' attention would be pointed to the first and second time that the following phrase appears:

   1rst time: "Left _____ cross_____, Right _____ cross_____."

   2nd time: "Left cross, Right cross."

A soft steady movement could accompany the silent music rest, as a way to reinforce aural memory. The difference would be most obvious when comparing the first phrase which includes the rests (silences) with the second phrase which has no rests between the sung words.

2. The visual recognition (iconic or symbolic mode of representation, see Bruner) could be another skill for the children to develop by using the first of the above music-text phrases. Initially the quarter note rest would be marked iconically with an image denoting silence that lasts as long as the words in this phrase. A line or an empty circle, or a finger pointing to silence could be appropriate choices for designating each rest. At a more advanced level the quarter rest could be represented by the specific music symbol which is being used by musicians in music notation.

In completing the presentation of the LIFEFORCE music activities, we encourage you to use them with your students and make learning fun and lasting! For best learning experiences,

Notes to Remember!

- SOUNDS first, then NOTES
- Learn through the BODY, then with ICONS (images, drawings), and only lastly with SYMBOLS (Bruner, in MacBlain, 2018)
- Introduce the WHOLE SONG first, then phrase by phrase.
- Give the FIRST NOTE of a song, let the students LISTEN carefully and then try to MATCH it, before starting to sing together.
- Before starting to sing as a group: GET ATTENTION (raise hands) →EYE CONTACT → PREPARATORY MOVEMENT→DECISIVE MOVEMENT (Begin!).
- TONIC is the sound where the song feels at rest.
- If they won't sing, let them CHANT or RAP. Participation is most important!
- Add ACCOMPANIMENT to singing!
- Simple BODY PERCUSSION as song accompaniment may increase student involvement.
- CLOSE EYES sometimes to concentrate on SOUND.
- Develop ACCOMPANYING MOVEMENTS that correspond with the lyrics and the music of a song for better memory.
- Use VARIETY in singing. Don't sing the whole song at the same level of loudness and speed.
- Add something NEW every time you ask your group to REPEAT a song.
- Have FUN singing and playing MUSIC TOGETHER!

LIFEFORCE BLS-Algorithm Yoga poses & games

Angeliki Botonaki

This is a very interesting way in which a fun practice, like kids yoga poses, intersects with the BLS-Algorithm and students' body and mind become engaged, which academically leads to better learning results. "LIFEFORCE BLS-Algorithm Yoga poses" could be also used in the "BLS Scenarios" and "Music Games-Songs" activities.

When teaching the LIFEFORCE Yoga poses, children should take 3-5 full breaths in each pose they do, before getting out of it. Their breathing resilience will extend in time, by exercising, so they need to be a little patient in the beginning. Teachers could talk about something relevant to the children during their breaths to help them take their minds off of their breaths or encourage them to stay in the position.

LIFEFORCE Yoga poses are designed aiming to intersect some particular kids yoga poses with the unique steps and stages that lead to save a life. So, in the end of each yoga pose, teachers may adapt them to the precise position of each BLS stage, wherever there is the need of doing so, in order to facilitate the procedure.

Teachers should make sure that students have enough space and their mats (you could use the school's gym room) and then go ahead and apply the eight LIFEFORCE BLS-Algorithm Yoga poses, incorporating them also to any of the "BLS scenarios" or "Music Games-Songs activities".

Activity 1: Freeze and show

Description

- The teacher puts some playful music on and the children move or dance. When s/he stops the music children must freeze in the yoga pose that s/he shows them or tells them.
- Then, the teacher splits the students in eight groups and gives one of the eight LIFEFORCE BLS-Algorithm Yoga pose card to each of the groups. After that, all students

have to work together, in order to find which the right order of their cards - in correspondence to the others'- and present the LIFEFORCE BLS-Algorithm through the yoga poses.

Aim

To identify the LIFEFORCE BLS-Algorithm Yoga poses, present them and put them in the right order.

Levels

Level 1: For 6-8, part a. and part b. can be implemented as separate activities. In part a. it is easier to show the pose (or card) rather than tell children the names of the LIFEFORCE BLS-Algorithm Yoga poses and ask to perform them. This could happen after a little practice first. In part b. the teacher should help the students coordinate.

Level 2: For 8-10, in part a., if the teacher shows the pose to the pupils (by card or by performing), after they do it, they name it too.

Language – communication skills

Sevasti Etmektsoglou, Theodoros Kalyvas

Theory

Being able to communicate is a very important skill. It requires knowledge of both verbal and no verbal features of the language, vocabulary, good listening skills as well as attention. Conversations are essential for social interaction and support learning and thinking (ican.org.uk, 2021). Communication is everywhere; it can be supported and improved in all activities through good practices by educators and significant others. “Children understand conversation rules -when to talk and when to listen”. They can also keep conversations going with a range of people in different situations, by making relevant comments or by asking questions. They supply details that they know are important for the listeners and realize when the latter do not fully understand and try to help them (ican.org.uk, 2021).

People use language for a range of different reasons, complementing or criticizing, clarifying and negotiating. “Language is the vehicle for learning. It enables understanding and expression of thought, it supports thinking, problem solving and reasoning and it’s accepted as being critical to cognitive development” (ican.org.uk, 2021).

“Children become much more able to be selective about what they need to listen to and are able to integrate listening with other tasks. Children are learning new vocabulary all the time - words they need for general learning and topic-specific vocabulary. Understanding how words can be linked by what they mean as well as how they sound and look, can really help children remember new vocabulary”. From early childhood, children are able to use newly learnt words in a specific and appropriate way. Furthermore, growing older, they are capable of using a range of words related to time and measurement and a variety of verbs to express their thoughts, as well as describing events and experiences in detail and in the right order (ican.org.uk, 2021).

Children have an innate need and strong motivation to connect with others in their environment. If teachers and carers of young children demonstrate that they value all children’s cultures and languages and work towards establishing positive relationships with them, children would be likely to feel safe and secure to proceed with the first important steps

of their social and emotional development. This inclusive and sensitive educational environment would affect not only the way children express themselves and manage their own emotions, but also the way they experience the world and form positive relationships with others (ed.gov, 2017).

In the L.I.F.E.F.O.R.C.E. program, young children would be encouraged to use and further develop their communication and language skills—more specifically Semantics, Descriptive and Narrative language—in order to be able to understand, learn and apply the L.I.F.E.F.O.R.C.E. - BLS information in all steps of the Algorithm.

Questions & Answers

Q 1: What happens when language isn't developed properly?

1. Difficulties with producing language.

Planning, organizing and saying what we want to say involves many different skills.

- Difficulties with vocabulary.

Some children find it hard to learn or recall words.

- Difficulties with forming sentences.

How words are joined together in the right order to make sentences

- Difficulties with organizing sentences and ideas.

We need to link our sentences together in a logical order to make sense to other people. Some children find it difficult to organize their ideas. Their speech may not follow a logical order. They may talk about lots of different topics in the same group of sentences. Some may find it difficult to plan what they want to say. This will affect how well they express themselves.

2. Difficulties with understanding others.

Understanding what is said to us involves a range of different skills.

- Attention and listening.

Paying attention and listening to other people can be difficult for some children. They may be easily distracted.

- Auditory skills.

Some children may find it difficult to remember enough words or sounds to make sense of what they are hearing.

- Understanding words, concepts and sentences.

We also need to understand the meaning of a word or the ideas behind it.

Some children find it hard to understand sentences with lots of information or with complex structures.

3. Difficulties with literacy skills.

- Poor reading, writing and spelling skills, impact accessing all areas of the curriculum.
- Poor understanding and use of vocabulary, cause the level of language used to teach the curriculum to act as a barrier to learning, rather than a facilitator.
- Difficulties with understanding verbal instructions. Possibly, because they need more time to process the language, this means that, while they are listening and processing one instruction, the next piece of information, has already been said.

4. Difficulties with social – emotional skills.

Children with speech delays may be at greater risk of developing social, emotional, or behavioral problems as adults. Speech delays can

- Affect their social interaction. They cannot learn how to play nicely, compromise, forgive, stand up for themselves, or exchange ideas.
- Cause the child to become short-tempered, lash out, and withdraw from others.

- Cause difficulties in forming and maintaining friendships. Children often choose friends who are good at communicating, so children with difficulties are doubly disadvantaged.
- Indicate a child who gets frustrated easily or has limited communication.

Q 2: What can you do to support language and communication with the children you work with?

In the classroom.

- Check that children understand the language used and the instructions given.
- Ask them to repeat back what they think you said or what they need to do.
- Use of visual and tactile approaches including use of real objects, practical activities, pictures and videos.
- Staff using non-verbal communication to support what they are saying, for example, gestures, pointing – or maybe even signing.
- Given time to respond to allow time for thinking.
- Strategies are used to ensure a child is paying attention, for example, the teacher says their name before giving an instruction.
- Encourage an ethos of asking for clarification, saying when they don't understand and what they're struggling with.
- Give them time for planning work, for example in literacy children are given extra time to think and perhaps talk about the key things to include in a story such as the main characters, what is going to happen.
- Support them to understanding what they've read and making inferences.
- Watch out for those with slow processing speed. Watch out for those who take a long time to respond or who are very quiet and watch other children to work out what to do. They pose a high risk for learning disabilities.

In their descriptions.

- Recall and re-tell events, to initiate speaking.
- When talking to children, add one or two words to the sentence length they already use in their own talking.
- Speaking with expression, with a clear voice to communicate and support meaning. Using volume (from quiet to loud), pitch (from low to high), and intonation (the changing rhythm and pattern of pitch).
- Give explicit structures for supporting narrative skills – stories should have who, where, when, what happened and an ending.
- Encourage children to support each other's thinking. Act like a detective – how do we know this will happen, how do we know this character is good – what evidence can we find?

In a dialog.

When talking with others, there are many rules one needs to consider

- Help them to start and finish a conversation by modeling. Some children may have difficulty understanding and using these rules.
- Take turns and not interrupt.
- Be aware of what the children already know or how they might be feeling.
- Change the conversation topic in an appropriate way. You can say: do you want to discuss some other topics? Allow the children to choose the topic
- Be aware of the situation.
- Reading the body language. Facial expressions, body language, volume, tone of voice and gestures, to exact the main meaning that isn't obvious from their speech.
- Change the topic of the conversation, when you recognize that they are bored.

- Know-how to ‘repair’ a conversation, if it goes off track, by rephrasing, asking questions and giving an appropriate end.

Activity 1

Secretly place an item into a box and ask the students to figure out what is inside without opening it. Students use their senses to find out what is it. Ask “yes” or “no” questions to modeling the initiation of speech and the use of closed ended questions.

Activity 2

Write compound words on sticky notes. Dividing each half of the word into two notes. Then, place one sticky note on each student’s desk. Then students must find the peer who owns the note that makes the compound word.

Activity 3

Students will enjoy playing while reinforcing important learning concepts. The act of passing a ball while saying anything, engages students and keeps their attention, and encourages order within the classroom by limiting who is speaking and when.

Activity 4

When a student thinks you are referring to them, they will stand in front of their desk. An example is, “This person is wearing boots”. So all of the students who wear boots would stand up. Then you say, “This person wears…….. and has……..”. Then you move on to another description and so on.

Activity 5

Randomly select a student to come up to the whiteboard and have them stand with their back facing the whiteboard. Then choose another student to come up and write a word on the board behind them. Limit the word that is written to a sight word, vocabulary word, spelling word or anything that you are teaching. The goal of the game is for the student to ask his/her classmates questions in order to guess the word written on the board (open ended/ closed ended questions).

Non-verbal communication

Basic features

- Facial expressions
- Gestures and movements
- Pauses, volume, pitch, and tone of voice
- Eye contact
- Space and how use it
- Body language and body posture

Activity 1

Form pairs of pupils and assign each pair a topic, which they will discuss in turn for 3 minutes. Ask the pupils in the audience if the conversation involved non-verbal communication, and then ask them to recognize nonverbal features in the conversation, and to identify the features that were absent, using the C5-01 Small card.

Activity 2

Preparation: Cut several strips of paper. On each, write down a mood or emotion like anger, joy, aggression, fear, annoyance, sadness, boredom, anxiety. Fold the strips of paper and put them into an open container. Write the sentence “Please stop what you are doing, stand up and walk in an orderly fashion to the front yard. Take only your jackets/coats with you!” on the whiteboard.

Have each pupil take a strip of paper and read out the sentence, expressing the mood/ emotion they have selected.

After each pupil has read their sentence, the other pupils should guess the emotion of the reader. Each pupil should write down assumptions they made about each “speaking” pupil.

Prosodic features of speech

Spoken language involves more than the use of words to communicate and support meaning.

Speaking with expression, with a clear voice, using volume, pitch and intonation connect to sound systems and meaning.

In order to have an effective speaking skill use these prosodic features, to convey meanings.

Prosodic features in reading improves comprehension and literacy achievement in school.

Basic features of speech

Pause is important to create space for others to speak who may need more processing time. Also, we need to have a temporary stop in order for the listeners to understand what we are saying.

Through tone we convey feelings and this determine how people react to us. If we speak in a monotonous tone, without changing our pitch might have trouble understanding us and affect our communication.

The stress helps in changing the meaning of the word. It is important in order to give expression and a degree of emphasis to what we are saying.

Volume it is an important factor to consider because show emotions, promote meaningful interaction and sustain another's attention.

The tempo has to do with your speed in speaking. The right tempo (very fast / slow)determines the listener's understanding what the speaker is saying, without misunderstanding.

Activity 1

Preparation: write the following sentence on the whiteboard: "You go to a party and you run into a classmate who has moved to a different school".

Give the pupils in turn instructions like the following and ask then to act in the way described in it:

You are glad to see them. You speak to them with enthusiasm.

You don't feel like talking to them, but you pretend to be excited.

You don't like them very much, so you speak in a bored manner.

You are not fond of them, but you behave politely.

You don't like them, so you speak ironically all the time.

You are so glad to find them that you speak very excitedly and using a lot of gestures.

Activity 2

Ask the pupils to read sentences/ a story using different voices from the CS-02 Small card (Whisper, Monster, Mad scientist, Silly, Old person, Mouse, Robot, Nasal voice, Quick pace, Slow pace, Baby voice, Pirate). Alternatively, you can use the Level 1 Prosody exercise 1 un the Pupil's handbook.

For level 2, ask the other pupils to identify basic prosody features.

*Please prepare sentences, which you will read to Level 2 pupils, first without a certain feature (i.e. pause) and then with it. Discuss similarities and differences, to help them understand what each feature sound like.

Close-ended questions and Open-ended questions

Closed- ended questions

Have limited set of possible answers or one right answer (fact based, true-false, yes-no or multiple options) that are fixed sets of predetermined responses.

Their use isn't for discussions but to receive from the responder simple responses, brief and straight to the point and precise.

Usually start with:

How much, how often, and helping verbs (is, do, am, have, has, would, will, should.

Answered with:

short quick responses in shorter period for responders to provide answers.

Open-ended questions

Can't be answered with yes or no but have free-form answer. Don't have a right or wrong answer because have multiple answers and we get concise information.

Their responses are complex, describe thoughts and experiences to express themselves but same times maybe gathering irrelevant information.

Usually start with:

Why, Where, What, Where, When, Which (Ws questions, Hs questions) How long, How many, How much, How often, How many times),tell me about, do you like, I wonder why, explain, describe.

Answered with:

long responses in a longer period for responders to provide in details answers, thoughts and experiences.

Effective questioning

- Use open questions and encourage pupils to discuss, not short answers (Ws questions).
- Use wait time (time to think).
- Respond to pupils' question with another question, so they will make appropriate connections.
- Ask your pupils to form questions according to the learning task.

Activity 1

Chose a topic and write it on the whiteboard. Instruct pupils to get information on the topic by asking "W" questions (why, who, what, when, where), which they can find in the CT-08 Small card.

Activity 2

Ask a pupil to think a person (i.e. favorite artist, comic her or movie character) and then to ask the rest of a class, "Who am I?".

The other pupils must use both open-ended and close-ended questions to find the correct answer.

Activity 3

Ask a pupil to choose an object. The rest of the class takes turns asking closed-ended questions (answered with yes/no), to determine what the object is. If the class has not guessed the object, after each pupil has asked one question, then the pupil who chose the object wins.

Activity 4

Tell a pupil to ask the rest of the class who else shares a trait, quality, like dislike, hobby, sport, etc. with them. For example:

- Who has younger siblings like me?
- Who likes …… (sport) like me?
- Who likes wearing ….. (color) like me?
- Who likes …..(flavor) ice cream like me?

The pupils asks these types of questions until they find other pupils who have something in common with them. Than another pupil takes over.

Activity 5

Preparation: Find a story. Write down sets of open-ended questions (that can't be answered with yes or no) related to the story and their answers on A4 sheet.

Read the story to the pupils. Write one answer at a time on the whiteboard.

Ask the pupils to find the correct question, using the CS-04 Small card.

Sample open-ended questions

- How do (character) know that…?
- What do (character) think would happen if/after/next.. ?

- How did that happen?
- What could (character) do instead?
- How did (character) do that?
- Is there anything else (character) could use?
- Why did (character) choose that?
- How are these the same/different?
- Why is it important?

Conversational skills

Conversations are not two people taking turns saying unrelated sentences. Talking is essentially a form of content delivery, and it's not really communication unless we listen.

Active listening is communication technique that the listener gives all his attention to the speaker and letting them know that he is paying attention. They provide feedback of restating or paraphrasing what they have heard.

Active listening improves personal relationships, misunderstanding and conflicts, strengthen cooperation, and foster understanding.

When talking with others, there are many things we need to consider to the speaker's behavior and body language.

For example, we need to:

- Be able to start and finish a conversation (say the person's name, smiling, approaching them in a friendly manner).
- Take turns and not interrupt.
- Be aware of what our listener already knows or how they might be feeling.

- Use Nonverbal communication and respect their personal space
- Focus on the speaker, stay on topic, be aware of the situation . Avoid getting distraction by your thoughts.
- If you get stuck, ask a follow up question to“repair” a conversation
- If you want to change the topic, wait for a break in the conversation.

Some children may have difficulty understanding and using these 'principles'.

Stages of Listening by J. A. DeVito

- Receiving. Focus on hearing a speaker’s message.
- Understanding. Determines the context and meanings of the speaker’s message for gathering basic information.
- Remembering. Memory of a message and retain information
- Evaluating. Form an opinion of information and ideas that they have heard and developing a response.
- Responding. Listener involvement by verbal and/or nonverbal reactions

Activity 1

Ask each pupil in turn to talk about 5 objects in the room with either a specific color, shape, material or function, which you will specify (i.e. 5 yellow objects). Each pupil has 30 seconds to list the 5 objects.
Then, the pupil names another color or shape or material or function, for the next pupil to speak. Each new speaker repeats 2 objects that they heard from the previous speaker and then talks about 3 new objects.

Activity 2

Write a topic on the whiteboard. Take a whiteboard marker and explain to pupils that it will act as a "microphone" to indicate the pupil whose turn it is to speak. All other pupils must listen. Give the marker to the pupil who will speak first and ask them a question about the topic. The pupil will answer the question and then must ask a different question to the pupil who will speak next (what, who, how, why, when, where) about the same topic and pass the marker. Each speaker must answer the question and then ask a different question about the topic, passing on the marker.

Activity 3

Break the group down into pairs. Each pupil in the pair picks one topic from the CS-03 Small card.

The pair decides who talks first. Explain that the pupils must establish eye contact and listen to each other carefully.

Remind the pupils that they should wait for their turn to speak, not interrupting their partner.

Tell pupils to begin by asking a question (Who, what, why, when, where). Let the conversation flow and make the following comments at appropriate moments.

Instruct the pupils to stay on topic, by asking relevant questions.

Tell the listener to make a comment, to indicate that they pay attention. Remind the pupils that, if they wish to introduce a new topic, they should wait for a break in the conversation.

Remind the pupils that the can close the conversation with: see you soon, I have to go to ..., it was nice talking to you, talk to you later.

Alternatively, you can use the Level 1 and Level 2 Conversational skills exercise 1 in the Pupil's handbook.

Activity 4

Break the group down into pairs. Each pair picks one topic they're going to talk about. The pair decides which pupil will talk first. The two speakers must follow the conversational rules, while all other pupils must listen to the conversation and answer the questions on the CS-05 Small card.

Notes to teach communication skills!

- Be a Model
- Set boundaries (teach kids how to get your attention—without inappropriate disruption).
- Don't Embarrass Children by Correcting (gently correcting errors in private).
- Teach Empathy (An empathic listener is a skilled listener).
- Show the Power of the Pause (encourage a culture of pausing to also create space for others to speak who may need more time).
- Turn-Taking (taking turns in speaking is much like sharing).
- Let them describe what they see in story form (utilizing their ability to speak them to the classroom while other children practice their listening skills).

Descriptive language

It describes something or someone accurately and in a way that makes it come alive for the listener or reader on multiple levels.

An important part of description is the sensory analysis (how it affects the senses), which we use to describe facts, locations, faces, objects, etc.

Speaking and writing that involves a detailed description, picture that the listener or the reader can visualize and being part of the scene.

An objective or subjective description can include opinions, feelings and thoughts to convey the meaning behind the text.

The elements of description include:

Classification of the object, person or situation.

Listing of their characteristics.

Descriptive details.

Planning of descriptive speech (evaluating the relevance of information and organise writing by time, location or importance).

Final description.

Development of descriptive speech skills

First stage: description of objects, expressions-faces, animals and facts with visual aid (color cards and card sequences for events).

Second stage: repeat the process with black and white cards, sketches and one cumulative card per event.

Third stage: the visual aid is absent and the child's descriptions are based on his/her life experiences.

Fourth and final stage: the teacher chooses the objects-facts of description (first aid scenario, prevention scenario, action scenario, everyday life scenario, etc.)

Descriptive language – guides

Describe an object

What is its name?
Where can we find it?
What is its color and shape?

What is its material?
How is it used?
Do you have one yourself?

How would you use it?

Describe a person

Who is this person?
How do you know this person?

How is this person (face, body)?

What are they wearing?

What is their job?

Where do they work?

Activity 1

Copy the **Describe an object** guide-questions to the whiteboard. Choose an object in the classroom. Ask pupils each of the questions and let them come up with multiple answers. Enrich their answers with adjectives and other descriptive words*. Finally, give a complete description of the object, by answering all of the questions yourself.

The same activity can be performed with the **Describe a person** guide-questions.

*For each guide-question, write sample descriptive words on the whiteboard, denoting shape, color, size, material, appearance, expressions, senses and emotions.

Activity 2

Expanding on the previous activity, ask pupils to each choose one object in the classroom. Then, ask each pupil to give a complete description of their object, using the guide-questions on the whiteboard and to enrich their answers with adjectives and other descriptive words.

The same activity can be performed with the Describe a person guide-questions.

Activity 3

Ask pupils to describe an object or person familiar to them, using the LS-01 Small card and quide-questions, either verbally or in writing. You can also assist them by writing on the whiteboard the descriptive vocabulary you created in the previous activities.

Activity 4

To have pupils practice their skills in senses-based description, arrange the five senses on respective columns on the whiteboard. Under each column, add a list of relevant adjectives, encouraging the pupils to share as many adjectives as they can. Then, ask them to think of different ways to describe an object/or person, using one word from each of the columns on the whiteboard.

Activity 5

Preparation: Locate a set of 8-10 images/pictures.

Show the images/pictures you have prepared to the classroom and ask each pupil to choose one. Then, ask each pupil to share their description with the classroom without revealing which image/picture they are describing. The other pupils must try to guess the image/picture from the descripition.

Describe an object

Name this object and specify its type
Where can we find it?
What are its characteristics?
What material is it made of?
How is it used?
Have you ever used it?
Name other objects in the same category

Describe a person

What is this person's name?
What is your relationship with this person?
What are this person's physical characteristics?
What is this person's appearance?
What is this person's profession?
How does this person behave?
What do you feel for this person?

Note: Please use activities 1, 2 and 3 from the **LSL-01 Large card**, to introduce the Level 2 quide-questions for the different types of descripition.

Activity 1

Preparation: Prepare different sentences and write them on the whiteboard. The sentences should be simple and basic, with no descriptive elements.

Ask pupils to make these sentences more descriptive, using adjectives denoting shape, color, size, material, appearance, expressions, senses and emotions.

Describe a location

What is its name?
Where is it located?
How does it look like?
Why do we go there?
Where is a similar location?
How do you feel when you go there?

Describe a situation

Who is/are the hero/heroes?
Where is it happening?
When did it happen?
What is happening?
How are the heroes acting?
How are they feeling?
What happened at the end?
What was a similar situation that happened to you?

Activity 2

Ask pupils to each choose a topic and write a descriptive paragraph, without using any "to be" verbs. Alternatively, you may limit them to one or two per paragraph. Pupils should come up with alternative, more complex syntax to add description to their topic. Please also use the LS-02 and LS-03 Small cards and quide-questions.

Activity 3

Ask pupils to each choose an object and then ask them to write five sentences about it. Each sentence must focus on one of the senses. Pupils will have to come up with the appropriate vocabulary for each sentence.

Activity 4

Preparation: Prepare samples of descriptive and narrative texts.
Split pupils into two groups. Ask one group to read the descriptive text and the other group to read the narrative text. Then, have the pupils compare and contrast the two types of text and write the main characteristics of each on the whiteboard.

Narrative language

Is the ability to use language to tell or retell stories, events that occur in everyday life or past experiences.

Narrative skills require cognitive, linguistic, pragmatic and social abilities.

Narratives can be either spoken or written, fictional or non-fictional, and formulate new realities and ideas or narrate experiences of everyday life.

Linear narrative presents sequencing events of the story, in a logical way and in the order in which they happened. Events are connected to each other by causal and temporal relations.

Through the development of narrative skills, listening and reading comprehension skills, receptive vocabulary, understanding of time and writing skills are also developed. Furthermore, pupils can make predictions about future events, understand the relationship between cause and effect, as well as build critical and creative thinking skills.

Improving oral narration can improve written narration and literature skills.

Key Elements of a Narrative

Choose a topic

Instruct the pupils to think about real life experiences and make a list of the things that they want to include in their stories.

Create character(s) and choose a setting

Ask your pupils to think of the main character(s) and their details (name, appearance, likes/dislikes, interests, place of residence, family, etc.).
Ask the pupils to make each a list of 3 adjectives describe their heroes. Ask the pupils to think of the time and setting of their stories.

The Beginning

Advise the pupils to set an opening scene. It should grab the reader's attention with an unusual premise.

The Problem

Ask pupils to introduce the problem which the heroes are facing (is it a conflict with another character, with themselves, with a real-life/fictional situation?) Suggest that there may be an unexpected twist to the story.

The Resolution

Ask the pupils to describe how the problem reaches its climax and how it is resolved.

The End

Ask the pupils to devise the end to the story and to think of what the heroes achieved/learned.

Activity 1

Draw 4 columns on the board: WHO (heroes of the story), WHERE/WHEN (setting), WHAT (does the hero want to achieve), PROBLEM (what prevents the hero from achieving it). Ask pupils to think of WHO, WHERE/WHEN, WHAT and PROBLEM ideas, and to write them in the respective column.

Finally, ask each pupil to create their own story idea with the contents of the 4 columns. *Using the LS-04 Small card, pupils can identify the basic elements of any story.

Activity 2

Preparation: A4 printouts of fictional stories.

Give pupils 3 different types of fictional stories.

Ask them to write the types of characters they expect to find in each. Then, ask the pupils to match each type of story with the most unlikely characters and describe them briefly.

Activity 3

Ask the pupils to prepare key elements of a story. Provide the topic and ask them to think of the heroes and the setting.

They must decide on the type of conflict and come up with 5 problems.

Activity 4

Ask the pupils to list their 2 favorite movies and books.

Then ask them to find the main elements of each (WHO, WHERE/WHEN, WHAT, PROBLEM).

Ask pupils to narrate their favorite movies/books, using the LS-04 Small card for structure.

Alternatively, use the Level 2 Narrative exercise 1 in the Pupil's handbook.

Cognitive – Perceptual skills

Sevasti Etmektsoglou, Theodoros Kalyvas, Sophia-Chrysovalantou Zagalioti

Theoretical framework

Cognitive skills form a second group of skills which is necessary to be fostered and developed, since they run several steps of the algorithm.

Cognitive are the primary skills our brain uses to read, memorize, process, think, learn, reason, pay attention and move the muscles of the body. These skills start to develop from early childhood.

We would like to present selected definitions of, examples and activities of the building blocks of the cognitive skills that are most prominent through the LIFEFORCE – BLS algorithm.

To begin with, we should have in mind some general information about children's cognitive development, such as the following (Lehalle & Mellier, 2005).

- Development occurs in waves followed by periods of calm
- Each developmental stage is built on the previous
- Stages are used only as guides, each child has its own rhythm of development
- Development takes place simultaneously in many development areas
- Development takes place unevenly
- Development is a result of sensorial-perceptional maturation's interaction with the psycho-social environment of each child
- 90% of the brain development is completed up to 5 years old

Training exercises work best when practiced 5 days per week for 8-12 weeks. We're able to complete two or three activities in 15 minutes. We rotate games to work on all the cognitive skills

Brain training even helps students who struggle with test anxiety or just want to take their test taking skills from good to better.

Notes to Remember!

- Discuss course schedule and prepare the students using their own experiences to help them understand why it's important to learn
- Allow extra time for skills practice
- Allow trial and error to learn the skills
- Repeat the information in as many ways as you can throughout the course (in the middle and at end).
- Use a reward system
- Be on topic. Laugh and joke with them, but continue to steer them back on topic.
- Prefer the black and white printing to increase the visual challenge of the games.
- Plan for extra breaks.

Activities for brain break

Brain break before, during, and/or after an activity. A brain break get students refocused and ready to learn again.

- Play Mingle. Set the timer for one-minute intervals that last five minutes. Each time the timer goes off students have to mingle with someone new. The teacher poses five questions on the front board to help get the conversion started.
- Follow the leader is a student favorite. Change this game up by having students take turns being the leader.
- Skywriting to practice spelling or vocabulary words. Choose a word and have students write it in the sky.
- Students pretending they are playing different instruments in the air. It's a good way to get their energy out.
- Pantomime games

Skill 1: Visual perception

Visual perception is the ability to perceive our surroundings through the light that enters our eyes. Is the ability to interpret, analyze, and give meaning to what we see. It help**s** us to integrate visual information with previously stored data to form a stable, predictable, familiar world. Vision perception allows us to understand, not just see. There is a wide range of visual perceptual skills: In this text we present the ones that more frequently activated through the LIFEFORCE BLS algorithm steps and these are: Visual discrimination, Visual figure ground, Visual attention, Visual closure, Visual-spatial relations and Visual form constancy.

Tips for visual perception!

- Use a coloured dot or sticker to show what side of the page to start writing on or reading from
- Use directional arrows to help students with direction or starting position for letter
- Formation and dot-to-dot worksheets to formulate letters and numbers
- Highlight the line to encourage correct line alignment
- Encourage students to identify mistakes in written material
  Write the number of mistakes at the end of each row and give the children time to locate them.

Activity 1: Visual discrimination

Description

Visual discrimination is the ability to recognize details in visual images and to determine exact characteristics and distinctive features among similar objects. It allows people to identify and recognize the likeness and differences of shapes/forms, colors and position of objects, people,

and printed materials. It gives us the ability to match and sort objects. This skill helps children distinguish between similarly spelled words

It is very important through all the steps of the LIFEFORCE – B.L.S. algorithm.

Levels

Level 1:

- Visual discrimination exercises of letters, (errors in form, errors in size), syllables, words (phonotactic structure - number of syllables), numbers (multi-digit)
- Use small cards and hand out one to each child, with a correct letter/word on one side and an incorrectly formed letter/word on the other side. Have the child try to draw/write the letter/word correctly, then turn over the card to see if it is right. (self correction)
- Locate the differences. Exercises of gradual difficulty, visual discrimination (differences between two images)
- In the first level practice with both eyes.

Level 2:

- Shape matching
- Find the errors (identifying objects that appear, based on errors in their use, i.e. a cup with a toothbrush instead of a spoon).
- In the second level practice with each eye separately.
- At an advanced level, use black and white images from specific to more abstract

Extension

- Exercises where the child has to reproduce a letter correctly, seeing the incorrect version in relation to orientation / axis. There should be the ability to self correct.
- Letter matching.
- Locating different forms of the same digits.

- Word Search Puzzles for learning reading, vocabulary, spelling.

Learning difficulties

Difficulty in visually distinguishing words and graphs with visual similarities in reading and writing, difficulty locating errors in an assignment, difficulty identifying 2D with 3D forms (letters of the alphabet).

Activity 2: Visual figure ground

Description

Visual figure ground refers to the ability to locate and identify shapes and objects embedded in a busy visual environment. This skill keeps children from getting lost in details, confused with too much print on the page to locate specific information, affecting their concentration and attention,

For example, to approach the scene in safety or being observant of visual indications of danger such as a moving car, falling objects etc. without being distracted by other surrounding stimuli.

Levels

Level 1:

- Find hidden pictures in books, photos or magazines.
- Find objects in a cluttered room or in a cluttered picture.

Level 2:

- Create pictures of objects in the same category two-dimensional, black and white with abstract depiction on a background with enough information, where children have to discover.

Extension

Exercises of locating letters-numbers in the background, counting letters and numbers, solving Word Search Puzzles.

Learning difficulties

- Difficulties in locating a game, organizing and sorting personal items
- Difficulty in filtering visual distractions
- Difficulty in finding words in a text due to his/her inability to exclude other words around it
- Difficulties in reading, copying and paying attention
- Difficulty in copying from the board and may omit segments of words.

Management strategies

- Place their desk in an area closer to the front to avoid distractions from other students and their desks.
- Eliminate as much of the visually stimulating classroom wall decorations as possible, especially near their desk.
- Seat child towards front of classroom away from windows – where teacher is most likely to be aware of any confusion or lack of comprehension.
- Do not have a worksheet cluttered with “cute” decorations and place only one activity on a page.
- Use a red marker to outline boundaries for coloring/writing, mazes or cutting tasks. With the marker you can cut one task in two smaller amount of work.

Activity 3: Visual closure

Description

Visual closure reflects a child's ability to visualize a complete whole when given incomplete information or a partial picture, shape, object and amount. This skill helps children read and comprehend quickly, recognize inferences and predict outcomes. This skill requires abstract problem solving.

Levels

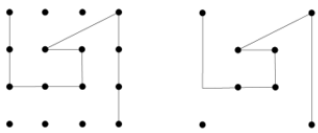
Level 1:

- Copying shapes in a grid of dots.
- Parts of pictures appear, and pupils have to guess the picture.

- Can be used for writing letters and be color labeled for the early stages of writing.

Level 2:

- Gradually increase: the size of the grids with the number of dots, the distance from dot to dot, the placement of a grid next to or behind the child (she must turn her head or her eyes).
- To increase the difficulty, remove some dots from the grid.



Extension

- What number / word is this? Only part of a number or a word is displayed. You can do this by writing a word on the board and then wiping off part of it. The degree of difficulty gradually increases.
- Which frame fits the word?

Learning difficulties

They may also confuse similar objects or words, especially words with close beginning or endings when they have poor abilities.

Difficulty in copying text and spelling

They may skip some tests, skip words or even syllables within words.

Difficulty in using worksheets that are not photocopied with the proper resolution.

Additionally, children have difficulty completing thoughts and making decisions when they do not have all the data

Management strategies

- Step-by-step instructions for completing his/her work
- Give him/her a chance to correct his/her mistakes by giving instructions.

Activity 4: Visual-spatial relations

Description

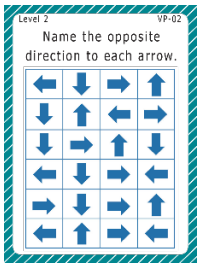
Visual-spatial relations is the ability to perceive the position of objects in space and to one's own self, (laterality, understanding left and right on one's own body, and directionality,

understanding left and right on other objects, good understanding of their body's position within space, a general awkwardness in their movements). When for example following instructions or implementing other steps, the children must know their left and right, or which is a person's right when lying on the ground.

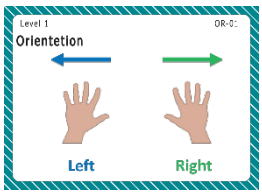
Levels

Level 1:

- Finding the position of elements (letters, numbers, syllables, words) in different contexts as well as placing them following specific commands.
- Cards with duplicate image showing differences: (change in location, of object, change color of an object, missing or appearance of an item)
- The child says the direction of the arrow.



- In this exercise the letter direction is combined with the corresponding part of the body:
- As you read the letters aloud, press the appropriate part of your body at the same time.



- Laterality-orientation commands (game)
    - https://www.youtube.com/watch?v=vsfBKYfuAm8
    - https://www.youtube.com/watch?v=V363Z92PAHk

Level 2:

- Recognition of concepts right, left on someone else (crossing of sides when the reference point is across him/her)
- Rhythmic play with song as couples where children clap their hands individually among them, crossing them. They can also point to other parts of the body.

Extension

The children must know their left and right when following a line of print left to right during reading and letter reversals and poor spacing during writing.

Learning difficulties

At a learning level, inversions of letters or their movement (mathematical operations inversion of two digits), inversion of the direction of reading and writing, difficulty in writing where distances between letters - words are not observed.

They find it difficult to locate what they are looking for on a page, they lose the order they are in, they forget where they have started.

Difficulty differentiating the concepts right-left, difficulty in calculating distances, reading maps-diagrams

Management strategies

- Use of arrows that indicate the direction (letter writing, writing direction).
- Color marking of the page frames, marking the borders of the page with colored glue.
- Mental calculations.

Activity 5: Visual form constancy

Description

Visual form constancy Is the ability to mentally manipulate forms and visualize the resulting outcomes. This skill also helps children recognize an object and find it among other forms in different contexts regardless of changes in size, shape, and orientation.

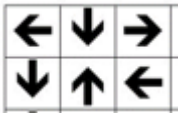
Levels

Level 1:

- Cards with photos of objects in the front position and cards with photos of the same objects with shots from behind, from above, from below and from the side. The child must identify and group the photos by recognizing the different perspectives of each object.
- Exercises for identification-detection-matching of pseudo-words, numbers, symbols, shapes with differences in shape, size, orientation.

Level 2:

- Exercises for recognizing-locating-matching letters, syllables, words, pseudo-words, numbers, with differences in shape, size, orientation, font, printed or handwritten.
- The child says the opposite direction from the one shown by the arrow.



Extension

Perspective exercises with clockwise or inverted rotation.

Learning difficulties

Children with poor form-constancy may struggle to recognize objects, letters, or words when turned a different direction or viewed from a different vantage point. They can fail to recognize words they know that are presented in a different manner, i.e., written on paper, in a book, or on the board.

Slow reading speed, difficulties in measuring volume, mass. It affects the attention and concentration in tasks that the child has to complete on his/her own, without supervision.

Management strategies

- Give the child what is to be copied on a paper lying flat on their desk, rather than the board, or copy from another child's paper.
- Try to use the same font or style of letter on handouts.
- When learning a letter form, have the child work in the same plane as it is being taught (they need a vertical board if that is what you're using).
- Teach them to tilt their head or eyes if they have trouble visualizing something at a certain angle.

Activity 6: Visual attention

Description

Visual attention is defined as the process by which we select a subset (the target), focus on important visual information and filter out unimportant background information (the distractors) for further processing.

Levels

Level 1:

- Using attention to detail, you will have to locate a recurring pattern on a grid and circle as many of the pattern you can find.

Level 2:

- Ask a pupil to identify the matching object within a column for a set of complex figures.
- The pupil must study pattern sets by comparing the left and right columns, and then must circle the pattern which is different in each set.

Extension

Also allows students to avoid distractions so that they can focus on and complete specific tasks.

It is influenced by both external and internal factors.

Visual attention is vital for reading.

Learning difficulties

- Activities proportional to the time of concentration
- Check and reduce acoustic, visual distractions in the room.
- Slow speech, short sentences, use of verbs, pauses between commands and instructions.
- Give examples, gradual autonomy of the child (scaffolding).

Skill 2: Auditory perception

Auditory perception is also important, involving two specific building blocks (auditory discrimination and auditory figure-ground) activated in several steps of the algorithm. The auditory perception skill refers to the ability of the brain to interpret and create a clear impression of sounds. Good auditory skills enable children to distinguish between different pitches, volumes, rhythms and sources of sounds and words, which has significant benefits for learning, reading and reading comprehension, amongst others.

When for example we approach a victim of OHCA we use all our sensory perception to identify the environment and the surrounding elements and take incoming information to process and proceed to further steps of recognizing signs of response or breathing, call for help and start CPR.

Auditory processing includes recognizing language, speech, and pitch of sounds. When we think or recall, we visualize the information stored in our long-term memory in the form of image or sound.

Tips for auditory perception!

- Let your children listen to a wide range of different types of music and develop music appreciation
- Play and sing action songs and rhymes
- Talk to your child and let it talk back to you in different intensities of voice: softer, louder and with different intonations
- Teach your child the sounds associated with familiar objects e.g a clock ticks
- Blindfold your child outside. Then call to her from different positions nearby and let her turn towards you
- Read or tell your child a story and ask afterwards ask her a few pertinent questions about the story
- Speak or sing in a high pitched voice and then a low pitched voice and ask your child to imitate you
- Clap a rhythm and ask your child to imitate it. Repeat with your backs to each other so that she cannot see you clap
- Gain the child´s attention prior to speaking.

Activity 1: Auditory discrimination

Description

Auditory discrimination is the ability to recognize, compare and distinguish between distinct and separate sounds. For example, it is crucial to be able to distinguish between someone else's normal and heavy (agonal) breathing.

It is very important through all the steps of the LIFEFORCE – B.L.S. algorithm.

Levels

Level 1: Listen to the following sound and try to identify who/what makes that sound.

Level 2: Listen to the following sounds and try to describe them based on the characteristics volume, tonality duration, pitch.

Learning difficulties

The child has difficulty hearing the difference between sounds or words that are similar (coat/boat or ch/sh). This problem can affect the ability of the child to follow directions, read, spell and write.

Activity 2: Auditory figure ground

Description

Auditory figure ground is the ability to filter background conversations and noises to focus on what is important for example when we check for breathing.
For example, to approach the scene in safety or being observant of visual indications of danger such as a moving car, falling objects etc. without being distracted by other surrounding stimuli.

Levels

Level 1:

- Having selected the appropriate background sound file, ask a pupil to follow the instructions below. Gradually, you may increase the volume of the background, or change it, in order to modify the difficulty level.
- Simple directions (two steps)
    - Point to your eye and then count to three.
    - Raise the pencil and then close your eyes.
    - Count to three and then touch your leg.
    - Point to your nose and then look at the ceiling.
    - Take the book and then grab the pencil.

Level 2:

- Having selected the appropriate background sound file, ask a pupil to tell you what the following words mean. Gradually, you may increase the volume of the background, or change it, in order to modify the difficulty level.

Ball, ambulance, elevator, pencil, pocket, window, parrot, fairytale, dream, shield, astronaut, boat, brush, bicycle.

Learning difficulties

The child is unable to pay attention because of noise in the background. Noisy, low-structured classrooms can be very frustrating.

Activity 3: Auditory closure

Description

Auditory closure is the ability to complete indistinct or inaudible words to create a clear auditory image, and to visualize a complete whole when given incomplete information or a partial picture. This ability can also help children recognize inferences and predict outcomes.

Levels

Level 1:

- Read one of the following sentences to a pupil and ask him/her to write down the missing word:
  - I brush my teeth with a _____.
  - I left my exercise book at school, so I can't finish my _____.
  - I like to watch cartoons on _____.
  - _____ live in the ocean.
  - My favourite _____ is red.
  - One _____ has seven days.

- Read the following sentences to pupils and ask them to complete them with words that group
  - A bowl of _____, a carton of _____, a flock of _____, a pair of _____, a swarm of _____, a bunch of _____, a spoonful of _____.

Level 2:

- Supply a word, ask a question and have pupils come up with one or more rhyming words as possible, which correctly answer the question.
  - "I am an animal. I rhyme with 'fog'. What am I?" (dog, hog, frog).
  - "To eat my dinner, I must sit on an object which rhymes with "pair". Where must I sit?"

- Say a simile and ask a pupil to provide the missing word:
  - As high as a _____ (kite)
  - As clear as a _____ (crystal)
  - As cold as ____ (ice)
  - As busy as a ___ (bee)

Learning difficulties

- Difficulty reading or spelling due to problems discriminating word sounds
- Difficulty following oral directions
- Asking for repetition a lot
- Missing things in conversations
- Long delays before responding to questions or instructions

Activity 4: Auditory synthesis and analysis

Description

Auditory synthesis and analysis refers to a child's ability to break up sounds as well as put them together. This is crucial for learning to read and spell.

Analysis is the ability to break a sentence into words, a word into syllables or a word into sounds – necessary for learning to spell.

Synthesis is the ability to put sounds or words together (e.g. c-a-t) – necessary for learning to read.

Levels

Level 1:

- Synthesis – Pronounce the sounds that make up a word and ask a pupil to put them together into a word. You can increase the number of letters to modify difficulty.

D-O-G = Dog, B-I-R-D = Bird, H-E-A-R-T = Heart, W-H-I-S-P-E-R = Whisper, A-M-B-U-L-A-N-C-E = Ambulance

- Analysis – Say a word and ask a pupil to detect and pronounce the sound that make up the word. You can increase the number of letters to modify difficulty.
  Table = T-A-B-L-E, School = S-C-H-O-O-L, Winter = W-I-N-T-E-R, Butterfly = B-U-T-T-E-R-F-L-Y, Television = T-E-L-E-VI-S-I-O-N

Level 2:

- Analysis – Ask the pupils to close their eyes while you read out words to them and raise their hands when they hear a specific sound, i.e. “s”. To make this exercise more difficult, you can ask pupils to raise their hands when they hear two specific sounds, i.e. “s” and “t”.
- Synthesis – Say pairs of words which form complex words and ask pupils to circle the respective image on their handbook. I.e. cloth + table = tablecloth, ball+foot=football, fight+fire=firefighter, chair+arm=armchair

Learning difficulties

Problems may be related to auditory filtering (distractibility), auditory phonemic processing (discriminating), identifying the sounds (extraction or decoding), and associating sounds with the symbols in reading and spelling (auditory phonological integration).

Activity 5: Auditory memory

Description

Auditory memory is the ability to recall or recognize of stimuli existing in the form of sound energy. Remembering the sound of a normal/agonal breathing or the screeching sounds of a vehicle decelerating.

Levels

Level 1: Give pupils verbal instructions and ask them to draw on the dot grid in their handbook. I.e.

- Start at the top right dot, draw left two dots, draw down one dot, draw down and to the left one dot…".

Level 2:

- Have the pupils sit in a circle and explain that you are all going on a shopping trip and everyone needs to remember all the things that are bought.
- Begin with the carrier phrase 'I went shopping and I bought a hat.' The first pupil on the right repeats the carrier phrase and your item, as well as adding their own 'I went shopping and I bought a hat and an apple …'. And so on around the group.

Learning difficulties

The child has difficulty remembering instructions such as directions, lists or study materials. It can be immediate ('I can't remember it now') and/or delayed ('I can't remember it when I need it for later').

Activity 6: Auditory sequential

Description

Auditory sequential is the ability to facilitate following instructions and memorization of rhymes, songs/ steps that are shown in an activity or in our case the LIFEFORCE – B.L.S. algorithm steps.

Levels

Level 1:

- Instruct a pupil that you will read a sequence of numbers and ask him/her to remember them and to repeat them in the correct order.
- Then read the following sequences of four numbers

1-2-3-4, 5-10-15-20, 5-6-7-8, 4-6-8-10, 3-5-7-9

Level 2:

- Instruct a pupil that you will read a sequence of words and ask him/her to remember them and to repeat them in the correct order.
- Then read the following sequences of six semantically connected words:

chicken-duck-pig-horse-cow-sheep

eye-nose-ear-mouth-forehead-chin

hand-foot-knee-finger-palm-chest

gift-child-party-birthday-surprise-play

Learning difficulties

Difficulties with auditory sequencing may include confusing numbers like 93 for 39 and confusing lists and sequences. For example, a child with auditory sequencing problems may not be able to complete a series of tasks in the right order. He or she may fail to be able to do so even when appearing to have heard and understood the directions.

Memory of letter and number sequences. Enhance imitation which is important for spelling, development of correct syntax and synthesizing the intent of a spoken message. Include practical information. (phone numbers, sport scores, birth dates, friend's addresses, holidays)

Difficulty to put words in sequential order. (month, second, day, year, week, hour).

Skill 3: Attention

Changes in attention have been described by many as the key to changes in human memory (Nelson & Fivush, 2004; Posner & Rothbart, 2007). Fatigue, hunger, noise, and emotional stress reduce the time focused on the task. After losing attention from a topic, a person may restore it by resting, doing a different kind of activity, changing mental focus, or deliberately choosing to re-focus on the first topic.

Factors which affect concentration

Psycho-emotional factors related to the emotional difficulties faced by pupils (fear, άγχος failure-performance related stress, cognitive – learning difficulties, difficulty to self-regulate in the structured school environment).

Internal distractions (personal thoughts and concerns, interaction with the object of learning, boredom, absent-mindedness, withdrawal, procrastination, fatigue).

External- environmental distractions, such as auditory (noise, chatter, electronic media) visual (space management, complexity of visual stimuli in space) sensory (temperature, lighting).

Also, the diversity of stimuli, the complexity of activity, the duration, the interaction with the object of learning, complicate retention of attention and can lead children to passive watching.

Tips for attention!

- Control and retention of eye contact
- Give exercises with gradual levels of difficulty and always connect them with the immediately lower level.
- Breaks (motor), adaptation and change of activity in cases of easy fatique an non-completion oft he task.
- Frequent repetitions, small volume of tasks, segmentation of tasks with small achievement targets.
- Resumption of the child's concentration in some way (verbal, haptic) which has been agreed with the child.
- Control of internal distractions related to thoughts, concerns, worries, through discussion with friends, family, teachers.
- Connection of the tasks and expansion to the child's everyday life, so as to create motivation and interest for the task.
- Focus in achieving a skill-knowledge and not in grading the performance.
- Educate children in the different types of exercises and their presentation, giving them in steps the way to solve them.
- Ask the child to repeat the instruction.

Activity 1 Focused Attention

Description

Focused Attention is the ability to keep attention on a stimulus (visual, auditory, or tactile) or activity, but having the tendency to lose focus due to distraction. Focused attention is a type of attention that allow you to choose and concentrate on one task at a time, ignores all other stimuli. It is essential to formed memories and recall of information.

Levels

Level 1:

Locate an item

- The teacher chooses an item within the children's visual environment.
- He gives a clue and gradually addes clues such as location, characteristics and use of the objects until the children figure out the object.
- Locate a sequence of items
- Within one paragraph, children must locate words starting with the first 10 letters oft he alphabet and write them down/encircle/read them.
- Master word. Put 1 minute on the clock and have students write down as many words as they can from the letters of the master word.

Level 2

Locate an item

- The teacher chooses a new word, phrase, date, rule and verbally directs the children's attention to the text (paragraph number, line number, word number in the line, initial letter, spelling clue etc.) until they locate it (orientation and visual scanning)

Count words inside a text

- Paragrahps/text of varying difficulty and length (number of lines, font size) are given and children are asked to count (with reading the words or pointing at them), write down or say the total number of words. Children's answers are compared and the process is repeated untl most children have found the correct number of words per paragraph or text.

Focus the group on spots in space every 10 seconds

- Without head movement, without blinking the eyes.
- Children are asked to look at a spot in the classroom chosen by the teacher, for 10 seconds. Whoever moves first, chooses the next spot.
- Choice of spots gradually changes levels (over, under, left, right, straight, behind).

Extension

The same can be extended to sequences of elements, such as numbers, days, months, dated of events.

Learning difficulties

Deficient focused attention will make doing other daily tasks more difficult and less efficient. A lack of attention, leads to difficulty remembering crucial pieces of information.

Recording of attention, refocusing and retention

- Children paint a road on the top of a page in their workbook.
- Each child chooses to be a moving object (animal, car, person, bicycle, etc.) on the road.
- The teacher explains to the children that he/she will narrate a story.
- Each time the children realize that they are thinking about something else or lose focus, they must draw a curve on the road. Then they refocus their thoughts and continue on the road.
- When the narration is over, children count the curves they have drawn and, if they want to, they share with the group the prevalent thought that occupied their attention.
- A record of the roads is kept and gradually they must have fewer curves.

Activity 2 Sustained Attention

Description

Sustained attention involves the ability to maintain one's focus and attention to an activity or stimulus over prolonged periods of time, in the presence of distractions and other activities. It involves the ability to return to an activity when interrupted and to persist in attending to a tedious or boring task. It may also involve the process of attending to multiple sources of information and being able to selectively choose what is most important to attend to.

Sustained attention is developmental, as older children may need to be able to attend for longer periods to complete more complex tasks.

Levels

Level 1:

- Find the Difference" in which two similar but slightly different pictures are provided

Level 2:

- Card games that require the player to observe and remember what has been discarded or held in someone's hand.
- Sequences of numbers, days, months, which the pupil must recall in reverse order to the original.
- Count down by 2/3 from 100 down to 70 or other number.

Extension

Children need to be kept involved with the material, so ask for responses regularly on the subject matter you are discussing.

Children need frequent breaks to refresh. These breaks help improve their levels of concentration and focus. Work in free time to your classroom daily schedule.

Learning difficulties

- Be clear and concise when giving directions. Do not overload pupils with too many words or directions.
- Utilize slow speech, small sentences, verbs, pauses between commands and instructions.
- Interesting and stimulating tasks to follow boring and mundane tasks (help pupils take on greater responsibility and reduce conflicts).
- Encourage pupils to talk about the components of activities and ask them to paraphrase what they have heard.

- Use competition to sustain attention. Challenge pupils to see who fully completes a task first. Competition often serves to help pupils sustain their focus.
- Try out a range of technologies that can sustain attention to learning.
- Offer examples for gradual pupil autonomy (scaffolding).

Activity 3: Divided Attention

Description

The ability to switch our focus between tasks or external stimuli is called divided attention or multitasking (Carlson, Zelazo, & Faja, 2013). Young children (age 3-4) have considerable difficulties in dividing their attention between two tasks and often perform at levels equivalent to our closest relative, the chimpanzee. However, by age five, they have surpassed the chimp (Hermann, Misch, Hernandez-Lloreda & Tomasello, 2015; Hermann & Tomasello, 2015). Despite these improvements, 5-year-olds continue to perform below the level of school-age children, adolescents, and adults. These skills continue to develop into adolescence.

Levels

Level 1:

- A teacher could use a story and students to pay attention to the story and then practice identifying what feeling a character is experiencing by holding up a smiley face.
  For example, the students would then hold up a happy or excited smiley face.

Level 2:

- In advance level an educator could use a document to create a story and include sections for students to insert the appropriate smiley faces as they follow along with the story.
- This concept can be used in other ways they could show a thumbs up or thumbs down. It is also helpful for discussing the do's and don'ts of classroom behavior.

- This game is for teaching the time tables, Everyone takes turns saying a number starting with 1, 2, 3 and so on. At every number with a 4(or another) in it or a multiple of 4, that person needs to say BUZZ (or other word) instead of the number. The next person just continues the series as normal (thinking while listening for your turn).

Extension

Divided attention used during reading time, when a student hears their teacher talk, so they switch their attention from reading to listening. When the teacher stops talking, the student returns to reading. In addition when listening to what the teacher is saying while reading information on the board or screen.

Learning difficulties

Students of all ages have a limited capacity to pay attention for an appropriate length of time.

- Using a schedule allows your students to clearly see what is coming next and when that time will come.
- Knowing how long they should focus on each item allows them to give their mind a break when each segment is up.
- If you break down a full day or project into smaller segments, they will know when to focus, when to rest and when it is time to get back to work.

Memory is an information processing system; therefore, we often compare it to a computer. Memory is the set of processes used to encode, store, and retrieve information over different periods of time.

Tips for memory!

MAKE CONNECTIONS: Making connections between new information and prior knowledge.

- Q1: What does this new information remind you of?
- Q2: Have you ever learned anything like this before?
- Q3: Have you ever had a real-life experience that you could relate to this new information?

CHUNKING: organize material into manageable units. Different items can be categorized under main categories. Numbers be broken into groupings presented in clusters.

TELL A STORY: Creating a story about the information to be learned can help with both memory encoding and retrieval.

RHYMES: Creating rhymes with academic content embedded can make recall an easier process.

CREATE A VISUAL ASSOCIATION: Visual associations allow students to connect a mental or drawn image with the information memorized.

CREATE AN AUDITORY ASSOCIATION: Auditory associations can help with learning vocabulary.

GRAPHIC ORGANIZERS: Graphic organizers are also called Mind Maps, to organize information and thoughts. Allow students to compare and contrast two concept or ideas.

- Time Lines: Help students place information in sequence or time order.

Tips for memory! (continue)

- Cycles: Assist students with concepts that have a repeating cycle like the nitrogen cycle or the water cycle.

ACROSTICS: Acrostics are short sentences that use the initial letter of each word or phrase to be memorized.

ACRONYMS: Acronyms are a sequence of letters that may or may not form a word. Each letter represents the first letter of the keywords to be remembered.

HOOKING: Hooking is a method that helps students connect the question to the answer so that information is stored in the same location and can be easily accessed. This is a great strategy for remembering vocabulary words because the answer is embedded in the question.

VERBAL REHEARSAL – TEACHING MATERIAL: to process information aloud. Thoughts are articulate it. Teach new topics to others, can be an effective way to memorize information.

SONGS: Songs are wonderful tools that can assist students in memorizing facts. (sequences of elements, such as numbers, days, months, dates of events).

Erica Warren (2021)

Activity 1: Working memory

Description

Working memory is the mental ability to temporarily store and manipulate information. The ability to hang on to information while in the process of using it (remember directions of a project, follow multi-step directions, remember what was just said in a conversation).

Individual differences in working memory capacity appear to arise from three components:

- the ability to visualize, hold, and maintain information in primary memory

- the ability to manipulate mental imagery
- the ability to access and apply relevant information in long-term memory

Levels

Level 1:

- Provides students with an image and then they are read or tell a script. They need to decide if the description is accurate or not. Then, if it's not accurate, they must decide what is wrong and provide a new sentence verbally.
- Read a very simple story to your pupils. Before reading the story, tell them to listen for specific pieces of information in the story (for example the main character's name). You can gradually increase the difficulty of the information you want your pupils to listen for.

Level 2:

- Recite or read aloud a familiar text, poem, or rhyme changing the words or wording. Pupil should raise her hand and shout out whenever she hears a mistake. You can even change the words, grammar, sound and meaning. Also, you can swap the word order or word parts.
- Read an unfamiliar story to your pupils. Afterwards ask them questions about the sequence of events. What happened first, who went to the game, etc. Continue to ask questions until the events in the story have been reviewed. You can also ask them to predict likely events in the story.

Extension

A child's working memory plays an important part in other learning journeys including:

- remembering multi-step instructions
- developing listening skills
- comprehending texts and develop comprehension skills
- decoding unknown words, plus much more.

Learning difficulties

Children with poor working memories struggle particularly with tasks such as remembering multipart instructions, tasks such as listening and writing, 'lose' information that forms a vital foundation for the acquisition of knowledge and skills in important academic areas such as language studies, mathematics and science (Alloway 2006, 2009)

They find timed tasks difficult and generally need more time to process information.

- For these children, instructions should be repeated frequently and at a slower pace, and the child should be encouraged to repeat instructions back.
- The teacher should present only one or two items or ideas simultaneously and avoid giving unintegrated material to retain for long periods
- Related techniques include using visual and verbal images (which helps to organize the material and associate ideas to one another to form bigger chunks and form a coherent framework), (Bjorkland & Douglas 1997).

Activity 2 Visual memory

Description

Visual memory is the ability to remember for immediate recall information such as activities, pictures or words that have been viewed in the past (e.g., dialing a phone number, reproducing figures from memory, remembering and recognizing an AED sign). It reflects the child's ability to store visual details of what has been seen in the short-term memory. It depends on attention, focus, observation and motivation. There are different types of visual memory, including the direct recall of information, long-term recall, as well as recall of elements in sequence.

Levels

Level 1

- Present a picture. The pupils will have 30 seconds to remember everything they can about the picture.
- For recalling letter formation the teachers said to the pupils to draw it with their eyes closed to remember the shape of the letter.
- The letters can then be glued onto index cards, and later the child can touch them to "feel" the shape of the letter.
- Make verbal descriptions of the letters (m and n have humps)
- Exercises to recall two – four items with or without visual hints.

Level 2

- Exercises to recall four – six items through multiple choices.
- Remember the objects, flip the card and find which objects they were.

- Exercises to recall items with questions
- Ask students to look closely for 30 seconds at all the details from a picture. After the time limit, take one picture and ask one or more questions:

1.What colors did you see? Shapes? Lines?

2. What was the action?

3. Who were the characters? What were they doing?

4. Did you notice a time of day or season?

5. What was the artist trying to portray through the picture?

Extension

Visual memory is important for reading comprehension (remember what they read), remembering what a word looks like (spelling), copying assignment from the board or book to their page.

Learning difficulties

Pupils with optical memory difficulties take a long time to copy, have difficulty in identifying words and retaining information.

They have difficulty in reproducing figures from memory (numbers,letters), as well as difficulty in identifying a word or symbol from a page in another one, and transferring learned words from one medium to another.

In addition, they present difficulties in dialing a phone number and remembering words from sight.

Activity 3 Visual sequential memory

Description

Visual sequential memory is the ability to recall a series or sequence of objects or forms in the correct order and find it among four other series of forms. This skill is used when memorizing telephone numbers, following multi-step directions.

Levels

Level 1

- Complete word search puzzles that require you to look for a series of letters.
- Game of sequence of moves with the whole body. The teacher makes a series of movements and the pupils must recall them from memory in the correct order.
- Game to teach the algorithm steps through pantomime.

- Serial recall of two-four items. 2 to 3 options are offered, where the items appear in a different order and the pupils must locate in them the correct sequence of items. They do not say the pictures' names out loud. Instead, they try to keep the pictures in their mind's eye.

Level 2

- Serial recall of four items. 3 to 4 options are offered, where the items appear in a different order and the pupils must locate in them the correct sequence of items.
- A sequence of items is offered and the pupils look at it for 30 seconds. Then, the same sequence is shown with one item missing. Pupils are asked to locate the missing item from a group of items.
- A sequence of items is offered and the pupils must observe it for 30 seconds. Then, from a group of items, the pupils are asked to locate and number the items of the original sequence in the correct order.
- For gradual exercise difficulty, choose black and white pictures with more abstract themes.

Extension

Sequential memory is necessary for sequencing of letters, spelling and sequencing of words in sentences (codification process) and reading (decodification process).

Learning difficulties

Can cause problems with: ability to sequence letters or numbers in words or math problems, remember the alphabet in sequence, retrieve words with reversals or when out of order, remember order of events after reading (which affects reading comprehension).

The child would also tend to forget assignments and forget steps that are shown in an activity

Activity 4 Auditory memory

Description

Auditory memory is the ability to recall or recognize of stimuli existing in the form of sound energy. Remembering the sound of a normal/agonal breathing or the screeching sounds of a vehicle decelerating.

Levels

Level 1

- Give pupils verbal instructions and ask them to draw on the dot grid in their handbook. I.e. Start at the top right dot, draw left two dots, draw down one dot, draw down and to the left one dot…".

Level 2

- Have the pupils sit in a circle and explain that you are all going on a shopping trip and everyone needs to remember all the things that are bought.
- Begin with the carrier phrase 'I went shopping and I bought a hat.' The first pupil on the right repeats the carrier phrase and your item, as well as adding their own 'I went shopping and I bought a hat and an apple …'. And so on around the group.

Learning difficulties

The child has difficulty remembering instructions such as directions, lists or study materials. It can be immediate ('I can't remember it now') and/or delayed ('I can't remember it when I need it for later').

Activity 5 Auditory sequential memory

Description

Auditory sequential is the ability to facilitate following instructions and memorization of rhymes, songs/ steps that are shown in an activity or in our case the L.I.F.E.F.O.R.C.E. – B.L.S. algorithm steps.

Levels

Level 1

- Instruct a pupil that you will read a sequence of numbers and ask him/her to remember them and to repeat them in the correct order. Then read the following sequences of four numbers

1-2-3-4, 5-10-15-20, 5-6-7-8, 4-6-8-10, 3-5-7-9

Level 2

- Instruct a pupil that you will read a sequence of words and ask him/her to remember them and to repeat them in the correct order. Then read the following sequences of six semantically connected words:

chicken-duck-pig-horse-cow-sheep

eye-nose-ear-mouth-forehead-chin

hand-foot-knee-finger-palm-chest

gift-child-party-birthday-surprise-play

Learning difficulties

Difficulties with auditory sequencing may include confusing numbers like 93 for 39 and confusing lists and sequences. For example, a child with auditory sequencing problems may

not be able to complete a series of tasks in the right order. He or she may fail to be able to do so even when appearing to have heard and understood the directions.

Memory of letter and number sequences. Enhance imitation which is important for spelling, development of correct syntax and synthesizing the intent of a spoken message. Include practical information. (phone numbers, sport scores, birth dates, friend's addresses, holidays)

Difficulty to put words in sequential order. (month, second, day, year, week, hour).

Activity 6: Semantic memory

Description

We get information into our brains through a process called encoding, which is the input of information into the memory system. The encoding of words and their meaning is known as semantic encoding.

Words that had been encoded semantically (about the meaning of the words) were better remembered than those encoded visually or acoustically. Semantic encoding involves a deeper level of processing than shallower visual or acoustic encoding.

Stored in our semantic memory is knowledge about words, concepts, and language-based knowledge and facts.

Semantic skills include, understanding and recognising different words, naming, categorizing, defining words, synonyms and antonyms, and understanding multiple meanings.

Tips for semantic memory!

- Recognize and name categories
- Understand and use descriptive words
- Recognize words from their definition
- Classify words.
- Relate the word we just heard to other words with similar meanings
- Attaching emotions to information to make semantic encoding more memorable

Levels

Word games with:

- Sorting – both real and pictorial items into simple given categories (eg. items we can find in the living room)
- Classification increasing the difficulty of criteria (two, three)
- Odd one out – ask the pupils to identify the items that should not be in a specific category and give reasons why.
- Ask the pupils to match pictures of objects and give reasons for their criteria
- Pupils have to use a range of prepositions to describe an object position, eg. in front of, next to, near).
- Concept opposites – introduce concept vocabulary within different areas of the curriculum, using visual/concrete material.
- Compound picture pairs – match pictures that form a compound word.
- Word families – collect words that belong to the same category and make wall maps.
- Comparative questions using opposites- synonyms words

Level 1: Activities which include matching picture and word cards, identifying homophones, making compound words with picture cards, making sentences with picture and word cards, matching picture cards with word cards, creating lists of word families by categories,

identifying synonyms for common words by listing, matching pronouns with nouns, and rephrasing simple sentences and paragraphs. These activities can be done independently or as a whole group.

Level 2: The teacher discussing a story and ask questions comparing the characters, about opposites, which character in the story has the same characteristics with someone known or how is the weather in the story different than the weather here today?

Extension

Children's semantic development is a gradual process and incudes a wide range of word types.

Primary school children start to learn about words which are similar in meaning and opposite in meaning, (synonyms, antonyms). With this new knowledge, new adjectives can be learnt and used in their writing for more sophisticated communication.

Learning difficulties

Students with difficulties with words and comprehension in reading may show difficulties in writing and speaking; this may be observed during attempts to form plurals, verb tenses, subject and verb agreement and possessive nouns and pronouns. Additional difficulties show word-finding problems, difficulty with word classification, a poor short-term auditory memory

Coping strategies

- a need to be given time to process information
- learning better through using concrete materials and practical experiences
- enjoying learning through using visual materials (charts, maps, videos, demonstrations)

Activity 7: Procedural memory

Description

Procedural memories start to form very early in life as you begin to learn how to walk, talk, eat, and play. These memories become so ingrained that they are almost automatic. You do not need to consciously think about how to perform these motor skills; you simply do them without much, if any, thought. Procedural memories refer to 'knowing how' to do something.

Type of long-term memory involving how to perform different actions and skills, knowledge of subject-specific skills and algorithms, knowledge of subject-specific techniques and methods.

Levels

Repeating a complex activity over and over again until all of the relevant neural systems work together to automatically produce the activity. Procedural learning is essential for the development of any motor skill or cognitive activity.

Level 1

- Make a schedule with words, symbols or pictures is an easy way to develop procedural memory
- Begin practicing procedural writing to give them prompts for activities with which they are very familiar and that they are likely perform on an everyday basis.
- Procedural writing about games or sports it involves taking a physical activity that children may not have previously thought about in a step-by-step fashion, and breaking it down into individual steps.

Level 2

- When you’re doing a task with a pupil, ask him to explain what you’re doing step by step. That helps them in creating visual, verbal and cognitive connections with the activity they are doing.

Forms of procedural texts:

- Directions – How do I get somewhere?
- Instructions – How do I do something?
- Recipes – How do I cook something?
- Rules for games – How do I play this?
- Manuals – How do I operate this?
- Timetables – What are we doing?

Procedural writing in which the pupil is asked to give navigational directions is useful because pupil be able to give directions to locations based both on physical descriptions of the surroundings and on road maps.

Extension

Following procedures can be challenging for many children. The difficulty could come from challenges remembering, challenges paying attention, or challenges completing the actual tasks that are part of the routine. Challenges remembering and completing sequential steps could be related to procedural memory.

Learning difficulties

- Break down large ideas into smaller chunks that can be stored in long-term memory.
- Use stories to help your pupils process events. Ask the to state both fact and emotions in each story and repeat main events through stories.
- Provide reminders and be sure your pupils are listening. See that you have eye contact, and have him or her repeat the task so you know you have his full attention.

Skill 6: Critical Thinking

Critical thinking demands a systematic approach to evaluating new information. It encourages us to question and reflect on our own knowledge and on how we arrive at the opinions we have resulting in the decisions we make. Among a number of aspects of critical thinking we have selected the following as the most necessary to be fostered and developed: Cause-effect relation, Decision making, Logical reasoning, Argumentation, Problem solving and compare and contrast.

At the time of an OHCA incident the decisions must be made fast, we need our senses to be tuned in, our attention to be sharp and our brain to be in action, ready for critical thinking, which will lead to the best decisions.

Activity 1: Cause-effect

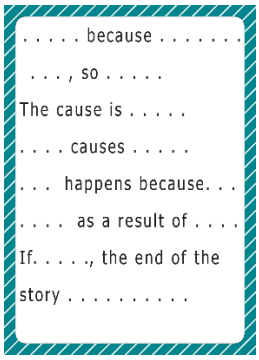
Description

The cause-effect relation affects all aspects of our lives. It pervades our thinking and motivates our rational actions. Knowledge of cause and effect provides the basis for rational decision-making and problem-solving. It is important in all areas. Predicting multiple possible causes and consequences is part of what helps us make decisions about the correct response to make.

Levels

Level 1:

- Build the appropriate vocabulary (causal links, causative verbs, conditionals, causative adverbs, adjectives and prepositions)
- (so, because, therefore, if, how, explain, then, so that, cause, effect, since, Witthaut).



- *_____ because _____.*
- *_____, so _____.*
- *The cause is _____.*
- *____ causes _____.*
- *_____ happens because _____.*
- *If you want ____, you should not ____.*
- *According to the text, _____.*
- *You need _____ because _____.*
- *In the passage, ____ showed ____ by _____.*
- ____ thus, ____.
- *__ made the character _____.*
- *In paragraph ____, _____ because _____.*
- *Due to the fact that ____, ____.*
- *_____ as a result of____.*
- *If _____, the end of the story_____.*
- *Based on _____, _____.*

- Determining whether phrases are cause or effect.
- Thinking of multiple causes and effects to build flexible thinking.

Level 2

- Work on explaining the scenarios in compound sentences that will make it clear.
- Build student skills using visual strategies from a picture level to sentences. Then add figuring out cause-effect in short problem scenarios as they both looked at the same picture sets and discussed the events with each other, to expand these critical thinking skills.

- Create a story synopsis building on the facts in the causal chain from the beginning to the end of the story. Create a frame to help pupils retell the story verbally or in writing.

Suggested questions

- Teachers should ask questions using question stems so that students get used to the language.

  - Did _____ cause _____?
  - Why did/didn't _____?
  - Tell me what happened when ____.
  - What causes _____?
  - How did ___ effect ___?
  - What is the effect of ____?
  - Explain why _____.
  - If you want _____, you should not …
  - Which sentence best tells why ____?
  - According to paragraph ___, when ____ happens, what happens next?
  - Why do you need _____?
  - According to the text, why ___?
  - What caused the character to ____?
  - In paragraph ___ why did _____?
  - Why was the narrator _____?
  - If _____, how would the end of the story be different?
  - What would have most likely happened at the end if _____?

Extension

Automatic causal inferencing has been found to be an important part of reading and text comprehension. Comprehension of text involves identifying relations between the various events, states and ideas expressed in the text.

When children are asked to come up with explanations, while learning, they are able to connect new ideas with prior cause-and-effect knowledge.

- Ask children to explain "why" and "how" something work or to explain what they are learning in their own words.

Learning difficulties

Students limited to one connection when it comes to cause-effect reasoning and social problem-solving skills that are so necessary for functional life skills.

When a child has trouble understanding cause and effect relationships, they don't have a proper understanding of the consequence of actions, they seem not to know the reasons for the rules, they do not learn from experience,

They freeze in new situations and seem unable to figure out what to do.

They have trouble seeing similarities between similar situations.

- For those students you can give questions that require them to answer with a yes or no answer or they can point to pictures to show the answer.

Activity 2: Decision making

Description

Decision-making skills show your proficiency in choosing between two or more alternatives. Decision making occurs because you want something to happen, while problem solving occurs when a problem arises. When children are young, their choices are more about personal preferences, but as they get older, their decisions can affect their safety and their lifestyle.

Levels

Steps of decision making

- Identifying a decision
- Find possible options (brainstorming)
- Identifying possible outcomes for the options
- Making a decision

- Reflecting on the decision

Level 1

- Engage in role-playing, even in retelling a story or a lesson (thinking about what it would be like to make a decision as another person under a whole different set of circumstances).
- Make a connection between their choices and the consequences of them.
- Offer a choice to have, make lists of pros and cons, talk about how to decide, which one you think will be more fun and suggest a time frame for making the choice. Gives pupils a chance to think about the choices and find words to explain the option they prefer.
- Show your pupils some pictures and asking, *"Would you rather be ……. or……..?"* Your pupils have to pick an answer and explain why. You can use any kind of animal, person or quality.
- Engage in a friendly debate and help the pupils learn to listen to others' viewpoints, but also to make on-the-spot decisions when necessary.

Level 2

- Ask them their opinions about what they read, and discuss what you like and dislike about the story. Allow the pupils to feel that they can disagree with one another.
- Teach your pupils the words to use to make these choices, by using them yourself when you talk about it.

Suggested vocabulary

- Choose, Decide, Why, Pros, Cons, Which, Careful, Rather, Prefer, Better, Consequence

Extension

- Give pupils a choice between two options:
- Would you rather be
- Would you rather listen

- Would you rather have
- Would you rather go
- Would you rather live
- Would you rather make
- Would you rather learn
- Would you rather feel

Learning difficulties

The pupils have difficulty in making a choice and justifying it.

They are confused and they cannot set priorities regarding their choice.

They have difficulty in managing time and they freeze when they have to make quick decisions.

Children cannot be independent, they dont want to have responsibillities, they have no confidence, they have anxiety and they avoid self-exploration.

Activity 3: Logical reasoning

Description

Logical reasoning is the essential skill of a human brain to interpret logical sentences or situations. Innovation, rational thinking, argumentation, problem-solving, decision making, and handling many real-life situations require you to have good logical or reasoning skills.

Suggested questions

Asking questions to pupils and after that they learn to ask their selves, is the most efficient way to improve this skill. May they find difficulties in the beginning but as they practice their brain will ask the exact question whenever the situation arises.

Levels

Level 1

- Encourage students in discussions about a variety of topics, issues, and current events.
- Q 1:
  - Who said it?
  - What did the say (facts opinion)?
  - Where did the say ?
  - When /Why/How?

- Don't answer your pupil's questions right away. Ask first what he thinks the answer is.
- Learning what to notice and what to ignore is the essential first step in reasoning about any problem.

Level 2

- Stimulate students to think about possibilities for the future.
- Assist students in re-evaluating poorly made decisions for themselves.
- Encourage students to reading books and journal for expand and explore thoughts and improve thinking as well as more creativity.

- Q 2:
  - What is happening?
  - Why it is important?
  - What don't you remember?
  - How do I Know?
  - Who is saying it?
  - What else…?
  - What if….?

Extension

Reasoning is needed for new challenges of life, different strategies to solve a problem, to find the missing information and when more than one solution is require for a problem.

Learning difficulties

Student feel stress and anxiety in any problem, task and concepts the reasoning ability of students become low.

If the nature of task too complex then reasoning ability is very low.

A proper reasoning is not possible without strong motivation. A strong motivation show organized and strong reasoning.

Activity 4: Argumentation

Description

Argumentative speech is developed based on logic, it contains thoughts and ideas which have been chosen among others, so that through our final choice we arrive at a justified conclusion.

This is a combination of descriptive speech, which has to do with space and the collection of information about the event, and narrative speech, which is connected with the time for narrating events.

Levels

Level 1

- Students will be familiar with formulating opinions and move from “supporting an opinion” to “arguing for a position.
- They identify reasons that will support an opinion about the question.

- Explain to students that we all have opinions and if we are asked why we do not like or do like something, we often "support" our opinions with claims that are based on personal experience.

Suggested questions

- Q1:
    - What do you think/what is your opinion (choice)?
    - Why (give arguments)?
    - Can you provide actual examples?
    - What do you believe about the opposite opinion?
    - What is your final choice?

- Read a story. The purpose of the activity is to engage students with a debatable topic. The pupils must to list story-based reasons to support their opinion. Students will have the ability to use oral language to achieve their purpose.

Level 2

- Explain to the pupils that except of informal discussions, need to understand what makes an "ARGUMENT," which is different from expressing an opinion. An argument is supported with verifiable (provable) evidence.
- Create Debate Rules: In small groups or pairs, students will receive "Debate Rules!"
- Debaters then take turns providing additional evidence to support claims with each student allowed no more than 1 minute to state his/her claim with evidence. Team end debate and summarizer from each position will then end the debate with a closing argument.

Debate vocabulary

1. Almost
2. Maybe
3. Often
4. If…then
5. Usually
6. Some likely
7. Most
8. Many
9. Probably
10. In most cases
11. Frequently

Learning difficulties

Children have difficulty in supporting their opinion verbally and in writing.

Activity 5: Problem solving

Description

Problem-solving means finding solutions to a problem. Problem-solving skills help you determine the source of a problem and find an effective solution.

And the ability to solve problems requires to think, communicate, and take action.

Kids face a variety of problems every day, ranging from academic difficulties to problems on the sports field.

Levels

Level 1

Problem solving steps

- determining and explaining perspectives in problem situations.
- story comprehension with questions.
- determining character emotions.
- telling and justifying solutions.
- summarizing the problem to improve explaining skills.

- Set a problem or each pupils sets a problem (see the exercice on the pupils handbook and help them to answer the questions).
- Help your pupils understand what she's feeling in the moment.
- Guide your pupils to identify the specific problem.
- Encourage your pupils to come up with as many solutions as possible.
- What would happen if your pupils attempted each of these solutions?
- Encourage your pupils to keep trying until the problem is solved.

Level 2

Problem solving steps

- Identify the problem
- Gather information
- Make questions (W's questions-open/closed ended)
- Explore new possibilities (class brainstorming)
- From ideas choose solutions
- Plan the actions/steps that required for the solutions (make a diagram)

Asking open-ended questions

- How could we work together to solve this?
- How did you work it out?

- Tell me about what you built, made, or created.
- What do you think will happen next?
- What do you think would happen if…?
- What did you learn?
- What was easy? What was hard?
- What would you do differently next time?

Extension

Thinking Tools:

- Brainstorming, challenge them to come up with as many ideas as possible in a simple problem.
- The 5 W's and an H are Who, What, Where, Why, and How (to gather the necessary information).
- Make a diagram to use when figuring out the steps required to implement a solution.

Learning difficulties

Kids who lack problem-solving skills may avoid taking action when faced with a problem.

Other kids who lack problem-solving skills spring into action without recognizing their choices.

- Encourage them to break the problems into smaller, more manageable chunks.

Activity 6: Compare and contrast

Description

Comparing and contrasting is an organizational skill used to arrange information in such a way that it can be understood or presented more effectively (making abstract ideas more concrete,

and reducing the confusion between related concepts based on their similarities and differences). It requires higher level thinking.

Levels

Level 1

- Give pairs of images/objects**,** animals, people, or places and ask pupils to find as many similarities and differences as they can.
- Ask them to identify objects in the same category, objects with the same use, objects made by the same material, etc.
- Additionally, they can compare two characters or compare two different books.
- This could be done verbally, in their exercise books, or on the whiteboard.

Level 2

Themes for compare and contrast

- Pupils compare themselves with a character from a book.
- Pupils compare 2 or more texts, 2 or more characters within a single text.
- After reading a text you could have your pupils answer questions as check for understanding.

Compare and contrast vocabulary (use the small Educational cards)

- COMPARE*:* alike, both, same, similar, like, in common, also, similarly, in comparison with, as well as.
- CONTRAST**:** different, differ, unlike, not alike, diference, on the other hand, however, although, eventhough, in contrast to.

Extension

Compare and contrast improves comprehension by highlighting important details, making abstract ideas more concrete, and reducing the confusion between related concepts.

After reading a text you could have your pupils answer questions as check for understanding.

These questions will give pupils an opportunity to compare and contrast verbally.

- Would you rather be friends with the character _____ or _____?
- Would you rather live in the main setting from the book _____ or the book _____?
- Would you rather solve the problem that _____ faced or the problem that _____ faced?
- Would you rather write your own ending to the book _____ or keep the ending the author wrote?
- Would you rather solve the problem the way the character _____ solved the problem, or in a different way?
- Would you rather the author included more information about the topic _____ or the topic _____?

Learning difficulties

Students have difficulties with reading and comprehension, but also in everyday life.

This impacts their skills for organizing and remembering information.

It is common to confuse abstract ideas and they don‘t understand related concepts.

- Scaffolding learning by introduced compare and contrast skills in small passages, short stories, and later books.

Activity 1: Spatial

Description

The ability to identify the position or direction of objects or points in space. To have good spatial awareness you also need to understand and respond to a change in position from these objects.

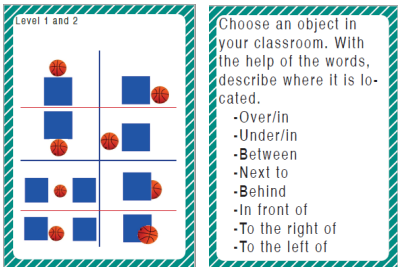
Levels

Level 1

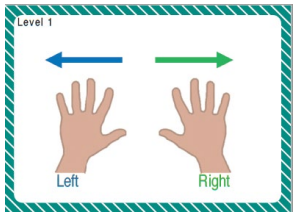
- Give different pictures to pupils (choose from their books) and then give each pupil the following instruction:
- ''Circle the picture or name the (object)…….. which is ……'' (add adverbs of place qualifiers of place)
  (concepts: up, down, next to, between, over, under, left, right)
- The pupils must locate the respective object.
- Give pupils an A4 sheet of paper with pictures of people-animals-objects, where the pupil must distinguish which faces/objects face to the left or to the right. Pupils can put their hands on either side of an object, so they can connect each direction with their respective hand.
- Give pupils shapes/objects with different perspectives and ask them to identify the target shapes/objects (visualizing objects from different perspectives).

Level 2:

- Each pupil chooses 2-3 objects from the classroom and writes down a description of their location in space, without naming the objects. At the end, each pupil reads their description and the other pupils try to guess the object. The pupil who finds the most objects is the winner.



- Pupils choose objects from the environment or from their book, and with the help of their hands identify the direction of the objects.



- The teacher gives instructions to the pupils and, using qualifiers of place, directs the pupils' stare towards the target object.
- Alternatively, the teacher can direct their steps so they can arrive at the respective objects, which require the pupils to follow directions.

Extension

- In the above activities, letter shapes, pseudowords, symbols, numbers and sequences of numbers can be used instead of objects, and pupils -depending on the teacher's instructions- must locate the target letter/words or their directionality inside a text.
- Pupils must be able to identify objects/symbols when they appear in different perspectives in space. They must also be able to do mental rotations of objects in their head.

Learning difficulties

Such children have trouble with simple concepts like up, down, on, under, in, out, behind, and in front. These are key directional words that may have no meaning for a child having difficulties with spatial concepts.

It may be difficult for a child with spatial awareness difficulties to master the act of writing.

May be confused by the teacher's writing instructions starts a sentence in the middle of the page have trouble in gym class and playing games that require equipment

Activity 2: Temporal

Description

An individual's tendency to connect to the psychological concepts of past, present or future, and it affects personality, motivation, emotion, decision making and stress coping processes.

Levels

Level 1

- Activities to learn the parts of a day (morning, noon, afternoon, evening), the temporal relationships among the parts, and connection of the parts with everyday routines of the pupils.
- The teacher can narrate a story, or use some text from the pupils' books. Pupils must reply verbally to the following questions:

    - Describe what is happening now
    - Imagine what happened before
    - Imagine what will happen after

- The teacher gives everyday routines (brushing teeth, breakfast preparation, etc.) and the pupils describe the before/after of each activity.

Level 2

- Expansion on the previous activity, where the pupils answer the questions in writing.

    - Describe what is happening **now**
    - Imagine what happened **before**
    - Imagine what will happen **after**

- The facts of a story are given mixed up and the pupils are asked to put the in the correct chronological order. (historical facts, story development, etc.)
- Give your students a blank piece of paper and colors and help them follow instructions for writing words such as: write „book“ with the blue color BEFORE with the pink. FIRST write „pencil“ with the blue color and THEN write with the pink, etc

Extension

Sequences (days, months, numbers, alphabet) can be used and the pupils can be asked to complete the previous/next element in the sequences.

Learning difficulties

Temporal concepts are those related to time: before, after, first, next, last, during, while, etc.

This can be very challenging vocabulary for students who struggle with time concepts.

They have difficulties in comprehending and using temporal concepts, in understanding temporal periods and in placing facts in chronological order.

Skill 7: Processing Speed

Processing speed describes how fast information is travelling through the brain. It is the ability το execute simple, repetitive, cognitive tasks in a fast and automated way. Processing speed affects attention, executive functions, memory, academic performance, behavior and social skills. It requires the capability of fast and simple decision making, combining speed and accuracy, and is divided into three major categories: visual processing, verbal/auditory processing and motor speed. "Processing Speed" is the speed with which a person executes basic cognitive processes and according to Kail & Ferrer (2007) "consistently predicts performance on a variety of cognitive tasks"

As it relates to learning, memorizing, retrieving and synthesizing information regarding the L.I.F.E.F.O.R.C.E.-BLS Algorithm, Processing Speed is considered a crucial element, especially when children are faced with unexpected and often traumatic situations. Establishing strong memory traces of the specific steps and sub-steps of the L.I.F.E.F.O.R.C.E.-BLS Algorithm, could contribute to a faster processing speed when reacting to a problem.

Activity 1 Stroop effect

Preparation: On an A4 sheet write 10 sets of 4-5 words each, one set below the other, and color each word in different colors. Prepare 5 different A4 sheets, so that no more than 4-5 students have the same sheet.

Hand out copies of the A4 sheets to pupils and ask them to say the color of each word, not read the word itself. For instance when the words are "**orange**, **blue**, **red**, **green**", the pupils must say "green, orange, blue, red" respectively, as quickly as they can.

Alternatively, you can use sets like the following:

- Write the words backwards (parent - **tnerap**).
- Use non-color words such as "**window**" or "**bicycle**".
- Use nonsense words such as "**ouvir**" or "**zwat**".

- Use emotional words such as “**fearful**” or “**happy**”.

- Color only half of the word or color only the first and last letter of each word (towel, baskeball)

Alternatively use the **Processing Speed Level 1 exercises 1 and 2, and the Processing Speed Level 2 exercises 1, 2 and 3 in the Pupil’s handbook.**

Activity 2

Ask the pupils in turn to say the alphabet, each starting from a different letter. Do the same with the months of the year and the days of the week. Ask the pupils to use the **PS-01 Small card.**

Alternatively, you can ask the pupils to say the above backwards.

Activity 3 Stroop effect

Ask pupils to use the **PS-02 Small card** or **PS-03 Small card**. For Level 1, instruct them to look at the shapes of animals and say the name of the animal, as fast as they can. They must NOT read the word written on the shape. For Level 2, side A ask the pupils to look at the geometrical shapes and name one shape and one color, alternately. For side B, ask the pupils to look at the numbers and name one number and one color, alternately.

Activity 4

Preparation: Make lists with series of 2, 3 or 4 single-digit and/or two-digit numbers (i.e. 1, 7, 14, 47).

Read each series out to a pupil in turn, and ask the pupil to recall them in reverse order. You can make lists of syllables, words, nonsense words, instead. Alternatively, ask the pupils to form pairs. Using the PS-04 Small card, one pupil reads out a series and the other pupil recalls it backwards. Then they swap roles.

END

Finally, when it is time to close the lesson, it is suggested to decompress children so that they feel both physically and mentally that the lesson comes to its end.

In the same way that pupils get ready to open up to new knowledge (through "Begin" section), they should slowly and gradually end this process inside the classroom, with the use of some techniques. This would lead to a smoother transition for the children to anything that follows and a better understanding and memorization of the desired material. It can be achieved with the help of the following activities.

Closing Activities

Angeliki Botonaki

Memory and concentration games:

Memory games are used at the end of the lesson to help the students establish the new knowledge and to remind them what they have already learned in a playful and relaxing way. Concentration game aims to calm the students by drawing their attention to a specific mind and body intersection, relaxing the part of their brain that was activated till then.

Activity 1: I went to the super market

Description

Standing in a circle, the teacher begins: "I went to the market and bought an Apple" (a word beginning with the letter A) while making a relevant movement/gesture (i.e. biting an imaginary apple). The child standing next to the teacher continues with a word beginning with letter B, after repeating the previous word and movement ("I went to the market and bought an Apple and a Brush"). Game continues with letter "C" and so on. When a child doesn't

remember the right sequence of words and/or movements, gets out of the game. Game goes on until children reach a time limit or until they reach Z or until they have a winner.

Aim

To memorize as more words and movements as possible and express them adequately. To combine words with relevant movements. To practice the alphabetical order and to use imagination with critical thinking in order to find the appropriate word.

Levels

Level 1: For 6-8, children don't get out of the game if they can't remember the next letter of the alphabet. Teacher helps with the alphabetical order and focuses on the memorizing.

Level 2: For 8-10, children have to complete the full aim 232ft he activity.

Extension

Here, the teacher can adopt the theme to any subject they teach, so that children concentrate on finding words related to the relevant category (history, geography, foreign languages, physics, etc.).

Relaxation

Here, there two options. The first one contains very short, relaxing stories, to be listened by pupils while lying on the mats (so a prerequisite is to find space and mats) and the second is a sharing body expression, as a way to share "goodbye" with all and feel giving and being accepted by the team before leaving. The activity that follows refers to the second option.

Activity 2. Transferable movement

Description

Children are standing in a circle. A child (or the teacher) begins making a movement. The rest of the children, one by one, starting with the one that is next, are repeating the same movement until the movement reaches the child who began. This will be like a wave. The next child continues making its own new movement with the rest following and so on until all children have shared their movement with the other.

Aim

To copy and follow one's unique movement, like accepting it. To feel free to express themselves and to feel part of the team.

Levels

Level 1: For 6-8, the teacher is more active to show and help. If a child can't think of a movement, teacher uses any movement or gesture that the child shows, even a shy smile, to help with the process of the activity.

Level 2: For 8-10, children can add a word to their movement regarding their feeling of the lesson or as a way of saying goodbye or anything else agreed.

Reflection & Team Goal

This session consists of two parts. The first has the meaning of reflection. Children are expected to **reflect** on the lesson, on their feelings, on what they have learned. "**Team goal**" is what follows next, to remind everyone where they stand, what they have achieved and which their targets are. "Team goal" could be a repetition of the two-line rime the children with the teacher composed together in the beginning of the lesson (after LIFEFORCE Principles). The LIFEFORCE song could be added here. In this final part, children need to

remember which the purpose of the lesson is, set a goal and feel they have something to wait for the next lesson.

Activity 3. Closing circle

Description:

- Reflection:

Each child answers in one word while sitting in a circle, in turns.

- What did you like most of what you learned today?
- Name what today's lesson made you feel like.
- Describe the lesson in one word.

It is really important for every child to be heard in expressing their feelings or opinion.

Team Goal:

- A two-line rime as a team goal or encouragement.

The teacher comes up with a small phrase that summarizes what has to be learned in the present unit, e.g. "Safety first for all". As long as this happens in the end of the lesson, pupils could come up with ideas too. Then s/he asks the pupils if they have an idea of how to form it, empower it, or anything else so that they feel they co-create, e.g. "Go-go-go, Safety first for all!" They repeat it loudly and rhythmically while joining their right or left arms in the center of the circle.

- LIFEFORCE song

Activities for all of the abovementioned sessions will be found in the lifeforce educational cards.

Notes to Remember!

- During a class discussion or lesson introduction, remember to activate children's prior knowledge (with fun ways) and give them time and space to express themselves.
- Among the Beginning activities, choose the one(s) that you think the children need more at the current time!
- The two-line rime/target will function in a fun and unifying way reminding the children of their goal!
- Use the UDL engagement tips -and the videos as well- to engage as more children as you can and have a successful lesson!
- Don't forget to remind the children of what activities will come next, in other words to give them an idea of the lesson structure, so that they feel more as a part of it.
- Remember to represent the learning information to the children in more than one ways. This can also be a way to boost their learning through repetition!
- Make sure you have used the UDL proposals to enhance children's ways of expression. You can watch the suggested videos as well!
- Combine activities that can be held in the gym room (enough space & mats) so that you don't have to change classrooms all the time. Most of the activities can be held in a well-structured gym room.
- All of the activities proposed in the above lesson structure have better application and learning outcomes when performed with the children working in groups or forming a circle, ideally in a space with mats.
- Use the activities in both your and the children's interests and have some fun. They are designed to be this way!

References

1. Armstrong P. Bloom's Taxonomy. *Vanderbilt University Center for Teaching*. June 10, 2010. https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/ (accessed 18/10/2021).
2. MacBlain, S. (2018). *Learning Theories for Early Years Practice*. Sage Publications
3. ed.gov. *Fostering Healthy Social and Emotional Development in Young Children: Tips for Early Childhood Teachers and Providers* -- January 18, 2017 (PDF).
4. Kail RV, Ferrer E. *Processing speed in childhood and adolescence: longitudinal models for examining developmental change.* Child development 2007; 78: 1760–70.
5. Lehalle H, Mellier D. *Psychologie du développement: Enfance et adolescence* (3rd ed.). Paris: Dunod, 2005.
6. Alloway, T.P. 2006. How does working memory work in the classroom? *Educational Research and Reviews*, 1(4):134-139.
7. Alloway, T.P. 2009. Working memory, but not IQ, predicts subsequent learning in children with learning difficulties. *European Journal of Psychological Assessment*, 25(2):1-7.
8. Bjorkland, D.F. & Douglas, R.N. 1997. The development of memory strategies. In: N. Cowan & C. Hulme (Eds). *The development of memory in childhood*. Sussex: Psychology Press. 201-246.
9. 12 Memory Strategies That Maximize Learning Posted by Erica Warren on May 25, 2021.
10. Fivush, R., & Nelson, K. (2004). Culture and Language in the Emergence of Autobiographical Memory. Psychological Science, 15(9), 573–577. https://doi.org/10.1111/j.0956-7976.2004.00722.x
11. Posner MI, Rothbart MK. Research on attention networks as a model for the integration of psychological science. Annu Rev Psychol. 2007;58:1-23. doi: 10.1146/annurev.psych.58.110405.085516. PMID: 17029565.
12. Carlson, S. M., Zelazo, P. D., & Faja, S. (2013). Executive function. In P. D. Zelazo (Ed.), *The Oxford handbook of developmental psychology (Vol. 1): Body and mind* (pp. 706–743). Oxford University Press.

13. Devito, J. A., & DeVito, J. (2007). The interpersonal communication book.
14. Herrmann, E., Misch, A., Hernandez-Lloreda, V., & Tomasello, M. (2015). Uniquely human self-control begins at school age. *Developmental Science, 18*(6), 979–993. https://doi.org/10.1111/desc.12272
15. Herrmann, E., & Tomasello, M. (2015). Focusing and shifting attention in human children (Homo sapiens) and chimpanzees (Pan troglodytes). *Journal of Comparative Psychology*, *129*(3), 268.
16. Carlson, S. M., Zelazo, P. D., & Faja, S. (2013). Executive function. In P. D. Zelazo (Ed.), *The Oxford handbook of developmental psychology (Vol. 1): Body and mind* (pp. 706–743). Oxford University Press.

6 Appropriate adaptations, accommodations, and modifications for special learning groups

Angeliki Botonaki, Sevasti Etmektsoglou

Appropriate adaptations, accommodations

In the recent years students with disabilities are being educated in the **general education environment** along with their peers without disabilities, using the general curriculum.

The key to success in the classroom lies in having appropriate **adaptations, accommodations, and modifications** made to the instruction and other classroom activities.

Adaptations, accommodations, and modifications need to be **individualized for students**, based upon their needs and their personal learning styles and interests. This allows students to access the general curriculum and other learning materials and activities and to demonstrate what they have learned (Bucalos & Lingo,2005).

Modifications may involve changing the way that material is presented or the way that students respond to show their learning.

Six typical types of adaptations are identified: input (such as use of videos, computer, or field trips), output (how learners will demonstrate understanding), size (the length of the assignment learners will be expected to complete), time (how much time learners will have to complete the assignment), difficulty (how the complexity of the lesson will be modified), and level of support (how much assistance will be provided to learners). Three **additional adaptations** are discussed: degree of participation (the extent to which the learner will be actively involved in the task), modified goals (adapting outcome expectations), and

substitute curriculum (when instruction is significantly differentiated to meet a learner's identified goals) (Cook & Rao, 2018, Williams, 2001).

The systematic adaptation of instructional materials and techniques

Clear transitions between activities, creating a non-distracting environment, modifications for instructional strategies or materials include allowing the child to dictate ideas, modifying the amount of in-class assignments (Williams, 2001).

Strategies for enhancing organizational and study skills include

Limiting choices, distributing discussion questions prior to the lesson for some students, teaching previewing strategies (Williams, 2001).

Adapting textbooks for children with learning disabilities

Highlighting information in the textbook, or providing the student with a high-interest/low-level vocabulary alternative. Pre teaching critical vocabulary and the use of study cards

to help students master the content presented in textbooks (Williams, 2001).

Attention-deficit/hyperactivity disorder (ADHD)

Students with ADHD have difficulty with attention and self-control. At school, that can look like inattention, distractibility, hyperactivity, impulsivity, and disorganization - all of which can get in the way of learning (Barkley, 2008).

The accommodations suggested address the student's behavioral concerns, work habits, organizational skills.

Incorporating movement into lessons, and adaptations to the way the material is presented, such as developing graphic organizers, and breaking assignments into smaller chunks (Barkley, 2008, Grindei & Benlloch-Dualde, 2015).

- Classroom environment
    - Use flexible seating, preferential seating close to the teacher and/or away from high-traffic areas.
    - Designate a quiet workspace in the classroom.
    - Post a written schedule for each day and let the student know ahead of time about schedule changes.
- Building organization skills
    - Use an assignment notebook

    - Color-code materials for each subject.
    - Provide an outline of the lesson
    - Note-taking strategies, like using graphic organizers and mind-mapping

- Giving instructions

    - Give directions out loud and have the student repeat them.
    - Provide a lesson outline that details instructions and assignments.
    - Keep instructions simple, clear, and concrete.
    - Use pictures and graphs to help create visual interest
    - Help the student break long assignments into smaller chunks.

- Completing tests and assignments

    - Understanding to be demonstrated in different ways, like oral reports, posters, and video presentations.
    - Provide different ways to respond to test questions, like saying the answers or circling them.
    - Minimize the number of questions and problems per worksheet.
    - Give extra time and quieter space for work and tests.

- Managing behavior

    - Use a behavior plan with a reward system.
    - Use a nonverbal signal to get the student's attention and indicate the need for
    - things like taking a brain break and/or to focus on assigned work.
    - Check in frequently to monitor the student's "emotional temperature" or frustration level.

- Excessive energy

    - Transitions incorporate movement – Transition periods (typically five minutes) between subjects, activities, or periods offer students the chance to both physically and mentally adjust to a new experience. Songs and games that involve physical movements

- Responding physically (e.g., hand or arm signals, holding up response cards or flags, jumping up, stamping feet) instead of, or along with, verbal responses.

- Difficulty sustaining attention
    - Block out excessive distractions.
    - Typical self-monitoring strategies, checkmark for being on task, an "X" for not; coloring for that period.

Dyslexia

- Low charts are ideal for explaining procedures.
- Pictograms& graphics help to locate information.
- Avoid abbreviations if possible or provide a glossary of abbreviations and jargon.
- Use short, simple sentences in a direct style and give instructions clearly.
- Avoid long sentences explanations, be concise.
- Avoid text in block capitals because this is much harder to read and white backgrounds.
- Provide handouts giving an overview of main points, well in advance of lectures.
- Dyslexic students often need points repeating, to ensure that information passes into their long-term memory. Give summaries at beginning and end of lectures and revisit points of learning at intervals (Grindei & Benlloch-Dualde, 2015).

Classroom materials and routines

- Use large-print text for worksheets.
- Provide extra time for reading and writing.
- Give the student multiple opportunities to read the same text. Use reading buddies during worktime (as appropriate).
- Pre-teach new concepts and vocabulary.
- Provide a glossary of content-related terms.

- Use visual or audio support to help the student understand written materials in the lecture.
- Post visual schedules and also read them out loud.

Giving instructions

- Give step-by-step directions and read written instructions out loud.
- Simplify directions using key words for the most important ideas.
- Highlight key words and ideas on worksheets for the student to read first.
- Check in frequently to make sure the student understands and can repeat the directions.
- Show examples of correct and completed work to serve as a model.
- Help the student break assignments into smaller steps.
- Give self-monitoring checklists and guiding questions for reading comprehension.
- Arrange worksheet problems from easiest to hardest.

Completing tests and assignments

- Allow understanding to be demonstrated in different ways, like oral reports, posters, and video presentations.
- Provide sentence starters that show how to begin a written response.
- Provide extended time for taking tests.
- Provide a quiet room for taking tests, if needed.

<u>Visual Impairmentent</u>

- Materials in large print or Braille.
- Audio materials recorded via computer.
- Captioning course videos.
- Enlarged or tactile drawings.
- Tactile demonstrations incorporated into instruction for understanding concepts.

- Use email for class notes and other teaching materials instead of printed documents for blind students (they can be converted in audio information through screen reading software) (Grindei & Benlloch-Dualde, 2015).

Classroom Materials and Routines

- Post visual schedules, but also say them out loud.
- Describe visual presentations aloud and/or provide narration.
- Build in time to summarize the important information from each lesson.
- Use a reading guide strip or a blank index card to block out other lines of text while reading.
- Provide a highlighter to use to highlight information while reading.
- Provide wide-ruled paper and darken or highlight lines and margins to help form letters in the right space.
- Provide colored glue sticks to use on white paper.

Giving Instructions

- Say directions and assignments out loud.
- Clearly space words on a page.
- Write directions in a different color from the rest of an assignment (or highlight them). Include simple diagrams or images to help clarify written directions.
- Use highlighting or sticky-note flags to draw attention to important information on worksheets.
- Allow time for the student to ask questions about directions.

Completing Tests and Assignments

- Allow the student to submit answers on a separate sheet of paper rather than on fitting them into small spaces.

- Reduce visual distractions by folding a test or using blank pieces of paper to cover up part of the page.
- Provide extended time on tests.

Hearing Impairment

- Printed and video materials offered before classes with captioning (involves synchronizing text with audio content of a video presentation).
- Facing student for lip reading.
- Reinforce spoken information with visual aids.
- When possible, provide the student with lecture notes, lists of new technical terms and printed transcripts of audio-visual materials.
- Do not hesitate to communicate with the student in writing when conveying important information.
- On line video materials with subtitles (Ashmead,2008).

Classroom Seating, Materials, and Routines

- Provide a quiet area for independent work.
- Let the student sit near the teacher and away from auditory distractions, like doors and windows.
- Check in frequently to make sure the student understands the work.
- Give extra time for testing.

Giving Instructions and Assignments

- Give step-by-step instructions, and have the student repeat them.
- Use attention-getting phrases like “This is important to know because...."
- Decide with the student on a nonverbal signal to show that a key point is being made.
- Say directions, assignments, and schedules out loud, and rephrase as needed.
- Repeat key information throughout the lesson, and rephrase as needed.

- Use visual tools, images, and gestures to enhance and support spoken lessons.
- Break down classwork instructions into short, written steps.
- Highlight key words and ideas on worksheets.

Introducing New Concepts/Lessons

- Speak clearly and slowly when presenting new information.
- Give material on a new concept to the student before it's taught to the whole class
- Give a list of or highlight key vocabulary and concepts for upcoming lessons.
- Give a short review or connection to a previous lesson before teaching something new.
- Give the student an outline of the lesson.
- Grade based on the student's completion of the lesson goal.

Grading and evaluation of students in special education

Grading adaptations are procedures or strategies that can be used to individualize the grading system for a student with disabilities.

One effect of developing grading adaptations is that students with a history of low or failing grades may be motivated to follow a personalized grading plan that has been developed to meet the student's particular strengths and needs.

Individualized education program (IEP) grading, student self-comparison, pass/fail, mastery level/criterion systems checklists and descriptive grading are types of grading adaptations that can be used to assign student grades.

Effective grading adaptations

- Prioritize content and related assignments
- Base part of grade on the processes that the student uses to complete work or the effort that the student puts forth
- Incorporate progress on IEP objectives into the student's grade
- Incorporate improvement measures into the student's grade

- Change scales or weights

Dyslexia

- 25 % extra time to be awarded to allow for slower speeds of reading and writing
- Alternate different evaluation methods: multiple choice, essay, etc.
- Non-written assessment
- Grade the student on the content that needs to be mastered, not on things like spelling or reading fluency
- Provide different ways to respond to test questions, like saying the answers or circling an answer instead of filling in the blank.

Visual Impairment

- Provide extra time (aprox. 25%-50% additional time)
  (examination papers may need to be enlarged or Brailed, with tactile diagrams, maps, etc.)
- Some may need a reader, an oral examination with the examiner, audiotaped questions, or large print papers.
- Allow oral reporting instead of written responses.
- Provide a quiet room for tests if needed.

Hearing Impairment

- Provide extra time (aprox. 25%-50% additional time)
- Use visual aids (i.e. writing on the board, slides, OHPs).
- Give written instructions.
- Break down test instructions into short, written steps (Ashmead,2008).

Mobility Impairment

- A reader or an oral evaluation
- Alternate different evaluation methods: multiple choice, essay, on line evaluation etc
- For an oral evaluation allow extra time for the student to listen to and refine or edit responses.
- For some students the combination of written and oral evaluation will be most appropriate.
- Some students with a mobility disability may need rest breaks.

Attention-deficit/hyperactivity disorder (ADHD)

- Frequent short quizzes, rather than one long test at the end of each unit.
- Give credit for work done instead of taking away points for late
- Grade for content, not for neatness.

Kids Might Refuse to Use Accommodations

It's not uncommon for kids to refuse to use accommodations, and there are many reasons why. There are lots of reasons kids may refuse to use accommodations, from feeling ashamed to just not needing them (Morin, 2019)

- They don't want to stand out or feel different.

Kids have a powerful need to feel like they fit in and belong. An accommodation can be another reminder of how they're different from their classmates. Some kids prefer to tough it out or struggle with an assignment, rather than stand out from the crowd.

- They're worried about how other

A classroom accommodation may be hard to understand for their classmates who don't use accommodations. That means some kids worry that their peers are going to say “no fair!" or make fun of them for using accommodations in class. Even one negative comment from a classmate can make your child reluctant to use an accommodation.

- They think they're doing something wrong.

Kids have accommodations in place that work well, they may start doing better. And that can be confusing. It might feel like the accommodation is doing the work for them, which can feel wrong. They may not yet understand that the accommodation is a tool that helps them show knowledge or get their work done.

- They don't believe or understand how it will help.

It's important that kids have a say in choosing accommodations.

Without child's buy-in, accommodations might not get used. Knowing why extra time on tests is an option or how a fidget is supposed to help is key in getting child to use an accommodation. It's also important to give child a few weeks to get comfortable with it.

- They don't want to ask to use it (or they forget to ask).

Ideally, accommodations are readily available or built in to lessons, so it's easy for kids to use them.

Rather than draw attention to themselves by pointing out the need or asking permission to use it, some kids will just go without. Or kids may just forget to ask if no one reminds them.

- Self-advocacy is an important skill for kids who learn and think differently.

It helps them ask for what they need-including accommodations. But not all kids know how to ask. They may not have the skills or the words to ask to use an accommodation. And kids who are shy about self-advocating or who don't want to look like they're correcting the teacher might opt to just not use their accommodation, rather than speak up.

- They don't want to admit they need help.

As kids get older, they may become more aware of how learning differences impact them in school. That awareness might make them feel emotions like shame. Kids may also want to "prove" to everyone that they don't need help. If they're not yet comfortable talking about their challenges or asking for help, they may refuse to use accommodations.

- It isn't helpful or doesn't work.

Kids who don't see the benefits of an accommodation may refuse to use it. They also might not know how to suggest something else that might work better.

Just keep in mind that there isn't always one solution. One place to start is by asking open-ended questions to start a conversation with child.

References

1. Anne B. Bucalos and Amy S. Lingo. *Filling the Potholes in the Road to Inclusion: Successful research-based strategies for intermediate and middle school students with mild disabilities* 2005.
2. Cook SC, Rao K. *Systematically Applying UDL to Effective Practices for Students With Learning Disabilities. Learning Disability Quarterly* 2018; 41: 179–91.
3. Williams J. *Adaptations & Accommodations for Students with Disabilities.* Adaptations Resources (Bib15) 2001: 2–9.
4. Barkley RA. *Classroom Accommodations for Children with ADHD*. The ADHD Report 2008; 16: 7–10.
5. Grindei L, Benlloch-Dualde VJ. *Adapting Learning Materials for Students with Disabilities*. Adaptations Resources 2015.
6. Ashmead DH. *Auditory Perception. In: Ashmead DH, ed. Auditory Perception: In M. M. Haith and J. B. Benson (Eds.), Encyclopedia of Infant and Early Childhood Development*,. Elsevier, 2008: 128–36.
7. Morin A. Common accommodations and modifications in school. Understood. August 5, 2019. www.understood.org/en/learning-thinking-differences/treatments-approaches/educational-strategies/common-classroom-accommodations-and-modifications (accessed 27/05/2021).
8. Cook, S. E. C., & Rao, K. (2018). Systematically Applying UDL to Effective Practices for Students With Learning Disabilities . *Learning Disability Quarterly*, *41*, 179–191.

7 Pupils' assessment

Alessandra Carenzio, Sara Lo Jacono

Theoretical framework

One of the key concepts chosen to create the tools and the assessment perspective is the one of competences. To understand the impact of competences as a concept, we should start with some definitions.

Competences are a combination of knowledge ("composed of the concepts, facts and figures, ideas and theories which are already established and support the understanding of a certain area or subject), skills ("defined as the ability to carry out processes and use the existing knowledge to achieve results") and attitudes (the disposition and mindset to act or react to ideas, persons or situations). To have a better idea on the European engagement in this field, see the following resource: https://kivinen.files.wordpress.com/2018/09/key-competences-for-lifelong-learning-en.pdf.

Competence is the "ability to cope with a task, or a set of tasks, managing to set in motion and orchestrate their own internal resources, cognitive, emotional and volitional, and to use the available external resources in a coherent and fruitful way". Knowledge, ability, disposition (attitude) are, then, the key elements (Hyland, 1993).

Le Boterf highlights **three dimensions** related to the exercise of a competence: the ability to mobilize their knowledge in response to a certain task, the willingness to invest the best of its resources in facing the task, the sensitivity to the resources and constraints that the operational context inevitably poses. Le Boterf (2010) gives the following tripartition: to know how to act, to want to act, to be able to act.

By competence, we understand good performance in diverse, authentic contexts based on the integration and activation of knowledge, rules and standards, techniques, procedures, abilities and skills, attitudes and values.

This concept fits very well with the aims and content of the project: when something happens, in fact, I need to set my resources, use my knowledge and organize all the external resources I can arrange coherently.

Competences meet children, adolescents and adults: they vary for sure in complexity, but they work in the same way. We are “competent” if we are able to act well in a certain situation, in this perspective to be competent does not mean solely to know something or to have some notions about some topics, but also to put knowledge into practice in a given context.

The European Union has identified 8 Key Competences that enable every citizen to adapt to changes of society, to working life, to study and to learn new things. So, using competence as a guiding element is part of the process the EU started many years ago, affecting teachers’ work and students’ school-life. It is, then, important to use this framework, as it speaks the language of schools and the way teachers work with pupils and students. This means to support a better understanding of out project, to welcome activities and to understand the connection between the project on BLS and the usual teaching, the different subjects and the different competences teachers try to foster every day.

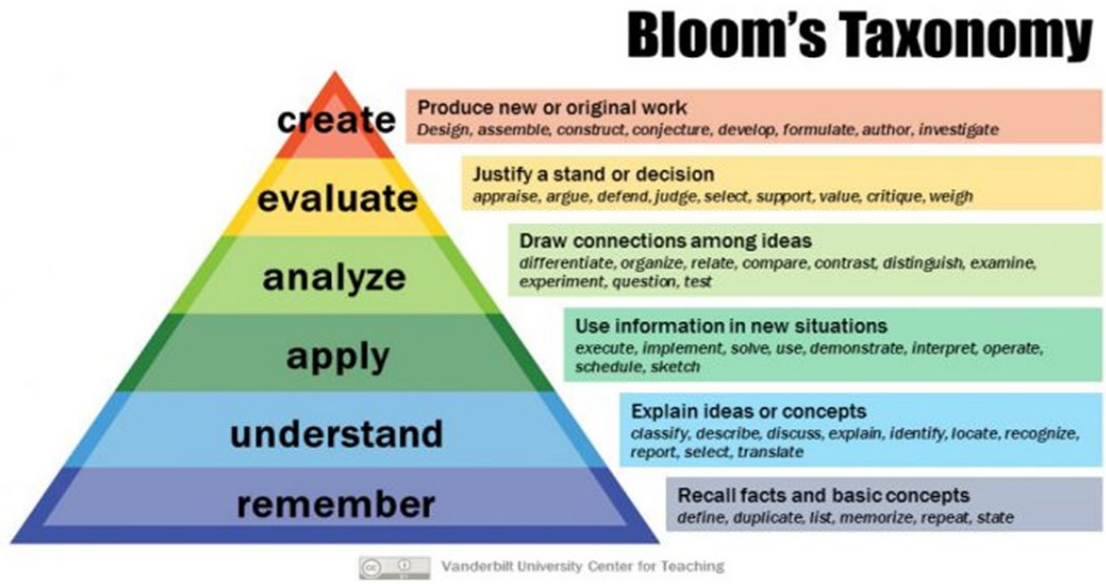
If we consider the EU LIFEFORCE project, probably the key competence naturally connected is the following: “personal, social and learning to learn competence”. It is “the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one’s own learning and career. It includes the ability to cope with uncertainty and complexity, learn to learn, support one’s physical and emotional well-being, to maintain physical and mental health, and to be able to lead a health-conscious, future oriented life, empathize and manage conflict in an inclusive and supportive context” (https://kivinen.files.wordpress.com/2018/09/key-competences-for-lifelong-learning-en.pdf).

If we move from theory to practice, competence-based design or design based on competence is a strategic way to design training and education activities: it means to use competences (a goal, a final disposition, a behavior) as the starting point of the design process.

If I know where I should arrive, I can better plan the path and what I need to reach it: if I know what a student has to do/know/act at the end of the activity, I can plan this activity in a more effective way and also assessment is affected. So, in this framework designers and trainers usually start from the end to go back to the origin (the activity/the project), in order to design "backwards".

This process needs little attention: first, we have to make a list of achievements and goals related to the competences (not too many, or the design would be uncontrollable); second, we have to define the assessment criteria (in relation to child performance), third, we can carefully design the most appropriate activities and methods (role playing, demonstration, games, videogames etc.) and produce learning resources.

The second key concept refers to Bloom's taxonomy.



Armstrong, P. (2010). Bloom's Taxonomy.

During the evaluation process and the creation of the observation list we used the aforementioned skills of the Bloom's Taxonomy in order to evaluate the level of remembering, understanding, applying, analyzing of the pupils.

The taxonomy has been used also in the questionnaire, as discussed in the paragraph devoted to this specific tool.

Tools

Questionnaires

Considering the theoretical framework referred to evaluation, the toolkit includes 4 tools: a questionnaire for pupils (two versions), delivered online; an observation list; a rubric designed to be used by teachers and by pupils in the general frame of peer evaluation; a diary for teachers and the traditional tool of drawing for young pupils.

Let's see how the questionnaire works and its design process.

Questionnaires should be delivered as a pre-test (before training) of children's knowledge and as a post-test (after training) to see the deviation after the sessions. The information provided, with the ones collected thanks to the observation checklist, will grant a best idea of what children learned during the training sessions and where, again, we should go back to make the process clear and understandable. These tools will be integrated by the use of drawing (with a common mandate).

The questionnaire is simple and it uses images.

Teachers can also read the questions in the classroom or print a version of the tool.

The questions are in a sort of scenario, besides general questions devoted to general knowledge, easy to grasp and understand, but also ideal as a medium to make questions situated (as said, children need to have a sort of environment to grasp topics and be "in the situation").

There are ordering questions, close-ended questions, there are no open-ended questions as for children's age. We propose a maximum of 3 possible answers for 6-8 year olds and a maximum of 4 possible answers for 8-10 year olds.

In constructing the questions we considered not only the algorithm, but also Bloom's taxonomy; the different levels of the taxonomy recur in the questions: - the level understand, specifically to the significant verb: identify and repeat; - the level remember, specifically to the significant verb: list; - the level apply, specifically to the significant verb: execute.

The questions are based on the three verbs at the base of the pyramid; the highest verbs, analyze and evaluate, refer to levels that are too high compared to the age groups we are considering.

The two questionnaires are identical in their ludic structure and in the questions; only one characteristic differentiates them: in the questionnaire intended for 8-10 year old children, the items are 4 instead of 3, since children of that age are capable of recalling 4 elements.

Questionnaire/activity for children (6-8 years old)

Note for teachers:

The questionnaire can be delivered as a pre-test (before training) of children's knowledge (individually) and as a post-test (after training) to see the deviation or as a starting activity with children in group.

The information provided, with the ones collected with the observation checklist, will grant a best idea of what children are learning.

The questionnaire is simple and it uses images. Teachers can also read the questions in the classroom or print a version of the tool.

1. What is the European emergency phone number?

A 112

B 118

C 911

2. Is the European emergency phone number free of charge?

A Yes

B No

3. You are in the park with your friends, you see a man lying down and you help him, as it is safe for you. What is the most appropriate action? Put the actions in order from 1 to 3.

A Check for normal breathing 3

B Kneel by his side 1

C Check for response 2

 A	 B	 C

4. What do you do to check if the man is conscious?

A I clap my hands

B I gently shake the shoulders of the victim and ask him loudly “Are you alright?”.

C I use my senses: I see if the chest is moving, I fell the breathing, I hear the breathing, I touch the chest to feel if it is moving or not

5. The man in the park is unresponsive. What should you do now?

A Ask someone to call 112 o take your mobile phone and dial 112, if you have one

B Ask someone to call your parents or take your mobile phone and dial your parents' number (if you have a mobile phone)

C Call for help shouting loud in the park

6. What information would you communicate while talking to 112?

A Your name and surname

B Details of her dress

C Fist I tell them where I am to enable the ambulance to find me soon

7. What do you do while you call the 112? Choose the right answer

A I stay with the man I am helping and activate the speaker function of my phone

B I move around the park

C I hang up

8. What maneuver paramedics apply to the man, when they reach the park with the ambulance?

A Chest compression

B Ventilation

C Belly compression

Questionnaire/activity for children (8-10 years old)

Note for teachers:

The questionnaire can be delivered as a pre-test (before training) of children's knowledge (individually) and as a post-test (after training) to see the deviation or as a starting activity with children in group.

The information provided, with the ones collected with the observation checklist, will grant a best idea of what children are learning.

The questionnaire is simple and it uses images. Teachers can also read the questions in the classroom or print a version of the tool.

1. What is the European emergency phone number?

A 112

B 118

C 911

D 115

2. Is the European emergency phone number free of charge?

A Yes

B No

C It depends on your provider

3. You are in the park with your friends, you see a man lying down and you help him, as it is safe for you. What is the most appropriate action? Put the actions in order from 1 to 3.

A Check for normal breathing 3

B Kneel by his side 1

C Check for response 2

 A	 B	 C

4. What do you do to check if the man is conscious?

A I clap my hands

B I gently shake the shoulders of the victim and ask him loudly “Are you alright?”.

C I use my senses: I see if the chest is moving, I fell the breathing, I hear the breathing, I touch the chest to feel if it is moving or not

D I scream loud

5. The man in the park is unresponsive. What should you do now?

A Ask someone to call 112 o take your mobile phone and dial 112, if you have one

B Ask someone to call your parents or take your mobile phone and dial your parents' number (if you have a mobile phone)

C Call for help shouting loud in the park

D Ask someone to call 911 or take your mobile phone and dial 911, if you have one

6. What information would you communicate while talking to 112?

A Your name and surname

B Details of her dress

C Fist I tell them where I am to enable the ambulance to find me soon

7. What do you do while you call the 112? Choose the right answer

A I stay with the man I am helping and activate the speaker function of my phone

B I move around the park

C I hang up

8. What maneuver paramedics apply to the man, when they reach the park with the ambulance?

A Chest compression

B Ventilation

C Belly compression

Observation list

Dr. Maria Prodromou, Dr. Marios Georgiou, Nikoletta Palli

The observation list aims to check the knowledge of the pupils after the LIFEFORCE training implementation according the Algorithm. The observation checklist is based on the **BLS assessment record of the European Resuscitation Council**. This observation list will evaluate pupils' knowledge after the training and six months later, in order to evaluate if pupils gain the proper skills (for example if pupils are able to check for environment safety both for pupils and for the patient, if they are able to check response, assess normal breathing, call emergency services, get help, do chest compression properly, rescue breaths, find an AED etc).

The criteria for checking pupils' performance were based on Bloom's taxonomy in order to evaluate if pupils **remember** (recall facts and basic concept, understand (explain ideas or concepts), **apply** (if pupils are able to use information in new situations), **analyse** (draw connection among the ideas), **evaluate** (justify a stand or decision) create (produce new or original work) in each step of the algorithm.

Checklist parameter

Practical skills assessment: **Algorithm**

Cognitive assessment: The operator - with the use of Bloom's taxonomy - will evaluate if pupils remember, understand, apply, analyze, evaluate, create as the examples below.

- **Visual perception** (for example assess if the environment is safe, know what to look, feel or to listen);
- **Auditory perception**;
- **Memory** (if pupils are able to recall the 112 phone number from their own memory);
- **Attention** (focused on the call);
- **Critical thinking** (pupils are aware of importance of appropriate depth, rate, recall, and minimizing interruptions);
- **Communication skills** (respond appropriately to the questions of the operators);
- **Orientation** (understanding the special arrangement in space and orientation with respect to the risk);

- Body awareness (for example, pupils identify where the shoulders is or where the chin is);
- Self-regulation (he/she is aware on how to position the hands on the chest?)
- Language skills (he/she an recall the relevant information as name, place, non breathing?).

Based on these objectives, the following observation list was created to assess the student's perceptual and cognitive skills (Borovnik Lesjak, Šorgo, Strnad,2019, Monteiro, Ferraz, Rodrigues, 2021, Ringsted, Lippert, Hesselfeldt,2007, van Dawen, Vogt, Schröder, 2018, Wilks, Kanasa, Pendergast, Clark K., 2016).

SECTION A: INTRODUCTION – CASE SCENARIO

1. Have the pupils understood the scenario?

☐ Yes
☐ No

2. Have they recognized that the person needs help?

☐ Yes
☐ No

3. Pupil Response

☐ Fight
☐ Flight
☐ Freeze

SECTION B: SKILLS ASSESSMENT

Skill	The candidate	Before		End		After	
		Achieved		Achieved		Achieved	
		Yes	No	Yes	No	Yes	No
Safety	Ensuring the **safety** of the: - rescuer - victim - bystanders						
Check for response	Gently shake / touch shoulders and ask "Are you alright"?						
Check for normal breathing	Gently tilt the Victim's head backwards, lifting the chin to open the airway.						
	LOOK if the chest is moving						
	LISTEN with your ear for respiratory sounds						
	FEEL the victim's breath on your cheek?						

	Ask “Is this normal breathing OR is it only coughing, moaning, snoring?”			
Call for help	(If the victim is unresponsive and / or not breathing, or is breathing abnormally) Stay with the victim while calling			
	Call 112			
	Activate the speaker function of the phone			
	Say your name, your location and what happened			
	Answer the questions that are asked on the phone			
	Stay on the phone, don’ t hang up			
	Send a helper to bring an AED, if applicable			
	If you are alone, do not leave the victim, but start CPR			
Chest compressions	Place the heel of your hand on the center of the victim’s chest.			
	Place the heel of the other hand on top of the first hand and interlock your fingers.			
	Keep your arms straight vertically above the victim ’s chest and press down on the sternum, 5-6cm.			
	After each compression, release the pressure on the chest without losing contact between your hand and the sternum.			
	Repeat at a rate of 100 - 120 compressions per min.			

SECTION C: BLS – COGNITIVE ASSESSMENT

Skill	The candidate	Before		End		After	
		Achieved		Achieved		Achieved	
		Yes	No	Yes	No	Yes	No
Safety	Can the pupil detect (listen or see) potential dangers in the scenario environment?						
	Can the pupil take into consideration the dangers before deciding to act?						
	Does the pupil act after the dangers are neutralized and the environment is safe?						
Check for response	Did the pupil look if the victim responded to stimuli?						
	Did the pupil listen if the victim responded to stimuli?						
	Can the pupil determine/decide that the victim is not responding?						
	Can the pupil locate the shoulders?						
Check for normal breathing	Does the pupil visually identify if the victim is breathing (chest rising)?						
	Can the pupil distinguish breathing sounds from enironmental sounds?						
	Can the pupil identify the type of breathing (fast, slow, agonal, normal)?						
	Can the pupil determine that the victim breathes normally?						
	Can the pupil locate the forehead?						
	Can the pupil locate the chin?						
Call for help	Can the pupil remember the number 112 from memory?						

	Can the pupil describe where he/she is?			
	Can the pupil describe the sequence of events that have happened?			
	Can the pupil describe the victim's condition?			
	Can the pupil follow the conversation rules with the discpatcher?			
	Can the pupil understand and is he/she able to respond to the dispatcher's questions?			
	Does the pupil ask for clarifications if he/she cannot remember an instruction?			
	Can the pupil carry out instructions in the correct sequence?			
Chest compressions	Can the pupil locate the center of the victim's chest?			
	Does the pupil know how to place his/her hands during chest compressions? (arms straight, fingers interlocked)			
	Can the pupil synchronize his/her body movement, in order to maintain a pace of 100-120 compressions per minute?			
	Can the pupil remember to alternate the stages of chest compressions (30) and ventilations (2)?			
	Does the pupil comprehend the sequence of actions during ventilations (i.e. that opening the airways must happen before ventilations)?			
	Can the pupil realize that he/she is not following the correct sequence of actions?			

Before the cource
End of the course
6 months after the course

Visual and auditory perception
Memory
Attention
Critical thinking
Communication skills
Orientation
Body awareness
Self-regulation
Language skills

Rubric to assess the specific task "emergency recognition-call for help-manage the call and interact with the victim"

A rubric is a very useful evaluation tool, used for self-evaluation, co-evaluation, and for inter-evaluation of performances developed in a specific situation (project, training etc.).

The evaluation rubric is used when teachers want to show examples of well-executed or deficient works; when they want to list the characteristics of the expected works; when they want to encourage peer evaluation.

A well-made rubric allows students to know in advance what are the criteria on which the teacher will express the evaluation; for this reason, sharing the rubric with the class improves the quality of learning and motivates students to work well, improves self-assessment, reduces the time the teacher spends in evaluating, favors the involvement of families, since parents know what the teachers expects from their children, it promotes didactic continuity, and improves the quality of the school as it ensures an effective control of learning levels (as I can easily know where I am in the progressive flow from high to low level).

Rubrics, then, are tools for evaluating complex performances, such as those required in the development of a product, in the solution of a problem, in the conduct of an oral presentation, in the construction of a text or a multimedia communication. The name is used in English-speaking contexts, but the origin of the term is Latin. In the liturgical books, in fact, the term rubric referred to the set of rules governing the conduct of the rites and which were written in red (in Latin ruber, hence rubric) to distinguish them from the texts of the prayers that were to be recited. Hence the term rubric as a set of rules for evaluating a performance.

The framework is continuous assessment and formative assessment, that let students show that they're learning, while summative assessments let them show what they've learned. Continuous assessment can provide early indications of the performance of students, this allows them to share feedback to identify problems at their earliest stages; it helps inclusiveness, it provides students with many opportunities to prove their mastery of material and to access knowledge; it reduces the anxiety around testing and it is more challenging.

To build a rubric it is necessary to break down a performance into its important elements and, for each of them, to provide for a rigorous definition of the expected performance levels. The

rubric assumes the maximum value when it is designed and built together with the students, because this allows them to understand what are the elements to keep under control and allows to share criteria and working methods that will be used by the teacher in the evaluation.

That is why we designed a rubric for the project, intended for:

- for *peer evaluation* (pupils assess pupils) for older children involved in the project (10 years old).

If your pupils use rubrics and you, as a teacher, have adopted rubrics as usual tools in your work routine, you can also use it with younger pupils.

If it is the first time, remember that you should present the rubric to your pupils before using it. In case of doubts you can watch the video on rubrics.

- for *pupils' evaluation* (by the teacher). The rubric can be used during the observation by teachers in order to give more detailed feedback on pupils' performance (and to explain how and where to improve).

The rubric can be used during the observation. It is always useful to make pupils aware of performance levels in a specific situation: the rubric is organized with a progressive description of their behavior (from the best response to the weakest one).

In this way pupils can understand their responses and how to improve. If you are in the highest level in a topic (Safety), you can need improvements in another field (Check for response). The name of the level can be changed, but it always has to be positive (no negative form or judgments).The first line refers to a starting activity, aimed at recognizing the situation of emergency. Teachers can use scenarios and cards to start a conversation: *What do you see? What do you notice? What can be dangerous?* You can use just a part of the lines/topics, according to what you observe and to the simulation or exercise involving pupils.

You can use just a part of the lines/topics, according to what you observe and to the simulation or exercise given to pupils.

The most important thing in a rubric is the dynamism, you can improve and you can move from one level to the other (in fact, words are always positive).

Teacher's

	Levels of the performance (from the highest to the weakest)			
Elements of the performance	**Fully**	**Partially**	**With slight difficulties**	**With someone's help**
Emergency recognition	The pupil immediately understands and without anyone's help that the person needs for help	The pupil understands that the person needs for help, but it takes some time	The pupil has a little trouble understanding that someone needs his/her help	The pupil understands that the person needs help only when someone points it out
Safety	The pupil immediately realizes that the situation is safe, through practical issues (like the presence of cars, dangers linked to electricity, fire etc.)	The pupil understands that the situation is safe, personally, but he/she doesn't realize if it is same for the people around and for the victim	The pupil has a little trouble understanding that the situation is safe, as he/she doesn't know which are the practical issues to consider (cars, electricity, fire etc.)	The pupil understands that the situation is safe only when someone tells it is
Check for response	The pupil knows how to act and he/she is confident. The 3 actions he/she easily takes are: to kneel by the side of the victim, to shake or gently touch her/his shoulder and to ask "Are you right"?	The pupil knows how to act, but it takes a little time: to kneel by the side of the victim, to shake or gently touch her/his shoulder and to ask "Are you right"? are not so immediate	The pupil has a little trouble to remember what to do, that is to kneel, to touch/shake his/her shoulder and he/she hardly remembers what to ask the victim	The pupil acts just when someone guides him/her

Check for normal breathing	The pupil knows how to place one hand on the victim's forehead and the other hand fingertips under the chin bone. He/she knows how to tilt the head backwards while lifting the chin; how to look, listen and feel the breath of the victim and after no more than 10 seconds he/she understands if breathing is normal	The pupil remembers how to place the hand and fingertips, but then he/she has trouble to move on breathing assessment and to take a decision on absence of normal breathing	The pupil has a little trouble to remember what to do, he/she hardly remembers exactly where to put hands and move on	The pupil acts just when someone guides him/her, telling where to put hands and fingertips and how to lift the chi and tilt the head backwards to check for normal breathing
Call for help	The pupil immediately picks up the phone (or asks someone to do it) and calls the emergency number 112 alone and autonomously	The pupil remembers to pick up the phone (or to ask someone to do it), and to call the emergency number, but he/she has a little trouble remembering the number	The pupil picks up the phone (or asks someone to do it) as soon as he/she can and eventually calls the number 112 with a bit of effort	The pupil picks up the phone (or asks someone to do it) as soon as someone asks him/her and reminds him/her the number
Call managing	The pupil explains clearly and easily what is happening by standing next to the victim and activating the speaker or another hands-free function to remain in contact with the operator	The pupil explains what is happening as best he/she can, but he/she doesn't immediately remember standing near the victim and activating the speaker function	The pupil has a little trouble explaining what is happening and he/she doesn't remember to activate the speaker function	The pupil can only explain what is happening if someone helps him/her to organize the speech

Chest compression	The pupil knows how to act and he/she is confident: he/she kneels by the side of the victim, places his/her hands on the center of the victim's chest with one hand over the other one and the fingers interlocked. He/she keeps the arms straight and press them straight down deep and fast	The pupil knows how to act, but it takes a little time: to kneel by the side of the victim and to correctly place arms and hands on the victim's chest are not so immediate actions for him/her	The pupil has a little trouble to remember what to do, that is to kneel, to correctly place his/her own arms and hands and to press the victim's chest; he/she hardly remembers where and how to place his/her hands	The pupil acts just when someone guides him/her
Ventilation	The pupil knows when to start ventilation. He/she can pinch the soft part of the nose closed, using the index finger and thumb of his/her hand placed on the forehead	The pupil remembers when to start ventilation and how to do it properly, but then he/she has trouble to move on	The pupil has a little trouble to remember what to do, he/she hardly remembers exactly where to put hands and move on	The pupil acts just when someone guides him/her, telling where to put hands, how to tilt the head and how to lift the chin
AED	The pupil knows that an AED is needed and he/she easily retrieves it in a very short time	The pupil doesn't remember well where the AED is placed, but he/she looks for it and finds it after a few hesitation	The pupil has difficulties in remembering what an AED is and so he/she needs time to think, before looking for it	The pupil finds and gets the AED only when someone explains him/her what it is and where to find it

Pupil's

	Levels of the performance			
Elements	**Fully** 😊😊😊😊	**Partially** 😊😊😊	**With slight difficulties** 😊😊	**With someone's help** 😊
Emergency recognition	Your mate understands **immediately** and **without anyone's help** that the person needs for help	Your mate understands that the person needs for help, but **it takes some time**	Your mate has a **little trouble** understanding that someone needs help	Your mate understands that the person needs for help **only when someone points it out**
Safety	Your mate **immediately** realizes that the situation is safe (no cars, fire, electricity dangers)	Your mate understands that the situation is safe, **not caring for the people around and for the victim**	Your mate has a **little trouble** understanding that the situation is safe for everyone	Your mate understands that the situation is safe **only when someone tells it is**
Check for response	Your mate knows how to act **confidently** (kneeling by the side, shaking/gently touching shoulders, asking "Are you right?")	Your mate knows how to act, but it **takes a little time** to reflect	Your mate has a **little trouble to remember what to do**	Your mate acts just **when someone guides the actions**

Check for normal breathing	Your mate knows **easily how to place hands and how to look, listen and feel the breath of the victim** to understands if breathing is normal	Your mate **remembers how to place the hands but has trouble to move on**	Your mate **has a little trouble to remember what to do**	Your mate acts **just when someone tells how** to check for normal breathing
Call for help	Your mate **immediately picks up the phone** (or asks someone to do it) **and calls the emergency number autonomously**	Your mate **remembers to pick up the phone** (or to ask someone to do it), but **has trouble remembering the number**	Your mate **picks up the phone** (or asks someone to do it) **and stops**	Your mate picks up the phone (or asks someone to do it) **just when someone suggests it** and recalls the number
Call managing	Your mate explains **clearly and easily** what is happening by standing next to the victim and activating the speaker	Your mate explains what is happening, but **forgets some of the passages**	Your mate **has trouble explaining what is happening** and **doesn't activate the speaker function**	Your mate can only explain what is happening **with the help of other people**
Chest compression	Your mate **knows how to act confidently** (kneeling by the side of the victim, placing hands on the center of the chest, keeping arms straight and pressing them straight down deep, fast)	Your mate **knows how to act, but it takes a little time**: the passages are not immediate	Your mate **has a little trouble to remember what to do**	Your mate acts **just when someone guides** the actions

Ventilation	Your mate **knows when to start ventilation**	Your mate **remembers when to start ventilation and how to do it properly**, but **with little trouble**	Your mate **has a little trouble to remember what to do**	Your mate acts **just when someone guides** the steps
AED	Your mate **knows that an AED is needed and easily retrieves** it in a very short time	Your mate **doesn't remember well where the AED is placed**, but looks for it and finds it **after some time**	Your mate **has difficulties in remembering what an AED is** and **needs time** to think	Your mate finds and gets the AED **only when someone explains** what and where it is

Teacher’s diary

Diary is a very useful tool in terms of documentation.

When educators and teachers fill in the diary, after the training session, they are able to write down what happened and why, making precious annotations.

The diary is a data collection tool, with a low structuring degree, used mainly in experiential observation. In the diary, the subject describes, in the form of a free narrative, all the information deemed relevant for the research or for the understanding of the event to be narrated. It is of fundamental importance that the diary is not drawn up with the intention of reporting "objectively" what happens but that, on the contrary, it reports, as faithfully as possible, both the event and the point of view of the "narrator-observer”.

Writing a journal or a diary is a very ancient form of expression and reflection. We can trace the origin to anthropological research, which takes the name of ethnographic research (starting from Bronislaw Malinowski). This type of investigation seeks to "understand and interpret the point of view of the natives, but also to describe what the natives are not aware of."

The diary, or logbook, is widely used by researchers as a sort of "travel companion".

It can be defined as a self-reflection tool that allows us to write down our experience with the aim of better understanding a given situation (a project, an activity in the classroom etc.). In other words, we reconstruct the history of a process that finally acquires meaning as the diary narrates the experience in its complexity, from the factual point of view (what happened) and the emotional side (how I felt). The aim then is to improve our work and the effectiveness of our actions.

Keeping a diary contributes to developing different skills such as observation, documentation, reflection and retention, or "making available an experiential material on which to return reflexively to gain awareness of one's own experiences and mental experiences that accompanied them. This reminds of Schön’s work on professional development and reflection (teachers as reflective professionals).

Due to the low structure of the tool and the ease of use, the diary can be adopted as a data collection tool in different contexts of educational research. It can be completed either by the teaching staff and by students (not suggested under 10-11 years, a period in which storytelling skills allow a correct interpretation of the timelines).

It is recommended, then, to fill it in close to the session, to provide vivid information. The aim is to give feedback and information on what happened in the session, from teachers' point of view, concerning pupils' behavior.

For the project, we recommend this form of diary, based on very simple informations: a sort of cover to organize the annotations and to go back to the diaries when used for a specific period of time (name, pupils' age, number of pupils, topic, day); a descriptive section (what happened) of pupils' reaction; positive aspects emerged (to go back on these aspects and make them a sort of good practice); difficulties (in order to overcome them and to make few changes to improve the process).

As teachers, according to your personal experience and "style", you can add lines and topics, or evidence like pictures, videos or pieces of information (dialogues etc.).

We designed a very easy tool in order to be used briefly, easily and collecting all the basic information in order to reflect and go back to the main aspects of the activities promoted and held in the classroom. To better understand the framework, we suggest Bion's masterpiece "Learning from Experience" (1962), widely translated in different idioms.

Teacher's diary

General information	
Teacher's name	
Day, month, year	
Pupils' age	
Pupils' number in the classroom	
Topic of the session	

1. **Tell what happened during the session in terms of pupils' reaction (e.g. if they listened and collaborated etc.)**

   ……

   ……

   ……

   ……

   ……

   ……

2. **What positive aspects did you detect? (e.g. in terms of cognitive aspects, emotional learning etc.)**

   ……

   ……

   ……

   ……

   ……

   ……

3. **What difficulties did you observe (e.g. pupils could not follow the training, the training was too demanding, they were tired)?**

……

……

……

……

……

……

Notes:

……

……

……

……

……

……

……

……

……

……

Videos in education

Pictures and moving images have been used for a long time for educational purposes, from the magic lanterns to the latest web streaming solutions in a text-rich environment where contents are always accessible "at any time and everywhere" via portable devices, such as smartphones. Images and videos are doubtless the most diffused medium among children and young people, considering the dissemination of images in our society and the role of visual social media such as Instagram or TikTok (boyd, 2014).

Asensio and Young have introduced a conceptual framework called the "Three 'I's Framework" for analysing the use of video, describing the interplay of Image, Interactivity and Integration. Digital videos can be used as an interactive and integrated tool, for example with the tagging resources: imagine a video and during it a bubble speech appears with a question and the viewer can answer and move to another section to work on other concepts. Or, again videos with different strategies, as for example the "game-book" where you choose the path of the protagonist. Videos and images can be interlinked with supporting texts, links etc. as part of an "augmented learning environment".

Videos have a very strong relation to emotions, to cognition and to the operational steps, conducting to learning experiences: it is a quick way to learn things and behaviours; you can show situations you cannot bring into the classroom; visualization and identification are helped by videos. If we think about learning, "learning through imitation" is definitely part of children's learning process and videos are a "model" with their story and their characters. This means that images can be a support in visualization and in the comprehension of difficult concepts and subjects.

And, above all, the ability of videos to tell a story in a powerful and emotionally involving way is very important: narratives and storytelling are very interesting issues to be considered and to focus on.

We can define the use of videos in education and school environments, then, not as a novelty, but as a useful strategy. To understand it we can use the following system system comprising:

- the pedagogical approach, from the instrumental use of videos (to explain a physical phenomenon or to wake discussion or to reflect on a news etc.) to the critical use of

videos in education (to underline the specific languages or to grasp the connections between the media and the socio-economic system).

- the teaching "styles". It is possible to identify a double familiar polarity: on one side the transmissive style; on the other side we find the collaborative style, where the centre of the process moves to the social construction of knowledge; in this case teachers become a guide and students are part of a working group.

Videos and images, then, can be seen in four main ways, when we refer to school, as stated by CREMIT in a interesting research supported by the European Broadcasting Union (Jibs Project):

1) as a representational tool (i.e. video clips as useful tools for visualizing difficult concepts in an easier way). This perspective reveals a consciousness about what videos can bring into the teaching and learning processes and about the didactical benefits of images, but the transmission of content still remains the aim of the activities with videos.

2) as a natural language for children (i.e. videos as useful resources for activating communication between children). This profile is very close to the creative use that should be related to videos, but the perspective is still instrumental. That is to say, videos are valid tools able to increase communication and attention among pupils, but they are not still the object of learning activities.

3) as a didactical tool (clips used for supporting traditional lessons with documents, images and other formats as complementary materials). This is the most traditional profile related to audiovisual experiences at school, in which videos are considered as technological instruments supporting lessons, like a written page or a graphic table.

4) as a creative opportunity for active learning and media making, videos are then useful supporting a playing-based approach, where pupils are active, and they can help critical reflections and sharing in the classroom.

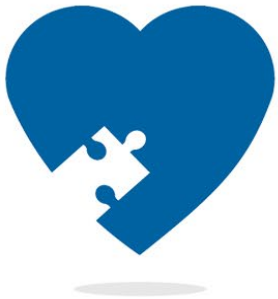
In the project, videos are part of teachers' and students' training in the subject area and also part of the research tools: they are a vivid medium in the cards (referring to the scenarios with images), they are vehicles for complex contents (combining music and songs and also for learning new strategies). In a sort of way, they represent all the four ideas (representational tool, a natural language, a didactical tool and a creative opportunity).

Fig. 1 Video in education: a language and a tool

References

1. Bion, W.R. (1962a). Learning from Experience. Lahnam: Jason Aronson, 2004.
2. Borovnik Lesjak V, Šorgo A, Strnad M. Development, validation and assessment of the test on knowledge about basic life support and use of automated external defibrillator among schoolchildren. Scandinavian journal of trauma, resuscitation and emergency medicine 2019; 27: 114.
3. Le Boterf, G. (2010). Costruire le competenze individuali e collettive. Agire e riuscire con competenza. Le risposte a 100 domande. Guida: Napoli.
4. Hyland, Terry. (2006). Competence, Knowledge and Education. Journal of Philosophy of Education. 27. 57 - 68. 10.1111/j.1467-9752.1993.tb00297.x.
5. Monteiro MdLRBP, Ferraz AIB, Rodrigues FMP. *ASSESSMENT OF KNOWLEDGE AND SELF EFFICACY BEFORE AND AFTER TEACHING BASIC LIFE SUPPORT TO SCHOOLCHILDREN.* Revista Paulista de Pediatria 2021; 39: e2019143.
6. Ringsted C, Lippert F, Hesselfeldt R, et al. *Assessment of Advanced Life Support competence when combining different test methods--reliability and validity.* Resuscitation 2007; 75: 153–60.
7. van Dawen J, Vogt L, Schröder H, et al. *The role of a checklist for assessing the quality of basic life support performance: an observational cohort study*. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine 2018; 26: 96.
8. Wilks J, Kanasa H, Pendergast D, Clark K. *Emergency response readiness for primary school children. Australian health review : a publication of the Australian Hospital Association* 2016; 40: 357–63.

Co-funded by the
Erasmus+ Programme
of the European Union



lifeforce

KIDS SAVE LIVES

Ελληνική Εταιρεία Επείγουσας Προνοσοκομειακής Φροντίδας

UNIKLINIK KÖLN

Italian Resuscitation Council

European University Cyprus