PRÁTICAS EDUCATIVAS, MEMÓRIAS E ORALIDADES

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Proposal of a didactic sequence for basic life support education in elementary school

EDUCATIONAL PRODUCT

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Abstract
The objective of this article is to present a didactic sequence for teaching Basic Life Support (BLS) in the school environment, aimed at 5th-grade elementary school children, developed from a professional master's dissertation. The proposal, based on a multidisciplinary and practical approach, seeks to promote health education by encouraging the training of students capable of performing BLS maneuvers, especially in emergency situations, following the guidelines of the American Heart Association (AHA). The didactic sequence, based on Zabala (1998), includes a lesson plan for teaching BLS and the creation of a low-cost manikin from recyclable materials. It is also supported by self-instructional training videos for teachers, ensuring the accessibility and reproducibility of the practice in different school contexts. The study also contributes to the inclusion of health topics in the school curriculum, strengthening life education and risk prevention.
Keywords: Elementary School. Diverse Curriculum. Health Education. Basic Life Support. Didactic Sequence.

Proposição de uma sequência didática para educação em suporte básico de vida no ensino fundamental

Resumo
O objetivo deste artigo é apresentar uma sequência didática para o ensino de Suporte Básico de Vida (SBV) no ambiente escolar, voltada para crianças do 5º ano do Ensino Fundamental, elaborada a partir de uma dissertação de mestrado profissional. A proposta, fundamentada em uma abordagem multidisciplinar e prática, busca promover a educação em saúde ao incentivar a formação de alunos aptos a executar manobras de SBV, especialmente em situações de emergência, conforme orientações da *American Heart Association* (AHA). A sequência didática, fundamentada em Zabala (1998), inclui o plano de aula para o ensino de SBV e a criação de um manequim de baixo custo com materiais recicláveis, sendo ainda amparada por vídeos de treinamento autoinstrucional para os professores, garantindo a acessibilidade e a reprodutibilidade da prática em diferentes contextos escolares. O estudo também contribui para a inserção de temas de

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saúde no currículo escolar, fortalecendo a educação para a vida e a prevenção de situações de risco.
Palavras-chave: Ensino Fundamental. Currículo Diversificado. Educação em Saúde. Suporte Básico de Vida. Sequência Didática.

1 Introduction

The time between the identification of a cardiorespiratory arrest (cardiac arrest, CA) and the initiation of Basic Life Support (BLS) actions is essential for the patient's chances of survival. According to the Brazilian Society of Cardiology, data in the literature regarding the incidence of CA in the country are scarce; however, some studies, such as those by Bonizzio *et al.* (2019), Sousa *et al.* (2019), and Zandomenigui and Martins (2018), indicate that between 200,000 and 300,000 cases of CA occur annually in Brazil, half of them in out-of-hospital settings, with the vast majority occurring at home, and with a child or adolescent often being the only witness to the event.

Beyond national borders, according to Kuvaki and Ozbilgin (2018), Lukas *et al.* (2016), and Naqvi *et al.* (2011), it is estimated that, in Europe and the United States, approximately 700,000 people die each year due to out-of-hospital cardiac arrest (OHCA). The rate of cardiopulmonary resuscitation (CPR), even in these developed countries, remains very low, around 5% to 10%. According to Bernoche *et al.* (2019), for each minute that elapses after the onset of the event, the probability of survival decreases by 7% to 10%. Thus, following a CA, brain cells can tolerate only 3 to 5 minutes of anoxia (lack of oxygen); however, in almost all cases, this time is much shorter than that required for the arrival of emergency medical services (EMS). There is strong scientific evidence that survival increases two- to fourfold when BLS is initiated immediately by bystanders who witness an out-of-hospital CA (Böttiger and Van Aken, 2015).

Given the importance of these data, there is a consensus among cardiology societies, associations, and study groups that the most effective way to minimize this problem is to train as many people as possible in BLS maneuvers. The World Health Organization (WHO) even recommends two hours of CPR training annually in all schools

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worldwide for students aged 12 years and older (Banfai *et al.*, 2018; Semeraro *et al.*, 2018; Süss-Havemann *et al.*, 2020).

From this perspective, and in accordance with the American Heart Association protocol, anyone can immediately initiate CPR, as only two hands are required. However, raising public awareness and providing education are essential. According to Böttiger and Van Aken (2015), school-age children act as multipliers of BLS knowledge because, when they learn at school, they pass this information on to family members such as siblings, parents, and grandparents. As reported by Bohn *et al.* (2015), in Denmark, where resuscitation education has been mandatory in primary schools since 2005, an increase in the rate of bystander resuscitation was observed, from 20% in 2001 to more than 50% in 2012.

Based on successful cases and with the endorsement of the World Health Organization (WHO), the KIDS SAVE LIVES strategy was created in 2015, with adoption by a large part of Europe and the United States of America. In Europe alone, CPR education is mandatory in five countries and recommended in another 16 (Böttiger, Semeraro, and Wingen, 2017). Following the same recommendation, Brazil has joined this initiative, involving undergraduate students, professors, and researchers from the University of São Paulo (USP). Through the implementation of a pilot project, KIDS SAVE LIVES Brazil identified a substantial increase in participants' BLS skills: 73.4% stated that CPR was an important topic in school education, and 65% reported that it should be mandatory (Nakagawa *et al.*, 2019).

Thus, by introducing a BLS approach in schools, according to Ribeiro, Sá, and Tjeng (2020), it is possible to reach a large number of children who, over time, will become adults trained in BLS, with appropriate awareness of the importance of taking action and with meaningful learning. This occurs through theoretical–practical interaction and the consequent exposure to accurate information validated by international protocols. Beyond knowledge dissemination, it is also possible to foster responsible citizens who are aware of the importance of their actions.

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Curricular BLS education in schools presents several advantages, as reported in studies such as that by He *et al.* (2018). The authors state that school age is the best period for teaching CPR, as students are a motivated audience, retain skills easily, and, with this approach, a large proportion of the population will master these competencies within a few decades. Bánfai *et al.* (2017) show that students' interest outweighs difficulties related to physical issues, demonstrating a high level of satisfaction among children aged 10 to 11 years.

It is also worth mentioning the study by Barbosa, Santana, and Nicolini (2020), which, through a systematic review of publications on BLS training for children, concludes that since physical inability does not discourage the performance of maneuvers, training from childhood promotes greater knowledge acquisition and provides a foundation for future opportunities, in addition to creating a network for the dissemination of skills to family members.

Regarding training being delivered by teachers rather than health professionals, studies such as that by García del Águila *et al.* (2019) demonstrate that training conducted by teachers themselves during the school year is highly valued by students and facilitates an attitudinal change toward performing BLS, emphasizing that "it is neither feasible nor pedagogically advisable for this responsibility to fall exclusively on healthcare professionals" (García del Águila *et al.*, 2019, p. 187). Furthermore, teachers have experience in teaching children and are able to teach CPR to students as effectively as any healthcare professional (Böttiger *et al.*, 2020; Lukas *et al.*, 2016).

From the same perspective, two large-scale studies can also be cited that demonstrate the effectiveness of teaching this subject matter by teachers themselves. The first is a six-year longitudinal study conducted by Lukas *et al.* (2016), which concluded that learning and skill retention among the group of students who received training delivered by teachers were satisfactory when compared with those trained by emergency physicians. The study indicates that healthcare professionals are not mandatory for CPR training of school-age children, making it easier for schools to implement the activity.

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The second is a study carried out across the entire territory of the United States with 334,610 students, conducted by Magid, Heard, and Sasson (2018). There was a significant improvement in post-test responses compared with pre-test results (84% vs. 50%, $p<0.001$), demonstrating the feasibility of training facilitators to disseminate BLS education to students, thereby preventing the healthcare system from having to absorb yet another activity and becoming further overburdened.

Therefore, the objective of this didactic sequence is to present materials that enable teachers of core curriculum subjects to provide BLS education to 5th-grade elementary school students, from a multidisciplinary perspective, through horizontal articulation of knowledge from the Areas of Knowledge of Languages (Arts curriculum component) and Natural Sciences (Science curriculum component). By working with the integration of knowledge across areas, the aim is to value multiple forms of learning through playful activities, such as mannequin construction and simulation.

2 Methodology

The didactic sequence described in this article is the product resulting from a professional master's dissertation in Management, Innovation, and Technology in Urgency and Emergency Care, developed during the 2020–2021 biennium, which sought to create an innovative and accessible educational resource for BLS education. It is characterized as applied research which, according to Andrade (2017), should provide practical solutions to concrete problems, meeting the demands of modern life.

To support the implementation of the didactic sequence, self-instructional videos were produced detailing the BLS protocol. The material, made available on the free-access YouTube platform, was designed to facilitate teacher training, functioning as a complementary resource for carrying out the proposed activity. In this way, it is possible to minimize the need for face-to-face training with healthcare professionals, as well as to increase school adherence to the proposal. In addition, necessary adaptations to the

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characteristics of Brazilian public schools were considered, in order to contribute to the teaching–learning process across the diverse realities existing in the school environment.

The focus was on developing instruments that allow elementary school teachers to integrate the BLS theme into the school curriculum, providing both theoretical and practical perspectives.

The instruments developed for this purpose were:

- A didactic sequence, including a lesson plan and theoretical guidelines.
- A mannequin for practicing chest compressions, made from recycled and low-cost materials.
- Videos with practical guidance for the development of BLS actions.

These materials are based on the protocols of the American Heart Association (AHA) (Hazinski *et al.*, 2015) and the Brazilian Society of Cardiology (Bernoche *et al.*, 2019), but adapted to language accessible to lay audiences. The objective is to ensure understanding, acceptance, and use of these contents by a significant number of teachers, enabling the dissemination of knowledge about BLS.

Furthermore, the inclusion of BLS in the 5th-grade elementary school curriculum was planned based on the guidelines of the Brazilian National Common Core Curriculum (BNCC) (Brazil, 2018), specifically skill EF05CI07, which addresses the need to "justify the relationship between the functioning of the circulatory system, the distribution of nutrients throughout the body, and the elimination of produced waste."

2.1 Didactic Sequence

According to Zabala (1998), contents are not limited solely to traditional subjects and disciplines, but rather "learning contents are all those that enable the development of motor, affective, interpersonal relationship, and social integration capacities" (Zabala, 1998, p. 30). For the same author, a didactic sequence is understood as an ordered and articulated series of activities that make up each thematic unit, that is, the specification of

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all actions that will occur in the classes, with time estimation, including the assessment of learning. These actions must be related to one another in order to construct a coherent and meaningful whole, with significance for both students and teachers.

The didactic sequence presented in this article is grounded in this perspective, as it aims to develop students' conceptual, procedural, and attitudinal competencies, such as health care, leadership, communication, and management in emergency situations, such as cardiac arrest (CA), which are essential for students' preparation for life.

For the development of the proposal, students are expected to already have basic knowledge regarding heart function, pulmonary and systemic circulation, and the importance of oxygenation—contents that are already part of the 5th-grade elementary school curriculum. The didactic sequence presents the correlation between proper heart function and the maintenance of life, as well as the importance of knowing how to recognize a case of CA and take appropriate actions to save an individual's life. It is suggested that implementation occur over a period of at least four classes; however, this time may be adapted according to the needs and characteristics of each group.

The plan for the first class is a discussion circle to determine prior knowledge about the topic, as well as to promote the introduction of concepts and the theoretical approach. The second class is dedicated to mannequin construction (a multidisciplinary proposal that can be carried out within the Arts curriculum). The final two classes are intended for theoretical review, practice of chest compressions (a multidisciplinary proposal that can be carried out within Physical Education), and assessment.

2.2 Self-Instructional Training and Mannequin Creation

In view of the results of some studies indicating a knowledge deficit among Basic Education teachers regarding first aid (Campos Junior *et al.*, 2020; Pichel López *et al.*, 2018), seeking training in this area is important in order to enable greater in-depth understanding of the protocols addressed herein. The use of videos was chosen because, as noted by Santos *et al.* (2019), in areas such as health education, the use of audiovisual

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resources in teacher training enables a comprehensive formative process involving reflection and meaning-making.

Accordingly, BLS training recorded on video by the author was made available, with access to self-instructional material through the following link: https://youtu.be/KhFd78jphJs. The option for self-instructional training is due to the difficulty in offering face-to-face training and is supported by studies such as those by Bylow *et al.* (2019), Pedersen *et al.* (2018), and Napp *et al.* (2020), which show no statistically significant differences in practical skills when comparing self-learning training with instructor-led training, indicating that online education can be an effective alternative for preparing teachers.

Regarding mannequin creation, modeling for science education is a field of extensive study and use, departing from traditional teaching models in which the student is a passive recipient of knowledge delivered expositively by the teacher. Considering the applicability of the proposal within a didactic modeling approach, the high cost involved in acquiring CPR training mannequins, which makes them difficult to access for individuals or institutions, and with the aim of increasing accessibility, an alternative mannequin made from recyclable materials was used. The model was freely inspired by a proposal from the Cardiology Society of the State of São Paulo.

The didactic model is part of the multidisciplinary proposal, as it can be developed within the Arts curriculum. It is constructed using recyclable and low-cost materials, ensuring reproducibility, periodic content review, and flexibility in material use. The method of creating the mannequin was designed so that the children themselves could assemble it, fostering an emotional bond with the material. The step-by-step construction process is presented in a video available at: https://youtu.be/AigWNK-zemg.

3 Presentation of the Didactic Sequence

Zabala's (1998) proposal suggests a structured approach to teaching that considers both educational objectives and the needs and characteristics of students. This

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didactic sequence was organized in order to facilitate meaningful learning, starting from students' prior knowledge and promoting the active construction of knowledge based on an ordered series of actions, which are detailed below.

3.1 Class 1 – Introduction of Concepts and Theoretical Approach

In this class, the importance of the proper functioning of the circulatory and respiratory systems for the maintenance of life will be addressed, in addition to the introduction of the concepts of cardiac arrest (CA) and Basic Life Support (BLS). The topic is suggested to be developed in the form of a discussion circle. Students should be provided with a moment of interaction as these questions are raised. According to Gardin (2018), it is important to emphasize that "this is not the moment to present all pre-established concepts to students, but rather to involve them in the theme of the class, encouraging the participation of all and discovering what prior knowledge they bring with them."

Box 1 – Guiding Questions

CONTENT	GUIDING QUESTIONS	KNOWLEDGE CONSTRUCTION
HEART	What is the heart? What is its function? What happens if it stops?	The heart is an organ of the human body, located in the center of the chest slightly toward the left side, which functions as a pump that propels blood. If it stops functioning, blood will not reach the organs, quickly leading the person to death.
LUNGS	What are the lungs? What is their function?	The lungs are the organs responsible for exchanging carbon dioxide from the blood cells for the oxygen we inhale during breathing, thereby supplying all other organs of the body.
RELATIONSHIP BETWEEN HEART AND LUNGS	What is the relationship between the heart and the lungs? What happens if the heart does not send blood to the lungs or if the lungs do not receive oxygen from our breathing?	Address the topic related to pulmonary circulation, in which the heart sends blood to the lungs where it is oxygenated and returns to the heart to be distributed throughout the body.

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CONTENT	GUIDING QUESTIONS	KNOWLEDGE CONSTRUCTION
RELATIONSHIP BETWEEN HEART AND OTHER ORGANS	What happens if the heart does not send oxygen-rich blood to the other organs?	Reinforce that the cells of the body require oxygenation and that, without oxygen, the body's cells die and organ systems cease to function.

Source: Prepared by the authors.

After the initial questions, the teacher should guide the class toward a health education approach, using guiding questions such as: *Do you know what cardiac arrest (CA) is? Have you ever witnessed a situation like this? Would you know what to do if you saw someone in this condition? Did you know that anyone can help?*

Considering the previously mentioned lack of familiarity of Basic Education teachers with the topic, a more detailed explanation is presented below:

Cardiac arrest occurs when the heart fails to adequately perform its function, interrupting the delivery of blood to the lungs and its distribution throughout the body. It is a medical emergency and, if no action is taken, the victim may die within a few minutes. However, anyone who has received training can provide assistance. It is sufficient to use both hands to compress the chest and simulate the functioning of the heart through chest compressions. This action is part of what we call Basic Life Support (BLS), a set of systematic and sequential procedures that can be performed by anyone at the scene, with the objective of providing first aid until the arrival of emergency services, such as the Mobile Emergency Medical Service (SAMU), or another available service. Immediate performance of BLS is essential until specialized care arrives and transports the patient to the hospital. The main objective is to maintain blood circulation and cerebral oxygenation, preventing death or permanent sequelae.

Some data reinforce the importance of BLS:

- It is estimated that between 200,000 and 300,000 cases of cardiac arrest occur annually in Brazil, with fewer than 10% receiving adequate care (Bonizzio *et al.*, 2019; Sousa *et al.*, 2019);

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- CPR performed by laypersons can increase the victim's chance of survival by two- to fourfold. However, fewer than one in five victims receives this intervention (additional local data can be consulted in online research);
- Brain cells, neurons, begin to die between 3 and 5 minutes after cardiac arrest. Therefore, for every minute without intervention, survival chances decrease significantly (Böttiger *et al.*, 2018).

In view of this, the knowledge, attitudes, and skills addressed in this class may be decisive in the life of a person affected by cardiac arrest, both to prevent death and to reduce sequelae. Next, a simplified BLS protocol organized into four steps will be presented, which can be viewed in the recorded practical demonstration available at: https://youtu.be/KhFd78jphJs.

At this moment, the chain of survival should be presented theoretically, as practical application will be carried out in a subsequent class.

Figure 1 – Adapted Chain of Survival

Source: Prepared by the authors.

- **Step 1 – Scene Safety:** It is essential to ensure environmental safety before initiating any first aid care. It should be emphasized that we must never place ourselves at risk in order to help another person, as we must not become an additional victim.

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- **Step 2 – Identification of Cardiac Arrest:** To identify cardiac arrest, it is necessary to check whether the person is unresponsive and not breathing. To do so, vigorously tap the victim's shoulders, looking for any verbal response or movement. If there is no response, check breathing by observing chest movement characteristic of the respiratory process. It is also possible to position oneself laterally in order to better visualize chest rise.
- **Step 3 – Call for Help:** In this step, the guidance is for the child to ask an adult to call the emergency number 192 (SAMU) and report that there is a person who is unresponsive and not breathing. This information characterizes an emergency and ensures immediate dispatch of assistance. The person making the call should remain on the line throughout the care, following the instructions provided by the SAMU professional and carrying out the necessary actions.
- **Step 4 – Chest Compressions:** Compressions must be performed correctly, as proper technique tends to yield better outcomes. Therefore, recommendations regarding positioning, rate, depth, and complete chest recoil must be followed. The ideal position is with knees on the ground beside the victim, elbows extended, and shoulders aligned at a 90-degree angle relative to the victim's chest (a position that will be demonstrated in the practical class).

The recommended rate is 100 to 120 compressions per minute. It may be emphasized that this corresponds to nearly two compressions per second, and clapping hands can be used to mark the rhythm. The ideal depth in adults is 5 to 6 cm. After each compression, it is essential to allow full chest recoil without removing the hands from the contact point.

In the next class, the activity of mannequin construction will be carried out. For this purpose, organize the class into groups of four or five students and instruct each group to bring the necessary materials: a size 10 T-shirt, stuffing material for the T-shirt, a cardboard box, and the chosen device to simulate the heart, according to the options indicated below.

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3.2 Class 2 – Production of the Chest Compression Mannequin

Suggestion: Work in groups of four to five students, with each group producing its own mannequin. The activity may also be carried out individually or through the construction of a single mannequin for the entire class.

The mannequin can be constructed in different ways, according to the characteristics and possibilities of each institution. As an interdisciplinary suggestion, it is recommended that the activity be developed within the Arts curriculum.

Considering that the objective is not to train rescuers through this practice, the materials used may be varied and of low realistic fidelity.

Required materials:

- T-shirt (preferably children's size, size 10).
- Material for stuffing the T-shirt (synthetic fiber, polystyrene, crumpled newspaper, among others).
- Poster paint (gouache).
- Cardboard for the face and chest.
- Adhesive tape.
- Stapler, rubber bands, or other material to close the T-shirt.

Options to simulate the heart – all alternatives below were tested and adequately meet the proposal:

- Partially filled large balloon, approximately heart-sized.
- Plastic arm float.
- or 2-liter PET bottle with the cap closed.
- Toilet paper roll with fabric placed inside.

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Steps for mannequin construction:

- Paint the SAMU number (192) on the front of the T-shirt, in order to characterize the mannequin and reinforce the emergency number.
- Cut the cardboard into the shape of the chest, neck, and head.
- Attach the “heart” to the front of the cardboard, centered in the chest area, using adhesive tape.
- Put the T-shirt on the mannequin.
- Draw the eyes, mouth, and nose on the face.
- Fill the T-shirt with the chosen material (polystyrene, crumpled newspaper, synthetic fiber, or other recycled material).
- Close the base, sleeves, and neckline of the T-shirt using a stapler, rubber bands, or sewing.

At the following link, it is possible to watch a video demonstrating mannequin construction, which can be used as support for the class: https://youtu.be/AigWNK-zemg

3.3 Class 3 – Review of the Four Theoretical Steps and Practice

At this stage, the four steps addressed in the first class should be reviewed, now including demonstration and hands-on practice using the mannequin.

- Step 1 – Scene Safety
- Step 2 – Identification of Cardiac Arrest
- Step 3 – Call for Help
- Step 4 – Chest Compressions

After or concurrently with this theoretical review, practical activities are carried out. For this purpose, the following recommendations should be adopted (which are also highlighted in the training video: https://youtu.be/KhFd78jphJs):

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- Position yourself beside the victim with your knees on the ground.
- Keep your knees apart from each other to ensure better stability.

Figure 2 – Position beside the victim

Source: Prepared by the authors.

- Place the hypothenar region (heel of the hand, the firmest part of the palm) of one hand on the victim's chest (sternum) and place the other hand on top of the first, interlacing the fingers.

Figure 3 – Hypothenar region of the hand

Source: Prepared by the authors.

- The compression site is an imaginary line between the nipples, at the center of the chest.

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Figure 4 – Chest compression site

Source: Prepared by the authors.

- Position the shoulders approximately 90 degrees above the victim (shoulders aligned at a 90° angle with the victim's chest).

Figure 5 – Shoulder Position

Source: Prepared by the authors.

- Keep the arms extended (elbows straight).
- Perform 100 to 120 compressions per minute.

To assist with retention of the compression rate, studies such as that by Del Pozo *et al.* (2016) observed a significant improvement in learning and good retention rates with the incorporation of music into BLS education, increasing its effectiveness and constituting

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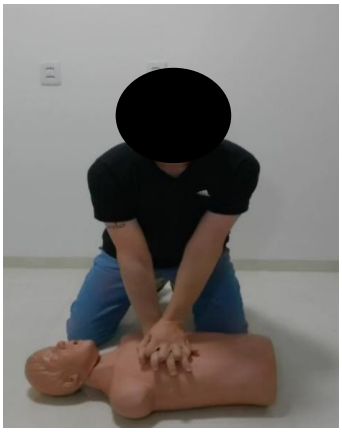
a promising technique that should be considered. In this regard, support songs such as *"Baby Shark"* or *"Stayin' Alive"* may be used, as they present a rhythm compatible with the ideal rate for performing chest compressions. The songs can be downloaded through the following links: Stayn' Alive / Baby Shark.

It is also possible to select other songs with a rhythm between 100 and 120 beats per minute, which can be found with free access in the YouTube playlist at the following link: Playlist.

Figure 6 – Elbow Position



Source: Prepared by the authors.

- Compressions should reach a depth of at least 5 cm and no more than 6 cm.

Figure 7 – Performing Chest Compressions

Source: Prepared by the authors.

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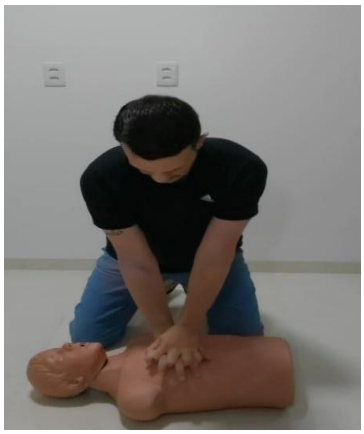
- In other words, compress fast and hard!
- Allow full chest recoil after each compression, without removing the hands from the chest (to allow the heart to refill with blood).

Figure 8 – Chest Recoil



Source: Prepared by the authors.

- Minimize interruptions in compressions.
- Switch with a classmate every two minutes (prevents fatigue and maintains high-quality compressions).

Now, let's get to work! Instruct the children to take their mannequins and practice, following the four steps: scene safety, identification of cardiac arrest, call for help, and chest compressions. *Note:* The practice may be carried out within the Science or Physical Education class.

Video link demonstrating the development of the practice with children: https://youtu.be/taNhf4Hj0cs

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3.4 Lesson 4 – Practice Consolidation and Assessment

To conclude the topic, the practice may be repeated as many times as necessary until all students perform the technique correctly and assimilate it. It is important to observe and correct aspects such as how to check responsiveness (victim's response and breathing), requesting specialized help (calling 192), proper posture for performing chest compressions, compression rate (100 to 120 compressions per minute), compression depth (avoiding shallow compressions), and full chest recoil after each compression.

In real-life situations, compressions should be maintained until the arrival of emergency medical services (SAMU) or until the person regains consciousness. For didactic purposes, it is recommended to establish a one-minute cycle for each participant during practice.

After the practical activity, gather the class again and assess learning and engagement. Returning to the discussion circle proposed at the beginning, questions may be used such as: *What did you like the most? What did you find most interesting? Do you think you would be able to perform chest compressions if necessary? What is the SAMU number?*

Then, word search and crossword activities, available below, may be applied as a playful way to reinforce the learned content.

It is also recommended to encourage students to share the knowledge with their family members, thus promoting a true chain of goodwill.

The playful activities for consolidating knowledge — crosswords and word searches — were developed to be used in conjunction with the didactic sequence. The links to download the materials in PDF and high resolution are available below.

Crossword puzzles: Link

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Figure 9 – Crossword puzzles

Source: Prepared by the authors.

Word search: Link

Figure 10 – BLS Word Search

Source: Prepared by the authors.

4 Final considerations

The didactic sequence on this theme proposes the use of a systematic technical care protocol from an Elementary School perspective, problematizing each action and seeking the best way to provide meaningful learning, in which students can relate the content learned to everyday situations. The possibility of implementing this didactic sequence in municipal schools is concrete, and receptivity to the proposal tends to be quite positive. Based on the skills established in the BNCC (Brazilian National Common Core Curriculum), greater adherence by schools and teachers is sought, since there is integration with the contents already planned for the school year. Thus, the activity ceases to be sporadic training and becomes a coordinated and continuous action.

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With the adoption of this proposal, it is expected that, in a few years, there will be a generation of young people and adults with knowledge, albeit initial, about BLS (Basic Life Support). The experience of countries that have implemented similar initiatives points to very promising prospects.

The educational impact of the proposal is also noteworthy, as it contributes to the improvement of health education in basic education, strengthening the importance of the social inclusion of topics that often remain restricted to higher education. In addition, the initiative encourages the development of new studies aimed at structuring health education in Elementary School. It is emphasized that this theme can still be widely explored in different contexts, such as the creation of didactic sequences aimed at High School and Vocational/Technical Education.

It is therefore concluded that developing this activity of integrating knowledge with children tends to generate learning with practical meaning, in which students recognize the importance of the content and understand its applicability in daily life, generating a direct impact on their lives and on the lives of others. However, it is still necessary to investigate the long-term effects of this method.

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