



# PLAE

**PLAY, LEARN , ACT, ENSURE**  
**sustainable development goals**

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# METHODOLOGY

## Educational Design Research



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## OPENING – INTRO

The **2030 Agenda for Sustainable Development** is an action program for people, the planet and prosperity signed in September 2015 by the governments of the 193 UN member countries. It incorporates 17 Sustainable Development Goals - Sustainable Development Goals, SDGs - in a large action program for a total of 169 'targets' or finish lines. The official launch of the Sustainable Development Goals coincided with the beginning of 2016, guiding the world on the path to take over the next 15 years: in fact, countries have committed to achieving them by 2030.

The Development Goals build on the achievements of the Millennium Development Goals that preceded them and represent common objectives on a set of important development issues: the fight against poverty, the eradication of fame and the fight against climate change, to name just a few. 'Common goals' means that they concern all countries and all individuals: **no one is excluded, nor should they be left behind along the path necessary to take the world on the path of sustainability.**

**“PLAE Play, Learn, Act, Ensure sustainable development goals”** is aimed to create inclusive and innovative educational tools for teachers to be able to work towards Sustainable Development Goals with the primary school pupils (6-12), through an innovative and entertaining manner, using Game-Based Learning.

## PROJECT PARTNERS

**FORMATIVE FOOTPRINT (FF)** is a research centre and educational design organisation located in Spain, in the province of Valladolid, focused on: analysing theoretical frameworks and concepts; designing information gathering processes; information analysis; detection of educational needs in people and organisations; ensuring the quality of processes with measurable indicators; measuring the impact of education on people and organisations. Based on the research activities, FF is able to provide solutions, recommendations and even be involved in the design and creation of new training processes. The method of analysis and elaboration of new training processes is Design Based Research (DBR) and in its educational concretion called Education Based on Design (Educational Design Research (EDR)). FF applies this methodology to develop educational solutions/devices of various kinds, from productions that take the form of technological programs or platforms to those that consist of productions of an educational tool of a different nature. Always in a continuous dialogue between theory and practice. In doing this, Formative Footprint has always been looking for the European added value of its activities. In this context, Formative Footprint gained expertise in the



design and management of International and national projects, which allowed it to further develop and increase the organisation's activities in the field of innovation and education.

FF is aligned with the 2030 Sustainable Development Goals. FF considers that one of the most important factors to achieve these goals is based on citizenship education. Education must be the engine that moves people in the right direction.



**VILAKA STATE GYMNASIUM (VSG)** represents a comprehensive state-funded, co-educational, full-time school ranging from grades 1 to 12. The school consists of 160 students and 33 teachers. Our aim is to provide our students with qualitative education, inspiring them to achieve the best results in their studies and become multilingual, tolerant and highly educated citizens of the world, successful in any profession they will choose later in life. Having the status of the methodological centre in Balvi district, we are interested in sharing and exchanging our experience with the colleagues from all the schools in our district. We organize conferences, seminars, courses, and methodological days for students and teachers. All our students have the opportunity to participate in extracurricular activities. There are language, chemistry and physics clubs, workshops and seminars organized based on various subjects. Our students are also engaged in research work activities starting from grade 8. The research represents an obligatory part of the curriculum for the students of grades 10 to 12, and they conduct their research in various fields such as linguistics, humanitarian and exact sciences.



**FUNDACION GFM RENOVABLES** is a non-profit organization with over 20 years of experience in the field of training. Located in Villacañas, a small town in Toledo (Spain). With an extension of 3,200 m<sup>2</sup> for the formative and technical units. Our entity has made a qualitative leap in terms of the adaptation to the needs of training and youth in the field of renewable energy. Collaborates with the entity GFM, a leader in the field of sustainability, renewable energies, environment, and entrepreneurship. The scope of the Foundation focuses on two main areas: - Encouraging the entrepreneurship and acquisition of personal skills of Students - Promoting awareness of renewable and sustainable Energy. It also develops a strategic plan at the level of awareness actions in different areas at the level of public institutions (City Councils, Departments of Education, Ministry), schools, citizens' associations, educational institutions of professional training, high schools, universities, and employment support centers.



**E-SCHOOL EDUCATIONAL GROUP** is an Adult Education Centre and VET provider accredited by the Greek Ministry of Education & Qualifications and Vocational Guidance as a lifelong learning centre (ID 2000112). It provides high-quality education and accreditation to help learners develop skills that will help them transition smoothly and successfully into the labour market. The organisation's activities are structured around the following themes:

I. Entrepreneurship and Employability: Promoting Employability and Entrepreneurship through updating people's occupational qualifications, enhancing their employment perspectives, linking education with labour market needs, supporting equal access and transition to labour market, overcoming skills mismatch, and fostering social cohesion.

II. Digital Literacy: Developing individuals' digital skills for life and work through promoting Digital skills and competences, Digital citizenship, Digital Thinking, and Open and distance learning.

III. Social inclusion: Promoting inclusion, equality, and non-discrimination of disadvantaged or marginalised groups such as groups excluded due to race, gender identity, age, disability, immigration status, etc. A special emphasis is placed on the inclusion and empowerment of people with disabilities by offering training and career development.

IV. Sustainability: Promoting Sustainable Development, focusing on addressing climate change, sustainable consumption, environmental education, and sustainable communities.



**SELVA SOCIETA' COOPERATIVA A R.L. ONLUS** is a social cooperative, that form the beginning of its professional life, believes in some important methodologies, that applies in all its services and projects.

These methods are: Play Pedagogy - Montessori's method - Peer education - Outdoor education - STEAME education – Educational design research. Inspired by this framework of methodologies, where the subject of the educative action is the principal actor of the action, not a passive spectator but an active agent, who experiences to acquire skills, Selva organizes and manages:

**SOCIO CULTURAL EVENTS** for the entire population from 2015: Sgranar per colli (Sport event) and Bellavista Social Fest (music festival).

**EDUCATIVE SERVICES** (from 0 to 17 years): manages its own private services for children between 0 to 3 years and its own pre - school activity (3- 6 years), apart from this, Selva cooperate through specific agreements with public schools of every grades (from 6 to 18





years) organizing outdoor education, after school activities (homework, artistic and manual workshop, cultural activities, sport activities).

ANIMATION FOR EALDERLY in day care centers for the elderly.

SOCIAL SERVICES in cooperation with local entities for disadvantage people inclusion and integration.

ADULT EDUCATION to contribute to people's expansion of creativity, fulfillment, personality assertion and critical abilities to create innovative learning digital tools, education materials and methods than can be used during the pandemic crisis to promote intercultural dialogue, and allow people to exchange views and opinions social inclusion project for disadvantaged people.

During and after Covid emergency Selva has implemented other two methodologies, one is for employees and indirectly for pupils and children, one is for children and their families.

1. How combine outdoor and sport education with the use of digital tools.
2. Comparison between STEAM education and the Montessori method.

What has been learned through these two new approaches, which is not part of a research, has however been applied with children and students, obtaining great educational successes related to the acquisition of skills: social, cultural, sports and psycho motor, personal, increase in knowledge.

## CONTEXT

### Sustainable Development and SDG's

Sustainable development is defined as development that satisfies needs of the present without compromising the ability of the future generations to satisfy their needs. To achieve sustainable development, it is important to harmonize three fundamental elements: economic growth, social inclusion, and environmental Protection.



**The Sustainable Development Goals are a call for action by all countries – poor, rich and middle-income – to promote prosperity while protecting the planet.** They recognize that ending poverty must go together with strategies that build economic growth and address a range of social needs including education, health, social protection, and job opportunities, while tackling climate change and environmental protection.

ANOTHER WAY TO SEE SDG'S "THE 5 P":

**PEOPLE - PLANET - PROSPERITY - PARTNERSHIP - PEACE**

Sustainable Development Summit 2015 established the 17 Goals of development.

**Our 4 SDG's**

The 4 sets of board games concern the following sustainable development goals - results such as those of greatest interest and applicability for pupils and teachers – are:

**Good health and well-being (n. 3)**

**Quality education (n. 4)**

**Affordable and clean energy (n. 7)**

**Climate action (n. 13)**

**Good health and well-being - Ensure healthy lives and promote well-being for all at all ages:** Over the last 15 years, the number of childhood deaths has been cut in half. This proves that it is possible to win the fight against almost every disease. Still, we are spending an astonishing amount of money and resources on treating illnesses that are surprisingly easy to prevent. The new goal for worldwide Good Health promotes healthy lifestyles, preventive measures, and modern, efficient healthcare for everyone.



**Quality education - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all:** Education liberates the intellect, unlocks the imagination and is fundamental for self-respect. It is the key to prosperity and opens a world of opportunities, making it possible for each of us to contribute to a progressive, healthy society. Learning benefits every human being and should be available to all.

**Affordable and clean energy - Ensure access to affordable, reliable, sustainable and modern energy for all:** Renewable energy solutions are becoming cheaper, more reliable and more efficient every day. Our current reliance on fossil fuels is unsustainable and harmful to the planet, which is why we have to change the way we produce and consume energy. Implementing these new energy solutions as fast as possible is essential to counter climate change, one of the biggest threats to our own survival.

**Climate action - Take urgent action to combat climate change and its impacts:** Climate change is a real and undeniable threat to our entire civilization. The effects are already visible and will be catastrophic unless we act now. Through education, innovation, and adherence to our climate commitments, we can make the necessary changes to protect the planet. These changes also provide huge opportunities to modernize our infrastructure which will create new jobs and promote greater prosperity across the globe.

## PROJECT OBJECTIVES

Teaching the priorities of the SDGs in the primary school is the most effective, sustainable approach to delivering to the labour market in 2030 the first cohort of global citizens that actively worked with the SDGs and thinks differently – A cohort that embraces inclusiveness and prosperity for all. As these goals are planned on a long term it is of great importance to start raising awareness on them since the base of the educational system, in primary schools, to create future generations that will ensure the achievement of these goals, through their behaviours, attitudes and lifestyle. The objectives of PLAE are:

- To provide qualitative and inclusive educational tools to teachers and educators on how to raise awareness and work on the Sustainable Development Goals with pupils.
- To improve the teachers' skills and competences, in terms of delivering creative content, providing them the necessary knowledge, tools and know how.
- To create awareness to primary school pupils regarding SDG and to foster positive attitudes and behaviour in accordance with these goals.
- To foster eco-friendly attitudes, behaviours and lifestyles among teacher and pupils.

Our project purpose is to create a set of board games for each area of the sustainable goals, with a focus on raising awareness on the differences between the achievement of them according to different continents, like this we also ensure a deeper understanding of the international context and inequalities existing worldwide. During the project we will create a methodological guide and activities for teachers, educators and parents on how to teach their children through non-formal educational methods, through gamification of real-life situation, civic, social and emotional competences which will serve them to develop as functional and fulfilled adults contributing to a sustainable development of their community and society.

### OBJECTIVES CONTEXT

In 2015, after consulting millions of people and organisations across the world, the final decision about what the goals would be was made by the governments of the United Nations. The Sustainable Development Goals are a set of global priorities for ensuring that economic, environmental, social and cultural wellbeing is achieved for everyone around the world. They are ambitious goals for governments across the world to achieve, but a lot can be done at school and at home to support them. The goals aim to end poverty, protect the planet & try to make sure that everyone around the world is living comfortably. To this end, it is indispensable to develop an adequate sensitivity to the issues of personal and collective well-being, the adoption of correct lifestyles, the fight against climate change: to build, within the year 2030, inclusive, just and peaceful societies. Through the themes of environmental education, sustainability, cultural heritage, global citizenship, it is possible to stimulate, especially among the younger generations, the awareness of everyday life being part of a local and global community. The focus on the young generation is the best way to ensure the adults of tomorrow perform better than we ourselves have. In addition to imparting subject knowledge and skills, it is also important to focus on the tools, ensuring they are creative, motivating and engaging. By creating proper educational tools, which focus on the needs of primary pupils, will facilitate the teaching process as well and will guarantee a deeper understanding of the topic through the GBL. Developing a sense of one's own role in sustainable and inclusive global development can best be taught at the primary education level. It is actually not the adults of today who desperately need the transformative shift, but the adults of tomorrow who today need to acquire the competences that will make them create a better day than what we have done. This is the most sustainable approach. Teaching the priorities of the SDGs in primary school is the most effective, sustainable approach to delivering to the labour market in 2030 the first cohort of global citizens that actively worked with the SDGs and thinks differently – A cohort that embraces inclusiveness and prosperity for all. As these goals are planned on a long term it is of great importance to start raising awareness on them in the base of the educational system, in primary schools, in order to create future generations that

will ensure the achievement of these goals, through their behaviours, attitudes and lifestyle.

## RESEARCH DESIGN

The EDR (Educational Design Research) METHODOLOGY concretized into 8 main activities, starting from the investigation of the user and its context. This analysis includes information regarding how in each educational system the SDGs are approached in terms of curricula, teaching methodologies, learning objectives, educational resources which should lead to acquisition of skills and creation of future generation of global sustainable citizens.

1. Research about what is the main problem of teaching and introducing SDG in educational centers curricula.
2. Focus group with teachers to create appropriate SDG lessons plans and content for the games.
3. Create the structure of the game.
4. Design the theme/questions for sustainable development goals.
5. Create the graphic design of the game.
6. Create the prototypes in all languages (english, spanish, greek, Italian and latvian).
7. Test the prototype board games with the teachers and pupils; This phase will be implemented in educational centres from partners' countries, for the educational set of board games to be tested, validated by educational professionals and primary school pupils, and providing feedback, to create the best final version of the board game, customized on the needs and opinions of the beneficiaries and users.
8. Collect the feedback each educational institution where the pilot phase was performed to provide feedback, in form of questionnaires filled by both educational professionals and primary school pupils.

## FOCUS GROUP REPORT

**Research type** Focus group discussion - is a discussion where people from different fields but with similar experiences engage in a discussion on a specific topic.

**Research strategy** At first the partners prepared the questionnaires and each of them had to select at least **10** participants, teachers from elementary and secondary schools who work with pupils aged 6 to 14, to contact the Focus Group Discussion in their country. In total **43** teachers participated in the Focus Group Discussions. The mediators explained the participation guidelines, the need for all participants to be actively involved, and the timetable. After that, they shortly presented the PLAE project, and its objectives and stressed the importance of the meetings. Each focus group lasted one

hour and consisted of democratic and collaborative participation in which every participant had the opportunity to express their opinions.

The objectives of the Focus Groups were the following:

- to identify barriers in working the SDGs in a practical way in primary school levels
- to identify the level of knowledge, skills and tools related to the practical applicability of the SDGs in their lessons
- to identify the level of awareness of primary school pupils regarding the SDGs

### Time horizon

The focus group was conducted in various countries from July to October 2022.

### Data collection method(s)

The developed questionnaire reflects the potential of investigating teachers' attitudes, beliefs, and behaviours, as well as their teaching practices, regarding the Sustainable Development Goals (SDGs).

### Focus Group Questions:

1. Do you implement activities connected with the SDG? If yes, could you give us some examples?
2. What activities/games do you know associated with the SDGs?
3. What day-to-day actions do you think a pupil could do in favour of the SDGs?
4. What kind of SDG are connected with the curricula?
5. If you had a board game on SDGs:
  - a. What other game would you like it to be like?
  - b. What topics would you like it to address?
  - c. What features would you like it to have?
6. Any other suggestions?

### Data analysis per partner Country

#### Greece

#### 1. Do you implement activities connected with the SDG? If yes, could you give us some examples?

Participants stated that Education for Sustainability is included in the curriculum of Greek schools. The primary focus is on engaging pupils with environmental and sustainability issues at school and in their communities.

#### 2. What activities/games do you know associated with the SDGs?

Participants reported implementing experiential activities such as visits to environmental education centres, tree planting, and other activities in which pupils discuss and draw about issues such as the environment, climate change, and recycling, among others.



### 3. What day-to-day actions do you think a pupil could do in favour of the SDGs?

- Collect and distribute food to families in need.
- Collect funds for donation to a children's foundation.
- Hold discussion on the significance of a healthy diet.
- Turn the water off when brushing your teeth or hands.
- Turn off the lights when you leave a room.
- Respect your classmates.
- Donate clothes you do not need.
- Recycle.

### 4. What kind of SDG are connected with the curricula?

SDG 1: No poverty

SDG 2: Zero hunger

SDG 3: Good health and wellbeing

SDG 4: Quality Education

SDG 16: Peace, justice and strong institutions

### 5. If you had a board game on SDGs:

- What other game would you like it to be like?

Snakes and ladders, Puzzle, quiz

- What topics would you like it to address?

Participants emphasized that all objectives are significant; however, given the age of the pupils, they suggested that the material be developed around the following themes:

- No poverty
- Zero hunger
- Good health and well-being
- Quality education
- Gender equality
- Clean water and sanitation
- Affordable and clean energy
- Reduce inequalities
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Peace



- What features would you like it to have?
  - The games that will be developed must be designed for a specific objective and geared toward achieving that objective.
  - In order to facilitate the player's interaction with the game, there should be a clear set of rules.
  - The game should reward correct choices and penalize incorrect ones. Thus, players will be able to distinguish between successful and unsuccessful actions and remain focused on their objective.
  - The game should be enjoyable.
  - The level of difficulty should correspond to their age.

## 6. Any other suggestions?

The games should complement the curriculum and be connected to a subject.

## Conclusions

In conclusion, participants stated that they believe all SDGs are important, but that the created materials should emphasize topics that are easily understood by children aged 6 to 12 years old. Regarding the characteristics of the games, they stated that they should be designed for a specific purpose with age-appropriate content, reward correct decisions and penalize incorrect ones to keep players focused on the game's objective, and be enjoyable.

## Italy

During the Focus Group Discussion, 13 teachers working with elementary and secondary school pupils were asked the following:

### Questions:

1. What subject do you teach?
2. How old are your pupils / pupils?
3. Do you carry out activities related to the SDGs in the classroom? If so, could you give some examples?
4. What activities / games do you know associated with the SDGs?
5. Which school subject do you think is most involved in addressing sustainable development issues and SDG's?
6. What daily actions do you think a pupil could do in favor of the SDGs in the school context?
7. In your opinion, which of the 17 SDGs are related to school subjects?
8. If you had an SDG game, which game would you like it to look like?
9. If you had an SDG's game, what topics would you like it to address?
10. If you had a game on the SDG's, what features would you like it to have?
11. Do you think a board game on these topics could be useful for your work?

## 12. Do you have any suggestions for game design?

The debate was recorded through written, verbal transcription, which will be signed by the participants. Otherwise, at the end of the debate, was send to the participants a google mod link, to answer at the same questions above, and easily built a graphic representation of their work. The following day, a thank you email was sent to the participants. Where the next steps of the project were presented.

### 1. What subject do you teach?

13 Teachers: 3 Italian, 3 Mathematics, 3 History, 1 Science, 1 English, 2 Italian, History and Geography

### 2. How old are your pupils / pupils?

3: 8/9 years old; 4: from 11 to 14 years old; 3: 7/8 years old; 1: from 11 to 14 years old; 2: 6/11 years' old

### 3. Do you carry out activities related to the SDGs in the classroom? If so, could you give some examples?

Answers

|   |                                                                                                                                                                                                                                                                                          |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | Yes, activities related to respect for the environment                                                                                                                                                                                                                                   |
| 4 | Yes, in collaboration with the teachers of Science, Geography and Technology who deal with the practical and scientific part, we proposed to the pupils to imagine and then build two models of the country: one powered exclusively by fossil fuels, the other only by renewable energy |
| 3 | In our school we grow plants, we do separate collection, we do not use plastic except in emergencies and in any case recyclable. We have in section the bins for the differentiated.                                                                                                     |
| 1 | We try to teach children about separate collection                                                                                                                                                                                                                                       |
| 3 | Yes. Example: turn on the lights when we leave a room, do not waste water. Gender equality, reduce inequalities                                                                                                                                                                          |

### 4. What activities / games do you know associated with the SDGs?

Answers

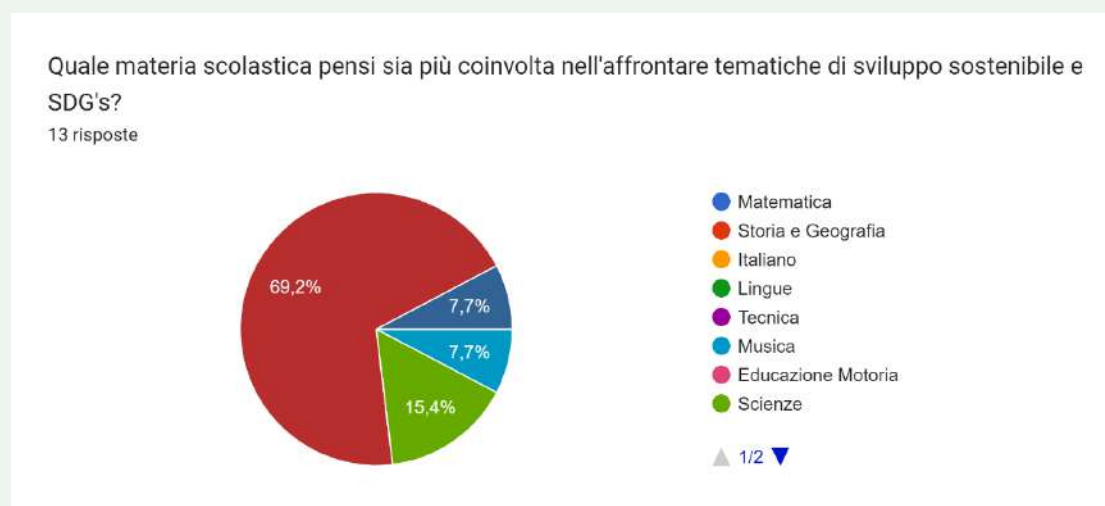
|   |                                                  |
|---|--------------------------------------------------|
| 3 | We invent language games on gender and inclusion |
|---|--------------------------------------------------|



|   |                                                                                                                                                                                                                                                       |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | I don't know any games                                                                                                                                                                                                                                |
| 3 | Quizzes with timed questions, speed competitions in finding “right or wrong” objects scattered around the classroom, do's and don'ts lists at home, etc.                                                                                              |
| 1 | We play inclusive games aimed at giving children a positive critical thinking about sustainable development and we pass contents related to this topic through experiences then reworked through nursery rhymes, stories, songs and group activities. |
| 1 | Readings, reality assignments, investigations and observations, reports                                                                                                                                                                               |
| 1 | Shared activities between pupils and workshops                                                                                                                                                                                                        |

### 5. Which school subject do you think is most involved in addressing?

Answers



6 All

2 Math

2 Music

3 Science

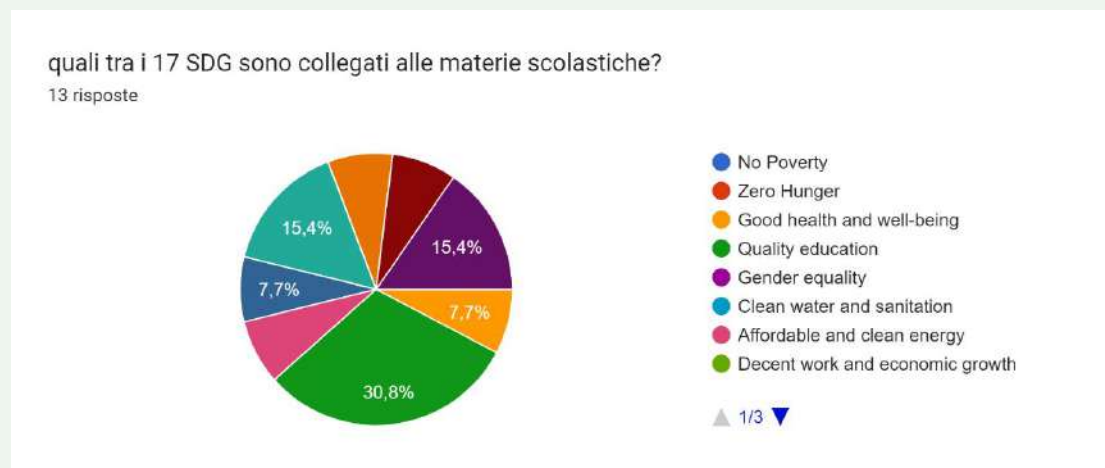
### 6. What daily actions do you think a pupil could do in favor of the SDGs in the school context?

Answers

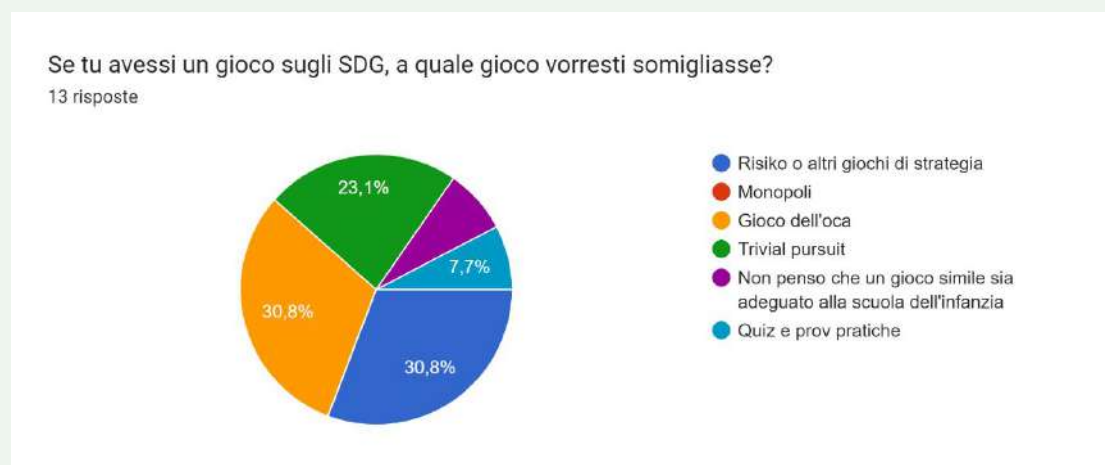
- Divide the waste

- Clothing suitable for the season to avoid wasting energy, do not use non-recyclable materials, recycle using the various classroom baskets with greater care
- Separate waste collection, attention to energy saving.
- Separate collection, avoid waste
- Sustainability: Waste sorting
- Inclusion of disadvantaged comrades
- Respect for the environment and energy saving
- Personal hygiene and shared spaces
- Separate collection, conscious use of paper, garden cleaning with dedicated days
- Clean energy, peace on earth

### 7. In your opinion, which of the 17 SDGs are related to school subjects?



### 8. If you had an SDG game, which game would you like it to look like?

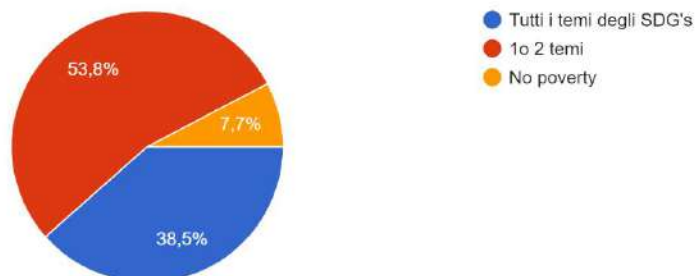


### 9. If you had an SDG's game, what topics would you like it to address?



Se tu avessi un gioco sugli SDG's, quali argomenti vorresti affrontasse?

13 risposte



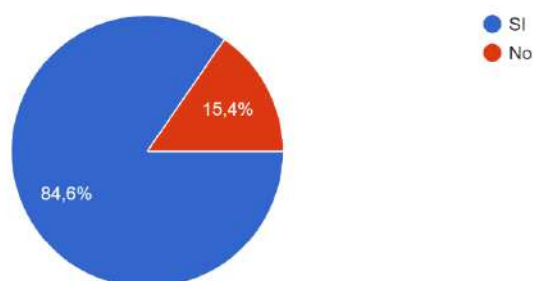
###### 10. If you had a game on the SDG's, what features would you like it to have?

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Goals to be achieved in collaboration and fun                                                   |
| Interactive and connected to the experience                                                     |
| Fun, engaging and easily explained                                                              |
| That it was inspiring                                                                           |
| Easy to understand, even for the little ones                                                    |
| Cooperation                                                                                     |
| It should be very engaging with the help of video and audio ... multimedia and interactive      |
| Easy to understand, even for the little ones                                                    |
| Immediacy and practicality, attractive layout and fonts, (good) competition between competitors |
| Adaptable to any age group                                                                      |
| Manipulative and experiential                                                                   |
| Inclusive for those who do not speak Italian or for those with disabilities                     |
| Suitable for the age of children                                                                |

###### 11. Do you think a board game on these topics could be useful for your work?

Pensi che un gioco da tavola su questi argomenti possa essere utile a tuo lavoro?

13 risposte



###### 12. Suggestions





1. In general, I believe that knowledge and awareness arise from experience, on which I base the teaching that I propose in the section
2. I built, with pen and paper, a simple bingo with combinations, but a well-made group game will certainly have a better impact

### Latvia

During the Focus Group Discussion 10 Latvian teachers working with both elementary and secondary pupils answered the questionnaire developed by the partners.

#### **1. What activities/games do you know associated with the SDGs?**

- Simulations
- Role plays
- Board games
- Cards
- Crosswords

#### **2. What day-to-day actions do you think a pupil could do in favour of the SDGs?**

- Recycling
- Collecting waste paper
- Cleanup days
- Planning and doing research related to energy consumption and other resources

#### **3. If you had a board game on SDGs:**

- ❖ What other game would you like it to be like?
  - Game in electronic version
  - Card games
  - Board games
  - Flashcards
  - Videogame
  - Simulations
- ❖ What topics would you like it to address?
  - Environment
  - Health
  - Environmental sustainability
  - Impact on ecosystems
  - Hygiene
- ❖ What features would you like it to have?
  - Suitable for different groups of age and sizes;
  - Definitely - colourful
  - Memorable Characters

- Great Controls. Even if everything about a game is amazing, it won't matter if players can't properly interact with it. ...
- An Interesting storyline & Visual Style. ...
- Combining fun and realism
- Captivating and giving continuous challenge
- Flexibility
- Solid Level Design.
- Good Balance of Challenge & Reward.

## Conclusions

The SDGs are mainly covered in middle school grades (7, 8, and 9) and the teachers mostly implement the following topics: good health, life on land and underwater, infrastructure and innovations, peace and justice, partnerships.

## General Conclusions

Considering the outcomes of the Focus Groups, it is evident that the educators are well-versed in the SDGs, as some of them are included in the school's official curriculum. However, teaching the SDGs, particularly to younger pupils, can be challenging, and teachers would like to include the Goals into their lesson plans in an engaging and enjoyable way.

The educators are already implementing SDG-related activities in the classroom, with an emphasis on environmental protection, recycling, sustainability, and good health. They reported that there are a variety of activities that can be conducted during school hours to assist pupils in becoming sustainable citizens, including food and clothing collections for charities, waste sorting, energy conservation projects, personal hygiene in the classroom, clean-up days, etc.

In addition, they argued that learning-by-doing is the most effective method for addressing these issues because pupils should adopt these behaviors as a way of life. To this end, board games seemed like a great idea, as it would be simpler to implement in the classroom and would encourage every pupil to participate.

When asked about the **topics**, the teachers suggested that the games cover the Goals:

- **SDG 3: Good health and wellbeing,**
- **SDG 4: Quality Education,**
- **SDG 6: Clean water and sanitation,**
- **SDG 8: Decent Work and Economic Growth,**
- **SDG 16: Peace, justice and strong institutions**



since they are more appropriate given the pupils' age.

Most teachers agreed upon the basic **features of the games**. The games should be age-appropriate so that the level of difficulty matches the pupils' abilities and knowledge. In addition, each game should be centered on a single objective and geared towards accomplishing that objective. The game should reward correct choices and penalize incorrect ones. Thus, players will be able to distinguish between successful and unsuccessful actions and remain focused on their objective. A set of rules that is simple for younger children to comprehend and interact with is also quite important. Another factor to consider to be considered is that the games should have a captivating storyline that makes them engage. Finally, the games should be enjoyable and complement the official curriculum.

## QUESTIONNAIRE REPORT

### Research type

Questionnaire addressed to pupils.

### Research strategy

The partners first prepared the questionnaire and translated it into their native language (Latvian, Italian, and Greek). Each of them distributed the questionnaire to at least thirty pupils aged 6 to 20 from elementary and secondary schools in their respective countries. The questionnaire was completed by **139** pupils in total (Latvia: 52, Italy: 56, Greece: 31). The questionnaire was designed to assess pupils' prior knowledge and involvement with the SDGs, as well as their expectations for project outcomes.

### Time horizon

The investigation was conducted in the same period of the focus group, from July to October 2022.

### Data collection method(s)

The following questions are included in the questionnaire:

1. Your age
2. Have you heard of 17 UN Sustainable Development goals?
3. Have you acquired any of these 17 SDGs in your syllabus at school?
4. What goals should be addressed in the learning process?
5. In what way would it be interesting for you to learn about SDGs?
6. What board games are you interested in? (you can say the name of the board game or explain the features (with cards, role game, number of players, etc.))

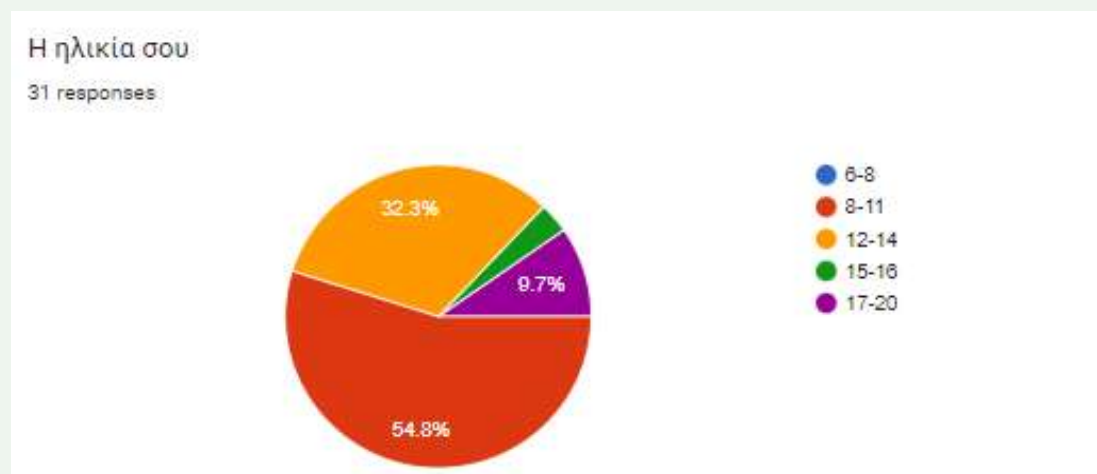




## Data analysis

### Greece

#### 1. What is your age?



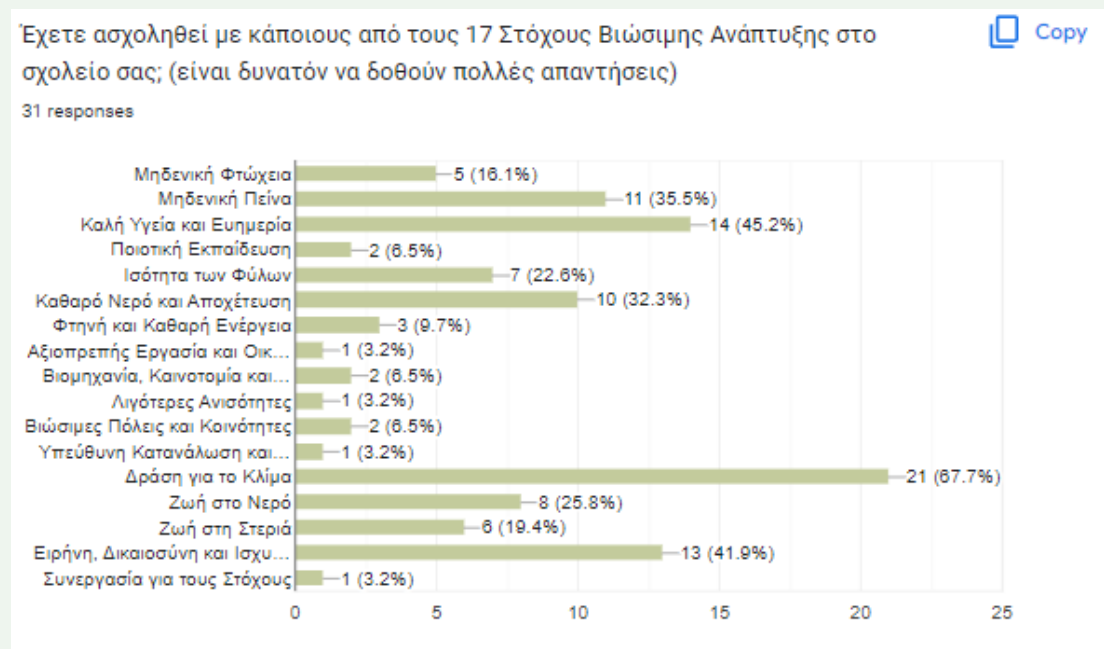
Most pupils that answered the questionnaire were primary school pupil's attending the 5<sup>th</sup> and 6<sup>th</sup> Grade.

#### 2. Have you heard of 17 UN Sustainable Development goals?



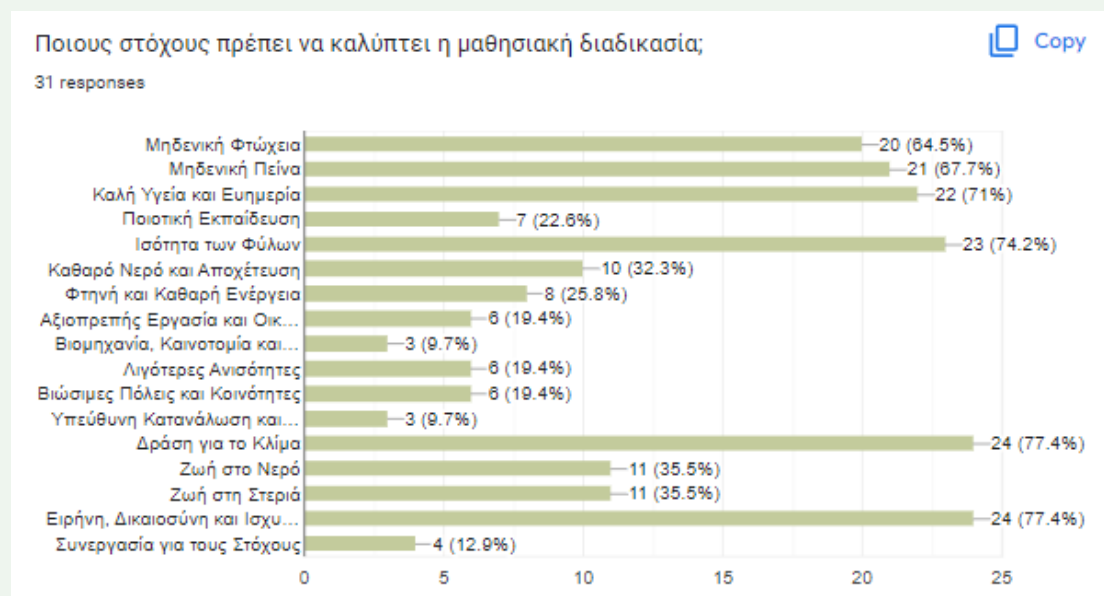
According to the responses, a large percentage of pupils are unaware of the 17 Sustainable Development Goals or believe that the topic has never been addressed in school through their lessons.

### 3. Have you acquired any of these 17 SDGs in your syllabus at school?



Although the participants stated that they had not heard of the SDGs, they later reported that through their lessons, they had dealt with issues primarily related to Climate Action, Good Health and Well-Being, Peace and Justice, Strong Institutions, Zero Hunger and Clean water and Sanitation.

### 4. What goals should be addressed in the learning process?

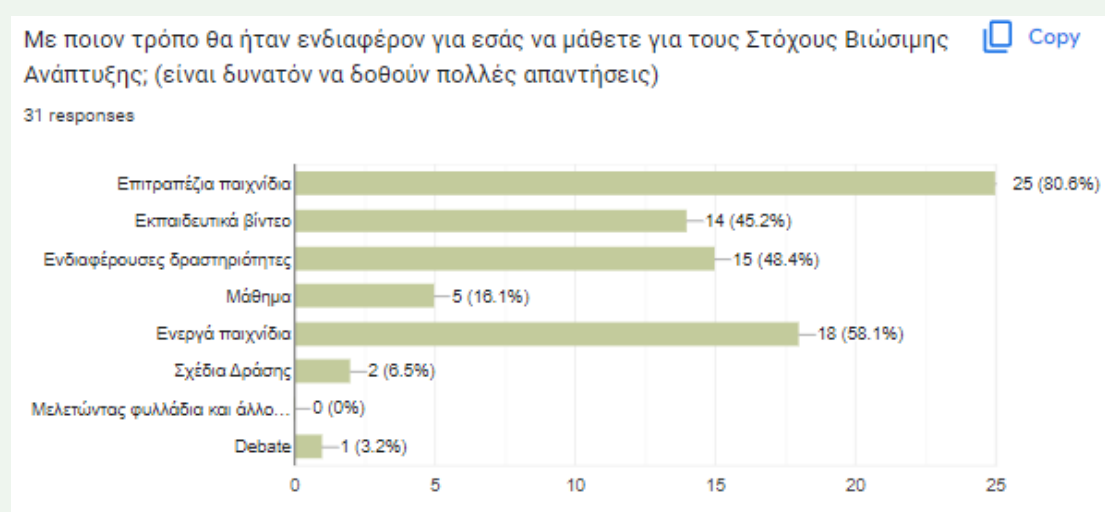




After briefly explaining the 17 SDGs, the moderator gathered the pupils' responses on which of them should be included in the school curriculum. The graph above shows that the majority were very interested in:

- 13: Climate Action
- 16: Peace and Justice Strong Institutions
- 5: Gender Equality
- 2: Zero Hunger
- 1: No Poverty

### 5. In what way would it be interesting for you to learn about SDGs?



The participants, being pupils, stated that they prefer learning about new topics and subjects through Board Games, Active Games, Interesting Activities and Tutorial Videos.

### 6. What board games are you interested in? (you can say the name of the board game or explain the features (with cards, role game, number of players, etc.)

The games in which the participants are interested are as follows: Snake and Ladders, Monopoly, Role games, Card games, Uno, Taboo and Trivial pursuit.

### Conclusions

Based on the findings in Greece, pupils prefer learning more on topics such as GOAL 13: Climate Action, GOAL 16: Peace and Justice Strong Institutions, GOAL 5: Gender Equality, GOAL 2: Zero Hunger and GOAL 1: No Poverty. Moreover, they state that they prefer learning about new topics and subjects through Board Games, Active Games, Interesting Activities and Tutorial Videos.

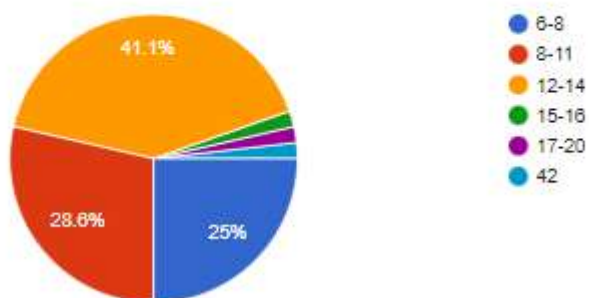


## Italy

### 1. What is your age?

Età

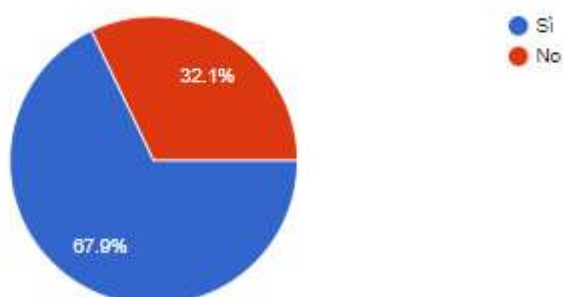
56 responses



### 2. Have you heard of 17 UN Sustainable Development goals?

Hai mai sentito parlare degli Obbiettivi di Sviluppo Sostenibile?

56 responses



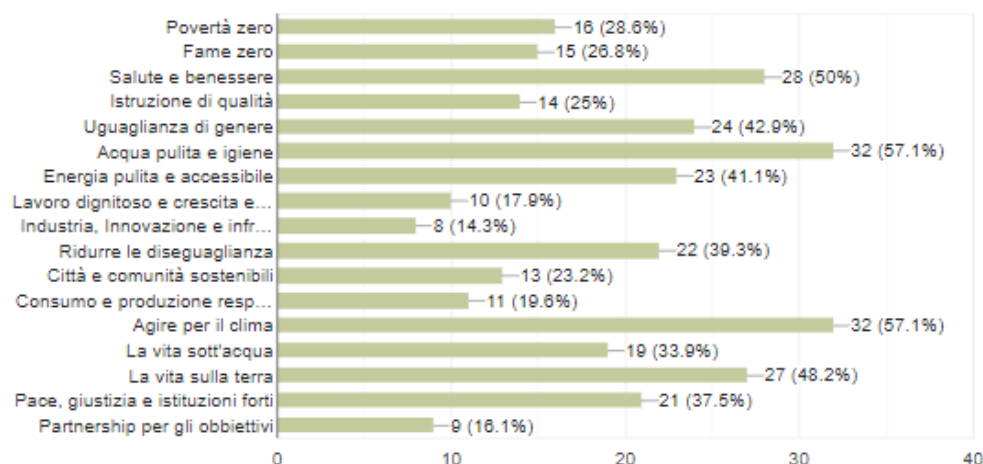


### 3. Have you acquired any of these 17 SDGs in your syllabus at school?

Ha mai appreso/approfondito qualcuno di questi 17 SDG durante il tuo programma scolastico? (sono possibili più risposte)



56 responses

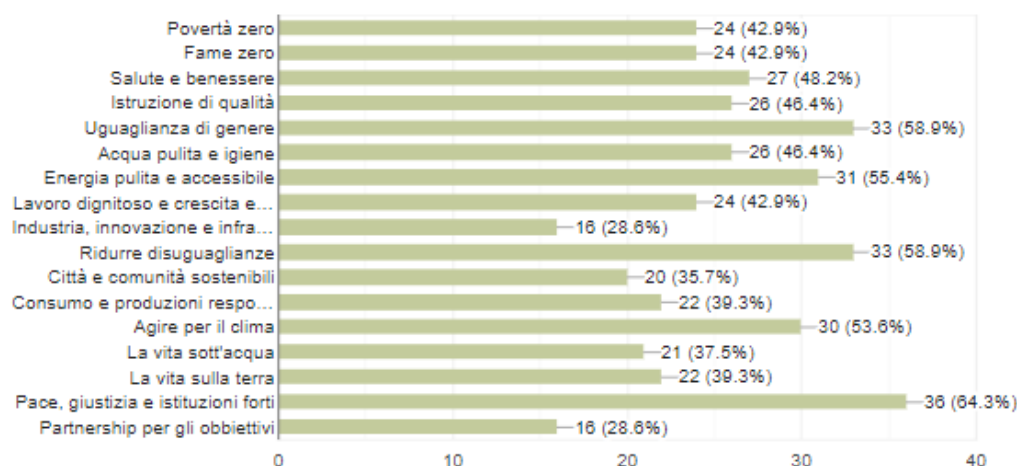


### 4. What goals should be addressed in the learning process?

Quale obiettivo dovrebbe essere insegnato durante il percorso scolastico

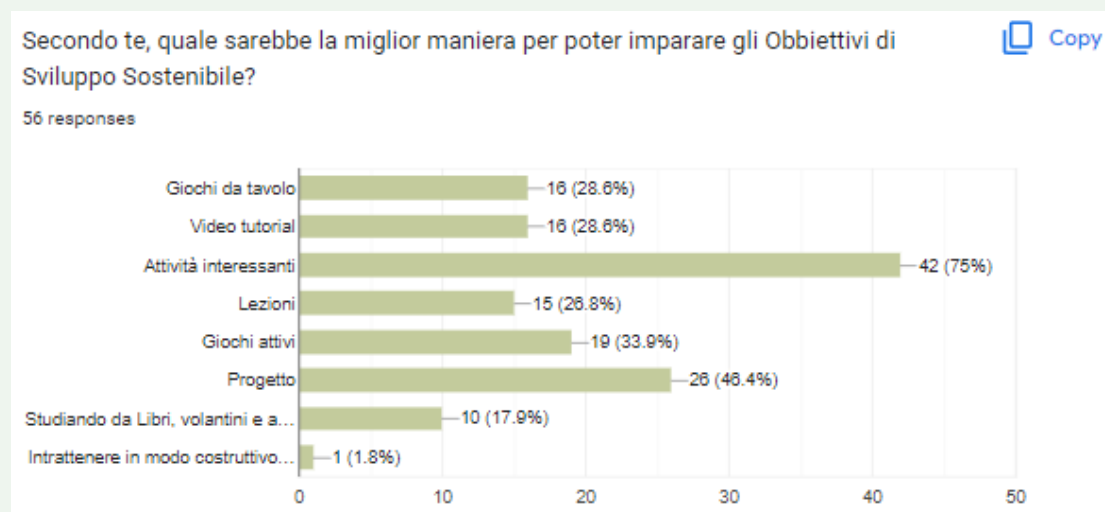


56 responses





## 5. In what way would it be interesting for you to learn about SDGs?



## 6. What board games are you interested in? (you can say the name of the board game or explain the features (with cards, role game, number of players, etc.)

The games in which the participants are interested are as follows: Monopoly, Jenga, Talisman, Card games, Memory card games, Board games, Role-playing games, Uno, Chess, Bingo, Risk, Trumps, Deck Stealing, Cluedo, Lupus in Tabula, Outdoor games, Classic cards, guess who, Risk, and Goose games.

## Conclusions

Based on the findings in Italy, pupils prefer learning more on topics such as GOAL 5: Gender Equality, GOAL 3: Good Health and Well-being, GOAL 7: Affordable and Clean Energy, GOAL 10: Reduced Inequality, GOAL 13: Climate Action, and GOAL 16: Peace and Justice Strong Institutions. Moreover, they state that they prefer learning about new topics and subjects through interesting activities, Project, and Active games.

## General Conclusions

According to a survey conducted in partner countries, the most interesting topics for teachers to work on, are GOAL 5: Gender Equality, GOAL 3: Good Health and Well-being, GOAL 7: Affordable and Clean Energy, GOAL 13: Climate Action, and GOAL 16: Peace and Justice Strong Institutions. From the synthesis of the results of the two surveys for teachers and pupils, the whole consortium decided to create the board games by focusing on the 4 most interesting SDGs topics:

**SDG 3 – Good health and well-being**





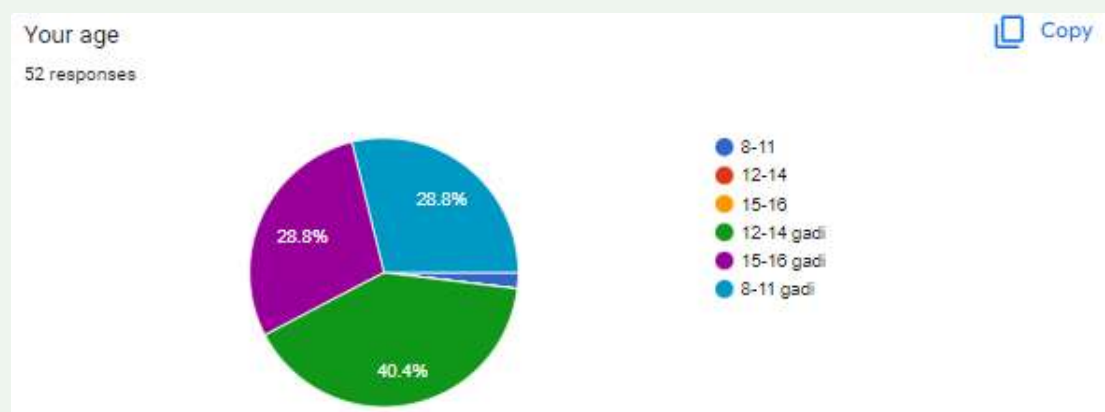
**SDG 4** – Quality education

**SDG 7** – Affordable and clean energy

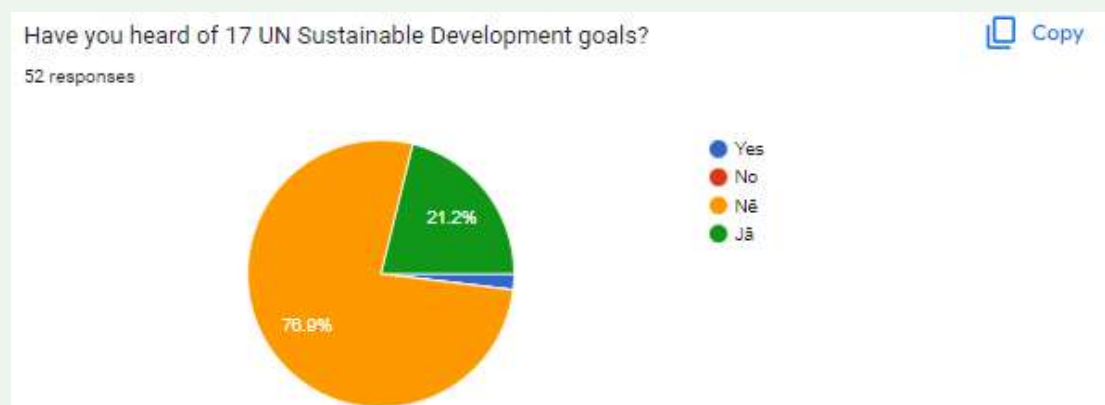
**SDG 13** – Climate action

## Latvia

### 1. What is your age?



### 2. Have you heard of 17 UN Sustainable Development goals?



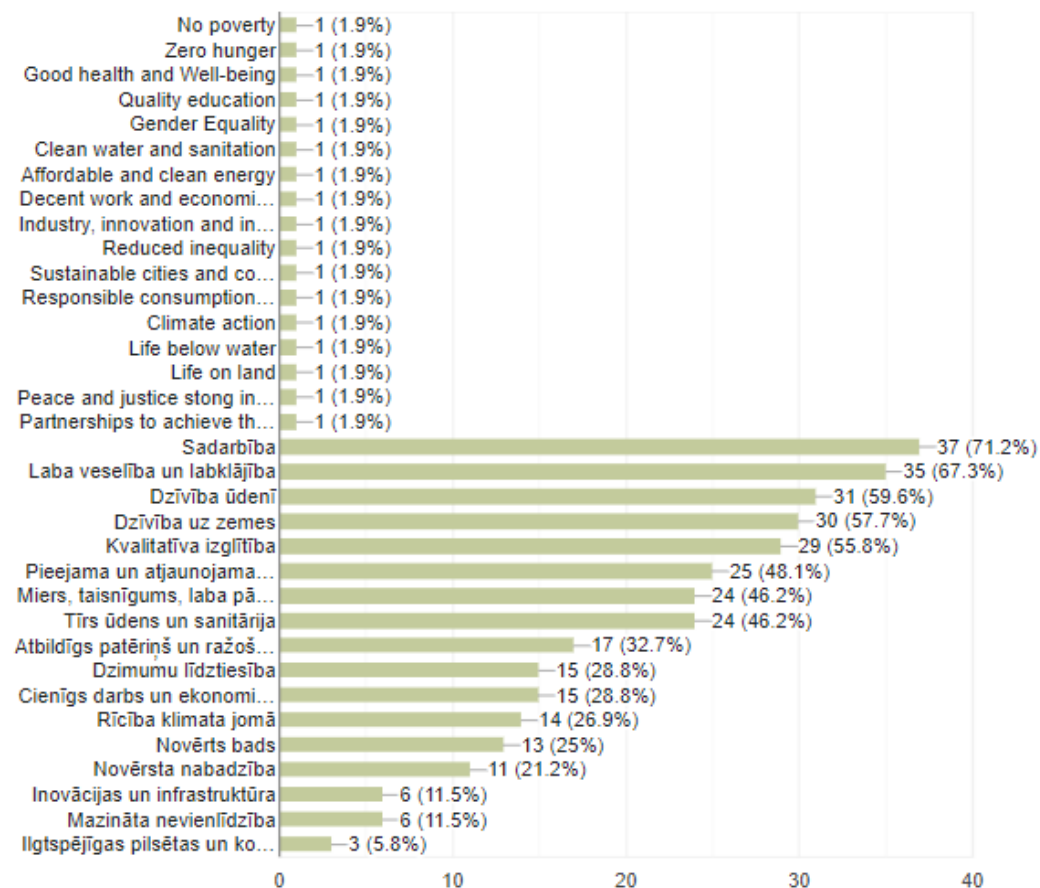




### 3. Have you acquired any of these 17 SDGs in your syllabus at school?

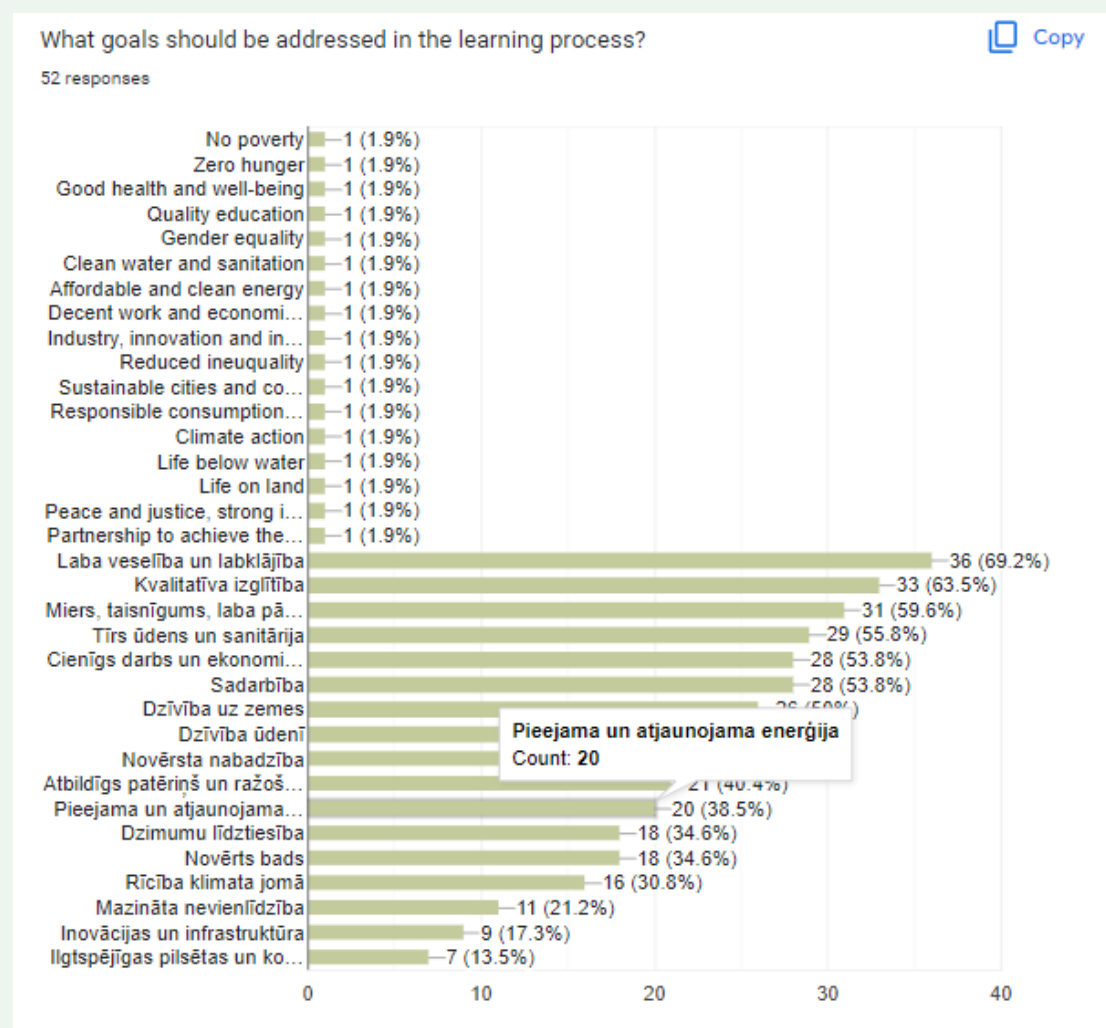
Have you acquired any of these 17 SDGs in your syllabus at school? (several answers possible) [Copy](#)

52 responses

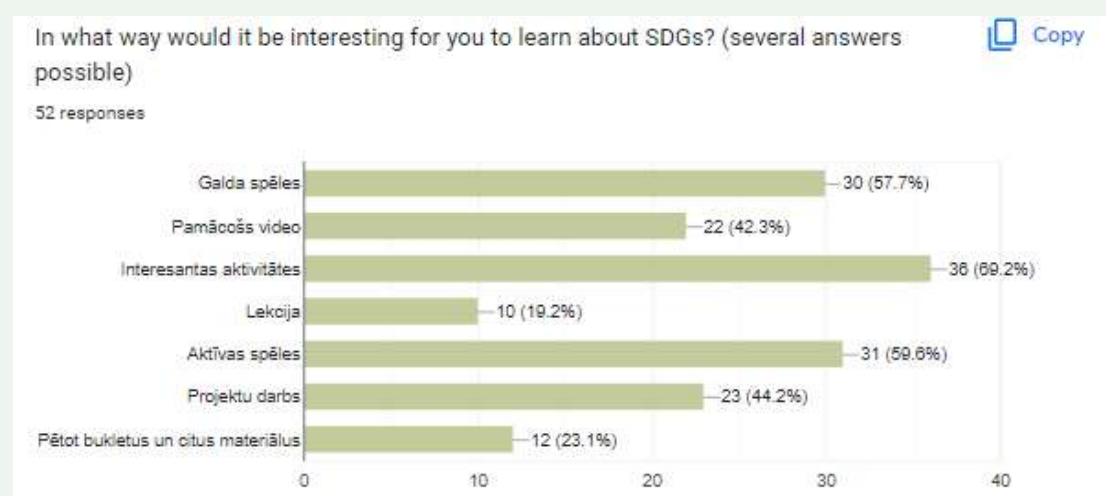




#### 4. What goals should be addressed in the learning process?

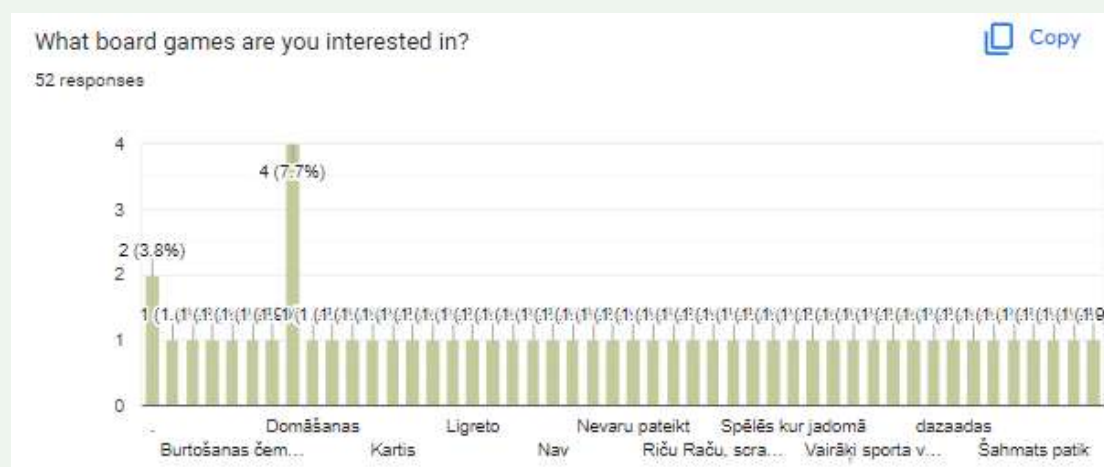


#### 5. In what way would it be interesting for you to learn about SDGs?





## 6. What board games are you interested in? (you can say the name of the board game or explain the features (with cards, role game, number of players, etc.)



## Conclusions

The results of the teachers' focus group depict support for a quick and fun educational game designed to help raise awareness for the goals with a focus on GOAL 3: Good Health and Well-being, GOAL 14: Life Below Water, GOAL 15: Life on Land, GOAL 4: Quality Education, GOAL 7: Affordable and Clean Energy, GOAL 16: Peace and Justice Strong Institutions, GOAL 6: Clean Water and Sanitation and provide players with a range of ways in which they personally can help achieve the goals. The games should be suitable for different groups of age and sizes with interesting storyline and visual style combining fun and realism, captivating and giving continuous challenge, flexible with a good balance of challenge and reward. Topics that should preferably be included in games for primary level grades are Environment, Health, Environmental sustainability, Impact on ecosystems and Hygiene.

## General Conclusions

According to a survey conducted in partner countries, the most interesting topics for teachers to work on are: GOAL 5: Gender Equality, GOAL 3: Good Health and Well-being, GOAL 7: Affordable and Clean Energy, GOAL 13: Climate Action, and GOAL 16: Peace and Justice Strong Institutions. Moreover, they stated that they consider the most preferred means to teach pupils are Board Games, Active Games, and Interesting Activities.

From the synthesis of the results of the two surveys for teachers and pupils, the whole consortium decided to create the board games by focusing on the 4 most interesting SDGs topics:



**SDG 3** – Good health and well-being

**SDG 4** – Quality education

**SDG 7** – Affordable and clean energy

**SDG 13** – Climate action

## METHODOLOGIES USED IN THE PROJECT

Educational design research is a genre of research in which the iterative development of solutions to practical and complex educational problems provides the setting for scientific inquiry. The solutions can be educational products, processes, programs, or policies. Educational design research not only targets solving significant problems facing educational practitioners but at the same time seeks to discover new knowledge that can inform the work of others facing similar problems. Working systematically and simultaneously toward these dual goals is perhaps the most defining feature of educational design research.

Game-based learning (GBL) is a teaching approach that incorporates gaming elements and principles into educational activities to promote pupil engagement and motivation. This involves using game mechanics, such as points, badges, leader boards, and feedback systems, to enhance the learning experience.

For example, points can be used to track a pupil's progress and provide rewards for achieving specific goals, such as completing a certain number of assignments. Badges can be earned for demonstrating mastery of a particular skill or for completing a challenging task. Leader boards can be used to foster competition among pupils, promoting engagement and motivation. Discussion boards can be used to facilitate collaboration and peer-to-peer learning.

GBL can be carried out using digital or non-digital games, such as role-playing games, board games, or card games. Digital games may include simulations that allow pupils to experience real-world scenarios and develop problem-solving skills. In this way, GBL offers an active learning experience that encourages critical thinking and promotes creativity.

Overall, GBL offers a unique approach to learning that leverages the engagement and motivation of games to enhance the educational experience. By incorporating gaming principles into educational activities, GBL offers a fun and effective way to promote pupil learning.



## THE IMPORTANCE OF USING GBL METHODOLOGY IN SCHOOLS

Game-based learning (GBL) is a teaching methodology that has gained popularity in recent years as educators look for new ways to engage pupils and promote better learning outcomes. At its core, GBL involves the integration of game elements, mechanics, and principles into learning activities, with the goal of promoting pupil engagement and motivation.

GBL offers several benefits to pupils, teachers, and schools. Perhaps most importantly, it can be a powerful tool for increasing pupil engagement and motivation. Games are inherently engaging and can capture pupils' attention in a way that traditional teaching methods often cannot. By making learning fun and interactive, GBL can help pupils become more invested in their own learning, leading to better outcomes.

Another key advantage of GBL is that it promotes active learning. In traditional teaching models, pupils are often passive recipients of information, but in GBL, they are actively engaged in the learning process. Games require pupils to make decisions, problem-solve, and engage in critical thinking, all of which are important skills for success in school and beyond.

GBL also allows for individualized learning. Games can be customized to meet the needs and learning styles of individual pupils, allowing them to work at their own pace and receive personalized feedback and support. This can help pupils who may struggle in traditional classroom settings to succeed and feel more confident in their abilities.

Collaboration is another benefit of GBL. Many games require teamwork and communication, which can help pupils develop important social and emotional skills. Working together towards a common goal can also promote a sense of community and belonging, which is important for creating a positive learning environment.

Finally, GBL can promote the development of a wide range of skills, including literacy, numeracy, digital literacy, creativity, and problem-solving. Games can provide pupils with opportunities to practice and apply these skills in a fun and engaging way, helping them to develop the skills they need to succeed both in school and in their future careers.







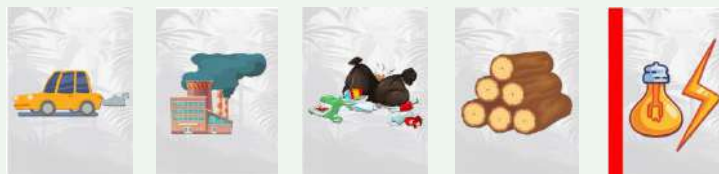
## BOARD GAMES AND RULES

### CLIMATE CHANGE – Board game

#### HOW TO SET UP THE GAME

1. Print the 26 pages. We recommend you to do it, on cardboard, if possible, to increase the weight of the cards. You will need to glue the front and back as described below.
2. **Deck of character cards** (60 cards, 12 characters). Each character has 5 cards: on the front, some of the human causes contributing to climate change and on the back, the character's image.

Front

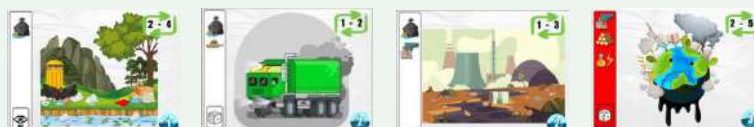


Back



3. **Deck of Climate Change cards** (48 cards arranged horizontally): all cards will have the same back. The front will be different in each case.

Front



Back



4. **End Game cards** (1 card laid horizontally): it has the same back as the Climate Change cards and the STOP icon on the front.

Front







Back



5. To make shuffling easier, you will need to sleeve the cards to play comfortably (standard sleeves size 63.5 mm x 88 mm).
6. You will also need a 6-sided dice.

### INTRODUCTION



2-5 players



From 4 years old



20 minutes

Climate change is an undeniable fact. Human action contributes negatively through the emission of polluting gases, the accumulation of waste, deforestation, or the excessive consumption of energy. To try to correct it, you will have to recognise these **causes** and try to be aware of them in your daily life. Will you be able to remember what we are doing wrong at any given moment with our beloved planet Earth?

### OBJECTIVE OF THE GAME

Your goal is to score victory points. To do this, you must display the causes of climate change on your character cards in the same order as the **Climate Change** card requests. This task will not be easy, as your character cards will change position throughout the game, and you will have to remember the new order of the causes of climate change.

### COMPONENTS



60 character / causes Cards



36 Climate Change Cards



12 Climate Change Cards  
(energy waste)



1 End Game Card



1 dice



## PREPARATION

**1** - There are 12 characters available. Each player will have to choose one of them with the cards associated with it (4 cards from the base game + 1 expansion card with red side stripe).

**2** - Decide together whether or not to play the expansion (the expansion is more complex and is not recommended for beginners or for young children).

## RECOMMENDATIONS FOR PLAYING THE BASE GAME:

*CHILDREN AGED 4 - 5 YEARS:* Children of this age can have the card in position 4 always face up.

*CHILDREN 6-10 YEARS:* can play with the 4 cards face down.

## RECOMMENDATIONS FOR PLAYING WITH THE EXPANSION:

*CHILDREN OVER THE AGE OF 10:* can add the 5th card which includes ENERGY WASTE cause. These cards increase the difficulty.



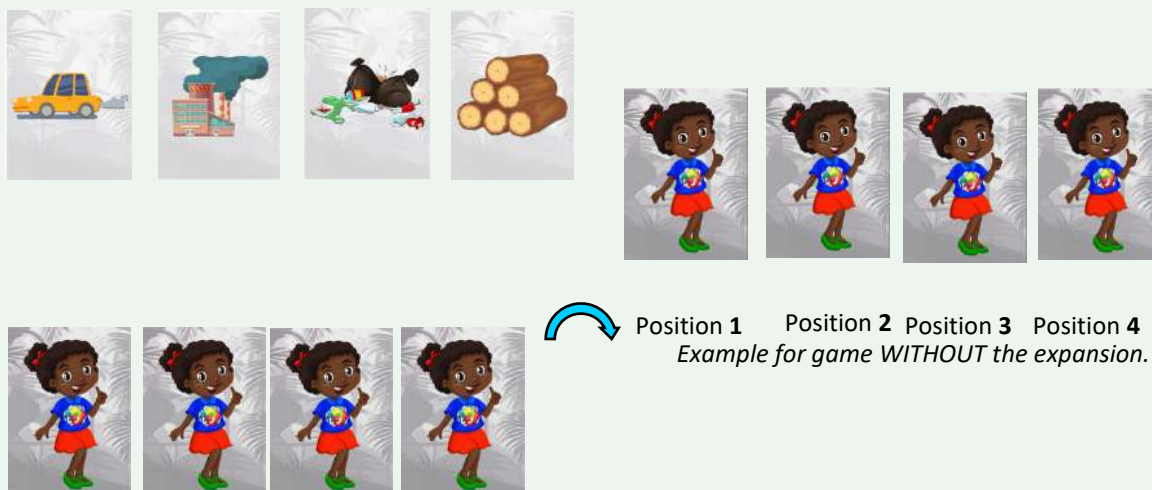
They have a red side stripe. If you decide to play with the expansion, you will need to add to the Climate Change deck the Energy Waste cards.



**NOTE:** The game can be played by children of different ages including all five cards.

Simply keep the card in position 5 always face up for children who might need it to even out the difficulty. Even very young children can play with adults by keeping the children's cards in positions 4 and 5 face up.

**3** - Place the cards in a horizontal row in front of the player. This will be their playing area. The cards should be visible on the character's side, trying to memorise at the outset the causes of climate change that lie underneath (POLLUTING TRANSPORTATION, INDUSTRIAL CO2 EMISSIONS, WASTE, DEFORESTATION from the base game and ENERGY SPILL for the expansion). The player will place them face down in the order of their choice. This will mark his starting position.



**4** - Shuffle the Climate Change cards. Separate the last 10 cards of the 4 deck and shuffle the *End Game* card between them. Place these 11 cards on the bottom of the Climate Change cards deck and do not reshuffle it.



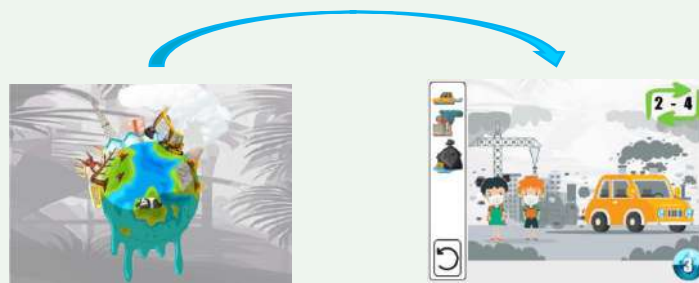
Leave the deck face down with the Climate Change image in plain view on the middle of the table within reach of all players. The discards shall be placed next to this deck.

*NOTE: For shorter games, you can remove 5 to 10 cards from the deck WITHOUT LOOKING and discard this End Game card.*

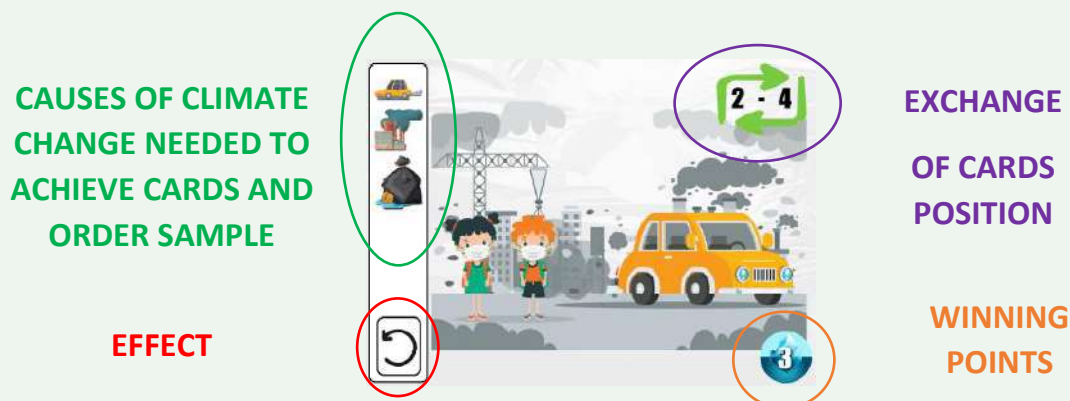
**5** - Place the die next to the Climate Change deck and choose the starting player (you can do this by rolling the die if you want).

## HOW TO PLAY

The starting player turns over the top card of the Climate Change deck.

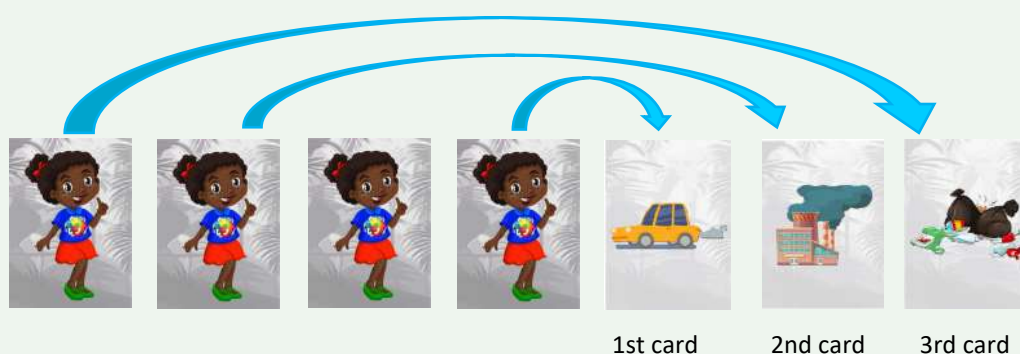


In addition to the central image, you can find several icons:



Once the Climate Change card is displayed, you have to turn your character cards showing the same **climate change causes** as the Climate Change card. **If there is more than one cause, you must turn them up in the correct order (from top to bottom).**

*Example: To get this Climate Change card (for 3 victory points), you had to turn over the polluting transport, industrial CO2 emissions and waste cards in that order (leaving them in the same position).*



#### IF YOU GET IT RIGHT:

1st) Take the Climate Change card and its **Victory points**. Place it face up on its side on your play area.

2nd) Turn all your character cards face down and without looking at the cards, **swap the position of the cards** as shown on the Climate Change card.



In this example, we would change the card in position 2 to the card in position 4.



3º) **Apply the effect of the card** if it has one.

As you can see, your character cards and their corresponding causes of climate change will change position throughout the game. You must use your good memory to achieve victory.

*NOTE: For children aged 4 - 5 years or who still have difficulty memorising the positions of the cards, you can place the card in position 4 always face up, so that if, for example, 2 were to be exchanged for 4, the new card placed in position 4 would remain face up, while the card that has moved to position 2 would go back to face down.*

#### IF YOU FAIL:

Remove the unwinnable card and place it face up in a discard pile next to the Climate Change draw deck. You must turn in a previously won Climate Change card as a penalty (you may choose from all cards you have won), placing it in the discard pile along with the lost card. If you have not yet won any cards, there is no penalty.

Once the hit or miss has been resolved and the **effect**, if any, has been applied, the game continues with the player to your left (unless the direction has been altered by one of the effects). The new player in turn will show a new card from the Climate Change deck and try to correctly display the energies in the correct order to get it.

#### EFFECTS

You can find 5 different types of **effects** (effects apply ONLY if the card has been obtained)



Change the direction of the game. The game starts clockwise.



Skip the next player's turn.



The player who has obtained the card can look at his character cards to remember the position of the energies but without altering the order of the cards.



All players can look at their character cards to remember the position of the energies, but without altering their order.



Roll the dice.

- If 1, 2, 3 or 4 comes up: the other players must swap, WITHOUT LOOKING, the position of two of their cards (of their choice). Example: swap card 1 for card 4.

- If 5 or 6 is drawn: ONLY the player who has drawn the card must exchange, WITHOUT LOOKING, two of his cards (of his choice).





## END OF GAME:

The game is over the moment the End Game card appears. If you chose to remove cards to shorten the game, the game will end when the last card of the Climate Change deck is played.



End Game Card

## WINNING THE GAME

The player with the most VICTORY POINTS wins the game. If there is a tie, the players share the victory.



## GREEN ENERGY – Board game

### HOW TO SET UP THE GAME

1. Print the 26 pages. We recommend you to do it, on cardboard, if possible, to increase the weight of the cards. You will need to glue the front and back as described below.
2. **Deck of character cards** (60 cards, 12 characters). Each character has 5 cards: on the front, the energy types and on the back the character image.

Front



Back



3. **Deck of Green Energy cards** (48 cards arranged horizontally): all cards shall have the same back. The front side will be different in each case.

Front



Back



4. **End Game cards** (1 card laid horizontally): it has the same back as the Green Energy cards and the STOP icon on the front.

Front





Back



5. To make shuffling easier, you will need to sleeve the cards to play comfortably (standard sleeves size 63.5 mm x 88 mm).
6. You will also need a 6-sided dice.

### INTRODUCTION



2-5 players



From 4 years old



20 minutes

Our planet is in danger. We need your help to make **the transformation of the energy model** happen at the speed necessary to save our mother Earth. To do this, you will have to manage **renewable and green energies in the** right way. Will you be able to remember where the right type of energy is needed at any given moment?

### OBJECTIVE OF THE GAME

Your objective is to score victory points. To do this, you must display the energy of your character cards in the same order as the Green Energy card requests. This task will not be easy, as your character cards will change position throughout the game and you will have to remember the new order in which the energies are placed.

### COMPONENTS



60 character / Energy Cards



36 Green Energy Cards



12 Green Energy Cards  
(biodiesel expansion)



1 End Game Card





1 dice

## PREPARATION

**1** - There are 12 characters available. Each player will have to choose one of them with the cards associated with it (4 cards from the base game + 1 expansion card with red side stripe).

**2** - Decide together whether or not to play the expansion (the expansion is more complex and is not recommended for beginners or for young children).

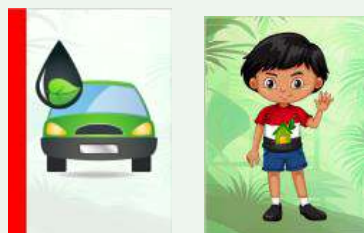
## RECOMMENDATIONS FOR PLAYING THE BASE GAME:

*CHILDREN AGED 4 - 5 YEARS:* Children of this age can have the card in position 4 always face up.

*CHILDREN 6-10 YEARS:* can play with the 4 cards face down.

## RECOMMENDATIONS FOR PLAYING WITH THE EXPANSION:

*CHILDREN OVER THE AGE OF 10:* can add the 5th card which includes energy BIODIESEL. These cards increase the difficulty.



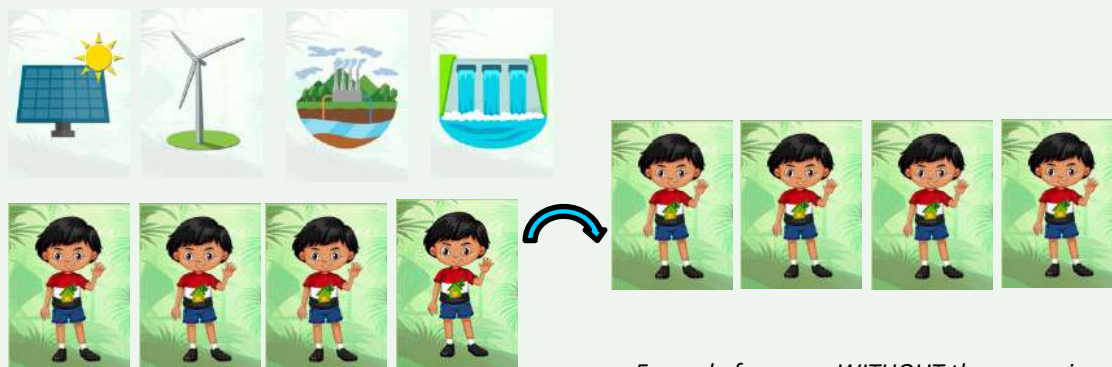
They have a **red side stripe**. If you decide to play with the expansion, **you will need to** add to the Green Energy deck Biodiesel card.



**NOTE:** The game can be played by children of different ages including all five cards.

Simply keep the card in position 5 always face up for children who might need it to even out the difficulty. Even very young children can play with adults by keeping the children's cards in positions 4 and 5 face up.

**3** - Place the cards in a horizontal row in front of the player. This will be their playing area. The cards should be visible on character's side, trying to memorise the energies underneath (SOLAR, WIND, GEOTHERMAL and HYDRAULIC from the base game and BIODIESEL for the expansion). The player will place them face down in the order of his choice. This will mark his starting position.



Example for game *WITHOUT* the expansion.  
Position 1   Position 2   Position 3   Position 4

**4** - Shuffle the Green Energy cards. Separate the last 10 cards from the deck and shuffle the *End Game* card between them. Place these 11 cards on the bottom of the Green Energy deck and do not reshuffle the deck. Leave the deck face down with the Green Energy image in plain view on the middle of the table within reach of all players. The discards shall be placed next to this deck.

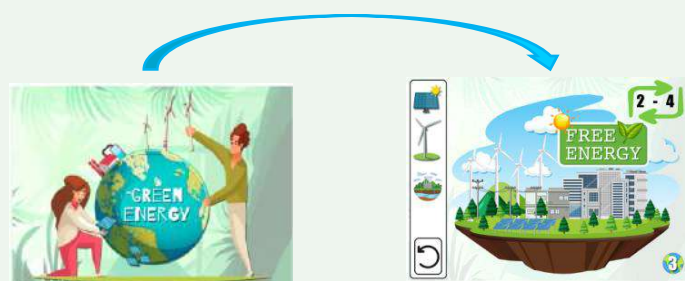
*NOTE: For shorter games, you can remove 5 to 10 cards from the deck WITHOUT LOOKING and discard this End Game card.*



**5** - Place the die next to the Green Energy deck and choose the starting player (you can do this by rolling the die if you want).

## HOW TO PLAY

The starting player turns over the top card of the Climate Change deck.



In addition to the central image, you can find several icons:





Once the Green Energy card is displayed, you have to turn your character cards showing the **same energies** as the Green Energy card. **If there is more than one energy, you must turn them up in the correct order (from top to bottom).**

*Example: To get this Green Energy card (for 3 victory points), you had to turn over the solar, wind and geothermal cards in that order (leaving them in the same position).*



#### IF YOU GET IT RIGHT:

**1st)** Take the Green Energy card and its Victory points. Place it face up on its side on your play area.

**2nd)** Put all your character cards face down again and without looking at the cards, swap the position of the cards as shown on the Green Energy card obtained.

In this example, we would change the card in position 2 to the card in position 4.



**3º) Apply** the effect of the card if it has one.

As you can see, your character cards and their corresponding energies will change position throughout the game. You must use your good memory to achieve victory.

*NOTE: For children aged 4 - 5 years or who still have difficulty memorising the positions of the cards, you can place the card in position 4 always face up, so that if, for example, 2 were to be exchanged for 4, the new card placed in position 4 would remain face up, while the card that has moved to position 2 would go back to face down.*

#### IF YOU FAIL:

Remove the unwinnable card and place it face up in a discard pile next to the Green Energy draw deck. You must turn in a previously won Green Energy card as a penalty (you may choose from all cards you have won), placing it in the discard pile along with the lost card. If you have not yet won any cards, there is no penalty.

Once the hit or miss has been resolved and the **effect**, if any, has been applied, the game continues with the player to your left (unless the direction has been altered by one of the effects). The new player in turn will show a new card from the Green Energy deck and try to correctly display the energies in the correct order to get it.

#### EFFECTS

You can find 5 different types of **effects** (effects apply ONLY if the card has been obtained)



Change the direction of the game. The game starts clockwise.



Skip the next player's turn.



The player who has obtained the card can look at his character cards to remember the position of the energies but without altering the order of the cards.



All players can look at their character cards to remember the position of the energies, but without altering their order.



Roll the dice.

- **If 1, 2, 3 or 4 comes up:** the other players must swap, WITHOUT LOOKING, the position of two of their cards (of their choice). Example: swap card 1 for card 4.

- **If 5 or 6 is drawn:** ONLY the player who has drawn the card must exchange, WITHOUT LOOKING, two of his cards (of his choice).

## END OF GAME:

The game is over the moment the End Game card appears. If you chose to remove cards to shorten the game, the game will end when the last card of the Green Energy deck is played.



End Game Card

## WINNING THE GAME

The player with the most **VICTORY POINTS** wins the game. If there is a tie, the players share the victory.

## HEALTHY LIFE – Board game

### HOW TO SET UP THE GAME

1. Print the 26 pages. We recommend you to do it on cardboard, if possible, to increase the weight of the cards. You will need to glue the front and back as described below.
2. **Deck of character cards** (60 cards, 12 characters). Each character has 5 cards: on the front, the energy types and on the back the character image.

Front

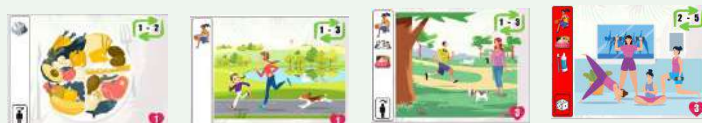


Back



3. **Deck of Healthy Life cards** (48 cards arranged horizontally): all cards shall have the same back. The front side will be different in each case.

Front



Back



4. **End Game card (1 card laid horizontally)**: has the same back as the Green Energy cards and the STOP icon on the front.

Front



Back



5. To make shuffling easier, you will need to sleeve the cards to play comfortably (standard sleeves size 63.5 mm x 88 mm).



6. You will also need a 6-sided dice.

### INTRODUCTION



2-5 players



From 4 years old



20 minutes

Our body is not at its best. The excessive use of digital devices and transportation, streaming television, long days of study... are causing a sedentary lifestyle and what this entails as a detriment to our health. But there is still time to improve our body if we manage to change certain habits and lead a **healthy life**. Can you remember what healthy habits to follow at all times?

### OBJECTIVE OF THE GAME

Your objective is to score victory points. To do this, you must display the healthy habits of your character cards in the same order as the Healthy Life card requests. This task will not be easy, as your character cards will change position throughout the game and you will have to remember the new order of your healthy habits.

### COMPONENTS



60 character / habits Cards



36 Healthy Life cards



12 Healthy Life cards (personal hygiene expansion)



1 End Game Card



1 dice

### PREPARATION

1 - There are 12 characters available. Each player will have to choose one of them with the cards associated with it (4 cards from the base game + 1 expansion card with red sideband).





**2** - Decide together whether or not to play the expansion (the expansion is more complex and is not recommended for beginners or for young children).

**RECOMMENDATIONS FOR PLAYING THE BASE GAME:**

*CHILDREN AGED 4 - 5 YEARS:* Children of this age can have the card in position 4 always face up.

*CHILDREN 6-10 YEARS:* can play with all 4 cards face down.

**RECOMMENDATIONS FOR PLAYING WITH THE EXPANSION:**

*CHILDREN OVER THE AGE OF 10:* can add the 5th card which includes the habit. **PERSONAL HYGIENE.** These cards increase difficulty. They have a **red side stripe.**



If you decide to play with the expansion, **you will need to** add to the Healthy Life deck personal hygiene cards.



**NOTE:** The game can be played by children of different ages including all five cards. Simply keep the card in position 5 always face up for children who might need it to even out the difficulty. Even very young children can play with adults by keeping the children's cards in positions 4 and 5 face up.

**3** - Place the cards in a horizontal row in front of the player. This will be their playing area. The cards should be visible on the character's side, trying to memorise the healthy habits underneath (HEALTHY EATING, PHYSICAL EXERCISE, SOCIAL RELATIONSHIPS, and SLEEP from the base game and PERSONAL HYGIENE for the expansion). You place them face down in the order of your choice. This will mark your starting position.





Example for game *WITHOUT* the expansion.  
Position 1 Position 2 Position 3 Position 4

4

-

Shuffle the Healthy Life cards. Separate the last 10 cards from the deck and shuffle the *End Game* card between them. Place these 11 cards on the bottom of the Healthy Life deck and do not reshuffle the deck.

Place the deck face down with the Healthy Life image in plain view in the middle of the table within reach of all players. The discards shall be placed next to this deck.

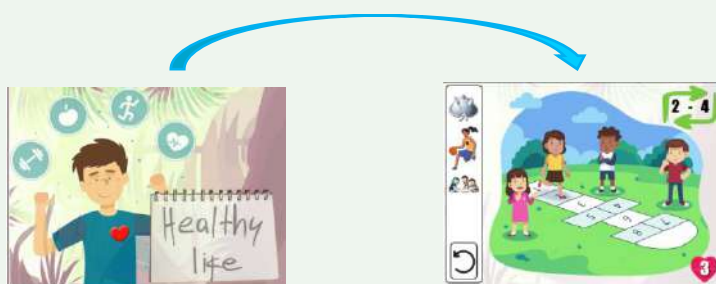
*NOTE: For shorter games, you can remove 5 to 10 cards from the deck without looking and discard this End Game card.*



5 - Place the die next to the Healthy Life deck and choose the starting player (you can do this by rolling the die if you want).

## HOW TO PLAY

The starting player turns over the top card of the Healthy Life deck.

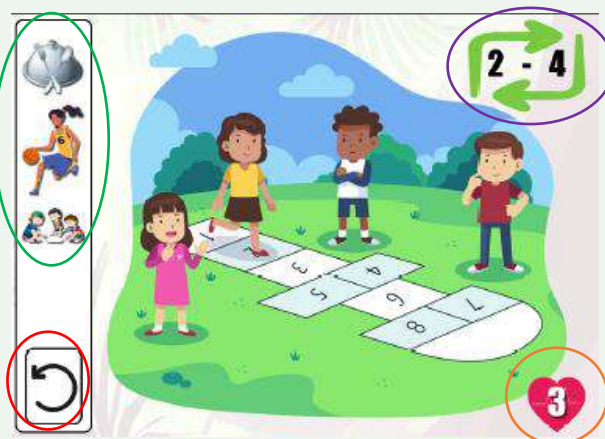


In addition to the central image, you can find several icons:



CAUSES OF  
CLIMATE  
CHANGE  
NEEDED TO  
ACHIEVE CARDS  
AND ORDER  
SAMPLE

EFFECT

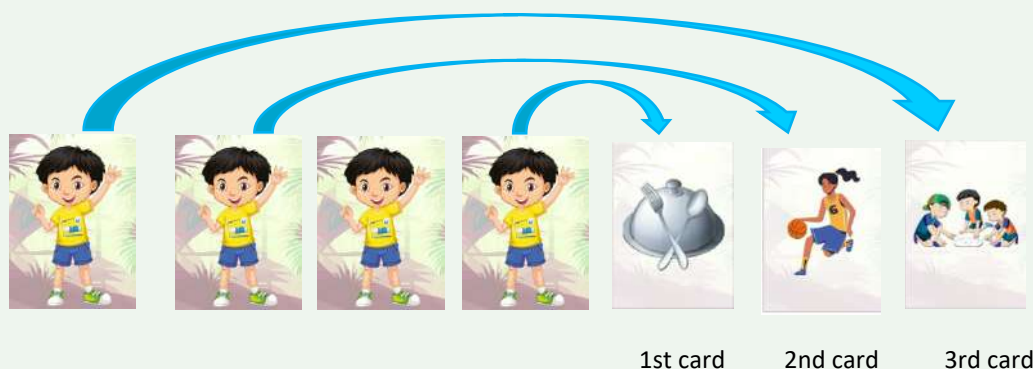


EXCHANGE  
OF CARDS  
POSITION

WINNING  
POINTS

Once the Healthy Life card is displayed, you have to turn your character cards showing the **same healthy habits** as the Healthy Life card. **If there is more than one healthy habit you must turn them up in the correct order (from top to bottom).**

*Example: To get this Healthy Life card (for 3 victory points), you had to turn over the Healthy Eating, Physical Exercise and Social Relations cards in that order (leaving them in the same position).*



**IF YOU GET IT RIGHT:**

**1st)** You take the Healthy Life card and its Victory points. Place it face up on its side on your play area.

**2nd)** Put all your character cards face down again and without looking at the cards, swap the position of the cards as shown on the Healthy Life card.



In this example, we would change the card in position 2 to the card in position 4.



**3º) Apply** the effect of the card if it has one.

As you can see, your character cards and their corresponding healthy habits will change position throughout the game. You must use your good memory to achieve victory.

*NOTE: For children aged 4 - 5 years or who still have difficulty memorising the positions of the cards, you can place the card in position 4 always face up, so that if, for example, 2 were to be exchanged for 4, the new card placed in position 4 would remain face up, while the card that has moved to position 2 would go back to face down.*

#### IF YOU FAIL:

Remove the unwinnable card and place it face up in a discard pile next to the Healthy Life draw deck. You must turn in a previously won Healthy Life card as a penalty (you may choose from all cards drawn), placing it in the discard pile along with the lost card. If you have not yet won any cards, there is no penalty.

Once the hit or miss has been resolved and the **effect**, if any, has been applied, the game continues with the player to your left (unless the direction has been altered by one of the effects). The new player in turn will show a new card from the Healthy Life deck and try to correctly display the healthy habits in the correct order to get it.

#### EFFECTS

You can find 5 different types of **effects** (effects apply ONLY if the card has been obtained)



Change the direction of the game. The game starts clockwise.



Skip the next player's turn.



The player who has obtained the card can look at his character cards to remember the position of the energies but without altering the order of the cards.



ALL

All players can look at their character cards to remember the position of the energies, but without altering their order.



Roll the dice.

- **If 1, 2, 3 or 4 comes up:** the other players must swap, WITHOUT LOOKING, the position of two of their cards (of their choice). Example: swap card 1 for card 4.

- **If 5 or 6 is drawn:** ONLY the player who has drawn the card must exchange, WITHOUT LOOKING, two of his cards (of his choice).

### END OF GAME:

The game is over when the End Game card appears. If you chose to remove cards to shorten the game, the game will end when the last card of the Healthy Life deck is played.



End Game Card

### WINNING THE GAME

The player with the most VICTORY POINTS wins the game. If there is a tie, the players share the victory.





## TRASH HUNTERS – Board game

### HOW TO SET UP THE GAME

1. Print the 26 pages. We recommend you to do it on cardboard, if possible, to increase the weight of the cards. You will need to glue the front and back as described below.
2. **Deck of character cards** (60 cards, 12 characters). Each character has 5 cards: on the front, the types of recycling bins and on the back the image of the character.

Front



Back



3. **Deck of Trash Hunters cards** (48 cards laid out horizontally): all cards will have the same back. The front will be different in each case.

Front



Back



4. **End Game cards** (1 card laid out horizontally): it has the same back as the Trash Hunters cards and the STOP icon on the front.

Front



Back



5. To make shuffling easier, you will need to sleeve the cards to play comfortably (standard sleeves size 63.5 mm x 88 mm).



6. You will also need a 6-sided dice.

## INTRODUCTION

 **2-5 players**

 **From 4 years old**

 **20 minutes**

Humans constantly exploit the planet's natural resources. This generates large amounts of waste of all kinds, with serious consequences for our planet. As well as taking up large areas of land, this waste damages the landscape, increases greenhouse gas emissions and pollutes the soil, water and air. If we get used to Reduce, Re-use and Recycle waste (3Rs rule).

Will you be able to remember which recycling bins to use at any given moment?

## OBJECTIVE OF THE GAME

Your objective is to score victory points. To do this, you must display the recycling bins on your character cards in the same order as the Trash Hunters card requests. This task will not be easy, as your character cards will change position throughout the game and you will have to remember the new order of your recycling bins.

## COMPONENTS



60 character / Bins Cards



36 Trash Hunters Cards



12 Trash Hunters Cards (organic bins expansion)



1 End Game Card



1 dice

## PREPARATION

- 1 - There are 12 characters available. Each player will have to choose one of them with the cards associated with it (4 cards from the base game + 1 expansion card with red side stripe).



**2** - Decide together whether or not to play the expansion (the expansion is more complex and is not recommended for beginners or for young children).

**RECOMMENDATIONS FOR PLAYING THE BASE GAME:**

*CHILDREN AGED 4 - 5 YEARS:* Children of this age can have the card in position 4 always face up.

*CHILDREN 6-10 YEARS:* can play with the 4 cards face down.

**RECOMMENDATIONS FOR PLAYING WITH THE EXPANSION:**

*CHILDREN OVER THE AGE OF 10:* can add the 5th card which include the ORGANIC waste bin. These cards add extra difficulty. They have a **red side stripe**.

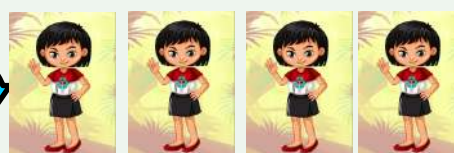


If you decide to play with the expansion, **you will need** to add the organic waste bin card to the Trash Hunters deck.



**NOTE:** Children of different ages can play including all five cards. Simply keep the card in position 5 always face up for children who might need it to even out the difficulty. Even very young children can play with adults by keeping positions 4 and 5 face up on the children's cards.

**3** - Place the cards in a horizontal row in front of the player. This will be their playing area. The cards should be visible on the character's side, trying to memorise the recycling bins underneath (GLASS, METAL, PLASTIC, PAPER from the base game and ORGANIC for the expansion). The player will place them face down in the order of their choice. This will mark their starting position.



Position 1 Position 2 Position 3 Position 4

*Example for game WITHOUT the expansion.*



**4** - Shuffle the Trash Hunters cards. Separate the last 10 cards from the deck and shuffle the *End Game* card between them. Place these 11 cards on the bottom of the Trash Hunters cards deck and do not reshuffle it.

Leave the deck face down with the Trash Hunters image in plain view, on the middle of the table within reach of all players. The discards shall be placed next to this deck.

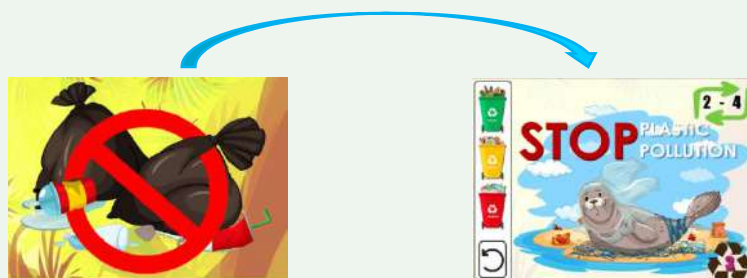
*NOTE: For shorter games, you can remove 5 to 10 cards from the deck WITHOUT LOOKING and discard this End Game card.*



**5** - Place the die next to the Trash Hunters deck and choose the starting player (you can do this by rolling the die if you want).

### HOW TO PLAY

The starting player turns over the top card of the Trash Hunters deck.



In addition to the central image, you can find several icons:







Once the Trash Hunters card is displayed, you have to turn your character cards over showing the same **recycling bins** as the Trash Hunters card. **If there is more than one recycling bin you must pick them up in the correct order (from top to bottom).**

*Example: To get this Trash Hunters card (for 3 victory points), you had to turn over the glass bin, metal bin and plastic bin cards in that order (leaving them in the same position).*



#### IF YOU GET IT RIGHT:

**1st)** Take the Trash Hunters card and its Victory points. Place it face up on its side on your play area.

**2nd)** Turn all your character cards face down again and without looking at the cards, swap the position of the cards as shown on the Trash Hunters card obtained.

In this example, we would change the card in position 2 to the card in position 4.



**3º)** Apply the effect of the card if it has one.

As you can see, your character cards and their corresponding recycle bins will change position throughout the game. You must use your good memory to achieve victory.

*NOTE: For children aged 4 - 5 years or who still have difficulty memorising the positions of the cards, you can place the card in position 4 always face up, so that if, for example, 2 were to be*





*exchanged for 4, the new card placed in position 4 would remain face up, while the card that has moved to position 2 would go back to face down.*

#### IF YOU FAIL:

Remove the unwinnable card and place it face up in a discard pile next to the Trash Hunters draw deck. You must turn in a previously won Trash Hunters card as a penalty (you may choose from all cards you have won), placing it in the discard pile along with the lost card. If you have not yet won any cards, there is no penalty.

Once the hit or miss has been resolved and the **effect**, if any, has been applied, the game continues with the player to your left (unless the direction has been altered by one of the effects). The new player in turn will show a new card from the Trash Hunters deck and try to correctly display the recycling bins in the correct order to get it.

#### EFFECTS

You can find 5 different types of **effects** (effects apply **ONLY** if the card has been obtained)



Change the direction of the game. The game starts clockwise.



Skip the next player's turn.



The player who has obtained the card can look at his character cards to remember the position of the energies but without altering the order of the cards.



ALL

All players can look at their character cards to remember the position of the energies, but without altering their order.



Roll the dice.

- If **1, 2, 3 or 4 comes up**: the other players must swap, **WITHOUT LOOKING**, the position of two of their cards (of their choice). Example: swap card 1 for card 4.

- If **5 or 6 is drawn**: ONLY the player who has drawn the card must exchange, **WITHOUT LOOKING**, two of his cards (of his choice).

#### END OF GAME:

The game is over the moment the End Game card appears. If you chose to remove cards to shorten the game, the game will end when the last card of the Trash Hunters deck is played.



End Game Card

### WINNING THE GAME

The player with the most VICTORY POINTS wins the game. If there is a tie, the players share the victory.



## LESSON PLANS

### Introduction

PLAE Toolkit includes lesson plans and ready-to-use educational activities to teachers and pupils. By providing clarity of objectives, managing time effectively, catering to different learning styles, and enabling assessment of student learning, these lesson plans can help to ensure that the board games are used to their full potential as a tool for learning. Moreover, the final version of the lesson plans is easily adaptable to the needs of individual classes in different countries, as a result of feedback and suggestions received during the pilot phase in each partner country.

All lesson plans include step-by-step instructions, examples of learning activities, links to external resources, ideas for exploration, and a glossary of enrichment terms. Teachers are encouraged to use them in accordance with the curriculum and the interests of their pupils. More specifically, the objective of the lesson plans developed for:

- **the first board game** associated with SDG 13 (Climate action) is to educate pupils about human activities that contribute negatively to climate change and encourage them to act.
- **the second board game** associated with SDG 7 (Affordable and clean energy) is to educate pupils about the urgency of transforming the energy model to save our planet.
- **the third board game** associated with SDG 3 (Good health and well-being) is to educate pupils on the significance of adopting a healthy lifestyle.
- **the fourth board game** associated with SDG 4 (Quality education) is to educate pupils about the massive amounts of waste produced by humans and their catastrophic implications for our planet.

The lesson plans are organised in a way that makes them a valuable and user-friendly planning and implementation tool for the teaching practise. The lesson plans contain:

### Pedagogical objectives

Each lesson plan's intended objectives are clearly stated and cover cognitive, emotional, and/or psychomotor domains. The cognitive objectives refer to the knowledge imparted by the course and the cognitive skills it cultivates, including thinking, perception, and memory. Emotional objectives pertain to the learner's general interest, perceptions, attitudes, and emotions. These objectives are intended to position pupils favourably and increase their appreciation for the course's facts and information. Psychomotor objectives refer to the acquisition of skills required by the course's content and structure.



### **Pre-existing ideas/perceptions of the pupils**

Before pursuing the process of constructing new knowledge from the pupils, it is necessary for the teacher to understand their pertinent perceptions. The educational community accepts that pupils' comprehension of what they learn is influenced by their own interpretive concepts. In other words, pupils construct interpretations by relating what they already know to what they read; as a result, it is possible that their interpretations will differ from those intended by the teacher (Kokkotas, 2002). Therefore, it is essential that the teacher be aware of the mental models his or her pupils have already developed regarding the topic being taught.

### **Methodological approaches proposed**

Group collaboration, experiential, or a combination of these are the primary pedagogical methods that produce the necessary learning environment. The combination of teaching approaches is left to the pedagogical/teaching skills of the teacher, who may employ additional alternative methods if he or she deems it necessary for the full realisation of the learning outcomes. When offered, it is suggested that pupils work in groups during the lesson and discuss the assigned tasks together.

The predominant model of collaborative group learning proposed results in improved learning outcomes. It promotes the development of children's thinking and sociability, motivates, and activates pupils, promotes understanding and consolidation of knowledge, contributes to a better pedagogical management of the pupil population's heterogeneity, and develops pupils' cognitive and metacognitive skills (Stavridou, 2000).

Moreover, critical thinking should be a goal of all teaching. Critical thinking, as a promoted form of thinking, is a fundamental goal of the teaching practise, because the critically thinking individual, for whom education is intended, must be able and willing to temporarily set aside personal beliefs, sociocognitive biases, and interests to examine factual and logical evidence (Matsangouras, 1998).

Principal to any methodological differentiation is the active participation of pupils throughout the instructional process. The pupil-centered framework should completely replace the teacher-centered model in the development of the learning process in the classroom.

### **The role of the teacher**

The teacher is responsible for organising, presenting, guiding, and assessing group work within the context of collaborative learning. He/she empathises with and anticipates the difficulties and problems of the groups, supervises their work, intervenes indirectly, and forecasts the final outcomes. And he ensures that the classroom environment is one of cooperation, democracy, and mutual understanding (Trilianos, 1998). In cooperative learning, the pupil is responsible for



constructing his or her own body of knowledge. Knowing "what he/she needs to know" from the outset, he/she actively participates in both the implementation of instruction to achieve the learning objectives and the search for new information to enrich the knowledge of his/her peers.

A pupil-centered philosophy characterises the collaborative approach, which is central to teaching development. As a guide rather than a knowledge transmitter, the teacher acts as the facilitator of the entire educational process. Collaborative learning necessitates the possession, on the part of the teacher, of crucial and demanding skills (Kokkotas, 2002).







## CLIMATE CHANGE BOARD GAME - LESSON PLAN 1

### LESSON IDENTITY

**TITLE: INTRODUCTION BEFORE PLAYING THE BOARD GAME “CLIMATE CHANGE”**

#### HOW TO USE THE EDUCATIONAL KIT

Educational KIT is designed to provide teachers and educators with methodological support raising pupils’ awareness about climate change and the causes and effects of environmental problems. The idea of this lesson plan is to introduce pupils to the topic “climate change” before playing the board game “Climate Change”.

#### TARGET GROUP:

**Direct Target Group:** teachers, and educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 40 minutes

**AIM:** The aim is to raise pupils’ awareness of SDGs 13 and 15 before playing the board game Climate Change.

#### LEARNING OUTCOMES

Learners are expected to:

- Raise their awareness of climate change and actions in climate.
- Identify the causes and effects of climate change.
- Understand the importance of environmental problems.
- Evaluate the results of the lesson.

#### TEACHING METHODS AND MEANS:

Brainstorming

Q&A sessions





Peer discussion

Pair and group work

Self-assessment

|                |                                                                                                                                                                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | Ask an introductory question to the entire class<br>(Question - What landscape features can you see around? (Are there mountains, fields, rivers lakes, etc.??))                                                                                                             |
| <b>Step 2:</b> | Ask pupils to answer the questions in pairs.<br>(Question 1- What's the most beautiful place in your town? Why do you like it? Describe it. 2- What's the ugliest place in your town? Why don't you like it? Describe it.). Then, ask them to present their ideas to others. |
| <b>Step 3:</b> | Pupils watch the video about climate change<br>( <a href="https://www.youtube.com/watch?v=Sv7OHfplRfU">https://www.youtube.com/watch?v=Sv7OHfplRfU</a> or <a href="https://www.youtube.com/watch?v=IJoAcDQoUww">https://www.youtube.com/watch?v=IJoAcDQoUww</a> ).           |
| <b>Step 4:</b> | Write the words "climate change" on the board and ask them to explain it in their own words based on the video.                                                                                                                                                              |
| <b>Step 5:</b> | Divide pupils into pairs or groups of 3.                                                                                                                                                                                                                                     |
| <b>Step 6:</b> | Draw a table with the titles "causes" and "effects" and ask pupils to group the causes and effects of climate change into the table.                                                                                                                                         |
| <b>Step 7:</b> | Pupils present their outcomes.                                                                                                                                                                                                                                               |
| <b>Step 8:</b> | Evaluate the lesson by answering the questions (see below).                                                                                                                                                                                                                  |

### Step 6: Table of causes and effects

| Causes | Effects |
|--------|---------|
|        |         |
|        |         |
|        |         |

### Step 8: Self-assessment of the lesson

|                        |  |
|------------------------|--|
| I learned...           |  |
| I didn't understand... |  |
| One question I would   |  |





|                |  |
|----------------|--|
| like to ask... |  |
|----------------|--|

SDGs related:

**No 13 Climate Change:** Climate change is a real and undeniable threat to our entire civilization. The effects of it are already visible and will be catastrophic unless we act now. We can make the necessary changes to protect the planet through education, innovation, and adherence to our climate commitments. These changes also provide huge opportunities to modernize our infrastructure which will create new jobs and promote greater prosperity across the globe.

SDG 13 has several specific objectives including:

- Strengthen resilience and adaptive capacity to all countries' climate-related hazards and natural disasters.
- Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning.
- Integrate climate change measures into national policies, strategies, and planning.
- Implement the UN framework convention on climate change.

**No 15 Life on Land:** A flourishing life on land is the foundation for our life on this planet. We are all part of the planet's ecosystem and have caused severe damage through deforestation, loss of natural habitats, and land degradation. Promoting the sustainable use of our ecosystems and preserving biodiversity is not a cause. It is the key to our survival.

SDG 15 has several specific objectives including:

- Conserve and restore terrestrial and freshwater ecosystems.
- End deforestation and restore degraded forests.
- End desertification and restore degraded land.
- Ensure the conservation of mountain ecosystems.
- Protect biodiversity and natural habitats.
- Promote access to genetic resources and fair sharing of the benefits.





## Feedback on the lesson:

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were teachers engaged and interested in the activities?        |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |





## CLIMATE CHANGE BOARD GAME - LESSON PLAN 2

### LESSON IDENTITY

**TITLE:** Learning by Playing the “Climate Change” board game

#### HOW TO USE THE EDUCATIONAL KIT

Educational KIT is designed to provide teachers and educators with methodological support raising pupils’ awareness about climate change and the causes and effects of environmental problems. This lesson plan aims to help pupils understand the topic “climate change” while playing the board game “Climate Change”.

#### TARGET GROUP:

**Direct Target Group:** teachers, and educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 40 min

**AIM:** By playing the board game, pupils will recognize the importance of climate change in our daily lives.

#### LEARNING OUTCOMES

Learners are expected to:

- Raise awareness of climate change on our planet.
- Realize the importance of the causes and effects of climate change.
- Be involved and participate actively in discussions about the board game.

#### TEACHING METHODS AND MEANS:

Game-Based Learning

SDGs related:

**No 13 Climate Change:** Climate change is a real and undeniable threat to our entire civilization. The effects are already visible and will be catastrophic unless we act now. We can make the necessary changes to protect the planet through education,





innovation, and adherence to our climate commitments. These changes also provide huge opportunities to modernize our infrastructure which will create new jobs and promote greater prosperity across the globe.

SDG 13 has several specific objectives including:

- Strengthen resilience and adaptive capacity to all countries' climate-related hazards and natural disasters.
- Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning.
- Integrate climate change measures into national policies, strategies, and planning.
- Implement the UN framework convention on climate change.

**No 15 Life on Land:** A flourishing life on land is the foundation for our life on this planet. We are all part of the planet's ecosystem and we have caused severe damage to it through deforestation, loss of natural habitats, and land degradation. Promoting the sustainable use of our ecosystems and preserving biodiversity is not a cause. It is the key to our survival.

SDG 15 has several specific objectives including:

- Conserve and restore terrestrial and freshwater ecosystems.
- End deforestation and restore degraded forests.
- End desertification and restore degraded land.
- Ensure the conservation of mountain ecosystems.
- Protect biodiversity and natural habitats.
- Promote access to genetic resources and fair sharing of the benefits.

|                |                                                                                        |
|----------------|----------------------------------------------------------------------------------------|
| <b>Step 1:</b> | Divide pupils into groups to play the game.                                            |
| <b>Step 2:</b> | Explain the rules of the game.                                                         |
| <b>Step 3:</b> | Let the pupils play the board games for 15 minutes.                                    |
| <b>Step 4:</b> | Stop the game and ask pupils questions that are related to the topic "climate change". |
| <b>Step 5:</b> | After the discussion, let the pupils restart the game.                                 |

Questions for discussion:

- 1) What is the game about?
- 2) Who or what is responsible for climate change?
- 3) What dangers are threatening our lives and our planet?
- 4) How has climate change affected animal species?
- 5) How would you explain climate change to someone?
- 6) Could you change your lifestyle to save our planet and prevent climate change?



7) Is it too late to stop climate change?

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied

| N<br>o | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|--------|----------------------------------------------------------------|---|---|---|---|---|
| 1.     | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2.     | Were the instructions clear enough?                            |   |   |   |   |   |
| 3.     | Were teachers engaged and interested in the activities?        |   |   |   |   |   |
| 4.     | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5.     | What would she/he do differently for the next session?         |   |   |   |   |   |





## CLIMATE CHANGE BOARD GAME - LESSON PLAN 3

### LESSON IDENTITY

**TITLE:** Environment and you / Make the difference

**TARGET GROUP:**

**Direct Target Group:** teachers, and educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 80 min (2 lessons)

**AIM:** The aim is to encourage learners to think about their attitudes towards the environment, discuss solutions and work out simple steps on how individuals' involvement can increase one's awareness of the topic of environmental protection in their community.

### LEARNING OUTCOMES

Learners are expected to:

- Reflect on what they already know about climate change, identify and explain threats to the environment;
- Think about how the environment can be affected by their everyday activities;
- Learn how they can improve the quality of their lives by making a positive impact on the environment at home, school, and in their community promoting sustainability.

### TEACHING METHODS AND MEANS:

Discussion and argumentation

Critical thinking

Q&A sessions

Pair and group work

Self-assessment

Paper A3





Markers

Printable materials/cards

|                |                                                                                                                                                           |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | Warming up activity.                                                                                                                                      |
| <b>Step 2:</b> | Reflection on what pupils already know about climate change.                                                                                              |
| <b>Step 3:</b> | Ask pupils to find 7 mistakes in the picture and explain to them possible threats to the environment.                                                     |
| <b>Step 4:</b> | In groups, pupils should identify positive and negative actions and discuss how the environment can be affected by these everyday activities.             |
| <b>Step 5:</b> | Divide the class into groups of 3 and ask them to create a poster or a puzzle.                                                                            |
| <b>Step 6:</b> | Presentation phase: The teacher asks each group to present its poster or a puzzle to the class and encourages feedback and suggestions from other pupils. |
| <b>Step 7</b>  | Self-assessment                                                                                                                                           |

## Step 1. Warming up activity.

The teacher asks pupils to look at the picture and engage in a free talk for three minutes in response to the term “climate change” by asking questions.



What do you see in the picture? Where (in which part of the picture) would you prefer to live and why? Who needs the environment? Who do you think the environment is





important to? Is it important to trees? Is it important to frogs? How about you, it's the environment important to you?

**Step 2.** Reflection on the previous lesson about Climate change. Ask the pupils at first to talk about the pictures in pairs using the questions as prompts, then elicit feedback as a whole class. Ensure all pupils participate.



Discuss the questions below:

- Which environmental problems do the pictures show?
- How many more environmental problems can you think of or remember from the previous lesson? What is the impact of climate change (on the environment, people, and animals)?
- Which problems affect your country/your community?

### Step 3. What's Wrong with this Picture?

The purpose of this activity is to encourage pupils to think about how the environment can be affected by their everyday activities.

Instructions for teachers: every day, your decisions have an impact on the environment. Everything from brushing your teeth, washing the dishes, throwing away a piece of paper, driving to school and even turning on a light in your bedroom has an impact on the environment. The following picture shows a neighborhood where people engage in everyday activities.

Divide pupils into small groups for the activity. Have pupils find seven things in the following picture that are wrong for the environment. Encourage them to discuss





different options to make the picture more environmentally friendly.



What other things do usually do that impact negatively on the environment?

**Answers: Can you find the 7 things wrong with this picture?**

1. The woman is throwing a glass bottle into the trash instead of recycling it. Recycling helps both the environment and the economy by reducing the need for raw materials to be extracted, and recycling also creates many jobs. Recycling also prevents materials from being thrown away.
2. The man is raking grass clippings and leaves into trash bags. You can use leaf bags to recycle your leaves and grass, or you can leave mowed grass clippings on the lawn as a source of nutrients for the grass. You can also compost grass clippings and fallen leaves and use the compost to fertilize the soil.
3. The car is leaking oil into the street. When oil leaks out of cars it is then washed into storm drains when it rains. Storm drains often lead directly to rivers and streams.
4. The man is throwing litter into the street. Street litter, such as plastic bags, cups, and candy wrappers, often gets swept away with rainwater into storm drains and ends up floating in rivers or washing up on land. A great deal of street litter is made up of plastic, which takes hundreds of years to break down. Animals can mistake plastics for food and can become tangled up in them. Recycle as much of your trash as possible and put all other litter in garbage cans.
5. The man is pouring motor oil down the storm drain. Motor oil can damage or kill

underwater plants and animals.

6. The sprinkler is watering the sidewalk. Place sprinklers so that the water goes only on the lawn, not the street or sidewalk. Avoid watering on windy days when water may be blown onto streets or sidewalks.

7. The man and woman are burning leaves. Smoke from five pounds of leaves contains about one pound of air pollution which contains harmful pollutants. Open burning contributes to the formation of ground-level ozone that damages human health, vegetation, and buildings. Some of the health problems caused by open burning include eye, nose, and throat irritation; lung irritation and congestion; shortness of breath and coughing; stomach or intestinal upset; and headaches.

[https://www.in.gov/idem/iee/files/ieay\\_lesson\\_plan.pdf](https://www.in.gov/idem/iee/files/ieay_lesson_plan.pdf)

**Step 4. Each group will be given a set of picture cards.** Learners should identify positive and negative actions and discuss how the environment can be affected by these everyday activities.

*See the appendix at the end of the lesson plan.*

#### **Step 5.**

**Option 1.** The next task involves a group activity about drawing a poster or an infographic on how to become environmentally friendly including small steps towards making this planet a better place for our communities and generations to come.

Each group has got a different task. One group has to focus on activities that they can do to protect the environment at home, 2nd- at school, 3rd- in their community.

Reflection on what they already know about climate change. Reflection on what they already know about climate change.

**Option 2.** Give each pupil one or two puzzle pieces and have them create their environment on each piece, either a teacher assigns them or one they come up with on their own. Second, have each pupil cut out their puzzle piece. Third, gather the pupils around the poster board and have them put the puzzle together. Finally, have pupils glue or tape their pieces of the puzzle to the poster board.

Discussion/Follow-up: Have the pupils make predictions about how their puzzle piece will affect their neighbor's puzzle piece, and how our everyday actions can affect our environment.

#### **Step 6. Group work presentations**

The teacher asks each group to present its poster or a puzzle to the class and encourages feedback and suggestions from another pupil.



### Step 7. Self-assessment - THE WHEEL

**THE WHEEL**  
Please apply to today's activities

The diagram is a large circle with a smaller circle in the center. Five lines radiate from the center to the outer edge, dividing the circle into five equal segments. Each segment contains a text prompt for reflection.

- Top-left segment: Something that intrigued me today
- Top-right segment: Something that I already knew
- Right segment: One question that I have
- Bottom segment: Something I can use with my friends or family
- Left segment: A new term, concept or idea I learned

From [Into the Classroom](#) Outward Bound Resources for Teachers



After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were teachers engaged and interested in the activities?        |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |

After all, lessons related to “Climate Change” it will be possible to increase pupils’ awareness and knowledge about both **SDG 13** and **15** and more specifically to allow pupils to focus on practical ways to implement sustainable practices in their daily life.

SDGs related:

**No 13 Climate Change:** Climate change is a real and undeniable threat to our entire civilization. The effects are already visible and will be catastrophic unless we act now. Through education, innovation, and adherence to our climate commitments, we can make the necessary changes to protect the planet. These changes also provide huge opportunities to modernize our infrastructure which will create new jobs and promote greater prosperity across the globe.

SDG 13 has several specific objectives including:

- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.
- Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning.
- Integrate climate change measures into national policies, strategies, and planning.
- Implement the UN framework convention on climate change.

**No 15 Life on Land:** A flourishing life on land is the foundation for our life on this planet. We are all part of the planet’s ecosystem and we have caused severe damage to it through deforestation, loss of natural habitats, and land degradation. Promoting the sustainable use of our ecosystems and preserving biodiversity is not a cause. It is the key to our survival.

SDG 15 has several specific objectives including:

- conserve and restore terrestrial and freshwater ecosystems.





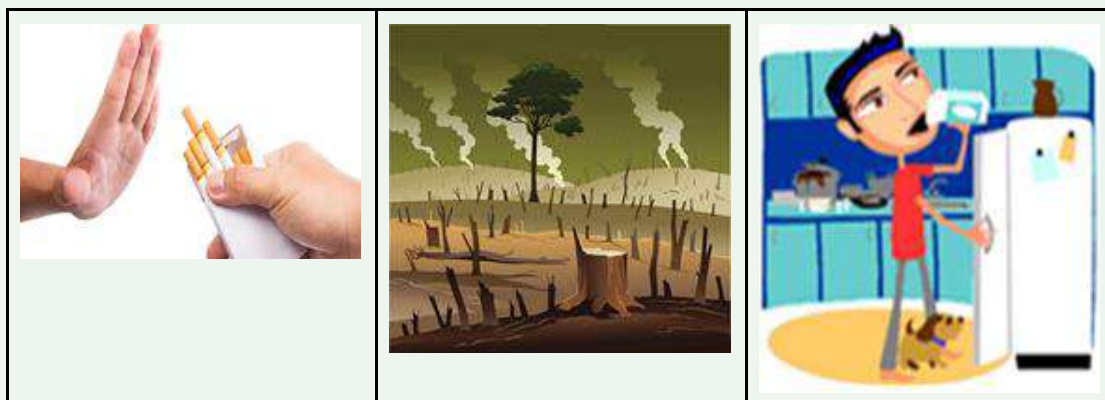


- end deforestation and restore degraded forests.
- end desertification and restore degraded land.
- ensure the conservation of mountain ecosystems.
- protect biodiversity and natural habitats.
- promote access to genetic resources and fair sharing of the benefits.











## GREEN ENERGY BOARD GAME - LESSON PLAN 1

### LESSON IDENTITY

**TITLE:** Introduction to Energy and Renewable Energy Sources

**TARGET GROUP:**

**Direct Target Group:** teachers, educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 60 min.

**AIM:** The aim is to raise pupils' awareness of SDG 7 and green energy sources before playing the board game.

**LEARNING OUTCOMES**

Learners are expected to:

- Become familiar with the elements of the game.
- Learn about SDG 7 and the theme of the game.
- Acquire knowledge of the different types of renewable energy sources and how we can integrate them into our practices.
- Recognize the importance of renewable energy sources for our planet and society.

**TEACHING METHODS AND MEANS:**

Plenary Session, Group Work, Brainstorming, Computer, Speakers, Projector or Whiteboard, Printable materials

### SDG 7

**SDG 7 “Affordable and Green Energy”** is one of the 17 Sustainable Development Goals (SDGs) established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. This goal centers on ensuring access to affordable, reliable, sustainable, and modern energy for all.



**SDG 7** has several specific targets including:

1. Provide universal access to cost-effective, dependable, and modern energy services.
2. Significantly increase the proportion of renewable energy in the global energy matrix.
3. Boost the rate of global energy efficiency development twofold.
4. Enhance international cooperation to facilitate access to clean energy research and technology, such as renewable energy, energy efficiency, and advanced and greener fossil fuel technology, and encourage investment in energy infrastructure and clean energy technology.
5. Expand infrastructure and enhance technology for the provision of modern and sustainable energy services for all in developing countries, particularly least developed countries, small island developing states, and landlocked developing countries, in accordance with their respective support programmes.

Through the developed board game “GREEN ENERGY”, the teachers will have the opportunity to raise pupils’ awareness of means and actions for achieving this SDG and ensuring the future of our planet.

Each card in the game represents a different green energy that can be linked to the corresponding situation, enabling pupils to visualize and realize sustainable energy sources.

## Phase 1 – Introduction

5’

|                |                                                                                                                                                                                                                             |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher writes the word “ENERGY” on the board and then asks pupils to explain what energy is and where it comes from. The teacher allows some time for pupils to think and express their ideas (even through movement). |
| <b>Step 2:</b> | The teacher writes the pupils’ ideas on the board.                                                                                                                                                                          |





## Phase 2 – Learn & Explore

45'

|                |                                                                                                                                                                                                                                                                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The class watches the video “Energy Animated” ( <a href="https://www.youtube.com/watch?v=uMH0zrZegDU">https://www.youtube.com/watch?v=uMH0zrZegDU</a> ), for approximately 6 mins                                                                                                                                                                 |
| <b>Step 2:</b> | The teacher divides pupils into groups and distributes a copy of the <b>Detective Data Sheet</b> (Appendix I) and clues to each group. She/he emphasizes that their aim is to search for an answer to the question “What is energy?”<br>If a group is having trouble completing the task, the teacher may offer some extra clues (Appendix II).   |
| <b>Step 3:</b> | Pupils discuss with one another and use the clues provided on the sheet to find evidence of energy. After each group has recorded their findings on their Data Sheet, the teacher asks them to define the term “ENERGY.”                                                                                                                          |
| <b>Step 4:</b> | The teacher then explains to the pupils the distinction between renewable and non-renewable energy sources. She/he writes the terms on the board and gives the pupils time to think about and debate their meanings.                                                                                                                              |
| <b>Step 5:</b> | The class watches the video “What Are Sources of Energy” ( <a href="https://www.youtube.com/watch?v=ViXtT8c4z-c&amp;t=122s">https://www.youtube.com/watch?v=ViXtT8c4z-c&amp;t=122s</a> ), for approximately 5 mins.<br>The teacher divides the class into groups and distributes the Energy Sources Sheet, which must be completed by each group. |
| <b>Step 6:</b> | The teacher then asks the groups to provide their responses while elaborating on each response.                                                                                                                                                                                                                                                   |

## Phase 3 – Reflection & Assessment

10'

|                |                                                                                                                                                                                                                            |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher shows the picture of SDG 7 on the board and asks pupils to think about which types of energy sources we use the most today. Are these energy sources harming our planet?                                       |
| <b>Step 2:</b> | What types of energy sources should we use and why?<br>How can we use renewable energy sources in our everyday lives?                                                                                                      |
| <b>Step 3:</b> | After the question session concludes, the teacher will ask the pupils about their expectations for the game (what they believe they will learn, what they believe about the method of learning through play, etc.) and, if |







|                |                                                                                                                                                                                         |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | necessary, provide the correct answers, allowing the pupils to increase their knowledge.                                                                                                |
| <b>Step 4:</b> | This activity will allow pupils to learn more about the different types of energy sources and why we must take action to achieve SDG 7, while also preparing them for the game session. |

## Teacher Reflection

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied.

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were pupils engaged and interested in the activities?          |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |



## Appendix I

### DETECTIVE DATASHEET

#### CLUES

Each device we use every day, from the smallest to the largest, requires energy to function.



Thousands of years ago, humans invented fire and utilized its energy to keep warm, light up their homes, and cook their food.

Humans also observed different sources of energy in nature, such as the sun, the wind, and water in rivers and lakes...

Thus, they utilized the energy of the wind blowing to build windmills, the energy of the water running in rivers to build water mills, the energy emitted by the Sun to generate electricity, etc.

We use energy nowadays to cook our food, produce comfortable living conditions, communicate, move, entertain, and so on.

#### EVIDENCE

| We know that energy was here because..... | Energy Source<br>(sun? wind? electricity?<br>other?) |
|-------------------------------------------|------------------------------------------------------|
|                                           |                                                      |
|                                           |                                                      |
|                                           |                                                      |
|                                           |                                                      |



## Appendix II

### EXTRA CLUES

1. Solar energy gives us light.
2. Sun energy helps our plants grow.
3. Lightning is a natural source of electrical energy.
4. Gasoline, produced from oil, gives vehicles the energy to move.
5. Energy is used for heating our houses and schools.
6. Energy keeps our fridge cool.
7. Wind power is essential for sailboats.



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7. Wind power is essential for sailboats.





## Appendix III

## ENERGY SOURCES

| RENEWABLE                                                                                          |  |  | NON-RENEWABLE                                                                                         |  |
|----------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------|--|
|                                                                                                    |  |  |                                                                                                       |  |
|                                                                                                    |  |  |                                                                                                       |  |
|                                                                                                    |  |  |                                                                                                       |  |
|                                                                                                    |  |  |                                                                                                       |  |
| <br>GEOTHERMAL  |  |  | <br>BIOMASS        |  |
| <br>NATURAL GAS |  |  | <br>WIND          |  |
| <br>WOOD      |  |  |                                                                                                       |  |
| <br>COAL        |  |  | <br>HYDROPOWER     |  |
| <br>MINERALS    |  |  | <br>OIL           |  |
|                                                                                                    |  |  | <br>SOLAR ENERGY |  |





## GREEN ENERGY BOARD GAME - LESSON PLAN 2

### LESSON IDENTITY

**TITLE:** Learning by Playing the “GREEN ENERGY” board game

**TARGET GROUP:**

**Direct Target Group:** teachers, educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 60 min.

**AIM:** By playing the board game, pupils will recognize the importance of integrating renewable energy into our daily lives.

**LEARNING OUTCOMES**

Learners are expected to:

- Become more aware of the effects that climate change has brought about to our planet.
- Realize the importance of renewable energy sources in the fight against climate change.
- Involve pupils in debates and discussions about board games.

**TEACHING METHODS AND MEANS:**

Plenary Session, Group Work, Game-based learning, Brainstorming, “Green Energy” cards, dice, Speakers, Projector or Whiteboard, Printable materials



## **SDG 7**

**SDG 7** “Affordable and Green Energy” is one of the 17 Sustainable Development Goals (SDGs) established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. This goal centers on ensuring access to affordable, reliable, sustainable, and modern energy for all.

**SDG 7** has several specific targets including:

1. Provide universal access to cost-effective, dependable, and modern energy services.
2. Significantly increase the proportion of renewable energy in the global energy matrix.
3. Boost the rate of global energy efficiency development twofold.
4. Enhance international cooperation to facilitate access to clean energy research and technology, such as renewable energy, energy efficiency, and advanced and greener fossil fuel technology, and encourage investment in energy infrastructure and clean energy technology.
5. Expand infrastructure and enhance technology for the provision of modern and sustainable energy services for all in developing countries, particularly least developed countries, small island developing states, and landlocked developing countries, in accordance with their respective support programmes.

Through the developed board game “GREEN ENERGY”, the teachers will have the opportunity to raise pupils’ awareness of means and actions for achieving this SDG and ensuring the future of our planet.

Each card in the game represents a different green energy that can be linked to the corresponding situation, enabling pupils to visualize and realize sustainable energy sources.



## Phase 1 – Introduction

5'

|                |                                                                                                                                                                                                           |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher explains to pupils that they will play the “GREEN ENERGY” game.<br>She/He shows them the cards and asks them to remember what they have talked about in the previous lesson. (Lesson Plan 1). |
| <b>Step 2:</b> | The teacher allows pupils to express their thoughts on the game and what they are expecting from it.                                                                                                      |

## Phase 2 – Learn & Explore

45'

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher divides the class into groups. Each group is one character/player. The groups roll the dice and take notice of the number they roll on the dice. The highest-numbered group makes its character selection first, and so on.                                                                                                                                                                                                                                                                                                                                                              |
| <b>Step 2:</b> | When the groups have selected their character/player, the teacher hands out the <b>RULES</b> to each group and explains the game.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Step 3:</b> | The teacher allows 20 min for the class to explore and play the game. The teacher observes and provides help when necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Step 4:</b> | When the 20 min is up the teacher stops the gameplay and asks the following questions: <ul style="list-style-type: none"><li>• What is the game about?</li><li>• What have you learnt while playing the game?</li><li>• Did you come across any cards whose meaning you couldn't understand? (Here, if a pupil has trouble understanding a card, it's a good idea to have another pupil explain it to him/her and, if necessary, to add information about it)</li><li>• Choose a card at random from the deck and ask the class what it means to them. (repeat this with a few more cards)</li></ul> |
| <b>Step 5:</b> | After the question session, the teacher allows more time for pupils to play the game if they wish.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |





## Phase 3 – Reflection & Assessment

10'

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | In the previous task, the group with the most points wins and gets the badge “Planet Hero”. Then asks pupils to connect the pictures on the cards with real-life problems and how our actions impact our future.                                                                                                                                                                                                                                                |
| <b>Step 2:</b> | <p><u>Discussion session:</u><br/>The teacher asks questions in plenary and tries to make conclusions on how green energy sources will help us achieve SDG 7.<br/>Suggested questions:</p> <ul style="list-style-type: none"> <li>• What is the impact of non-renewable energy sources on our planet?</li> <li>• What are the benefits of green energy sources?</li> <li>• Is there a way to use green energy sources to power our daily activities?</li> </ul> |

## Teacher Reflection

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied.

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were teachers engaged and interested in the activities?        |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |





## GREEN ENERGY BOARD GAME - LESSON PLAN 3

### LESSON IDENTITY

**TITLE:** The value of Energy Saving!

**TARGET GROUP:**

**Direct Target Group:** teachers, educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 60 min.

**AIM:** The aim is to help pupils implement knowledge and skills received from the previous sessions in their everyday lives.

**LEARNING OUTCOMES**

Learners are expected to:

- Be more motivated to incorporate sustainable practices into daily life.
- Recognize the significance of individual actions in promoting sustainability.
- Understand the value of reducing energy consumption.
- Realize how we can work towards achieving SDG 7 on a daily basis.

**TEACHING METHODS AND MEANS:**

Plenary Session, Group Work, Cardboards, Markers, Brainstorming, Speakers, Projector or Whiteboard, Printable materials



## **SDG 7**

**SDG 7** “Affordable and Green Energy” is one of the 17 Sustainable Development Goals (SDGs) established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. This goal centers on ensuring access to affordable, reliable, sustainable, and modern energy for all.

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4. Enhance international cooperation to facilitate access to clean energy research and technology, such as renewable energy, energy efficiency, and advanced and greener fossil fuel technology, and encourage investment in energy infrastructure and clean energy technology.
5. Expand infrastructure and enhance technology for the provision of modern and sustainable energy services for all in developing countries, particularly least developed countries, small island developing states, and landlocked developing countries, in accordance with their respective support programmes.

Through the developed board game “GREEN ENERGY”, the teachers will have the opportunity to raise pupils’ awareness of means and actions for achieving this SDG and ensuring the future of our planet.

Each card in the game represents a different green energy that can be linked to the corresponding situation, enabling pupils to visualize and realize sustainable energy sources.



**Phase 1 – Introduction****5'**

|                |                                                                                                                                                                                                                                                                                       |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher shows a picture of the game they played in the previous session (Lesson Plan 2) and asks pupils some relative questions: <ul style="list-style-type: none"><li>• Do you remember the topic of the game?</li><li>• What is the SDG 7? (shows a picture of SDG 7)</li></ul> |
| <b>Step 2:</b> | The teacher enables pupils to express themselves and provides hints to help pupils raise their schema and prepare for the next assignment.                                                                                                                                            |

**Phase 2 – Learn & Explore****45'**

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher divides the class into 2 - 4 groups and hands out a cardboard and markers to each group.                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Step 2:</b> | Ask pupils to come up with ways to save energy. Each group will have to make a presentation on cardboard (illustrations and sentences). The teacher may ask: <ul style="list-style-type: none"><li>• Why do we have to save energy?</li><li>• Can you think of any energy-consuming devices in your house that could be made to use less energy?</li><li>• Can we conserve energy even at school? How?</li></ul> The teacher encourages pupils to think creatively and come up with a variety of ideas. |
| <b>Step 3:</b> | The teacher allows 20 min for the groups to develop the energy-saving plan. The teacher can make this a game where one pupil in the group comes up with an energy-saving idea, writes it down, then he/she passes the marker to the person on their left and that pupil comes up with a different energy-saving idea. Move clockwise around the group until each pupil has at least 4 ideas.                                                                                                            |
| <b>Step 4:</b> | Each group will appoint a leader who will present their plan and exchange ideas with the rest of the classroom.                                                                                                                                                                                                                                                                                                                                                                                         |





## Phase 3 – Reflection & Assessment

10'

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | When all groups have presented their ideas, the teacher will talk about how everyone's effort makes a difference. Then, she/he will ask for ideas on other ways to save energy that aren't on the lists.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Step 2:</b> | <p><u>Discussion session:</u><br/>The teacher asks questions in plenary and tries to make conclusions on how green energy sources will help us achieve SDG 7.</p> <p>Suggested questions:</p> <ul style="list-style-type: none"> <li>• What form of energy is used the most daily? (Probably electricity.)</li> <li>• Why do we need to save energy?</li> <li>• How much of the energy used is renewable?</li> <li>• What is the impact of non-renewable energy sources on our planet?</li> <li>• What are the benefits of green energy sources?</li> <li>• Is there a way to use green energy sources to power our daily activities?</li> </ul> |

## Teacher Reflection

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied.

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were teachers engaged and interested in the activities?        |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |





## HEALTHY LIFE BOARD GAME - LESSON PLAN 1

### LESSON IDENTITY

**TITLE:** INTRODUCTION BEFORE PLAYING THE BOARD GAME “HEALTHY LIFE”

#### HOW TO USE THE EDUCATIONAL KIT

Educational KIT is designed to provide teachers and educators with methodological support raising pupils’ awareness about healthy lifestyle, recognizing the interdependence of health and development. The idea of this lesson plan is to introduce pupils with the topic “good health and well-being” before playing the board game “Healthy Life”.

**Direct Target Group:** teachers, educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 60 minutes

**AIM:** The aim is to give the necessary knowledge to teachers to explain SDG 3,6, 11 and 17 to their classes with pupils during the moment before using the board game.

#### LEARNING OUTCOMES

Learners are expected to:

- Become familiar with the elements of the game;
- Broaden knowledge of SDGs 3,6, 11 and 17 and the theme of the game;
- Understand the importance of a Healthy lifestyle, for oneself and for the community.
- Understand what is meant by a healthy lifestyle.
- Be able to identify different strategies and habits for having a healthy lifestyle.

#### TEACHING METHODS AND MEANS

Plenary Session, Group Work, Brainstorming, Computer, Speakers, Projector or Whiteboard, Printable materials.

Using this Lesson plan will be possible to increase awareness and knowledge in children about both SDG 3, 6 11 and 17 and more specifically get them to think about the importance of a healthy lifestyle while also giving them useful information to encourage an active behavior to protect the environment.



The idea of this lesson is to allow primary school teachers to manage the moment before the implementation of the game by providing the pupils with the important concepts connected to the topic of the game and to the selected SDGs.

This will be done not as a classic frontal lecture, but by incentivizing and encouraging dialogue among pupils by leading them to think about the importance of a healthy lifestyle and the effects it will have for itself and for the community, for the environment and for the future.

### **SDG 3, 6 ,11 and 17**

**SDG 3 Good Health and Well Being:** Over the last 15 years, the number of childhood deaths has been cut in half. This proves that it is possible to win the fight against almost every disease. Still, we are spending an astonishing amount of money and resources on treating illnesses that are surprisingly easy to prevent. The new goal for worldwide Good Health promotes healthy lifestyles, preventive measures and modern, efficient healthcare for everyone.

**SDG 6 Clear water and sanitation:** One in three people live without sanitation. This is causing unnecessary disease and death. Although huge strides have been made with access to clean drinking water, lack of sanitation is undermining these advances. If we provide affordable equipment and education in hygiene practices, we can stop this senseless suffering and loss of life

**SDG 11 Sustainable cities and communities:** The world's population is constantly increasing. To accommodate everyone, we need to build modern, sustainable cities. For all of us to survive and prosper, we need new, intelligent urban planning that creates safe, affordable and resilient cities with green and culturally inspiring living conditions.

**SDG 17 Partnership for the goals:** The Global Goals can only be met if we work together. International investments and support is needed to ensure innovative technological development, fair trade and market access, especially for developing countries. To build a better world, we need to be supportive, empathetic, inventive, passionate, and above all, cooperative.



## Phase 1 – Introduction

10'

Thanks to the developed board game “HEALTHY LIFE” it will be possible for the teachers to raise awareness with their pupils on the mentioned SDGs.

In fact, each card in the game represents a different example of a healthy lifestyle.

|                |                                                                |
|----------------|----------------------------------------------------------------|
| <b>Step 1:</b> | INTRODUCE THE SDGs TOPIC and prepare board game set on a table |
| <b>Step 2:</b> | SHORT STORYTELLING TO INTRODUCE HEALTHY LIFE TOPIC             |

## Phase 2 – Learn & Explore

45'

|                |                                                                                                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | Divide the class in 3 or more groups (using different kind of “energy” name (as you can see on the rules of the game, there are: healthy eating, sport, games, rest, hygiene) |
| <b>Step 2:</b> | Each group <b>draw an example</b> of healthy life or <b>create a story</b> with examples of healthy life                                                                      |
| <b>Step 3:</b> | Play the game                                                                                                                                                                 |
| <b>Step 4:</b> | After 3 rounds stop the game and make questions about what pupils understand and if they have fun                                                                             |
| <b>Step 5:</b> | Continue to play till the end                                                                                                                                                 |

## Phase 3 – Reflection & Assessment

10'

|                |                                                                                                                                                                                                                        |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher shows the picture of SDG 3 on the board and asks pupils to think about which types of healthy life activities they do in their everyday life and asks if these habits work for themselves and their family |
| <b>Step 2:</b> | What kind of lifestyle should we have and why? What can we do in our everyday lives?                                                                                                                                   |
| <b>Step 3:</b> | After the question session concludes, the teacher will ask the pupils about their expectations for the game (what they believe they will learn, what they                                                              |







|                |                                                                                                                                                                                              |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | believe about the method of learning through play, etc.) and, if necessary, provide the correct answers, allowing the pupils to increase their knowledge.                                    |
| <b>Step 4:</b> | This activity will allow pupils to learn more about the different types of a healthy lifestyle and why we must take action to achieve SDG 3, while also preparing them for the game session. |

## Teacher Reflection

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied.

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were pupils engaged and interested in the activities?          |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |



## HEALTHY LIFE BOARD GAME - LESSON PLAN 2

### LESSON IDENTITY

**TITLE: LEARNING BY PLAYING THE “HEALTHY LIFE” BOARD GAME**

#### HOW TO USE THE EDUCATIONAL KIT

Educational KIT is designed to provide teachers and educators with methodological support raising pupils’ awareness about healthy lifestyle, recognizing the interdependence of health and development. The idea of this lesson plan is to introduce pupils with the topic “good health and well-being” before playing the board game “Healthy Life”.

**Direct Target Group:** teachers, educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 60 minutes

**AIM:** The aim is to give the necessary knowledge to teachers to explain SDG 3,6, 11, and 17 to their classes with pupils during the moment before using the board game.

#### LEARNING OUTCOMES

Learners are expected to:

- Becoming familiar with the elements of the game;
- Broaden knowledge of SDGs 3,6, 11 and 17 and the theme of the game;
- Understand the importance of Healthy lifestyle, for oneself and for the community;
- Understand what is meant by a healthy lifestyle;
- Be able to identify different strategies and habits for having a healthy lifestyle.

#### TEACHING METHODS AND MEANS

Plenary Session, Group Work, Brainstorming, Computer, Speakers, Projector or Whiteboard, Printable materials.

Using this Lesson plan it will be possible to increase awareness and knowledge in children about SDG 3, 6, 11 and 17 and more specifically get them to think about the importance of a healthy lifestyle while also giving them useful information to encourage an active behavior to protect the environment.

The idea of this lesson is to allow primary school teachers to manage the moment before the implementation of the game by providing the pupils with the important concepts connected to the topic of the game and to the selected SDGs.

This will be done not as a classic frontal lecture, but by incentivizing and encouraging dialogue among pupils by leading them to think about the importance of a healthy lifestyle and the effects it will have for itself and for the community, for the environment and for the future.

### **SDG 3, 6 ,11 and 17**

**SDG 3 Good Health and Well Being:** Over the last 15 years, the number of childhood deaths has been cut in half. This proves that it is possible to win the fight against almost every disease. Still, we are spending an astonishing amount of money and resources on treating illnesses that are surprisingly easy to prevent. The new goal for worldwide Good Health promotes healthy lifestyles, preventive measures and modern, efficient healthcare for everyone.

**SDG 6 Clear water and sanitation:** One in three people live without sanitation. This is causing unnecessary disease and death. Although huge strides have been made with access to clean drinking water, lack of sanitation is undermining these advances. If we provide affordable equipment and education in hygiene practices, we can stop this senseless suffering and loss of life

**SDG 11 Sustainable cities and communities:** The world's population is constantly increasing. To accommodate everyone, we need to build modern and sustainable cities. For all of us to survive and prosper, we need new, intelligent urban planning that creates safe, affordable, and resilient cities with green and culturally inspiring living conditions.

**SDG 17 Partnership for the goals:** The Global Goals can only be met if we work together. International investments and support is needed to ensure innovative technological development, fair trade and market access, especially for developing countries. To build a better world, we need to be supportive, empathetic, inventive, passionate, and above all, cooperative.

## **Phase 1 – Introduction**

**10'**

**Step1:** Before the session game, search for a short video on correct lifestyles, **in your country language or in English**. You can search by



using the following links: <https://sdgs.un.org/goals>  
<https://undic.org/it/agenda-2030/>

## Phase 2 – Learn & Explore

45'

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Step1:  | After the first round of the game, interrupt the game.                                                                                                                                                                                                                                                                                                                                                                                                              |
| Step 2: | <p>Introducing a short role-playing game, as relevant as possible to the context of the children (school, family, gathering spaces with peer)</p> <p>Trace 1 Healthy eating</p> <p>Trace 2 Sport</p> <p>Trace 3 Social Relationships</p> <p>Trace 4 Rest</p> <p>Trace 5 Hygiene</p> <p>If you have divided the class into more groups, you can assign a role playing to each group. 30 minutes to play.</p>                                                         |
| Step 3: | <p><u>Debate session</u></p> <p>After the game session teacher can ask question to the class, about:</p> <p>What kind of Healthy life habits have emerged in role playing?</p> <p>What kind of wrong attitudes have emerged in role playing?</p> <p>Who recognized themselves in role playing? Because of correct or incorrect attitudes?</p> <p>What do you think about personal habits?</p> <p>What do they suggest doing to correct and change wrong habits?</p> |

## Phase 3 – Reflection & Assessment

10'





- Step 1:** Discussion session:  
The teacher asks questions in plenary and tries to make conclusions on how healthy lifestyle sources will help us achieve SDG 3.  
Suggested questions:
- What is the impact of healthy lifestyle sources on our planet?
  - What are the benefits of healthy lifestyle sources?
  - Is there a way to use healthy lifestyles to carry out our daily activities?

## Teacher Reflection

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied.

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were pupils engaged and interested in the activities?          |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |





## HEALTHY LIFE BOARD GAME - LESSON PLAN 3

### LESSON IDENTITY

**TITLE: INTRODUCTION AFTER PLAYING THE BOARD GAME “HEALTHY LIFE”**

#### HOW TO USE THE EDUCATIONAL KIT

Educational KIT is designed to provide teachers and educators with methodological support raising pupils’ awareness about healthy lifestyle, recognizing the interdependence of health and development. The idea of this lesson plan is to introduce pupils to the topic “good health and well-being” before playing the board game “Healthy Life”.

**Direct Target Group:** teachers, educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 60 minutes

**AIM:** The aim is to give the necessary knowledge to teachers to explain SDG 3,6, 11 and 17 to their classes with pupils during the moment after using the board game.

#### LEARNING OUTCOMES

Learners are expected to:

- Becoming familiar with the elements of the game;
- Broaden knowledge of SDGs 3,6, 11 and 17 and the theme of the game;
- Understand the importance of a Healthy lifestyle, for oneself and for the community;
- Understand what is meant by a healthy lifestyle;
- Be able to identify different strategies and habits for having a healthy lifestyle.

#### TEACHING METHODS AND MEANS

Plenary Session, Group Work, Brainstorming, Computer, Speakers, Projector or Whiteboard, Printable materials.

Using this Lesson plan will be possible to increase awareness and knowledge in children about both SDG 3, 6 11 and 17 and more specifically get them to think about the importance of a healthy lifestyle while also giving them useful information to encourage an active behavior to protect the environment.



The idea of this lesson is to allow primary school teachers to manage the moment before the implementation of the game by providing the pupils with the important concepts connected to the topic of the game and to the selected SDGs.

This will be done not as a classic frontal lecture, but by incentivizing and encouraging dialogue among pupils by leading them to think about the importance of a healthy lifestyle and the effects it will have for itself and for the community, for the environment and for the future.

### **SDG 3, 6, 11 and 17**

**SDG 3 Good Health and Well Being:** Over the last 15 years, the number of childhood deaths has been cut in half. This proves that it is possible to win the fight against almost every disease. Still, we are spending an astonishing amount of money and resources on treating illnesses that are surprisingly easy to prevent. The new goal for worldwide Good Health promotes healthy lifestyles, preventive measures, and modern, efficient healthcare for everyone.

**SDG 6 Clear water and sanitation:** One in three people live without sanitation. This is causing unnecessary disease and death. Although huge strides have been made with access to clean drinking water, lack of sanitation is undermining these advances. If we provide affordable equipment and education in hygiene practices, we can stop this senseless suffering and loss of life.

**SDG 11 Sustainable cities and communities:** The world's population is constantly increasing. To accommodate everyone, we need to build modern, sustainable cities. For all of us to survive and prosper, we need new, intelligent urban planning that creates safe, affordable, and resilient cities with green and culturally inspiring living conditions.

**SDG 17 Partnership for the goals:** The Global Goals can only be met if we work together. International investments and support is needed to ensure innovative technological development, fair trade and market access, especially for developing countries. To build a better world, we need to be supportive, empathetic, inventive, passionate, and above all, cooperative.

## **Phase 1 – Introduction**

**10'**

Thanks to the developed board game “HEALTHY LIFE” it will be possible for the teachers to raise awareness with their pupils on the mentioned SDGs.



In fact, each card in the game represents a different example of a healthy lifestyle.

|                |                                                                                                                                                                                                                                                                                                                                 |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher shows a picture of the game they played in the previous session (Lesson Plan 2) and asks pupils some relative questions: <ul style="list-style-type: none"> <li>• Do you remember the topic of the game?</li> <li>• What is SDG 3? (shows a picture of SDG 3 or the video showed in the previous lesson)</li> </ul> |
| <b>Step 2:</b> | The teacher enables pupils to express themselves and provides hints to help pupils raise their schema and prepare for the next assignment.                                                                                                                                                                                      |

## Phase 2 – Learn & Explore

45'

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | The teacher divides the class into 2 - 4 groups and hands out cardboard and markers to each group.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Step 2:</b> | Ask pupils to come up with ways to have a healthy lifestyle. Each group will have to make a presentation on cardboard (illustrations and sentences). The teacher may ask: <ul style="list-style-type: none"> <li>• Why do we have a healthy lifestyle?</li> <li>• How can you help your family maintain a healthy lifestyle?</li> <li>• What correct behaviors for a healthy lifestyle can be followed at school?</li> </ul> The teacher encourages pupils to think creatively and come up with a variety of ideas.                                                                                                                                                        |
| <b>Step 3:</b> | The teacher allows 20 min for the groups to develop a healthy lifestyle plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Step 4:</b> | Each group will appoint a leader who will present their plan and exchange ideas with the rest of the classroom.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Step 5:</b> | Alternative activities for groups: <ol style="list-style-type: none"> <li>1. Paint, artistic and manual laboratory on “good and healthy lifestyle” habits that each of us can do daily”.</li> <li>2. Practice sport tournaments and other outdoor activities in school or city park</li> <li>3. “The healthiest recipe” - Simple Cooking Laboratory processing of free written or dictated texts.</li> <li>4. Keep the class in the school park and continue to play the game board.</li> <li>5. Geocaching: Treasure Hunt through the class tablet with GPS system: evidence clues and treasures are related to the theme of well-being and healthy lifestyle.</li> </ol> |





6. Organizing a short Healthy Life “Video Contests” where the families and other classes are involved.

### Phase 3 – Reflection & Assessment

10'

**Step 1:** When all groups have presented their projects, the teacher will talk about how everyone's effort makes a difference. Then, the teacher will ask for ideas on other ways to have a healthy lifestyle that aren't on the list.

**Step 2:** **Discussion session:**  
The teacher asks questions in plenary and tries to make conclusions on how lifestyle will help us achieve SDG 3.  
Suggested questions:  
What are the benefits of a healthy life?  
What activity do we do most often?  
Who taught us the correct habits?  
What can we do every day to promote a healthy lifestyle?

### Teacher's Reflection

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied.

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were pupils engaged and interested in the activities?          |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |





## TRASH HUNTERS BOARD GAME - LESSON PLAN 1

### LESSON IDENTITY

**TITLE: INTRODUCTION – Class reflection on the importance of recycling collection**

**TARGET GROUP:**

**Direct Target Group:** teachers, and educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 80 min

**AIM:** The aim is to give the necessary knowledge to teachers to explain SDG 4 and 11 to their classes with pupils during the moment before using the board game

### LEARNING OUTCOMES

Learners are expected to:

- Becoming familiar with the elements of the game
- Broaden knowledge of SDGs 4 and 11 and the theme of the game
- Understand the importance of recycling for the environment and society.
- Knowledge of the different types of recyclable materials and the recycling process.
- Ability to identify recyclable and non-recyclable materials.

### TEACHING METHODS AND MEANS

Using this Lesson plan will be possible to increase awareness and knowledge in children about both SDG 4 and 11 and more specifically get them to think about the importance of recycling while also giving them useful information to encourage active behavior to protect the environment.

The idea of this lesson is to allow primary school teachers to manage the moment before the implementation of the game by providing the pupils with the important concepts connected to the topic of the game and to the selected SDGs.





This will be done not as a classic frontal lecture, but by incentivizing and encouraging dialogue among pupils by leading them to think about the importance of recycling and the effects it will have in the cities of the future where they will be living.

### **SDG 4 and SDG 11:**

**SDG 4** has several specific targets, including:

Ensuring that all girls and boys have access to free, equitable, and quality primary and secondary education.

Ensuring that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

Ensuring that all learners acquire the knowledge and skills needed to promote sustainable development.

Increasing the number of qualified teachers in developing countries

Eliminating gender disparities in education and ensuring equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities and indigenous peoples

SDG 11 refers to "Sustainable Cities and Communities," which is one of the 17 Sustainable Development Goals (SDGs) established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. This goal focuses on creating sustainable and livable cities and communities, which are essential for achieving sustainable development and addressing environmental, social, and economic challenges.

The targets associated with SDG 11 are as follows:

1. Ensure access to safe and affordable housing and basic services: This target aims to provide adequate and affordable housing, water and sanitation, energy, transport, and other basic services to all urban residents, including the poor and vulnerable.
2. Provide inclusive and sustainable urbanization and planning: This target aims to promote inclusive and sustainable urbanization and planning, including reducing urban sprawl, improving public transportation, creating green spaces, and promoting compact and mixed-use development.

3. Enhance resilience and disaster risk reduction in cities: This target focuses on reducing the vulnerability of cities to disasters, including climate-related disasters, by improving infrastructure, promoting disaster preparedness, and developing early warning systems.
4. Protect cultural and natural heritage in cities and human settlements: This target aims to protect and promote cultural and natural heritage in cities and human settlements, including historic buildings, cultural landmarks, and natural areas.
5. Ensure access for all to safe, inclusive, and accessible green and public spaces: This target aims to promote the development of green and public spaces that are safe, inclusive, and accessible to all urban residents, including children, women, the elderly, and people with disabilities.
6. Reduce the environmental impact of cities: This target aims to reduce the environmental impact of cities, including air and water pollution, greenhouse gas emissions, and waste generation, by promoting sustainable consumption and production patterns, reducing energy consumption, and promoting renewable energy sources.

SDG 11, which is about creating sustainable cities and communities, is closely connected to SDG 4, which is about ensuring quality education for all. The connection between these two goals is important because education is a key factor in achieving sustainable development, and sustainable cities and communities are necessary for providing quality education to all.

More in detail these two SDGs are closely connected with the recycling topic. Recycling is an important practice that contributes to achieving sustainable development goals by reducing waste, conserving natural resources, and mitigating the impacts of climate change. Here are some ways in which SDG 11, SDG 4, and recycling are interconnected:

1. Access to quality education is essential for promoting recycling practices. By providing education and training on waste management, recycling, and sustainable consumption, people can develop the knowledge, skills, and attitudes needed to create and maintain sustainable cities and communities.
2. Sustainable cities and communities provide a better environment for recycling. By promoting waste reduction and implementing recycling programs, sustainable cities can create a conducive environment for recycling, which can lead to better environmental outcomes.
3. Recycling promotes equity in education and environmental justice. By reducing disparities in access to basic services, such as waste management and recycling infrastructure, and by promoting inclusive and accessible recycling policies, sustainable cities can help ensure that all children have access to quality

education and environmental benefits, regardless of their background or socio-economic status.

4. Recycling provides opportunities for experiential learning. By promoting recycling and waste reduction initiatives in schools and communities, pupils can engage in hands-on learning experiences that promote sustainability and environmental awareness.
5. Recycling promotes a circular economy and sustainable production and consumption patterns, which are essential for achieving SDG 12, "Responsible Consumption and Production". By reducing waste and conserving natural resources, recycling can contribute to a more sustainable and circular economy, which in turn can help achieve other sustainable development goals, including SDG 11 and SDG 4.

Thanks to the developed board game "TRASH HUNTERS" it will be possible for the teachers to raise awareness with their pupils on the mentioned SDGs.

Each card in the game is representing a different bin and an example of trash/situation to connect with the correct recycling bin.

## Phase 1

10'

|                |                                                                              |
|----------------|------------------------------------------------------------------------------|
| <b>Step 1:</b> | Illustrate the SDGs 4 and 11, the topic, and the different cards of the game |
| <b>Step 2:</b> | Divide the class into groups of 4                                            |

## Phase 2

30'

|                |                                                                                                                          |
|----------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | Outline the questions and give each group 20 minutes to respond                                                          |
| <b>Step 2:</b> | Brainstorm with the children about the topic of the game and the importance of the environment in the present and future |

**Phase 3****40'**

|                |                                                                                                                      |
|----------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | Provide children with correct information about the different topics discussed (Use videos, PPT presentations, etc.) |
| <b>Step 2:</b> | Ask children to imagine and draw in groups the city of the future                                                    |

In the first phase, teachers will demonstrate the SDGs related to the game and show the game cards in detail, as support to provide information on the topic of recycling and to allow children to familiarize themselves with the different elements of the game.

Children will be divided into groups and assigned some questions to discuss. These will be useful both for teachers to understand the level of knowledge on the topic of "recycling" and to understand the different daily habits that each child has. The questions will be useful to stimulate curiosity and the desire to start playing the game to learn even more.

These questions are only indicative and can be changed with others:

1. What items do you usually throw away in the trash?
2. Do you recycle any items? If so, which ones?
3. How often do you take out the trash or recycle?
4. Do you know where your trash and recycling go after they're collected?
5. Have you ever thought about reducing the amount of waste you produce? How could you do that?
6. Do you reuse any items instead of throwing them away?
7. Do you know the difference between biodegradable, recyclable, and non-recyclable items?
8. How can we encourage others to recycle and reduce waste?
9. How can we make recycling fun?
10. Do you know what happens to items that are not disposed of properly?
11. Do you have any suggestions for how we could reduce waste in our household?

Once the question session is over, the teacher will ask the children about their expectations of the game (what they think they will learn, what they think about the method of learning by playing, etc.) and then provide, where necessary, the correct answers giving them a way to increase their knowledge. This will be done using interactive digital tools, which will ensure that children maintain attention and learn while having fun.





In the last phase, before the game starts, the teacher will ask pupils to draw the city of the future, using their imagination and the new information they have acquired.

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were teachers engaged and interested in the activities?        |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |







## TRASH HUNTERS BOARD GAME - LESSON PLAN 2

### LESSON IDENTITY

**TITLE:** Stimulating reflection about the importance of recycling while playing

**TARGET GROUP:**

**Direct Target Group:** teachers, and educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 60 min

**AIM:** The aim is to give the necessary knowledge to teachers to explain SDG 4 and 12 to their classes with pupils using a board game

#### LEARNING OUTCOMES

Learners are expected to:

- Be more aware of Quality Education
- Be more aware of Responsible consumption
- Create discussions and debates with pupils during game boards activity

#### TEACHING METHODS AND MEANS: SDG 4 and SDG 12

Applying Game-Based Learning

Using the PLAE's Board Game "Trash Hunters" and this Lesson plan will be possible to raise awareness on SDG 4 and 12 with pupils.

The idea of this lesson is to allow primary school teachers to implement the game with pupils and meanwhile address questions and explain concepts, creating a discussion with them.

First of all, SDG 4 stands for the fourth goal of the United Nations Sustainable Development Goals, which is "Quality Education." The goal aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

**SDG 4** has several specific targets, including:

- Ensuring that all girls and boys have access to free, equitable, and quality primary and secondary education



- Ensuring that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
- Ensuring that all learners acquire the knowledge and skills needed to promote sustainable development
- Increasing the number of qualified teachers in developing countries
- Eliminating gender disparities in education and ensuring equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities and indigenous peoples

**SDG 12** refers to the twelfth goal of the United Nations Sustainable Development Goals, which is "Responsible Consumption and Production." This goal aims to ensure that sustainable consumption and production patterns are adopted worldwide to reduce the negative impact of human activities on the environment and natural resources.

SDG 12 has several specific targets, including:

- Achieving sustainable management and efficient use of natural resources
- Halving per capita global food waste at the retail and consumer level and reducing food losses along production and supply chains
- Ensuring that people have access to relevant information and awareness for sustainable development and lifestyles.
- Promoting the development of sustainable tourism that creates jobs and promotes local culture and products while minimizing its environmental impact.
- Encouraging companies to adopt sustainable practices and report on their sustainability performance.

The achievement of SDG 12 is critical for achieving sustainable development and ensuring that future generations can enjoy a healthy and thriving planet.

SDG 4 (Quality Education) and SDG 12 (Responsible Consumption and Production) are both closely related to recycling, which is a critical aspect of responsible consumption and production.

**Recycling** is the process of converting waste materials into new products to reduce the consumption of raw materials, energy usage, and environmental pollution. Recycling is a key strategy for achieving SDG 12, which aims to promote sustainable consumption and production patterns.

To achieve SDG 12, education plays a vital role. Education can promote awareness, knowledge, and skills needed to understand the benefits of recycling and the impact of human activities on the environment. Through education, individuals can learn about



sustainable practices, such as reducing waste, using resources efficiently, and choosing sustainable products and services. Education can also teach people about the importance of separating waste for recycling and how to recycle properly to minimize environmental impact.

Furthermore, SDG 4 can support the promotion of recycling practices. Access to quality education can empower individuals and communities to make informed decisions and take action to reduce waste and recycle materials. Education can also provide people with the skills and knowledge needed to develop innovative recycling solutions, such as upcycling, which involves transforming waste materials into new products of higher value.

By achieving SDG 4 and SDG 12, we can create a culture of responsible consumption and production that includes recycling as a key practice. Recycling is not only a sustainable practice, but it also creates job opportunities, reduces the cost of waste disposal, and conserves natural resources. It is an essential component of the circular economy, where materials are reused, recycled, or repurposed to minimize waste and maximize the value of resources.

Thanks to the developed board game “TRASH HUNTERS” will be possible for the teachers to raise awareness with their pupils on the mentioned SDGs.

Each card in the game is representing a different bin and an example of trash/situation to connect with the correct recycling bin.

In conclusion, connecting SDG 4 and SDG 12 with recycling highlights the crucial role of education in promoting responsible consumption and production patterns that include recycling. Education empowers individuals and communities to take action to reduce waste and recycle materials, contributing to the achievement of the SDGs and a more sustainable future for all.

## Phase 1

**15'**

- |                |                                             |
|----------------|---------------------------------------------|
| <b>Step 1:</b> | Divide pupils into groups to play the game. |
| <b>Step 2:</b> | Explain the rules of the game.              |

## Phase 2

**25'**



|                |                                                                         |
|----------------|-------------------------------------------------------------------------|
| <b>Step 1:</b> | Let the kids play the game.                                             |
| <b>Step 2:</b> | After 15 minutes of the game stop them and ask questions topic related. |

### Phase 3

20'

|                |                                                                                              |
|----------------|----------------------------------------------------------------------------------------------|
| <b>Step 1:</b> | During the questions, phase create proactive debate and provide information on SDG 4 and 12. |
| <b>Step 2:</b> | Once the pupils answered the questions the game can restart.                                 |

To create a discussion with your pupils in this section we will give some questions as examples that you can use. Some of them will be good to implement by showing the board game card to allow the pupils to play during the second part of the activity, being more aware not only of the game but also of its content.

#### GENERAL QUESTIONS:

- In your opinion, what does quality education mean, and why is it important?
- That means in your opinion "Inclusive education"?
- How can we ensure that education is inclusive and equitable for all learners, regardless of their background or circumstances?

#### GAME QUESTIONS:

- What is the game about?
- Did you find any card that you didn't understand its meaning? Which one?

(Here if some of the pupils didn't understand one card is good to involve the others to explain him/her what they understand and in case add some information about it after the pupils gave their opinions)

- What is recycling, and why is it important?
- How can we sort and separate recyclable materials from non-recyclable ones?





- Which is the color of the bin that we use to recycle papers/glass/ plastic/ ... (choose one and in case ask them to show you the corresponding card)
- Choose a random card from the deck and ask the class what it means in their opinion (repeat this with a few cards)
- How can we reduce waste and consumption in our daily lives?
- What are some challenges or barriers to effective recycling, and how can we overcome them?
- What is the impact of recycling on climate change?

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied

| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were teachers engaged and interested in the activities?        |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |







## TRASH HUNTERS LESSON PLAN 3

**TITLE:** "Reduce, Reuse, Recycle: taking care of our Planet"

**TARGET GROUP:**

**Direct Target Group:** teachers, and educators working with primary school pupils (6-12 years old)

**Indirect Target Group:** primary school pupils; aged 6 – 12

**ESTIMATED DURATION:** 80 mins

**AIM:** The aim is to help pupils apply the knowledge and skills gained from the lecture and board game on recycling to their daily lives.

### LEARNING OUTCOMES

Learners are expected to:

- Be more motivated to implement sustainable practices in daily life.
- Understand the importance of individual actions in promoting sustainability.
- Understand that learning processes can also take place through games.

### TEACHING METHODS AND MEANS:

After using the PLAE's Board Game "Trash Hunters" and this Lesson plan will be possible to increase awareness and knowledge in children about both SDG 4 and 13 and more specifically to allow pupils to focus on practical ways to implement sustainable practices in daily life.

The idea of this lesson is to allow primary school teachers to manage the moment after the implementation of the game by providing the pupils with an engaging activity connected to the topic of the game and the selected SDGs.

This will be done not as a classic frontal lecture, but by incentivizing and encouraging dialogue and creativity among pupils with a feedback session and a practical activity.

**SDG 4 and SDG 13:**



**SDG 4** has several specific targets, including:

- Ensuring that all girls and boys have access to free, equitable, and quality primary and secondary education.
- Ensuring that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.
- Ensuring that all learners acquire the knowledge and skills needed to promote sustainable development.
- Increasing the number of qualified teachers in developing countries
- Eliminating gender disparities in education and ensuring equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities and indigenous peoples

SDG 13 refers to the 13th Sustainable Development Goal of the United Nations' 2030 Agenda for Sustainable Development. The goal of SDG 13 is to take urgent action to combat climate change and its impacts.

The SDG 13 targets include:

- Strengthening resilience and adaptive capacity to climate-related hazards and natural disasters
- Integrating climate change measures into national policies, strategies, and planning
- Improving education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning
- Promoting mechanisms for raising capacity for effective climate change-related planning and management in the least developed countries and small island developing States, including focusing on women, youth, and local and marginalized communities.

SDG 13 recognizes the urgent need to address climate change and its impacts, which are among the greatest challenges facing humanity today. The goals of SDG 13 are critical for protecting the planet and ensuring a sustainable future for all.

SDG 4 and SDG 13 are connected in several ways, as they are both interdependent and mutually reinforcing. Education can play a role in addressing climate change by raising awareness and understanding of the causes and impacts of climate change, as well as promoting the development of skills and knowledge necessary for taking action to mitigate and adapt to its impacts.

Achieving sustainable development requires action on both education and climate change. By promoting education and climate action together, we can build a more resilient and sustainable future for all.

**Phase 1****10'**

|                |                                                 |
|----------------|-------------------------------------------------|
| <b>Step1:</b>  | Divide the class into groups                    |
| <b>Step 2:</b> | Start the feedback phase after testing the game |

**Phase 2****30'**

|                |                                                                                       |
|----------------|---------------------------------------------------------------------------------------|
| <b>Step1:</b>  | Ask the pupils to brainstorm ways to reduce waste in the classroom.                   |
| <b>Step 2:</b> | In turn, pupils should identify recyclable and non-recyclable items in the classroom. |

**Phase 3****40'**

|                |                                                                                                                                       |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step1:</b>  | Divide the class into small groups and ask each group to create a recycling plan for the classroom.                                   |
| <b>Step 2:</b> | Presentation: Have each group present their recycling plan to the class and encourage feedback and suggestions from the other pupils. |

**Step1**

In the first stage, the teacher will ask children for feedback on the game, with questions like these:

1. What did you enjoy about the game?
2. What did you learn from the game?
3. Was there anything that you found challenging about the game?
4. Did you find the game helpful in understanding the topic?
5. What was your favorite part of the game?
6. Did you feel that the game was easy to understand and play?



7. Was there anything that you would change about the game?
8. Do you feel more knowledgeable about the topic after playing the game?

### **Step 2**

During this phase, the teacher will introduce the activity by explaining the importance of waste reduction and recycling and the three R's of waste management: Reduce, Reuse, and Recycle.

### **Step 3**

Have a group discussion with the pupils to brainstorm different ways to reduce waste in their school or community. Encourage them to think creatively and come up with a variety of ideas. Some ideas could be: turning off lights and electronics when not in use, using reusable water bottles and lunch containers, and using scrap paper for notes.

### **Step 4**

Ask pupils to identify recyclable and non-recyclable items in the classroom to check that the children have understood the difference.

### **Step 5**

This is the development phase in which pupils will work in groups and will work on the recycling plan. The plan should include strategies for reducing waste, separating recyclables from non-recyclables, and disposing of hazardous materials.

### **Step 6**

Each group will have a leader who will present the plan and then over the course of the month ensure that the strategy is adhered to. Each month the leader will change to allow all the children to learn these good practices. This activity promotes collaboration and teamwork while also reinforcing the importance of sustainable practices.

After the lesson, the trainer reflects on how the entire session was. Please rate the level of satisfaction by answering the following questions. Please use the following rating scale: 1- very satisfied, 2-satisfied, 3-Neutral, 4-Unsatisfied, 5-very unsatisfied



| No | Question                                                       | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------|---|---|---|---|---|
| 1. | Did the lesson end within an appropriate time frame?           |   |   |   |   |   |
| 2. | Were the instructions clear enough?                            |   |   |   |   |   |
| 3. | Were teachers engaged and interested in the activities?        |   |   |   |   |   |
| 4. | Were the aim and the objectives of the lesson met by teachers? |   |   |   |   |   |
| 5. | What would she/he do differently for the next session?         |   |   |   |   |   |







## DESCRIPTION OF GOOD PRACTICES (SDGs)

Below we will list a number of free resources available online for free that can be used by teachers as examples to make their lessons on a selected number of SDGs-related topics engaging and fun.

### Resources for SDG 3 – Good Health and well-being

|               |                                                                                                                     |
|---------------|---------------------------------------------------------------------------------------------------------------------|
| Title:        | HIV And Health Education                                                                                            |
| Organization: | UNESCO                                                                                                              |
| Link:         | <a href="https://unesdoc.unesco.org/ark:/48223/pf0000222122">https://unesdoc.unesco.org/ark:/48223/pf0000222122</a> |
| Description:  | A quick summary of HIV And Health Education, providing basic knowledge and practical information.                   |

|               |                                                                                                                                                                                                                                           |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Rise of the Plate PioneerZ                                                                                                                                                                                                                |
| Organization: | Worlds' Largest Lesson in partnership with Unicef                                                                                                                                                                                         |
| Link:         | <a href="https://worldslargestlesson.globalgoals.org/wp-content/uploads/2020/08/Rise-of-the-Plate-PioneerZ-English.pdf">https://worldslargestlesson.globalgoals.org/wp-content/uploads/2020/08/Rise-of-the-Plate-PioneerZ-English.pdf</a> |
| Description:  | A comic adventure to support Sustainable Development Goals 2 and 3                                                                                                                                                                        |

|               |                                                                                                                                                                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Introducing the Plate PioneerZ                                                                                                                                                                                                    |
| Organization: | Worlds' Largest Lesson in partnership with Unicef                                                                                                                                                                                 |
| Link:         | <a href="https://worldslargestlesson.globalgoals.org/wp-content/uploads/2020/08/Introducing-the-Plate-PioneerZ.pdf">https://worldslargestlesson.globalgoals.org/wp-content/uploads/2020/08/Introducing-the-Plate-PioneerZ.pdf</a> |
| Description:  | A Lesson Plan to support Sustainable Development Goals 2 and 3                                                                                                                                                                    |

|               |                                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------------------------------|
| Title:        | SDG 3 - Take it easy !                                                                                                  |
| Organization: | Erasmus+ Project: Stairway to SDG                                                                                       |
| Link:         | <a href="https://www.stairwaytosdg.eu/en/act/147-take-it-easy">https://www.stairwaytosdg.eu/en/act/147-take-it-easy</a> |





|              |                                                          |
|--------------|----------------------------------------------------------|
| Description: | A Lesson Plan to support Sustainable Development Goals 3 |
|--------------|----------------------------------------------------------|

|               |                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------|
| Title:        | Good Health and Well-Being Goals                                                                      |
| Organization: | Simpleshow foundation                                                                                 |
| Link:         | <a href="https://www.youtube.com/watch?v=HN9Gz7rCFo4">https://www.youtube.com/watch?v=HN9Gz7rCFo4</a> |
| Description:  | A video that explains the good health and well-being goals.                                           |

### Resources for SDG 4 – Quality Education

|               |                                                                                                                                                                                                                                     |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Why Are So Many Children Still Not In School?                                                                                                                                                                                       |
| Organization: | Worlds' Largest Lesson in partnership with Unicef                                                                                                                                                                                   |
| Link:         | <a href="http://cdn.worldslargestlesson.globalgoals.org/2016/06/12-Why-Are-So-Many-Children-Still-Not-In-School.pdf">http://cdn.worldslargestlesson.globalgoals.org/2016/06/12-Why-Are-So-Many-Children-Still-Not-In-School.pdf</a> |
| Description:  | A Lesson Plan to support Sustainable Development Goal 4. This resource tries to investigate the educational challenges that some children confront.                                                                                 |

|               |                                                                                                                                         |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | 2 girls 2 lives                                                                                                                         |
| Organization: | Send My Friend to School                                                                                                                |
| Link:         | <a href="https://sendmyfriend.org/resource/1goal-2-girls-2-lives/">https://sendmyfriend.org/resource/1goal-2-girls-2-lives/</a>         |
| Description:  | A film that tells the story of 2 girls born on the same day in Johannesburg. One had the opportunity to go to school, the other didn't. |

|               |                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------|
| Title:        | #SDG4 Data to Get All Children in School and Learning by 2030                                         |
| Organization: | UNESCO                                                                                                |
| Link:         | <a href="https://www.youtube.com/watch?v=X8bKAGr6xiY">https://www.youtube.com/watch?v=X8bKAGr6xiY</a> |
| Description:  | A video about the importance of getting all children into school and studying by 2030.                |



### Resources for SDG 5 – Gender equality

|               |                                                                                                                                                                                                                                             |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | From Where I Stand                                                                                                                                                                                                                          |
| Organisation: | World's Largest Lesson in partnership with Unicef                                                                                                                                                                                           |
| Link:         | <a href="https://worldslargestlesson.globalgoals.org/wp-content/uploads/2020/08/Final-Gender-Equality-Lesson-Plan-1.pdf">https://worldslargestlesson.globalgoals.org/wp-content/uploads/2020/08/Final-Gender-Equality-Lesson-Plan-1.pdf</a> |
| Description:  | The aim of the resource is to gain better understanding and awareness of one global topic, gender equality, to model more effective and active global citizenship.                                                                          |

|               |                                                                                                                                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Does society treat men and women the same?                                                                                                                                                                              |
| Organisation: | <a href="http://www.liveworksheets.com">www.liveworksheets.com</a>                                                                                                                                                      |
| Link:         | <a href="https://www.liveworksheets.com/worksheets/en/Social_Studies/Gender_equality/GENDER_EQUALITY_bq8184rq">https://www.liveworksheets.com/worksheets/en/Social_Studies/Gender_equality/GENDER_EQUALITY_bq8184rq</a> |
| Description:  | The aim of the activity is to discuss men and women's responsibilities and roles in the society.                                                                                                                        |

|               |                                                                                                                                                                                                                                                                  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Challenging Prejudice Gender Equality Scenario Cards                                                                                                                                                                                                             |
| Organisation: | TWINKL website                                                                                                                                                                                                                                                   |
| Link:         | <a href="https://www.twinkl.co.uk/resource/gender-equality-ks1-scenario-cards-t-lf-1644172696">https://www.twinkl.co.uk/resource/gender-equality-ks1-scenario-cards-t-lf-1644172696</a>                                                                          |
| Description:  | Everyone in the world deserves to be treated with respect. By discussing important issues, such as equality, with young children, we can equip them with the knowledge and understanding to challenge stereotypes and stand against prejudice and discrimination |

|               |                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Gender Roles and Stereotypes                                                                                                                                                                                                                                                                                                                                |
| Organisation: | Youtube educational video                                                                                                                                                                                                                                                                                                                                   |
| Link:         | <a href="https://www.youtube.com/watch?v=Ulh0DnFUGsk">https://www.youtube.com/watch?v=Ulh0DnFUGsk</a>                                                                                                                                                                                                                                                       |
| Description:  | People have occasionally felt pressure to act or look a certain way based on their gender. This pressure can make people unhappy, if they are being asked to be or act in a way that does not match who they really are. Today people have more freedom than ever to express themselves in ways that feel true to who they are, regardless of their gender. |

### Resources for SDG 6 - Clean water and sanitation

|        |                     |
|--------|---------------------|
| Title: | Clean water for all |
|--------|---------------------|



|               |                                                                                                                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Organisation: | World's Largest Lesson in partnership with Unicef                                                                                                                                 |
| Link:         | <a href="http://cdn.worldslargestlesson.globalgoals.org/2016/06/14-Clean-Water-for-All.pdf">http://cdn.worldslargestlesson.globalgoals.org/2016/06/14-Clean-Water-for-All.pdf</a> |
| Description:  | This resource aims to define water pollution, outline some of the causes of water pollution and describe the global inequality of access to clean water.                          |

|               |                                                                                                                                                                                             |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | World water Crisis                                                                                                                                                                          |
| Organisation: | British Council- Learn English Teens                                                                                                                                                        |
| Link:         | <a href="https://learnenglishteens.britishcouncil.org/study-break/video-zone/world-water-crisis">https://learnenglishteens.britishcouncil.org/study-break/video-zone/world-water-crisis</a> |
| Description:  | The aim of this lesson is to increase awareness of the water issue and its shortage in the world.                                                                                           |

|               |                                                                                                                                                                                             |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | World Water day                                                                                                                                                                             |
| Organisation: | British Council- Learn English Teens                                                                                                                                                        |
| Link:         | <a href="https://learnenglishteens.britishcouncil.org/study-break/magazine-zone/world-water-day">https://learnenglishteens.britishcouncil.org/study-break/magazine-zone/world-water-day</a> |
| Description:  | This lesson is aimed to make school children be aware of the World Water Day to celebrate water and make a difference for people who do not have the water they need.                       |

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Water on Earth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Organisation: | Sydney water                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Link:         | <a href="https://www.sydneywater.com.au/content/dam/sydneywater/documents/education/water-on-earth-lesson-plans.pdf">https://www.sydneywater.com.au/content/dam/sydneywater/documents/education/water-on-earth-lesson-plans.pdf</a>                                                                                                                                                                                                                                                                    |
| Description:  | <p>This material gives teachers various ideas on how to build pupils' understanding of water on Earth, its limited availability and that there are different types of water and usable amounts.</p> <p>The suggested learning sequence will investigate the distribution and location of water on a range of scales on Earth, explore the difference between water sources – freshwater, saltwater and the useable amounts on Earth, recognise that drinking water can come from a mix of water su</p> |

|               |                                                                                                                                                                                                                                                                                                                            |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Clean Water and Sanitation                                                                                                                                                                                                                                                                                                 |
| Organisation: | TWINKL website                                                                                                                                                                                                                                                                                                             |
| Link:         | <a href="https://www.twinkl.co.uk/resource/cfe-p-233-global-goals-clean-water-and-sanitation-first-level-idl-and-resource-pack">https://www.twinkl.co.uk/resource/cfe-p-233-global-goals-clean-water-and-sanitation-first-level-idl-and-resource-pack</a>                                                                  |
| Description:  | United Nations Global Goal 6 is to have Clean Water and Sanitation. That is the theme of this brilliant resource pack with everything you need to prepare an IDL topic on this theme. It contains planning and display resources as well as activities to get your class thinking about how they achieve this global goal. |

|        |                                           |
|--------|-------------------------------------------|
| Title: | How We Can Keep Plastics Out of Our Ocean |
|--------|-------------------------------------------|





|               |                                                                                                                                        |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Organisation: | National Geographic                                                                                                                    |
| Link:         | <a href="https://www.youtube.com/watch?v=HQTUWK7CM-Y">https://www.youtube.com/watch?v=HQTUWK7CM-Y</a>                                  |
| Description:  | This video stresses the issue of plastic pollution in water and emphasises its role on natural habitats of animals healthy and safety. |

### Resources for SDG 8 – Decent work and economic growth

|               |                                                                                                                                                                                                                                                                     |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Go Bananas                                                                                                                                                                                                                                                          |
| Organisation: | Oxfam                                                                                                                                                                                                                                                               |
| Link:         | <a href="https://www.oxfam.org.uk/education/classroom-resources/go-bananas-help-learners-aged-7-11-discover-where-their-food-comes/">https://www.oxfam.org.uk/education/classroom-resources/go-bananas-help-learners-aged-7-11-discover-where-their-food-comes/</a> |
| Description:  | Updated with new facts, photographs and stories, this cross-curricular resource will help learners aged 7-11 to discover where their food comes from.                                                                                                               |

|               |                                                                                                                                                                                                                                                                           |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | The Clothes Line                                                                                                                                                                                                                                                          |
| Organisation: | Oxfam                                                                                                                                                                                                                                                                     |
| Link:         | <a href="https://oxfamilibrary.openrepository.com/handle/10546/620664">https://oxfamilibrary.openrepository.com/handle/10546/620664</a>                                                                                                                                   |
| Description:  | Series of lesson plans and photo story teaches about Fair Trade, the textiles industry and India. Lessons include an exploration of the journey of cotton from the field to the shops; a quiz about India; and a class survey about the origins of learners' own clothes. |

|               |                                                                                                                                                                                                     |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | The Global Goals Food Project: Every Plate Tells A Story                                                                                                                                            |
| Organisation: | Unicef                                                                                                                                                                                              |
| Link:         | <a href="http://cdn.worldslargestlesson.globalgoals.org/2017/07/WLL-Lesson-Plan-July-Edit-20173.pdf">http://cdn.worldslargestlesson.globalgoals.org/2017/07/WLL-Lesson-Plan-July-Edit-20173.pdf</a> |
| Description:  | Advocacy Poster raising aiming to stop and think about the Global Goals. It raises the following questions: What can I do differently? Who can I tell?                                              |





**Resources for SDG 13 – Climate action**

|                   |                                                                                                                                                                                                                                                                                                               |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:            | Climate Change                                                                                                                                                                                                                                                                                                |
| Organisation:     | UNESCO                                                                                                                                                                                                                                                                                                        |
| Type of activity: | Classroom activity                                                                                                                                                                                                                                                                                            |
| Link:             | <a href="https://worldslargestlesson.globalgoals.org/wpcontent/uploads/2020/08/Introducing-the-Plate-PioneerZ.pdf">https://worldslargestlesson.globalgoals.org/wpcontent/uploads/2020/08/Introducing-the-Plate-PioneerZ.pdf</a>                                                                               |
| Description:      | Thanks to this resource: <ul style="list-style-type: none"><li>• Learners will learn about each other's personal experiences, knowledge and feelings concerning climate change;</li><li>• The activity will bring out learners' collective experience and level of understanding of climate change.</li></ul> |

|               |                                                                                                                                      |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Climate box and education                                                                                                            |
| Organisation: | United Nations Development Programme                                                                                                 |
| Link:         | <a href="http://climate-box.com/">http://climate-box.com/</a>                                                                        |
| Description:  | Climate Box is a comprehensive learning toolkit that educates school children about climate change and inspires them to take action. |

|               |                                                                                                          |
|---------------|----------------------------------------------------------------------------------------------------------|
| Title:        | Understand goal 13: climate action (Primary)                                                             |
| Organisation: | Participate                                                                                              |
| Link:         | <a href="https://www.youtube.com/watch?v=x68J435E0S4">https://www.youtube.com/watch?v=x68J435E0S4</a>    |
| Description:  | Video explanation of climate action using language suitable for elementary school children to understand |

|               |                                                                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:        | Chakra The Invincible fights climate change                                                                                                                                                           |
| Organisation: | UNICEF                                                                                                                                                                                                |
| Link:         | <a href="https://www.yumpu.com/en/document/read/55025200/chakra-the-invincible-fights-climate-change">https://www.yumpu.com/en/document/read/55025200/chakra-the-invincible-fights-climate-change</a> |
| Description:  | An educational comic strip about a special adventure to support action on climate change                                                                                                              |





## CONCLUSION AND SUMMARY

The PLAE Toolkit is a free resource and guide for primary school teachers who wish to combine the traditional school curriculum with an in-depth study of sustainable development and the SDGs of the 2030 Agenda in both formal and informal educational settings. It is designed for primary school teachers whose pupils' range in age from 6 to 12 years.

It aims to be a resource for educational professionals and families to support primary school pupils to become future sustainable citizens. The Educational KIT, combined with the set of board games, ensure a more effective learning process, by providing teachers and educational professionals all the needed knowledge and know-how of implementing non-formal educational methods, activities, and instruments to address the topic of SDGs with their pupils. Each of the four Board Games in the PLAE Toolkit focuses on a different aspect of the SDGs for which lesson plans have been developed.

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