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EDUCATIONAL SCENARIO

SUSTAINABLE DEVELOPMENT GOALS

(ENGLISH VERSION)



**Escola Nacional
de Saúde Pública**

UNIVERSIDADE NOVA DE LISBOA

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Context

The Sustainable Development Goals (SDGs) provide a framework to address challenges faced worldwide. The United Nations Sustainable Development Agenda, created in 2015, includes 17 SDGs to be achieved by 2030. It was adopted by 193 members and is a result of the joint work of Governments and Citizens to meet an extended set of goals, such as making energy clean and affordable, stopping global warming, ending hunger and poverty, promoting healthy lives, and creating sustainable cities and communities. Teaching the SDGs in schools promotes awareness on the global challenges and individual responsibility for actions while committing students to build a better and more sustainable future for everyone. Therefore, learning about the SDGs, reporting performance and actions, participating and/or developing campaigns, are dimensions of competence important for students' citizenship. The scenario supports teachers in encouraging students to be active participants in their local and global communities to solve the biggest challenges the world faces today while exploring how schools can help advancing the Global Goals and preparing them to capture evidence and communicate progresses. The final project engages students in community discourse on measures they can adopt to introduce positive changes, with big or small actions, thus creating a connection between students, the school, the community, and local stakeholders.

Scientific content and its relevance to public health education

The SDGs aim to boost citizens quality of life globally, without hindering the ability of future generations to meet their own needs, and promoting the integration of environmental, social, and economic factors into decision making. Public health is both a precondition for sustainable development and a significant outcome of it. Health and SDGs are intimately interconnected, as sustainable development does not occur in societies with persistent socio-economic inequalities, poverty, large scale environmental degradation, or widespread diseases. Health itself is one of the SDGs: Goal 3 aims to ensure healthy lives and promote well-being for all at all ages. Other goals address the main determinants of health. SDGs are so interconnected and progress requires integrated actions from different groups to address the social, economic and environmental dimensions of health and health-related SDGs. Students are particularly stimulated to be active participants in their local and global communities when engaged in real-life challenges, practical goals and problem-solving activities that connect global challenges with their living environments, and particularly with issues related to their health and well-being. School curriculums in the field of geography, science and citizenship promote, at different levels, fundamental learnings regarding the SDGs, their importance and pathways for action. The scientific and pedagogical content of the scenario allows teachers and students to explore sustainable development in its relationship with public health, and prepares them to take action in their community. The scenario contains inquiry based activities, learning objects, and updated evidence on SDGs implementation. It also challenges others to have a contribution for their community health and well-being, by engaging families in educational activities, and reaching people with a local community project and a set of open schooling events, organized by the school and led by students.

Estimated duration

5 sessions of 40-45 minutes

5-6 sessions of 40-45 minutes for students projects

Classroom organization requirements

From lessons 1 to 5, students work both alone and in groups. The use of computer is necessary in lessons 1 to 4 for the teacher to explore the learning objects in lessons. The use of computer is necessary in lesson three for the students to explore the learning objects. From lesson six onwards, students form four- or five-member groups for the development of the school project. The use of computer may be necessary.

Prerequisite knowledge and skills

Use of internet, use of web search engines, tools of Microsoft Office software (basic level), English (basic level).

Content glossary

Biodiversity. The different kinds of life found in one area—the variety of animals, plants, fungi, and microorganisms that make up our natural world.

Clean energy. Energy generated from recyclable sources and without emitting greenhouse gases.

Climate change. Long-term shifts in temperatures and weather patterns (regarding temperature, precipitation, and wind) that are especially caused by human activities.

Food security. People have, at all times, physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.

Gases. A state of matter consisting of particles that have neither a defined volume nor defined shape.

GDP. Total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. The gross domestic product (GDP) serves to measure the economic evolution of a country and is composed of the set of all goods and services, which produces value by national or foreign companies, in a given country.

Gender equality. The state in which access to rights or opportunities is not affected by gender.

Inequality. Unequal and/or unjust distribution of resources and opportunities among members of a given society.

Material footprint. The total amount of raw materials extracted to meet final consumption demands.

Poverty. The state of one who lacks financial resources or material possessions to fulfill his/her basic needs.

SDG Indicators. Statistical/mathematical value used to monitor the progress of the SDGs.

Sustainable cities. An urban center engineered to improve its environmental impact through urban planning and management.

Sustainable Development Goals. Collection of 17 interlinked global goals designed to be a blueprint to achieve a better and more sustainable future for all.

Sustainable development. Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.

Universal health coverage. All people have access to the health services they need, when and where they need them, without financial hardship.

Virus. Infectious agent of small dimension and simple composition that can multiply only in living cells of animals, plants, or bacteria.

Water, sanitation, and hygiene. Essential liquid for survival of humans, animals, and plants. Conditions related to clean drinking water and adequate treatment and disposal of human excreta and sewage. Conditions or practices conducive to maintaining health and preventing disease, especially through cleanliness.

Pedagogical glossary

Brainstorming. Brainstorming is an instructional technique with several variations, that might take place within small groups or with the entire class. During brainstorming all students shortly express their ideas or concepts which are relevant to a given guiding question or central term. Criticism of the ideas is absent during brainstorming and its aim is the production of a lot and divergent ideas.

Collaborative learning. Collaborative learning is a didactic model that involves a set of instructional techniques, during which students cooperate and/or collaborate during the learning process, instead of the atomistic, and often rival, view of students by the traditional school. Collaborative learning can boost the learning outcomes, students' interests and participation and their collaboration and communication skills.

Information. Facts, ideas, concepts, and data that have been recorded, analyzed, and organized in a way that facilitates interpretation and subsequent action.

Inquiry based learning. Inquiry-based learning refers to the engagement of students in learning activities during which they practice several scientific inquiry skills. Students make use of these skills to answer scientific questions either posed by the students themselves or by the teacher, by the handling of authentic data, either experimentally collected by themselves or given already collected. Some common inquiry skills include constructing and using models, carrying out experiments, data collection and organization, variable handling, data driven conclusion making and communicating over scientific issues.

Project based learning. Project based learning is an instructional model of active learning. It has several forms, during which students work in groups on the development of projects, which often refer to authentic problems or situations approaching real life conditions. Project based learning includes the phases of project initiation, project development and project presentation.

Sources: [Public Health Agency of Canada](#); [EuroHealthNet](#); [National Library of Medicine](#)

Indicative literature

Pradhan, P., Costa, L., Rybski, D., Lucht, W., & Kropp, J. P. (2017). A systematic study of sustainable development goal (SDG) interactions. *Earth's Future*, 5(11), 1169-1179.

United Nations (2018). *The Lazy Person's Guide to Saving the World*. Available at: <https://www.un.org/sustainabledevelopment/takeaction/>

United Nations (2021). *Progress towards the Sustainable Development Goals. Report of the Secretary-General. E/2021/58. 2021 session. Available at: https://sustainabledevelopment.un.org/content/documents/28467E_2021_58_EN.pdf*

Other relevant references include:

Sachs, J., Kroll, C., Lafortune, G., Fuller, G., & Woelm, F. (2021). *Sustainable development report 2021*. Cambridge University Press. DOI 10.1017/9781009106559

United Nations (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development*. Available at: <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>

Competences / Learning Goals

Key Competences

STEM / Personal, social, and learning to learn, citizenship.

Knowledge

Social and global concepts: sustainable development; sustainable development goals (SDGs); poverty; food security; universal health coverage; gender equality; water, sanitation, and hygiene; clean energy; gases; viruses; inequality; sustainable cities; material footprint; climate change; biodiversity.

Knowledge – impact assessment:

1. Explains the history of the development of SDGs.

2. Recognizes the importance of the SDGs.
3. Characterizes the goals and defines relevant concepts regarding the SDGs.
4. Identifies quantitative measures to track the progress of the SDGs.
5. Characterizes the association between the different SDGs.

Skills (abilities/competences):

General: Critical thinking; teamwork; communication; science-informed decision-making; analytical competency; problem solving, interpreting scientific data and scientific arguments; public speaking and debate; understanding how to use scientific data and texts.

Specific:

- understanding the background of the SDGs and their importance to achieve a better and more sustainable future for all.
- identifying what are the SDGs, their targets, and indicators.
- understanding how the SDGs can be addressed at the school/community setting.
- finding, analyzing, and interpreting scientific data, graphical elements, and tools to track and visualize progress towards the goals.
- understanding appropriate strategies and interventions at the local, national, and international level to achieve the SDGs.

Skills – impact assessment:

1. Selects appropriate sources to characterize performance on the SDGs.
2. Proposes concrete actions towards promoting sustainability in his/her lifestyle.
3. Influences the adoption of choices aligned to the SDGs by others (e.g., family, peers, friends).
4. Is able to demonstrate values and to adopt individual attitudes that lead to more sustainable societies.
5. Selects appropriate scientific data and information to describe the progress of the SDGs.
6. Identifies the problems and challenges of the community in relation to SDGs, connect them with SDG 3 (health and well-being) and find the relevant resources to address them.

Affective /Attitudes/Behaviour (beliefs)

- Adopting actions that can help towards achieving the SDGs (e.g., eat a healthy diet and drink a lot of water, donate non-perishable foods to charities, donate books, recycle, save water and electricity).
- Adopting attitudes supporting intellectual curiosity and evidence-based thinking (e.g., understanding how to interpret data and identify inaccurate findings and conclusions).
- Getting involved in the promotion of measures to address inequalities and vulnerabilities, environmental protection attitudes, concern for ethical issues.

Attitudes and behavior - impact assessment:

1. Believes that is important to contribute to the Global Goals.
2. Believes that working on the Global Goals can lead to positive outcomes at the community level.
3. Believes that it is crucial to identify obstacles and problems faced by communities regarding the SDGs.
4. Believes that efforts must be employed to achieve the SDGs.
5. Is committed to adopting sustainable behaviors in his/her lifestyle.
6. Is committed to communicate and address the problems and challenges of the community in relation to sustainable development.

Learning goals and outcomes

- Describes the SDGs and understands the importance of sustainable development.
- Explains how SDGs are interrelated.
- Uses argumentation to connect SDG3 with other SDGs.
- Obtains and analyzes data and scientific information regarding SDGs tracking.
- Proposes evidence-based actions, at different levels, that help advance the SDGs.
- Finds evidence, compiles data and information to help progress the SDGs at the local level.

- Uses evidence to propose measures that contribute to the sustainability agenda at the community level and communicates them to the community leadership.

Assessment methods

- ✓ Outcome assessment
 - Quantitative - questionnaire (in paper) - Assessment Questionnaire- Knowledge, Skills, Beliefs, attitudes, and behavior
 - Qualitative – students project: scientific poster and presentation.
- ✓ Process assessment - *assessment of the teaching-learning sequence* – observation grid: reaching the target audience, and extent; implementation of the scenario as planned; run of the learning scenario as expected/organizational issues to be solved; duration of the teaching-learning sequence; number of people exposed; score for likeability – students (“how fun was it to do”/ how fun would be to do again/ how could it be better)

Content

STEM content (relevant to learning goals & research topics)

STEM knowledge applied to sustainability: climate action, ecosystem preservation, health, mobility, digitalization, urban design, energy, water, sanitation, and hygiene.

Non-STEM content

Environmental and social changes, sustainability. Education for citizenship.

Digital Learning Objects (DLOs) and Digital Educational Resources (DERs)

- *Interactive dashboards*

Interactive dashboards of countries’ progress regarding SDGs: developed by the United Nations, the European Commission, and Our World in Data, provide quantitative goals, and SDGs indicators, allowing analysis of trends and inter-country comparisons.

Interactive dashboard of countries’ total progress towards achieving all 17 SDGs [LO1]:
<https://dashboards.sdgindex.org/map>

Interactive website of European countries’ progress towards SDGs [LO2]:
<https://ec.europa.eu/eurostat/cache/digpub/sdgs/>

Interactive website of countries’ progress for each SDGs indicator available [LO3]:
<https://sdg-tracker.org/>

- The origins of the SDGs, challenges, and opportunities (*infographic*) [ER1]
https://www.canva.com/design/DAE9rgTFfsg/EtHkkNj0fx2srp1OQ96TGg/view?utm_content=DAE9rgTFfsg&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

- The SDGs and their targets (*infographic*) [ER2]
https://www.canva.com/design/DAE3D37Ty_U/SMHVhveh2NXPwiZCsYIO9w/view?utm_content=DAE3D37Ty_U&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

- Actions to support the SDGs (*infographic*) [ER3]
https://www.canva.com/design/DAE-VA5kfHY/els1YF6ONfi-aieeCpslaA/view?utm_content=DAE-VA5kfHY&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

- SDGs targets and indicators- concepts (*infographic*) [ER4]
https://www.canva.com/design/DAE5xAZWDrs/-lihVLvt_HWvrz9hk90yAg/view?utm_content=DAE5xAZWDrs&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

- COVID-19 and the SDGs (*infographic*) [ER5]

https://www.canva.com/design/DAE5xGfrEsY/64mYacaO4fSHe4sEO_VvnA/view?utm_content=DAE5xGfrEsY&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

- Questionnaire- quantitative assessment of learning (*in paper*) [ER6]

From other sources/open access selected platforms:

- SDGs Booklet: Booklets developed by the United Nations, in which each SDG is described, and their importance described [ER7]

Booklet on the 17 SDGs (In Portuguese): https://unric.org/pt/wp-content/uploads/sites/9/2019/01/SDG_brochure_PT-web.pdf

Booklet the 17 SDGs (In English):

https://www.undp.org/content/dam/undp/library/corporate/brochure/SDGs_Booklet_Web_En.pdf

- SDGs Targets and Indicators [ER8]

https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202021%20refinement_English.xlsx

- 170 actions to transform the world: Book developed by the United Nations, containing 10 daily suggestions for each SDG; it focuses on how individuals can make a difference in the world around them [ER9]

170 Actions : <https://drive.google.com/file/d/1iMdE6DLLuCqwq3K9U-DaTUWB6KyMa8QG/view>

- SDGs data matrix: developed by “Our World in Data”, indicates for which of the 230 SDGs indicators there is data available [ER10]

<https://ourworldindata.org/uploads/2018/06/SDG-Data-Matrix-01.png>

Videos [ER11]

Call to Learning for Climate Education (03:11)

A video to inspire learning about climate change, with actions taken by youth around the world.

[https://www.youtube.com/watch?v=2oGKKAMjRfQ&t=12s&ab_channel=TheGlobalGoals_\(In_English\)](https://www.youtube.com/watch?v=2oGKKAMjRfQ&t=12s&ab_channel=TheGlobalGoals_(In_English))

Changemakers- One Step Greener (01:02)

A video about a project created in India aimed at recycling and better waste management.

[https://www.youtube.com/watch?v=riK1lfT1xUM&t=59s&ab_channel=TheGlobalGoals_\(In_English\)](https://www.youtube.com/watch?v=riK1lfT1xUM&t=59s&ab_channel=TheGlobalGoals_(In_English))

Fashion Avengers (01:00)

A video about individual actions to lead to more ethical and sustainable practices in how we dress.

[https://www.youtube.com/watch?v=lknb7IJHrEQ&ab_channel=TheGlobalGoals_\(In_English\)](https://www.youtube.com/watch?v=lknb7IJHrEQ&ab_channel=TheGlobalGoals_(In_English))

Can Children Really Make a Difference? (01:40)

A video of children advocating for different global challenges.

[https://www.youtube.com/watch?v=hR8hgBfZJcs&ab_channel=TheGlobalGoals_\(In_English\)](https://www.youtube.com/watch?v=hR8hgBfZJcs&ab_channel=TheGlobalGoals_(In_English))

Leave No One Behind: Tracy’s story (03:00)

A video telling the story of Tracy, and how she is a vocal advocate for girl’s education.

[https://www.youtube.com/watch?v=qwG8UdQpII&ab_channel=TheGlobalGoals_\(In_English\)](https://www.youtube.com/watch?v=qwG8UdQpII&ab_channel=TheGlobalGoals_(In_English))

Sustainability in everyday life (01:38)

A video showing small changes in our day to day that can lead to a big impact on sustainability.

[https://www.youtube.com/watch?v=kZIrIQDfInQ&ab_channel=ACCIONA_\(In_English\)](https://www.youtube.com/watch?v=kZIrIQDfInQ&ab_channel=ACCIONA_(In_English))

Repensar, Reduzir, Reutilizar, Reciclar (02:30)

A video discussing how we can take actions in our day-to-day life regarding sustainable consumption.

https://www.youtube.com/watch?v=PckAgY6stqU&ab_channel=institutoakatu (In Portuguese, with English subtitles)

Campanha Igualdade de Genero (01:56)

A video discussing actions that can be taken to tackle gender inequalities.

https://www.youtube.com/watch?v=sR9ooS8EYO8&ab_channel=CanalCNTC (In Portuguese)

Complementary

- Education for Sustainable Development (ESD). Developed by UNESCO, A resource bank, developed by UNESCO, that offers hundreds of pedagogical ideas for classroom activities and multimedia resources detailing how best to integrate ESD into teaching and learning [ER12]:

<https://en.unesco.org/themes/education/sdgs/material>

- The World's Largest Lesson, an initiative by UNESCO and UNICEF, with hundreds of free materials for students aged 4-18 [ER13].

In English: https://worldslargestlesson.globalgoals.org/resources/?_sft_language=english

In Portuguese, promoted by the Portuguese UNICEF Committee and by the Directorate-General of Education:

https://drive.google.com/drive/folders/0B79QWkVg54k_f1ZBekxOUFRISGpDUWs2QmlOa1JyMmJHTjIjTWENpcliNM2lIV09rRU9haUk?resourcekey=0-vvNBnQK5OOYy4VSMseF3Xg

- *Digital learning objects:*

Lesson1:

https://www.canva.com/design/DAFOWc8pm9Y/CK6thJOGq3W-N12qYpMxuw/view?utm_content=DAFOWc8pm9Y&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

Lesson 2 :

https://www.canva.com/design/DAFOWWNthYs/hhF7zD1RvGJf5G_wLA_2_g/view?utm_content=DAFOWWNthYs&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

Lesson 3 :

https://www.canva.com/design/DAFR7gE3woo/x4M0GCX-QAOCqT_ZvbaMMw/view?utm_content=DAFR7gE3woo&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

Lesson 4 :

https://www.canva.com/design/DAFR7liGYsk/L6Vfl0WALLaOyG7DhrwmQA/view?utm_content=DAFR7liGYsk&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

Teaching -learning activities

Principal target:

Sciences and Geography classes and Science clubs

8th grade (+/- 14 years old students)

5 sessions of 40-45 minutes

Geography and science teachers integrate other colleagues in the enactment of the scenario (e.g., mathematics, english and visual education teachers), as the implementation of the scenario aims to be interdisciplinary.

Lesson 1: Introduction to Sustainable Development Goals

➤ Learning objective: at the end of lesson 1 students should be able to identify the pillars of Sustainable Development, the origins of the SDGs and their meaning, recognize their importance, and to express that the different SDGs are related.

➤ Discussion on the main challenges the world/our country/the community faces now. The teacher introduces the question “which are the main problems the world/our country/the community faces now?”. Students are separated into groups for discussion, and each group must come up with a specific number of problems (to be defined according to number of students). Then a representative of the group is elected and write the ideas of the group on the board or flipchart. Students identify environmental, political, and economic problems our world/country/community faces at different levels. The ideas should be kept for another activity at the end of lesson 1.

➤ Presentation on the SDGs and their origins.

Teacher questions students about initiatives that could be taken to tackle these issues that affect us all. Following this discussion, the teacher asks if they know the term SDGs; if yes, the teacher asks students to express their ideas about SDGs. If not, the teacher asks students to explain the meaning of the word “Sustainable”. Following this discussion, the teacher explains that the Agenda for Sustainable Development addresses the major problems that the world faces today and explores the movements that triggered the SDGs. The SDGs were introduced in 2015 and are related to the Millennium Development Goals (MDGs), which established measurable, universally agreed objectives for tackling extreme poverty and hunger, preventing deadly diseases, and expanding primary education to all children, among other development priorities. The teacher presents the SDGs and gives an overview of targets and indicators applied to track the SDGs’ progress. The following resources should be used at this stage:

- The origins of the SDGs, challenges, and opportunities [ER1]
- SDGs Booklet [ER7]
- The SDGs and their targets [ER2]

➤ Connecting real challenges to the SDGs.

Students are stimulated to connect the problems previously identified to the SDGs, with the teacher moderating the class discussion. Some problems will be related to more than one SDG, therefore, in this activity, students realize that only integrated action at the level of several SDGs can effectively tackle the problems.

Suggested homework: students are encouraged to explore the SDGs and actions that support the Agenda for Sustainable Development. Following this class, they may also explore their targets and indicators, and their associations, after this lesson. The School Research Project consists in identifying actions, that have a relevant contribution to the SDGs, to be implemented at the school setting. Students can then start gathering ideas that contribute for the project since the first lesson.

Lesson 2: Individual actions towards the SDGs

➤ Learning objective: at the end of lesson 2 students should be able to propose concrete actions towards promoting sustainability in their lifestyle, able to demonstrate values and to adopt individual attitudes that lead to more sustainable societies, recognize the importance of contributing to the Global Goals and be committed to actions that support SDGs achievement.

➤ Discussion on possible actions, of individual nature, that contribute to the SDGs.

Students discuss, in groups, with the moderation of the teacher, which individual actions they can adopt towards supporting the SDGs achievement. Students should suggest actions they can take from their homes and in their communities. These actions can include saving electricity and water; reducing carbon emissions; recycling; biking, walking, or taking public transport; donating what is not used anymore; being vocal about inequality; to name a few. The discussion of actions will be supported by the following resource:

- 170 actions to transform the world [ER9]

The teacher may decide to present actions that the students didn't map during the exercise. For that the teacher can use the following resource:

- Actions to support the SDGs [ER3]

➤ Incorporating actions and practices in their lifestyle.

Based on the previous list of potential actions, students are stimulated to think about their routines and to identify 5 actions that they aim to incorporate in their daily lives, and explain how they will do it. The students work individually and write their answers on paper. This lesson is aligned with the School Research Project, and students can start getting insights and preparing for it. Students then present their findings to the class. The teacher promotes a discussion on strategies to address them in everybody's lives. The ideas that emerge during the discussion between students, moderated by the teacher, should be kept, as this knowledge will be useful for the School Research Project.

Lesson 3: Progress to achieve the SDGs.

➤ Learning objective: at the end of lesson 3 students should be able to identify data sources to characterize SDGs in a scientific perspective, select scientific data and information to describe the progress of the SDGs, define relevant concepts associated to the SDGs, and be able to interpret results regarding SDGs' targets and indicators.

➤ Assessing progress on the SDGs using global indicators

Teacher reviews the SDGs, the targets and the indicators presented in Lesson 1. Students understand that the achievement of the SDGs depends on an effective process of monitoring, reviewing, and following up. Students also understand that tracking the SDGs can be used to hold policy makers accountable to develop, implement, conduct, and promote actions to achieve the agreed goals.

Teacher and students explore together the progress made towards achieving the SDGs in a global perspective, through inter-country comparisons. Students understand that there are countries in which major challenges remain. (e.g., for SDG1 (No poverty), many European countries have achieved the SDG, while in most African countries major challenges remain; for SDG13 (Climate action), many African countries have achieved the SDG, while in most European countries major challenges remain). The following resource should be used at this stage:

- Interactive dashboard of countries' total progress towards achieving all 17 SDGs [LO1]

➤ Assessing the progress of SDGs using national indicators

Teacher and students explore together the national progress regarding the SDGs. It is suggested they explore varied SDGs and their respective indicators. Teachers must assist students in the interpretation of graphs that show varied indicators trends, as well as in understanding the concepts behind them (e.g., Healthy life years at birth; GDP per capita). Teachers also discuss with students the challenges in tracking the SDGs, either due to data shortcomings (incomplete or outdated data), or because global monitoring is not currently possible. Students understand the importance of tracking progress and how to interpret and compare data.

Given that there are too many targets and SDGs to explore, below there are some examples of questions that can be explored regarding different SDGs. These serve as guidance for the discussion in class, but students are encouraged to explore other SDGs, indicators, data and countries after the class.

Students are organized in 2 groups and invited to explore trustful data sources regarding SDGs tracking. They report performance on the SDGs according to the available indicators for each SDG. It is suggested that students answer the following questions:

Question	Proposed data source
1. Which European country had the highest percentage of people facing severe housing deprivation/poor housing conditions in 2020? (SDG1)	LO2
2. What was the share of the population living in extreme poverty in Italy in 2019? Was it higher or lower than the share in Spain? (SDG1)	LO3
3. What was the percentage of the population aged 18 years or over who were obese in Portugal in 2017? (SGD2)	LO2
4. What was the death rate due to tuberculosis, HIV, and hepatitis (per 100 000 persons) in the European Union in 2017? (SDG3)	LO2
5. How many people have died in the world from road traffic accidents in 2019, including vehicle drivers or passengers, motorcyclists, cyclists, and pedestrians? (SDG3)	LO3
6. What was the mortality rate attributed to cardiovascular disease, cancer, diabetes, or chronic respiratory disease in France in 2019? Has it increased or decreased since 2010? (SDG3)	LO3
7. Was the gender pay gap in the European Union higher than 10% in 2019? Has the gender pay gap increased or decreased since 2012? (SDG5)	LO2
8. Which of the following countries had the lowest percentage of population connected to at least secondary wastewater treatment systems in 2019? Belgium, Bulgaria, Finland, Slovenia? (SDG6)	LO2
9. Has the share of renewable energy as % of gross final energy consumption been increasing in Portugal since 2004? (SDG7)	LO2
10. Which country had the highest GDP per capita in 2019? France, Germany, Spain, Sweden? (SDG8)	LO2
11. Has the material footprint in the world increased or decreased since 2010? (SDG12)	LO3

The following resources should be used at this stage:

- SDGs targets and indicators- Concepts [ER4]
- Interactive website of European countries' progress towards SDGs [LO2]
- Interactive website of countries' progress for each SDGs indicator available [LO3]

The teacher explains the challenges in tracking the SDGs, either due to data shortcomings (incomplete or outdated data), or because global monitoring is not currently possible. The limitations of the collected evidence are discussed, and students should be able to distinguish different types of uncertainty related to the SDGs.

The following Resource should be used at this stage:

- SDGs data matrix [ER10]

Lesson 4: COVID-19 and SDGs

➤ Learning objective: at the end of lesson 4 students should be able to characterize the impact of the COVID-19 pandemic on the SDGs, identify data sources to map trends and performance on the SDGs.

➤ COVID-19 and the SDGs

The teacher explains that the COVID-19 pandemic has been an unprecedented event for our generation, and the extent to which the achievement regarding the SDGs has been derailed is not fully comprehended yet. The teacher asks students if they can infer what happened during the pandemic regarding performance on the SDGs. Then, students are organized in groups to answer this question. They define

questions and generate hypothesis about the impact of the pandemic on the SDGs. They can use the resources presented in the previous lesson to empirically base their findings. Finally, students return to their initial questions and hypothesis and explain if they were answered or validated by their research. Finally, students present and discuss their results in the classroom.

Some SDGs have a less strong relationship with public health and so the impact of the pandemic is less pronounced, and assessing their progress involves less STEM content. For these reasons it is suggested that the groups focus their attention on the following goals: SDG 1; SDG3; SDG4; SDG8. The following questions can be used to serve as guidance for the students to explore the progress of the SDGs during the pandemic period:

Question	Proposed data source
1. Was the percentage of people at risk of poverty or social exclusion in the European Union in 2020 higher than the percentage in 2019? (SDG1)	LO2
2. In Italy, what was the percentage of people facing with severe housing deprivation between 2015 and 2019? And what happened in 2020? (SDG1)	LO2
3. In India, what was « percentage of people living in extreme poverty between 2010 and 2019? And what happened in 2020? (SDG1)	LO1
4. Which year had the highest share of the population living in extreme poverty in Brazil in the period between 2015 and 2021? (SDG1)	LO1
5. Was the percentage of the population reporting unmet need for medical examination and care higher in 2020 than in 2019 in France? And in Spain? (SDG3)	LO2
6. What happened to the percentage of adults participating in learning between 2019 and 2020 in Portugal? And Italy? And France? (SDG4)	LO2
7. What was the trend for the GDP per capita in Portugal between 2014 and 2019? Has it increased or decreased in 2020? And in Italy? (SDG8)	LO2 and LO3
8. Was the share of the population employed in 2020 higher or lower than the share in 2019? (SDG8)	LO2
9. What happened to the unemployment rate in 2020 in India? And in Peru? And in Ethiopia? (SDG8)	LO1

Then the teacher also presents official data published by UNESCO, using the following resource:

- COVID-19 and SDGs [ER5]

Students understand the impact that COVID-19 had on the SDGs, and the challenges and opportunities that arise from the pandemic.

Lesson 5: Review of SDGs

➤ Learning objective: at the end of lesson 5 students should explain the origins of the SDGs, the importance of developing consistent actions towards sustainable development, to know sources of information to track them, recognize how they are interrelated, and have their doubts and misconceptions addressed, answered, and corrected.

Students answer a questionnaire about the SDGs. Questions encompass the learning goals and themes explored during lessons 1-4 (origins, each SDG, meaning, targets, progress tracking, relevant action). The questionnaire [ER6] assesses their knowledge, skills, attitudes, and behaviours regarding sustainable development. The teacher reviews the responses and captures students' misconceptions on the topic, the skills that are still underdeveloped and auto-declared behaviour that are not aligned with sustainable development and returns to the classroom to discuss the answers. Special materials are prepared to come back to the classroom in the project phase to address the absence of fundamental learnings and skills.

At this phase of the teaching-learning sequence, students have been exposed to SDG topics that are meaningful for them (e.g., poverty, hunger, diseases, inequalities, loss of biodiversity) and also have understood the unique challenges communities face all over the world, many of which that they may not have been conscious about before the classes. This understanding creates and fosters a sense of global

empathy, solidarity, and connection with the planet as a whole. By transforming this empathy into affective behaviour, students are ready to start designing projects that contribute to the community and to organize or get involved in local initiatives that create positive change.

Supplementary learning resources and educational activities

During any session of the school research project (described down, in autonomous section) is organized at least one of the following activities:

1. **Discussion with school representatives.** The school is a transformative environment, and the representatives can discuss with students how sustainable development is promoted in the school setting. Students can identify actions and interventions promoted at the school level that may contribute to the SDGs.
2. **Discussion with private or third sector organizations regarding sustainable development.** Many organizations incorporate practices that promote sustainable development, and students can discuss with experts how these practices are introduced and monitored, as well as positive results they are bringing to society.
3. **Discussion with governmental actors regarding Sustainable Development.** Many countries and governments have agencies and departments dedicated to the promotion and monitoring of SDGs, and students can discuss with experts how SDGs are promoted and monitored at a national level.

These educational activities can be in the form of teleconferences, classroom visits by experts, or student visiting organizations. The **visits to organizations interested in STEM and public health education** may include the following entities:

INSA (national public health laboratory - department of non-communicable diseases)

<https://www.insa.min-saude.pt/>

FCT NOVA (visit to laboratories)

<https://www.fct.unl.pt/>

Sporting Clube Portugal (visit to stadium or Cristiano Ronaldo Academy)

<https://www.sporting.pt/>

Auchan Portugal (visit of a nutritionist to the school with an activity on food and the environment)

<https://www.auchan.pt/>

Holon Farmacias (various activities on nutrition, pharmacology and health)

<https://www.farmaciasholon.pt/>

Águas de Portugal (Waters of Portugal - Environmental Education Center Water at 360°)

<https://www.adp.pt/pt/comunicacao/agua-a-360%C2%BA/?id=197>

SILab (visit to the Social Innovation Laboratory of Instituto Superior Técnico – University of Lisbon)

<http://silab.tecnico.ulisboa.pt/>

ATEC – Training Center – visit to the Academy to present professional training of a technical nature

<https://www.atec.pt/>

Escola Nacional de Saúde Pública (<https://www.ensp.unl.pt/>) – activity on STEM myths and professions with challenges on SDG 3 (in relation to others) and guests from various areas and from

other institutions such as Chaperone (<https://chaperone.online>) and ICNOVA (<https://www.icnova.fcsh.unl.pt/en/homepage-2/>)

(The list of partnerships will continue to be updated until the end of the project. You can consult all our partnerships here: <https://pafse.eu/pt/partes-interessadas-pafse/>)

School Research Project

Topics

Global Agenda for Sustainable Development
Scientific evidence and monitoring indicators
Actions to achieve the SDGs.
Translation of the SDGs to the local level

Research management, design, and administration

Overview. The project is based on guided research about measures that can be adopted at the school level to support the Agenda for Sustainable Development 2030, with a focus on questions related with SDG3- Good Health and Well-being. Students will be contributing to a healthy school and to the sustainability of their community by developing inquiry-based activities and presenting their results in a schooling event open to community participation. The students perform inquiry-based activities, collect data, analyse results, extract conclusions, and propose priorities for action. In the end of the project, students will present a scientific poster that identifies strengths of the school and the community in a public health and sustainability perspective, as well as areas for improvement that may be addressed by community stakeholders (e.g., students, residents, organisations, policy makers). During the process, they will be developing research skills, the capacity to navigate in digital environment, improve their skills to develop and communicate ideas, and teamwork skills, while investigating and discussing important actions that can be taken by the school regarding the requirements of sustainability.

Relevance. The agenda for Sustainable Development 2030 brings attention to the main challenges our world faces in various levels and defines ways to contribute for SDGs advancement from an individual to a global perspective. By learning about the SDGs, students get greater knowledge on solutions for problems they face in their own lives (e.g., energy poverty), as well as how to impact positively the lives of others. Students address the socioscientific issues brought by the project by collecting evidence and translating the research findings into concrete actions and efforts, to be taken at the school level, which contribute the sustainability agenda, while promoting equality, health, well-being, and sustainability in their community.

Estimated duration. The school research project starts after lesson five and has an estimated duration of 5-6 sessions of 45 minutes.

Resources. The following Digital Educational Resources can assist at this stage:

- Education for Sustainable Development (ESD) [ER12]
- The World's Largest Lesson [ER13]
- Videos [ER11]

Phases of the School Research Project:

The School Research Project structure follows the typical phases of an inquiry-based project:

1. Orientation – discovering a problem: students are introduced to a problem, which is the effects of human lives on the planet and the unsustainability of maintaining lifestyles and behaviours that destroy the capacity of sustainable living on earth. Teacher uses [ER2] to show some impacting images.

2. Conceptualization – finding a research/starting question: the teacher asks students if they believe they may have a relevant contribution for the sustainability of the planet and if the school can help in this

mission. After discussion around potential starting questions, students elect one that drives the school research project.

E.g.

- How may the school help advance the SDGs?
- What are the challenges of the school community regarding sustainable development?
- What are the challenges of the school community regarding SDG3?
- What are the elements present in the school community that don't contribute to the UN Agenda for Sustainable Development?

Students are separated into groups and each group addresses one category, mostly related to a group of SDGs, and systematically associated to SDG3- Good Health and Well-being. The three categories are:

- A. Social progress (SDG1, SDG2, SDG3, SDG8, SDG10, SDG11)
- B. Environmental protection (SDG 3, SDG6, SDG7, SDG 11, SDG 12, SDG13, SDG 14, SDG 15)
- C. Sustainable lifestyle (SDG 3, SDG11, SDG12, SDG13, SDG14, SDG15)

The teacher discusses with students' possible questions to assess the attributes of the school community in the categories and possible methods to get the answers. It is suggested the application of an online questionnaire and conduct observations, but other data collection methods (e.g.: interviews) may be included. The advantages and limitations of the alternatives are discussed.

For each category it is suggested below a couple of questions and a method to collect evidence. Given that the SDGs are related, some questions or attributes may be associated to more than one of the categories. At the end of the project, students must express how these attributes in their school/community are related to Good Health and Well-being (SDG3).

- Social progress: Decent work, food security and reduced inequalities (SDG1, SDG2, SDG3, SDG8, SDG11)

Main SDGs	Questions	Suggested data collection instrument
1,3	There are humans in a situation of poverty in the community?	Survey
8	Is access to employment and decent income for all assured?	Survey
1,2,3	There are humans in situation of hunger or malnutrition in the community?	Survey
2, 3, 8	Are the price of the meals affordable?	Survey
2,3	Are the meals healthy? (With the key nutrients)	Survey
2, 3,11,12	Is it usual to throw away food? Is there food waste?	Survey or Observation
2, 3, 11, 12, 13	There is a community garden?	Observation
3, 8, 11, 13	Is public transport to go to school good and cheap?	Survey
3, 10, 11, 13	Is public transport accessible for everyone regardless of their mobility?	Survey
3, 4, 10, 11	Is the school accessible for everyone regardless of their mobility?	Survey
1, 2, 3, 10, 11	Are there activities organized in the school/around the school/by the community to address needs of social nature? (e.g., food donation, charity events, social fairs, exhibitions, informative campaigns)	Survey/Observation/Interview

Note: different scales for responses may be applied (e.g. 1- strongly disagree; 2 – disagree; 3- not disagree, not agree 4- agree; 5 – strongly agree; 2- definitely false; 2 – false; 3 – not false, not true; 4 – true; 5-definitely true; 1- extremely unlikely; 2 – unlikely; 3 – not unlikely, not likely; 4 – likely; 5-extremely likely; 1 – yes; 2 – no).

- Environmental protection: Sanitation, clean energy, and climate action (SDG3, SDG6, SDG7, SDG11, SDG 12, SDG13, SDG 14, SDG 15)

Main SDG	Questions	Suggested data collection instrument
3, 6, 11, 12	Is there any waste of water at the school?	Survey or Observation
3, 8, 11, 13	Is the school accessible by public transport?	Survey
3, 11, 13	Is the school accessible by walking?	Survey
3, 11, 13	Is the school accessible by bicycle?	Survey
3, 11, 13	Is the car the preferred mode of transportation in your community? (To go to school, supermarket, visit friends)	Survey
3, 11, 12, 13	Is there any waste of energy in the school?	Survey or Observation
3, 7, 11, 13	Are there clean sources of energy at the school?	Survey or Observation
3, 11, 13, 15	Are there green public spaces in the school/around the school?	Survey
3, 11, 13, 14, 15	Are there social activities organized in the school/around the school/by the community to address environmental protection? (e.g., clean the beach/park campaign, car-free day, bicycle day, informative campaigns)	Survey/Observation/Interview

Note: different scales for responses may be applied (e.g. 1- strongly disagree; 2 – disagree; 3- not disagree, not agree 4- agree; 5 – strongly agree; 2- definitely false; 2 – false; 3 – not false, not true; 4 – true; 5-definitely true; 3- extremely unlikely; 2 – unlikely; 3 – not unlikely, not likely; 4 – likely; 5-extremely likely; 1 – yes; 2 – no).

- Sustainable Lifestyle: Sustainable communities and responsible consumption (SDG3, SDG11, SDG12, SDG13, SDE14, SDG15)

Main SDG	Questions	Suggested data collection instrument
12, 13, 15	Is the paper usage in the school excessive?	Survey
12, 14	Is single-use plastic common in the school?	Survey
11, 12	Are school supplies (pencils, markers, crayons) re-used or used until they are unusable?	Survey
11, 12	Are there recycling bins for paper, glass, metal, and plastic in the school/around the school?	Observation
11, 12	Are there donation bins in the school/around the school (e.g., for clothing items)?	Observation
12	Are there facilities in the school/around the school to repair objects?	Observation
11,13	Are there green spaces in the school/around the school?	Survey
3, 11	Are there public spaces in the school/around the school for people to do physical exercises and to be physically active?	Survey

3, 11, 12, 13, 14, 15	Are there social activities organized in the school or by the community to promote healthy and sustainable lifestyles? (e.g., clothes swap events, donation days, group walks/exercises)	Survey/Observation/Interview
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Note: different scales for responses may be applied (e.g. 1- strongly disagree; 2 – disagree; 3- not disagree, not agree 4- agree; 5 – strongly agree; 2- definitely false; 2 – false; 3 – not false, not true; 4 – true; 5-definitely true; 1- extremely unlikely; 2 – unlikely; 3 – not unlikely, not likely; 4 – likely; 5-extremely likely; 1 – yes; 2 – no).

In summary, a problem statement and a starting question are defined as a way that stimulates students’ interest and curiosity on the theme. Students, with the guidance of the teacher, decide on the data collection methods to answer the question and test their hypothesis, administer surveys, observations, interviews with community members/stakeholders (being the first two methods preferred). The advantages and limitations of the alternatives are discussed, and the data collection instruments are prepared. It is suggested that they work in groups using a laptop to build an online questionnaire in Google forms. At this phase, students must write the following crucial aspects of their scientific project.

- ✓ Problem
- ✓ Research question
- ✓ Research objectives
- ✓ Data collection method and instruments
- ✓ Define study participants/target group (WHO)
- ✓ Defining a strategy and activities to achieve the target group (HOW)
- ✓ Defining the minimum number of responses from the target (EXPECTED RESULTS)
- ✓ Set a timeframe for data collection (WHEN)
- ✓ Identify events that may limit data collection, and define mitigation strategies (RISKS)
- ✓ Define how to monitor results (CONTROL procedures)

3. Investigation- collecting evidence and information of scientific nature: students carry out the investigation, design and implement the inquiry–based activities (exploration, observation, experimentation, data interpretation). After reaching a minimum number of responses, they can use Microsoft Office programs (e.g., excel, word) to organize their data, either it is quantitative or qualitative. Different methods of investigation can be employed, and the strategies to achieve the target group and the minimum number of responses/observations are defined, as well as alternative strategies if unexpected events that may limit data collection occur.

4. Conclusion- –analyzing the collected evidence:

Students analyse the data collected and draw conclusions. The teacher discusses with the students the obtained results and based on the evidence, they discuss actions to be implemented in the school context that contribute to the SDGs and to promote public health. The teacher discusses with students what is the best method to present the results and software tools to produce the scientific poster may be used (the poster can also be produced on paper if the access on the computer is limited). The teacher supervises the work of students in preparing tables, graphs, texts, images, and the production of the final output –the scientific poster. The poster must include the research question, methodology, results, conclusions, and recommendations from the inquiry project.

5. Discussion – exploring the implications of the new knowledge: students present the conclusions of their research to the teacher and receive feedback, comments and improvement suggestions. Then the organization of the open schooling event is discussed to present and discuss the findings of the projects. Each group of students will present the evidence of their scientific poster and inform the public about the challenges of the project. At this phase, students will be improving their communication skills and

developing responsible citizenship. Students will be capable to explain how scientific knowledge may contribute to the resolution of a socioscientific issue related to sustainable development, and to recognize dimensions of the issue that cannot be addressed by science. The scientific poster, that identifies the strengths of the school and their surrounding area in terms of sustainable development, is presented and discussed. Within this scope, improvement areas that may be addressed by community stakeholders are identified (students, residents, organisations, policy makers).

In summary:

- Each project output (e.g.: scientific poster) is presented by the students in a community setting (e.g., exposition center, municipality, garden, museum, science fair).
- Students will communicate measures that contribute to the SDGs, using science-based data and argumentation. Students appeal to action that promotes health of the community and sustainable development.
- Students, parents, school community and relevant local stakeholders attend the event; understand strategies relevant for sustainable development and how each of them may be an agent of influence on the relevant settings (e.g., home, school, workplace, public space at the community).

Additional information

- Students and teachers should use the resources introduced in the lessons, as well as the complementary resources *Education for Sustainable Development* [ER12], and *The World's Largest Lesson* [ER13]. These resources Objects contain one section for each SDG, and these contain a great variety of materials including videos, reports, infographics, case studies, booklets. It is also suggested that teachers and students watch the videos [ER11].

- In collaboration with the disciplines of Information and Communication Technologies and Visual Education, students can select the best software to prepare their scientific poster and subsequently work on it with the support of the teacher (e.g., Canva, MS Power Point).

The project is based on guided research about the Global Goals and how schools can support this Agenda. To address the challenge proposed in this project, students bring the ideas from the first lessons and supplementary educational activities. Students understand the importance of progressing on the SDGs and of searching for reliable data to propose measures. Students propose actions for the school community that supports sustainable development.

Teaching-learning process milestones:

1. Students are able to incorporate evidence in their scientific posters coming from reliable data sources to support their ideas and show media literacy.
2. Students are able to identify and communicate measures based on the data collected by them to help progress the SDGs and produce positive impacts in the school and community settings.
3. Students are able to suggest and advocate for actions by different stakeholders, based on scientific-based data and information.

Organization of the open schooling event:

- Each poster is presented by the students in a community setting (e.g., exposition center, garden, museum, science fair).
- In the public presentation, students must be prepared to communicate relevant evidence-based recommendations that help to support progress on the SDGs, and that bring consequently bringing positive impacts for the local level.

Students, parents, school community and relevant local stakeholders attend the event and understand how the progress regarding the SDGs is associated with positive outcomes for the community health and well-being. In this context, they discuss with students the project results and strategies to support the progress of the SDGs at school and community level.

Public Debate and Recommendations (based on research results)

Presentation of posters, and discussion of recommendations based on data collected with the community leadership and stakeholders, dissemination via social communication (national, local, and specific networks).

Main Partner responsible: UNL (School of Public Health)

Assessment Questionnaire- Knowledge, Skills, Beliefs, attitudes, and behavior

Scenario topic: Sustainable Development Goals

Knowledge	
1. Explains the history of the development of SDGs.	<p>Question 1.1: What are the three pillars of Sustainable Development? A) Society, Economy, Environment. B) Equality, Freedom, Justice. C) Altruism, Joy, Optimism.</p> <p>Question 1.2: Which of the following statements regarding the Sustainable Development Goals is NOT true? A) The Sustainable Development Goals represent mandatory and international set of rules for development. B) The Sustainable Development Agenda was unanimously approved by 193 members of the United Nations. C) The Sustainable Development Goals are universal, and applicable to all countries while respecting their own national contexts.</p> <p>Question 1.3: The SDGs were adopted in 2015 by the United Nations General Assembly and should be achieved by: T? A) 2030. B) 2040. C) There is no year specified.</p>
2. Recognizes the importance of the SDGs.	<p>Question 2.1: Which of the following is NOT a goal of the United Nations Agenda for Sustainable Development 2030? A) To legally oblige countries to develop and adopt policies towards sustainability. B) To address the urgent environmental, political, and economic challenges the world faces. C) To promote peace and inclusive societies, reduce inequalities and contribute to the prosperity of economies.</p> <p>Question 2.2: Which of the following actions are NOT crucial for getting the SDGs on track? A) Reduce the number of SDGs in Agenda 2030. B) Recommitment by government, cities, business, and industries regarding the SDGs. C) Improvement of the availability of high-quality data for tracking and decision-making.</p>
3. Characterizes the goals and defines relevant concepts regarding the SDGs.	<p>Question 3.1: Identify how many SDGs and targets were defined. A) 17 goals and 169 targets. B) 17 goals and 201 targets. C) 15 goals and 21 targets.</p> <p>Question 3.2: SGD 3 is to ensure healthy lives and promote well-being for all at all ages, and Target 3.3 aims to end the epidemic of communicable diseases. Please identify which of the following diseases IS NOT included in Target 3.3. A) Diabetes. B) HIV. C) Tuberculosis.</p>

<p>4. Identifies quantitative measures to track the progress of the SDGs.</p>	<p>Question 4.1: Which indicator is used to control Target 1.1 (to eradicate extreme poverty for all people everywhere by 2030). A) Proportion of population living on less than \$1.90 a day. B) Prevalence of undernourishment. C) Annual growth rate of real GDP per capita.</p> <p>Question 4.2: Target 8.1 is tracked through the indicator “Annual growth rate of real Gross Domestic Product per capita”. Which of the following options is NOT integrated in the calculations of the Gross Domestic Product? A) Unemployment Rate. B) Investments. C) Imports and Exports.</p>
<p>5. Characterizes the association between the different SDGs.</p>	<p>Question 5.1: SDG 3 (Health and Well-being) is connected with SDG 1 (No Poverty) because: A) Poor socioeconomic conditions, such as poverty, contribute to health inequalities. B) Easy access to adequate sanitation is recommended for human health and well-being. C) The Mediterranean Diet is essential to reduce preventable NCDs.</p> <p>Question 5.2: Which of the following actions greater contributes to the achievement of decent work, economic growth, and reduced inequalities? A) Enact policies to raise minimum wages and other wages. B) Encourage boys at school age to pursue social studies and girls at school age to pursue technical studies. C) Limit carbon footprint by consuming local and seasonal products.</p> <p>Question 5.3: Which impact does climate change may produce on health? A) Negative Impact: Increased respiratory, cardiovascular, and infectious diseases due to negative influences in air and water quality, changes in the prevalence and geographical distribution of food. B) Negative Impact: The higher energy costs associated with droughts and higher temperatures will lead to less financial investments in health promotion activities. C) Positive Impact: The rise in temperature will make cold areas easier to live, making common winter diseases such as cold, flu and pneumonia less frequent.</p>
Skills	
<p>1. Selects appropriate sources to characterize performance on the SDGs.</p>	<p>Question 1.1: Which data sources may be preferred to track performance on the SDGs? A) United Nations SDGs tracker. B) National Statistics on Economic Development. C) Data retrieved by google searches.</p>
<p>2. Proposes concrete actions towards promoting sustainability in his/her lifestyle.</p>	<p>Question 2.1: Which individual actions can be taken to promote responsible consumption and production? A) Repair house appliances that no longer work. B) Throw away things that are no longer needed. C) Take a bath instead of using the shower.</p> <p>Question 2.2: Which individual actions can be taken to promote good health and well-being? A) Do not smoke and be more active. B) Visit a health provider at least once per month. C) Do not consume over 2,500 calories a day.</p>

<p>3. Influences the adoption of choices by others (e.g., family, peers, friends).</p>	<p>Question 3.1: I feel able to influence the adoption of actions that help achieve the SDGs by others (family, friends). 1) definitely true... 5) definitively false.</p> <p>Question 3.2: I will try to influence the adoption of actions that help achieve the SDGs by others (family, friends). 1) definitely true... 5) definitively false.</p>
<p>4. Is able to demonstrate values and to adopt individual attitudes that lead to more sustainable societies.</p>	<p>Question 4.1: I feel able to adopt individual attitudes in my day-to-day life that lead to more sustainable societies. 1) definitely false... 5) definitely true.</p> <p>Question 4.2: I feel able to identify different actions that lead to more sustainable societies. 1) definitely false... 5) definitely true.</p>
<p>5. Selects scientific data and information to describe the progress of the SDGs.</p>	<p>Question 5.2: I know the sources I have to consult to assess the progress of the SDGs. 1) strongly disagree... 5) strongly agree.</p> <p>Question 6.1: To find reliable information about the SDGs I should consult the following sources. A) researchers, scientific publications, United Nations SDG tracker. B) newspapers, google, YouTube. C) friends, journalists, Facebook.</p>
<p>7. Identify the problems and challenges of the community in relation to SDGs, connect them with SDG 3 (health and well-being) and find the relevant resources to address them.</p>	<p>Question 7.1: I feel able to identify the main problems my community faces in relation to SDGs. 1) definitely false... 5) definitely true.</p> <p>Question 7.2: I can understand how the challenges my community faces are related to health and well-being outcomes. 1) definitely false... 5) definitely true.</p> <p>Question 7.3: I feel capable of proposing actions that address the SDGs on my community. 1) definitely true... 5) definitively false.</p>
<p>Beliefs, attitudes and behavior</p>	<p>Instructions: There are no correct or incorrect answers; we are only interested in knowing your perspective.</p>
<p>1. Believes that is important to contribute to the Global Goals.</p>	<p>Question 1.1: My individual actions and participation in society life have an impact on the Global Goals. 1) strongly disagree... 5) strongly agree.</p> <p>Question 1.2: I am physically and financially capable of adopting actions that contribute to the Global Goals (. 1) Extremely unlikely... 5) Extremely likely.</p>

	<p>Question 1.3: My family and friends think that I should adopt actions that contribute to the Global Goals. 1) Extremely unlikely... 5) Extremely likely.</p>
2. Believes that working on the Global Goals can lead to positive outcomes at the community level	<p>Question 2.1: If I contribute to the Global Goals, I will bring positive outcomes to my community. 1) strongly disagree... 5) strongly agree.</p> <p>Question 2.2: I believe the issues tackled by Global Goals have. 1) <i>No influence...</i> 5) <i>Complete influence</i> over the most important challenges that my community faces.</p> <p>Question 2.3: My community thinks that the success of the Global Goals will bring positive outcomes for all. 1) Extremely unlikely... 5) Extremely likely.</p>
3. Believes that it is crucial to identify obstacles and problems faced by communities regarding the SDGs.	<p>Question 3.1: The identification of obstacles and problems that my community faces regarding the SDGs is crucial for solving them. 1) strongly disagree... 5) strongly agree.</p> <p>Question 3.2: It is possible to identify obstacles and problems that the community faces regarding the SDGs. 1) strongly disagree... 5) strongly agree.</p> <p>Question 3.3: It is common knowledge that it is necessary to identify obstacles and problems that the community faces for solving them. 1) strongly disagree... 5) strongly agree.</p>
4. Believes that efforts must be employed to achieve the SDGs.	<p>Question 4.1: It is important to employ efforts to achieve the SDGs. 1) strongly disagree... 5) strongly agree.</p> <p>Question 4.2: It is possible to employ efforts to achieve the SDGs. 1) strongly disagree... 5) strongly agree.</p> <p>Question 4.3: It is common knowledge that it is necessary to employ efforts to achieve the SDGs. 1) strongly disagree... 5) strongly agree.</p>
5. Has intention to adopt sustainable behaviours in his/her lifestyle.	<p>Question 5.1: I will plan to eat a healthy diet and drink a lot of water in my day-to-day life. 1) Extremely unlikely... 5) Extremely likely.</p> <p>Question 5.2: I plan to incorporate recycling in my day-to-day life. 1) Strongly disagree... 5) Strongly agree.</p> <p>Question 5.3: I plan to donate non-perishable foods and things that I no longer use in the next three months. 1) Strongly disagree... 5) Strongly agree.</p> <p>Question 5.4: I plan to save water and electricity in the next three months. 1) Strongly disagree... 5) Strongly agree.</p> <p>Question 5.5: I will walk, cycle, or take public transport instead of using a car or motorcycle as much as possible in the next three months. 1) Strongly disagree... 5) Strongly agree.</p>

	<p>Question 5.6: Among the following statements, choose the one that best describes what you currently think.</p> <ol style="list-style-type: none"> 1) I do not promote sustainability in my day-to-day life, and I also have no intention of doing so. 2) I do not promote sustainability in my day-to-day life, but I have been thinking about the possibility of starting to do so. 3) I never or rarely promote sustainability in my day-to-day life, but soon I will start doing it on a regular basis. 4) I do promote sustainability in my day-to-day life regularly, but I have only begun to do so in the last 6 months. 5) I do promote sustainability in my day-to-day life regularly I have been doing so for longer than 6 months.
<p>6. Is committed to communicate and address the problems and challenges of the community in relation to sustainable development.</p>	<p>Question 6.1: I intend to communicate and address the problems and challenges of the community in relation to sustainable development.</p> <ol style="list-style-type: none"> 1) Extremely unlikely... 5) Extremely likely. <p>Question 6.2: I have the physical and financial means to communicate and address the problems and challenges of the community in relation to sustainable development.</p> <ol style="list-style-type: none"> 1) Strongly disagree... 5) Strongly agree. <p>Question 6.3: It is expected from me that I communicate and address the problems and challenges of the community in relation to sustainable development.</p> <ol style="list-style-type: none"> 1) Strongly disagree... 5) Strongly agree. <p>Question 6.4: Among the following statements, choose the one that best describes what you currently think.</p> <ol style="list-style-type: none"> 1) I am not contributing to sustainability in my community, and I also have no intention of doing so. 2) I am not contributing to my community health, but I have been thinking about the possibility of starting to do so. 3) I am never or rarely have been contributing to my community health, but soon I will start doing it on a regular basis. 4) I am contributing to my community health regularly. 5) For more than six months I have always or almost always been contributing to my community health. 6) For several years now, I have been contributing to my community health, and I will continue to do so.
<p>7. Attitude Toward SDGs.</p>	<p>Question 7.1: For me to achieve SDGs is:</p> <p>harmful : _____ : _____ : _____ : _____ : _____ : beneficial</p> <p>pleasant : _____ : _____ : _____ : _____ : _____ : unpleasant</p> <p>good : _____ : _____ : _____ : _____ : _____ : bad</p> <p>worthless : _____ : _____ : _____ : _____ : _____ : valuable</p> <p>enjoyable : _____ : _____ : _____ : _____ : _____ : unenjoyable</p>