Inquiry Scenario

Plan Design form

for the promotion of Sustainability Citizenship

SYNAPSES

School Details	
School Name	Agrupamento de Escolas Gardunha e Xisto
City name (Rural/ small town/ middle town/ big city)	Fundão
Number of pupils and teachers	74 teachers 343 students
How many students and teachers will be involved in the Plan?	7 teachers 20 students

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Contents

Sustainable Future: Citizens for a Greener Planet

Short Description (Max 500 words):

"Sustainable Future: Citizens for a Greener Planet"

Objective: The "Sustainable Future: Citizens for a Greener Planet" educational scenario aims to educate students aged 9-12 about sustainability and empower them to become active citizens in promoting environmental responsibility. This program combines interactive workshops, field trips, and hands-on projects to explore key sustainability topics.

Day 1: Introduction to Sustainability The program begins with an icebreaker and group discussion on the importance of sustainability, followed by a workshop on the three pillars of sustainability: environmental, social, and economic. Students participate in an interactive quiz and visit a local eco-friendly initiative, such as a recycling plant or community garden, to learn about practical sustainability efforts. They end the day by creating a personal "Sustainability Pledge."

Day 2: Reducing Waste and Recycling Students conduct a waste audit to understand their waste generation and participate in a workshop on the life cycle of products. An upcycling workshop allows students to creatively reuse materials, turning waste into valuable items. The day concludes with students researching successful recycling practices from around the world.

Day 3: Water and Energy Conservation Students calculate their personal water footprints and discuss water conservation strategies. A workshop on renewable energy sources includes a hands-on activity, such as building a simple solar oven. A field trip to a renewable energy facility, like a solar farm or hydroelectric plant, helps students understand the technology and benefits of renewable energy. They develop an energy conservation plan for their household as homework.

Day 4: Sustainable Food Practices The focus shifts to food sustainability with a presentation on the farm-to-table journey and its environmental impact. Students learn about organic gardening and plant a small garden or start a compost bin. A cooking class using locally sourced ingredients highlights the benefits of eating seasonal and local foods. Students research and present traditional Portuguese dishes that use sustainable ingredients.

Day 5: Becoming Active Citizens The final day centers on empowering students to take action in their communities. In brainstorming sessions, students develop proposals for sustainability projects in their school or community, working in groups to create action plans. These proposals are presented and discussed, with peer feedback on feasibility and impact. The program concludes with a closing ceremony, where students receive certificates for their participation and outstanding

contributions, reflecting on the week's activities and the importance of sustainability citizenship.

Materials Needed:

- Projector and computer for presentations.
- Art supplies for the upcycling workshop.
- Gardening tools and seeds for the sustainable gardening activity.
- Ingredients and cooking utensils for the cooking class.
- Access to calculators or computers for the water footprint activity.

  https://www.waterfootprint.org/resources/interactive-tools/extended-water-footprint-calculator/

Evaluation: Student engagement is evaluated through their participation in activities, the creativity of upcycled products, the quality of sustainability project proposals, and reflection essays or reports on their homework assignments.

By integrating theoretical knowledge with practical experiences, this scenario aims to foster a deeper understanding of sustainability and inspire students to become proactive, environmentally responsible citizens.

Keywords (Up to 5):

Sustainability, citizenship, recycling, conservation, empowerment

Information about the Implementation

Language of the students:

Age of the students:

☒9-12 ☐ 12-15 ☐ 15-18 ☐ 18+

Number of Lessons – Duration (per lesson):

Number of Lessons: 5 days – 4 lessons each   Duration per Lesson: 50 minutes

Is this activity a STEM Activity?

For which subject(s) the activity is usable, is it an interdisciplinary activity?

Science ☒

Physics ☐   Chemistry ☐   Biology☐   Geosciences☐   Environmental☐   Other☒

Technology ☐

Engineering ☐

Arts ☒

Mathematics ☐

Information about the Scenario

Curriculum and country:

Link of the current activity to the curriculum:

Country: | Portugal | Class: | Science /Citizenship | Grade: | 5

Topic: | Sustainable development; Environmental education

Objectives (Max 100 words):

Description of the learning objectives

Understand Sustainability Concepts: Students will grasp the interconnected pillars of sustainability—environmental, social, and economic—and their significance.

Promote Waste Reduction and Recycling: Encourage students to conduct waste audits, learn about product life cycles, and practice upcycling for effective waste reduction and recycling.

Encourage Water and Energy Conservation: Educate students on calculating water footprints, exploring renewable energy sources, and devising personal conservation plans to reduce water and energy consumption.

Support Sustainable Food Practices: Teach students about food's environmental impact, engage them in organic gardening, and instruct them on cooking with local ingredients for sustainable food choices.

Develop Community Sustainability Projects: Guide students in brainstorming, planning, and presenting sustainability projects for their school or community, fostering teamwork and leadership skills.

Empower Active Citizenship: Empower students to take responsibility for their environmental impact and advocate for sustainability, promoting proactive citizenship within their communities.

Materials (Max 100 words):

Which resources and materials (software, hardware) are needed?

School Infrastructure	School Materials
Classroom	Projector and computer for presentations.
Library	Art supplies for the upcycling workshop.
Kitchen	Gardening tools and seeds for the sustainable gardening activity.
Outdoor spaces	Ingredients and cooking utensils for the cooking class.

School Infrastructure	School Materials
	Access to calculators or computers for the water footprint activity.

Use of School Infrastructure

How are school facilities and equipment used in your educational scenario?

School Infrastructure	School Materials
Classroom	Projector and computer for presentations.
Library	Art supplies for the upcycling workshop.
Kitchen	Gardening tools and seeds for the sustainable gardening activity.
Outdoor spaces	Ingredients and cooking utensils for the cooking class.
	Access to calculators or computers for the water footprint activity.

Green competences:

Which green competences are covered by the activity?

Embodying Sustainable Values	Valuing Sustainability	☒	Supporting Fairness	☒	Promoting Nature	☒
Embracing Complexity in Sustainability	Systems Thinking	☒	Critical Thinking	☒	Problem Framing	☒
Envisioning Sustainable Futures	Futures Literacy	☒	Adaptability	☒	Exploratory Thinking	☒
Acting for Sustainability	Political Agency	☐	Collective Action	☒	Individual Initiative	☒

The definition of the following terms can be found in GreenComp that is translated in all European Union languages.

Working with the community

Which external actors will be involved within the framework of the training scenario?

Organisation Type	Organisation Name
NGOs (Non-Governmental Organisations)	Quinta Pedagógica
PTA (Parent-Teacher Association)	Associação de pais
Local business	Restaurants

	Resistrela
Other (please explain)	

How will the above-selected institutions help in the educational scenario?

The external actors will be responsible for all the field trips the students are going to have and some of the workshops as well.

Those institutions will play a pivotal role in enhancing the educational landscape, particularly in promoting environmental citizenship. By integrating environmental education into their curricula, these institutions can equip students with the knowledge and skills necessary to understand and address environmental challenges. Through partnerships with environmental organizations and community engagement initiatives, institutions will provide practical experiences that foster a sense of responsibility and active participation in environmental stewardship. Additionally, institutions can lead by example by implementing sustainable practices on their campuses, thereby instilling the values of environmental sustainability in their students. Ultimately, institutions serve as catalysts for cultivating informed, responsible citizens who are empowered to contribute to a sustainable future.

Detailed activity description

Fill in the table below according to the hours of the training activity and its content (fill in the table with the subjects contained in your training scenario).

The educational scenario should follow the 5E didactic model of inquiry-based learning.

Number and name of courses	Course content	Teaching hours

Lesson 1: **Introduction to Sustainability**	**Morning Session:**
	
	• **Activity:** Icebreaker and Introduction
	  o Brief introduction about the project, objectives, and importance of sustainability.
	  o Icebreaker activity: "What is Sustainability?" group discussion.
	• **Workshop:** Understanding Sustainability
	  o Presentation on the three pillars of sustainability: environmental, social, and economic.
	  o Interactive quiz on key sustainability concepts.
		4

	Afternoon Session:
	
	• **Field Trip:** Visit to a Local Eco-Friendly Initiative
	  o Tour a local recycling plant, community garden, or eco-friendly business.
	  o Discussion with representatives about their sustainability practices and impact.
	
	Homework:
	
	• Students create a personal "Sustainability Pledge" outlining small changes they can make in their daily lives.	

Lesson 2: **Reducing Waste and Recycling**	**Morning Session:**
	
	• **Activity:** Waste Audit
	  o Students bring a small bag of waste from home.
	  o Conduct a waste audit to identify recyclable, compostable, and non-recyclable items.
	• **Workshop:** The Life Cycle of Products
	  o Presentation on the journey of everyday items from production to disposal.
	  o Discussion on the environmental impact of waste and the importance of recycling.
	
	Afternoon Session:
	
	• **Project:** Upcycling Workshop
	  o Students work in groups to create new items from recycled materials (e.g., tote bags from old t-shirts, planters from plastic bottles).
	  o Showcase the upcycled products and discuss the creative process.
	
	Homework:
		4

	• Research and write a short report on a country that excels in recycling and waste management practices.	

Lesson 3: **Water and Energy Conservation**	**Morning Session:**
	
	• **Activity:** Water Footprint Calculator
	   o Students calculate their personal water footprint using an online tool.
	   o Discussion on ways to reduce water consumption at home and school.
	• **Workshop:** Renewable Energy Sources
	   o Presentation on different types of renewable energy (solar, wind, hydro, etc.).
	   o Hands-on activity: Building a simple solar oven or wind turbine model.
	
	Afternoon Session:
	
	• **Field Trip:** Visit to a Renewable Energy Facility
	   o Tour a solar farm, wind farm, or hydroelectric plant.
	   o Learn about the technology and benefits of renewable energy.
	
	Homework:
	
	• Create an energy conservation plan for their household.
		4

Lesson 4: **Sustainable Food Practices**	**Morning Session:**
	
	• **Activity:** Farm-to-Table Journey
	   o Presentation on the journey of food from farm to table.
	   o Discussion on the environmental impact of food production and transportation.
	• **Workshop:** Sustainable Gardening
	   o Learn about organic gardening and permaculture.
		4

	o Plant a small garden or start a compost bin.
	
	Afternoon Session:
	
	• **Project:** Cooking with Local Ingredients
	   o Cooking class using locally sourced ingredients.
	   o Discuss the benefits of eating seasonal and locally produced food.
	
	Homework:
	
	Research and present a traditional Greek dish that uses sustainable ingredients.	

Lesson 5: **Becoming Active Citizens**	**Morning Session:**
	
	• **Activity:** Community Sustainability Projects
	   o Brainstorming session on potential sustainability projects for their school or community.
	   o Develop a project proposal and action plan in groups.
	
	Afternoon Session:
	
	• **Presentation:** Project Proposals
	   o Groups present their sustainability project proposals.
	   o Peer feedback and discussion on feasibility and impact.
	
	Closing Ceremony:
	
	• **Award Ceremony:** Certificates for participation and outstanding contributions.
	   o Reflect on the week's activities and the importance of sustainability citizenship.
	   o Group photo and celebration.
		4

Evaluation (if any):

Please write how students are going to be evaluated

Formative
- Direct observation: observing students' participation, their curiosity, their involvement in discussions and their interaction and collaboration among peers.

- Discussion or Debate: assessing the students' ability to argue, respect and defend different points of view on the basic theme of the activity.

- Student engagement evaluated through their participation in activities, the creativity of upcycled products, the quality of sustainability project proposals, and reflection essays or reports on their homework assignments.

Summative
- Report: ask the students to write a report on their findings which can be presented orally or as a poster.

- Self-evaluation and self-assessment: students should reflect on the knowledge they have acquired and how they have performed during the activity. They should also give constructive feedback to their classmates.

References (if any)

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Annex

Feel free to add any more information and material you have, indicatively photos from the activity, constructions needed or any handbook that may be available online.