



**Interactive Escape Rooms for
Climate Crisis Awareness and
Civic Engagement
in School Education**

**Module 4 -
Sustainable Innovation**

Unit 2 - Sustainable Technologies



Interactive Escape Rooms for Climate Crisis Awareness and Civic Engagement in School Education

Project Partners



European Project
Consulting (Italy)



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What is Sustainable Technology?



Sustainable technologies are tools, systems, or innovations designed to reduce environmental impact and use resources more efficiently. They help protect the planet while still meeting our needs, ensuring that future generations can also have access to natural resources.





Why Do We Need Them?

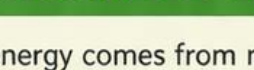
Sustainable technologies are important because they help reduce environmental problems and support a cleaner, healthier planet.





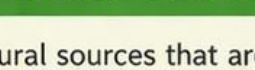
1. RENEWABLE ENERGY TECHNOLOGIES

Renewable energy comes from natural sources that are continuously replenished. These sources produce little to no greenhouse gas emissions, making them essential for a cleaner future.



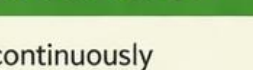
SOLAR ENERGY

Solar panels convert sunlight into electricity.



WIND ENERGY

Wind turbines generate electricity from moving air.



HYDROPOWER

Hydropower systems use flowing water to produce energy.

These technologies reduce dependence on fossil fuels and help lower emissions and environmental impact.

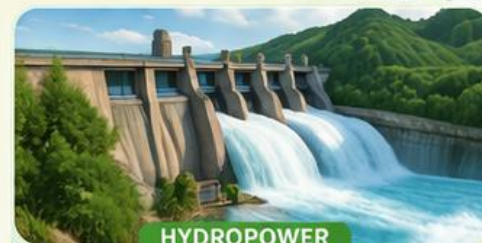


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2. BROADER SUSTAINABLE INNOVATIONS

Sustainability in technology is not limited to energy production. It also involves designing and using products and systems that are efficient, environmentally friendly, and socially responsible.



SMART HOME SYSTEMS

Optimise energy use and reduce waste.



ELECTRIC VEHICLES

Reduce air pollution and emissions.



GREEN BUILDINGS

Designed to minimise energy use and environmental impact.

Optimise energy use and reduce waste.



Reduce air pollution and emissions.



Designed to minimise energy use and environmental impact.

3. CIRCULAR ECONOMY

The circular economy aims to reduce waste by keeping materials and resources in use for as long as possible.

The diagram illustrates the Circular Economy through three main components, each represented by a blue box with a title and an image:

- RECYCLING SYSTEMS:** Shows three recycling bins (green, blue, and yellow) filled with various bottles. Below the image, it states: "Materials are collected and reprocessed."
- WASTE-TO-ENERGY:** Shows a factory building with a large green recycling symbol on its side. Below the image, it states: "Non-recyclable waste is converted into energy."
- SUSTAINABLE PRODUCT DESIGN:** Shows a laptop and a smartphone, both displaying a green recycling symbol on their screens. Below the image, it states: "Products are designed to be reused, repaired, or recycled."

On the right side of the diagram, a text box explains: "This approach reduces the need for new resources and minimises environmental damage." Below this text is a small green plant icon with a blue arrow pointing towards it.

At the bottom of the diagram, a large blue banner states: "TOGETHER, THESE INNOVATIONS BUILD A CLEANER, SMARTER, AND MORE SUSTAINABLE FUTURE." followed by a small green plant icon.



Materials are collected and reprocessed.



Non-recyclable waste is converted into energy.



Products are designed to be reused, repaired, or recycled.



TOGETHER, THESE INNOVATIONS BUILD A CLEANER, SMARTER, AND MORE SUSTAINABLE FUTURE.

Renewable Energy

Renewable energy comes from natural sources that do not run out, such as the sun, wind, and water. Solar panels, wind turbines, and hydropower systems produce energy without polluting the environment, making them a key solution for reducing greenhouse gas emissions.



Sustainable Innovations in Daily Life



Sustainability is not only about energy. It also includes how we use technology in everyday life. Smart homes can save energy, electric vehicles reduce air pollution, and green buildings are designed to be more efficient and environmentally friendly.



The Circular Economy

The circular economy focuses on reducing waste by reusing and recycling materials. Instead of throwing things away, products are designed to last longer and be reused. Technologies such as recycling systems and waste-to-energy solutions help make this possible.



CIRCULAR ECONOMY

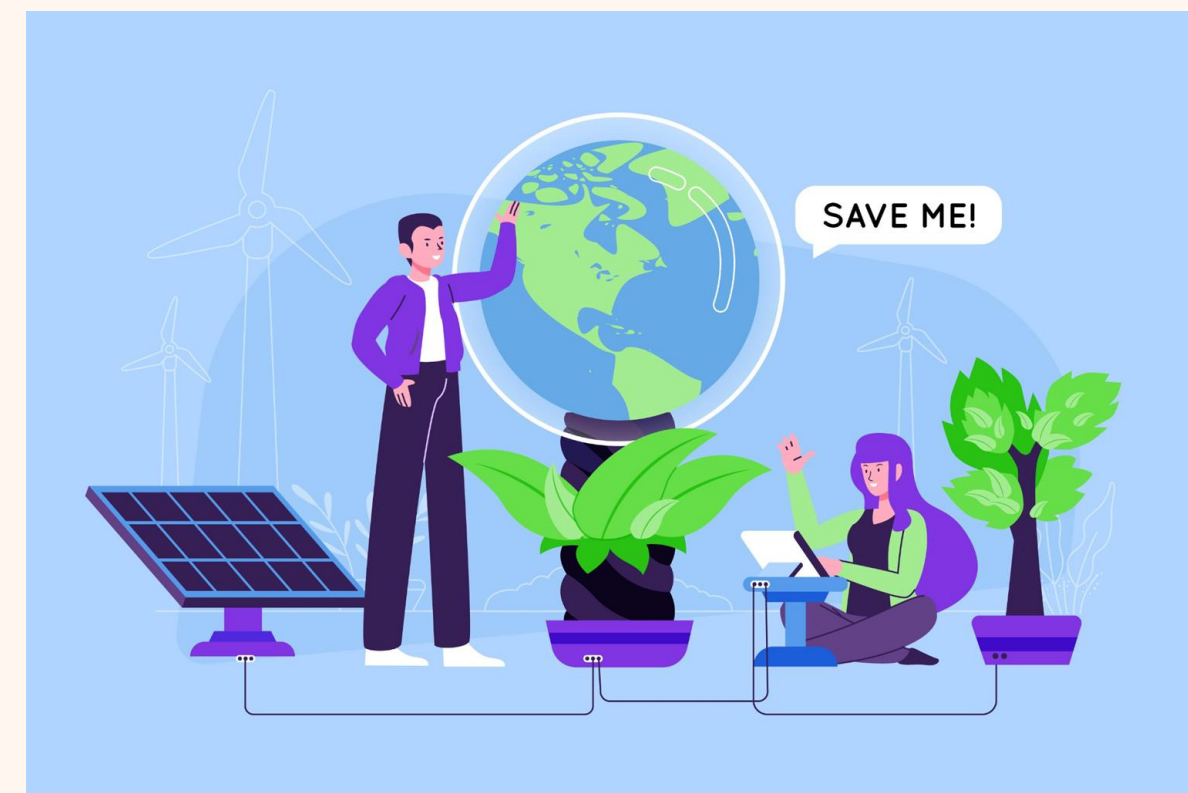
A LASTING SHIFT, NOT A PASSING TREND





Technology and Responsibility

Technology alone cannot solve environmental problems. It must be used responsibly. The choices people make every day, combined with sustainable technologies, can create a real positive impact on the environment.





Looking to the Future

Sustainable technologies are constantly evolving, and many new solutions still need to be developed. By combining knowledge, creativity, and innovation, young people can help create technologies that will shape a more sustainable future.





Thank you!

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