



STEM for inclusive Schools

WP2 – Activities

Worksheet - Renewable Energy Coding Project

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Project Title:	STEM for inclusive Schools
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Project partners:	P1 University Paderborn (UPB), DE P2 Universitatea Dunarea de Jos din Galati (UDG), RO P3 Scoala Gimnaziala Nr. 7 Galati, RO P4 Siec Badawcza Lukasiewicz - Instytut Technologii Eksploatacji, PL P5 Inovatif ve Girisimci Toplum Dernegi, TR P6 Sucessos Criativos, Lda, PT



Worksheet for the Activity:

Renewable Energy Coding Project

name of the activity

Task description

Time to finish the task: 6 days

Supplies:



Computers or laptops with access to Scratch (online or offline) or Python IDEs.

Internet access for research and tutorials.

Writing utensils and paper for drafting ideas.

Presentation software (e.g., Canva, PowerPoint).

Method:



Work in groups to create a coding project showcasing renewable energy concepts. Using Scratch or Python, design simulations or games where elements like solar panels, wind turbines, or hydroelectric systems play a key role. The activity includes brainstorming, research, coding, debugging, and presenting your project to the class.

Instructions:



DAY 1:

Discuss in your group:

- What renewable energy sources do you want to include in your project?
- Will you create a simulation or a game?

Use Table 1 to brainstorm ideas and list the renewable energy elements you plan to incorporate.



DAY 2-3:

Research renewable energy concepts and coding techniques.
Use Table 2 to sketch a storyboard or flowchart of your project.
Begin coding your project in Scratch or Python. Focus on:

- Integrating renewable energy features.
- Making your project interactive and functional.

DAY 4-5:

Test and debug your project to ensure smooth functionality.
Prepare a digital presentation showcasing:

- Your project's renewable energy elements.
- Key coding features used.
- Challenges faced and solutions implemented.

DAY 6:

Present your project to the class. Reflect on the following questions:

- What inspired your project design?
- How does your project promote renewable energy awareness?
- What coding skills did you improve during this activity?

Your Group name:



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Write the names of your group members in the box:



Table 1:



Brainstorm ideas and list renewable energy elements you plan to incorporate:

Energy Source	How it will be used in the project?
SOLAR Energy	
WIND Energy	



HYDRO Energy	

Reflection Questions:

1. What was the most challenging aspect of coding your project?
How did you overcome it?
2. Which renewable energy feature are you most proud of, and why?
3. How can the skills you learned in this project apply to real-world problems?