

STEM Education for Sustainable Development

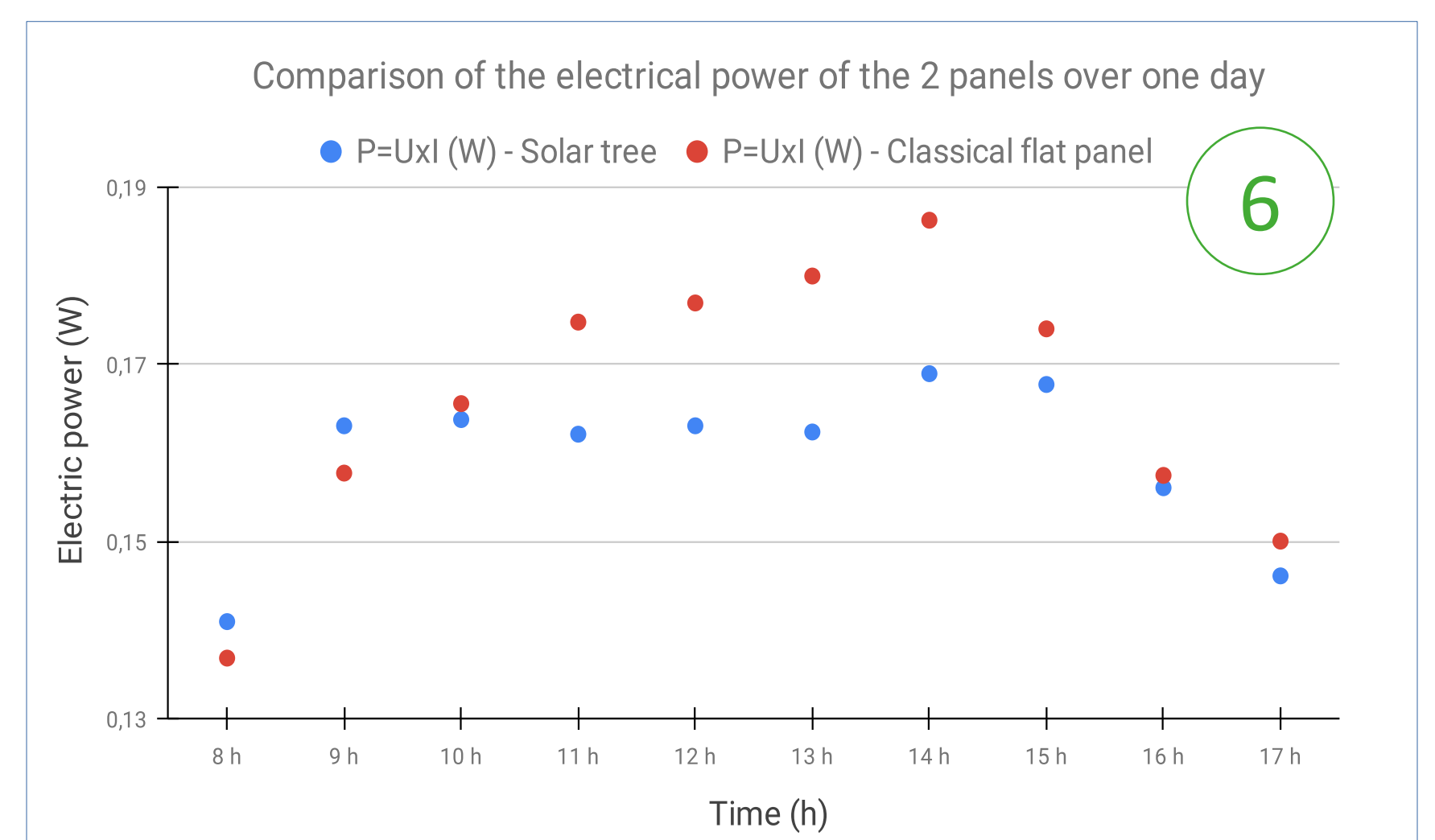
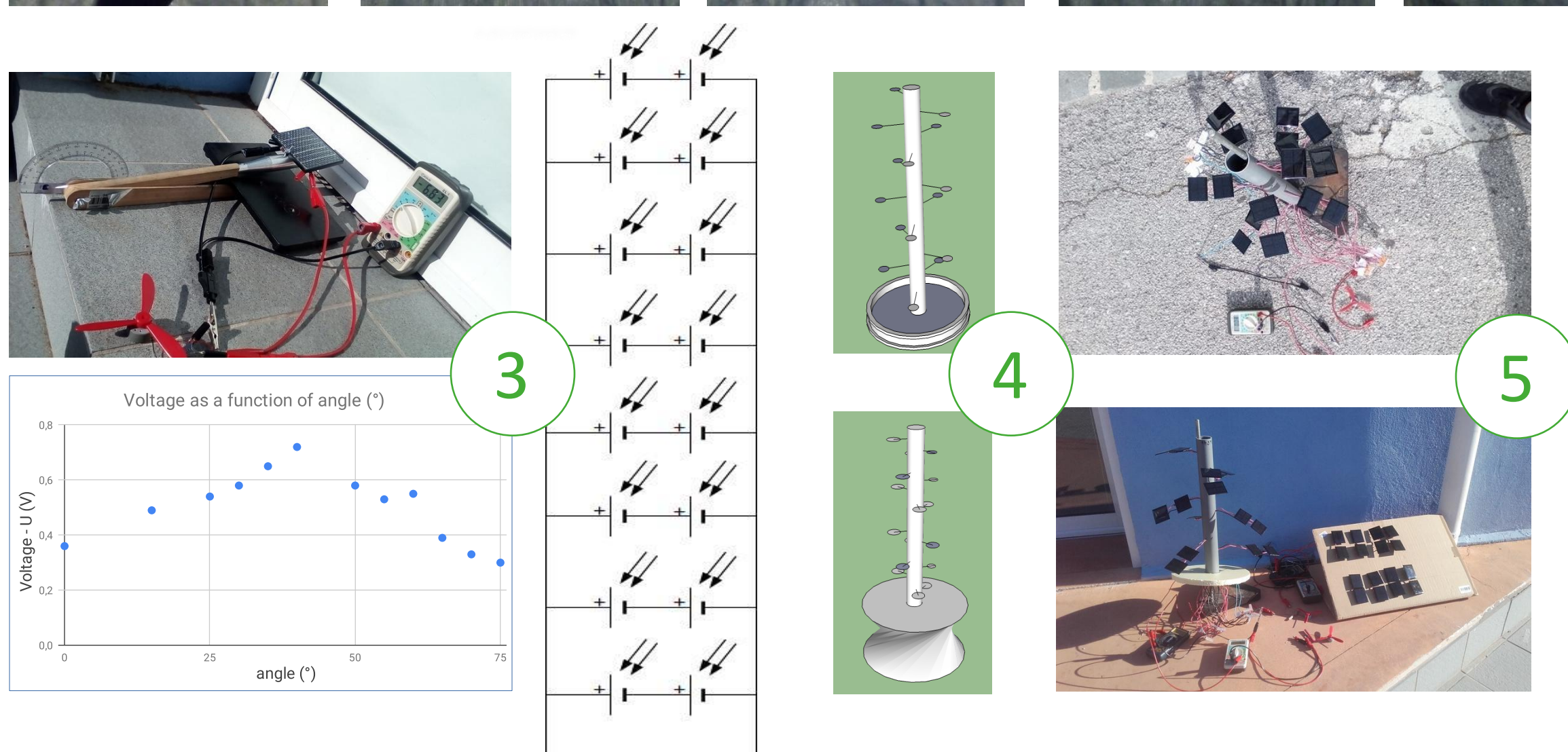
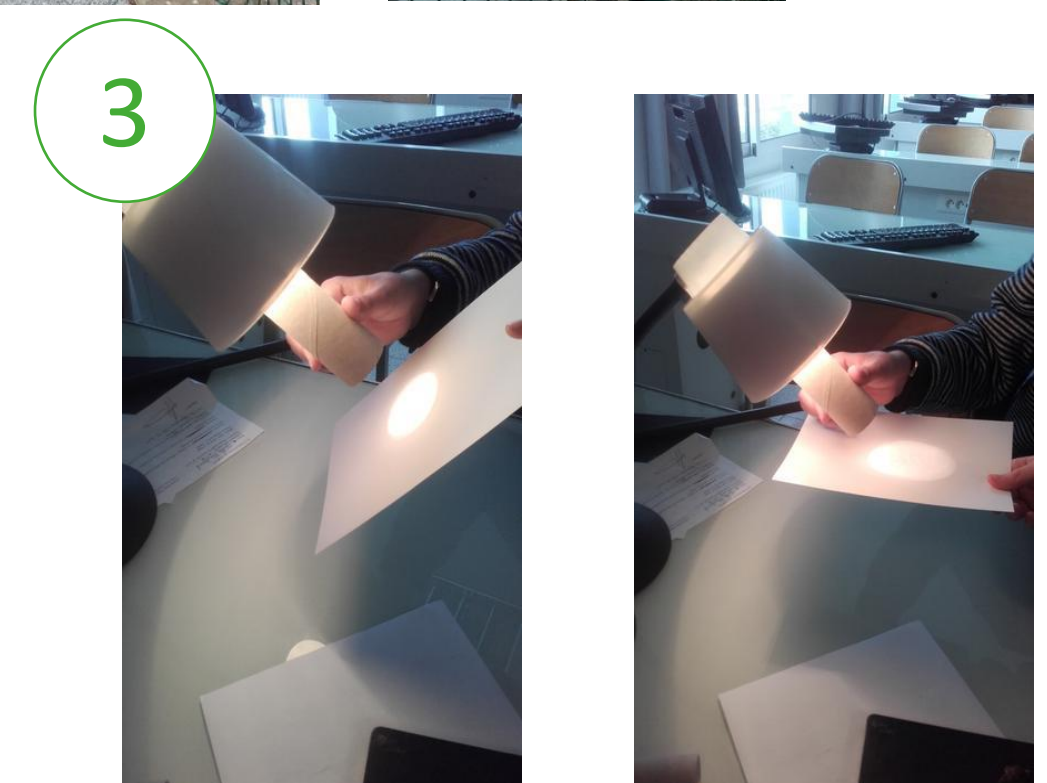
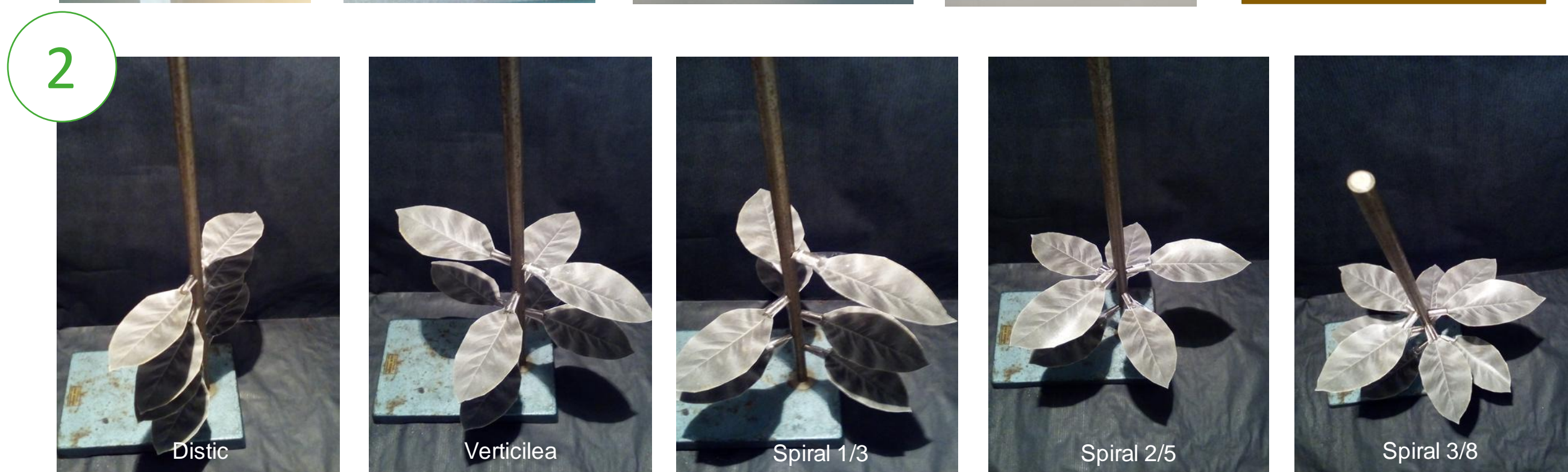
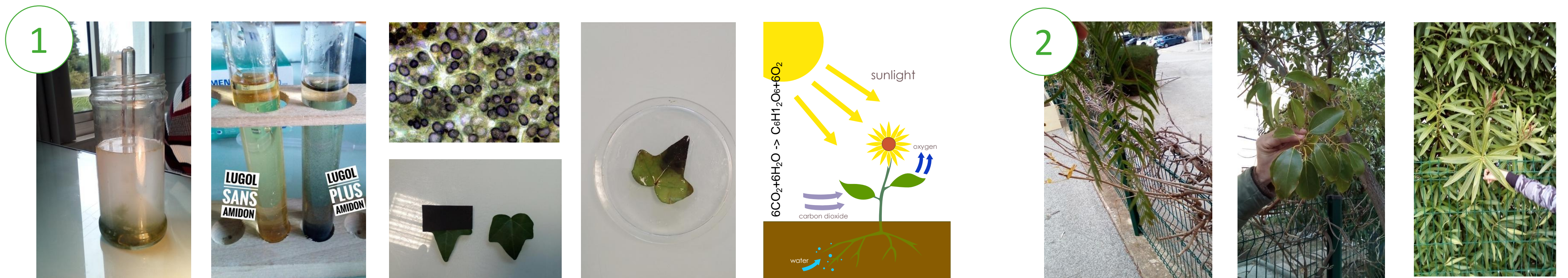
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Solar tree

How to improve a photovoltaic panel using biomimicry.

Crossdisciplinary project - biology, physics, chemistry, mathematics, technology.

1. Highlight the need for plants to receive light energy (biology, chemistry)
2. Analyze how plants optimize light reception, phyllotaxis (biology, mathematics)
3. Study photovoltaic cells (physics, technology).
4. Design and manufacture the photovoltaic devices (technology).
5. Measuring performance (physics).
6. Analyze the results and draw conclusions (physics, technology).



Conclusion:

- solar tree increases the ratio of ground area to electric power
- an interdisciplinary stem project involving all students
- a low-cost project linked to the sustainable development goals
- going forward with local development