

Development of renewable energy models for children education

Author: Vivien Balog

Case study tutor: Carmen Ibáñez Usach

Renewable energies tutor: Jose Segarra Murria

Rural development tutor: Vicent Querol

English tutor: Imre Baják

Professional supervisor: Zsuzsanna Kray

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- 2.1. Previous hydraulic model option 1.
- 2.2. Previous hydraulic model option 2.
- 2.3. Previous hydraulic model option 3.

3. Previous eolic models

- 3.1. Previous eolic model option 1.
- 3.2. Previous eolic model option 2.
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4. Previous photovoltaic models

- 4.1. Previous photovoltaic model option 1.
- 4.2. Previous photovoltaic model option 2.
- 4.3. Previous photovoltaic model option 3.

5. Final models

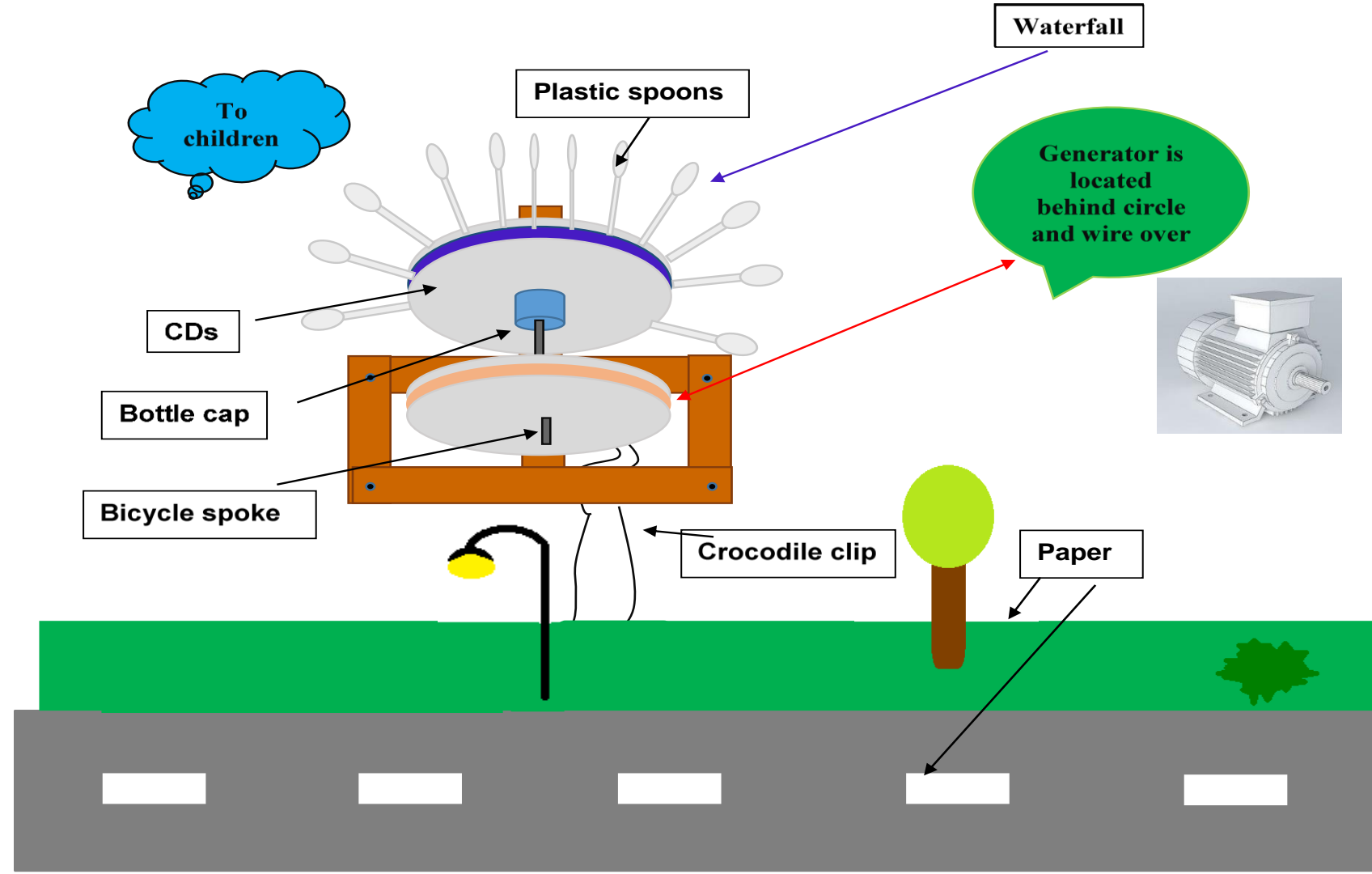
- 5.1. Final hydraulic model
- 5.2. Final eolic model
- 5.3. Final photovoltaic model

1. Introduction

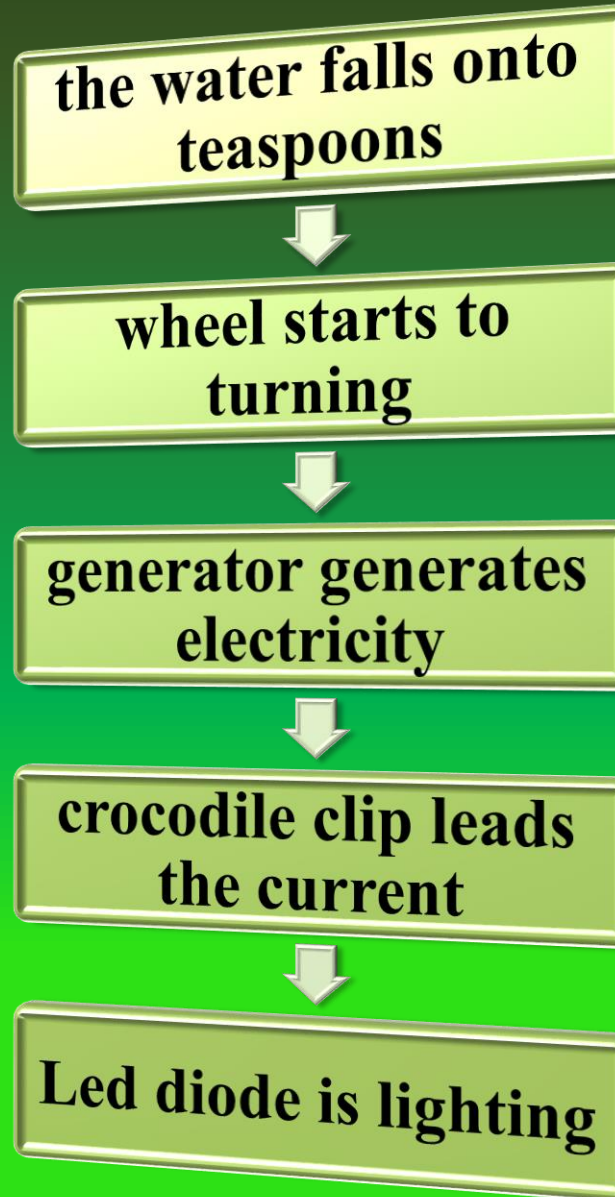
- This case study focuses on children education on renewable energies.
- In this case study, three models will be designed and their respective pedagogical guides will be prepared. Firstly, three different types of models will be analysed: hydraulic, eolic and photovoltaic energy each of them focused on a type of energy transformation process.
- For each model selected from the literature reviewed, different features will be presented:
 - Initial design of the model
 - Materials
 - Description of the process
 - Steps to build the model.
- Finally, three new models will be designed concerning three types of energy transformation.
- The main goal is: make students aware of the disadvantages of the different non-renewable sources and of the advantages of renewable energy sources.

2.1. Previous hydraulic model option 1.

- Initial design of the model

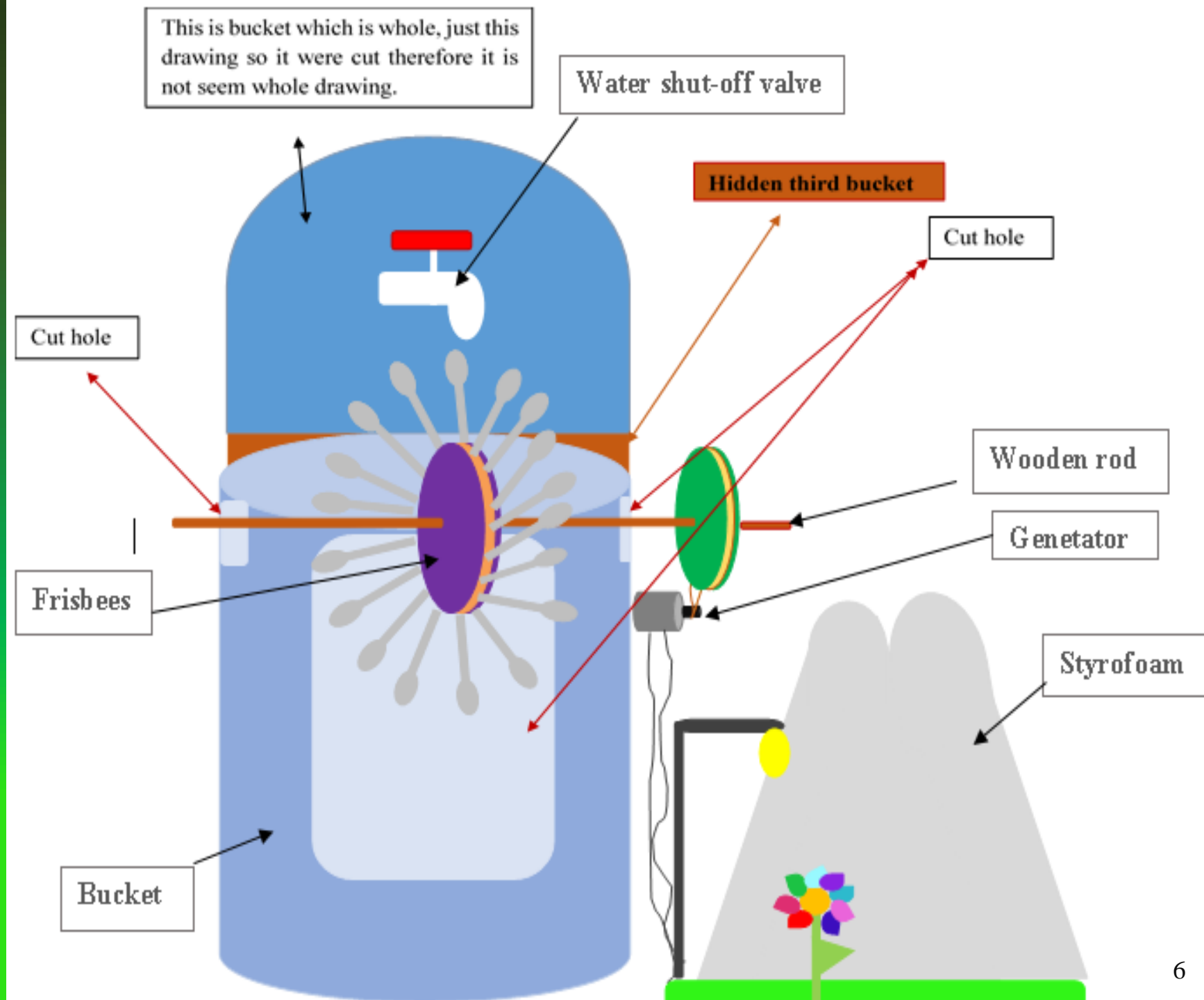


Description of the process



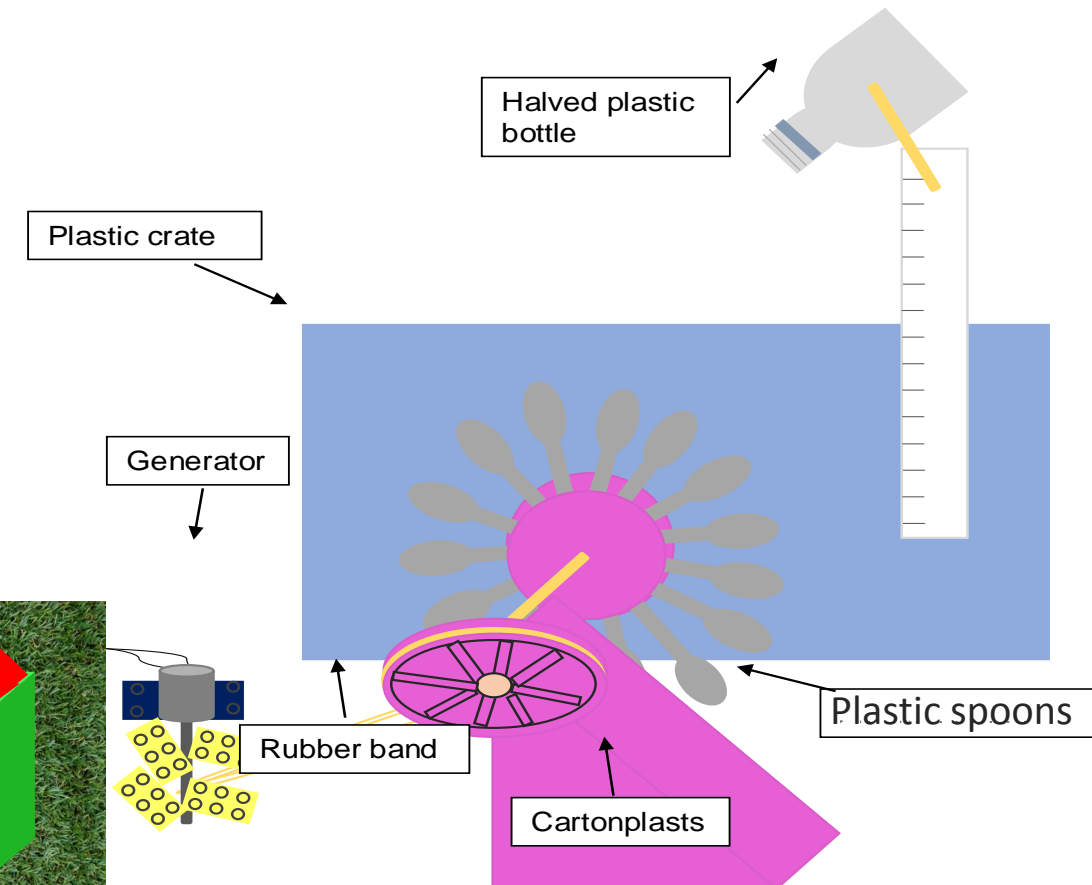
2.2. Previous hydraulic model option 2.

- Initial design of the model



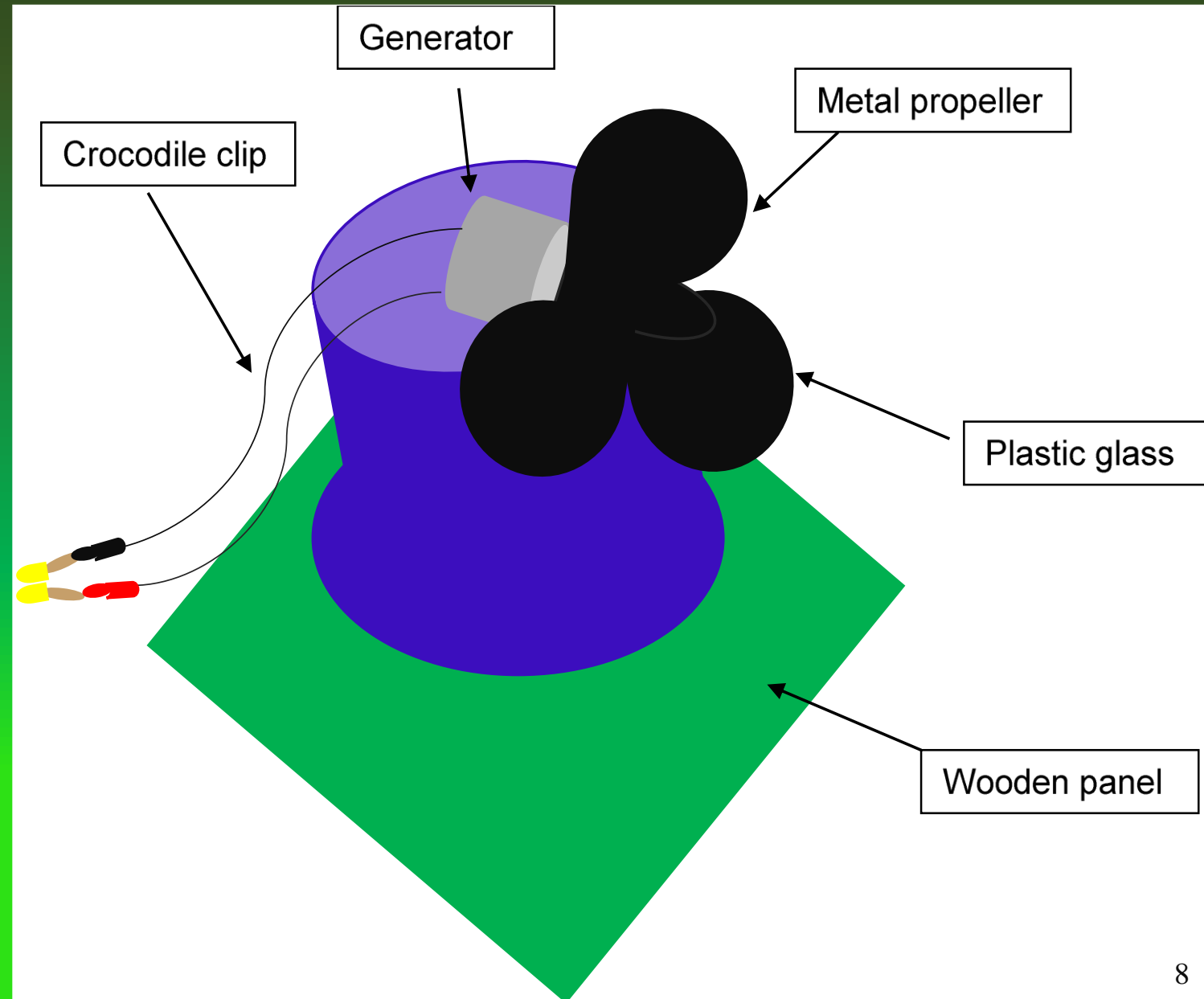
2.3. Previous hydraulic model option 3.

- Initial design of the model



3.1. Previous eolic model option 1.

- Initial design of the model



Description of the process

**Turn
on hair
dryer**

**wind
reaches the
turbine and
the turbine
starts to
turning**

**Genera
tor**

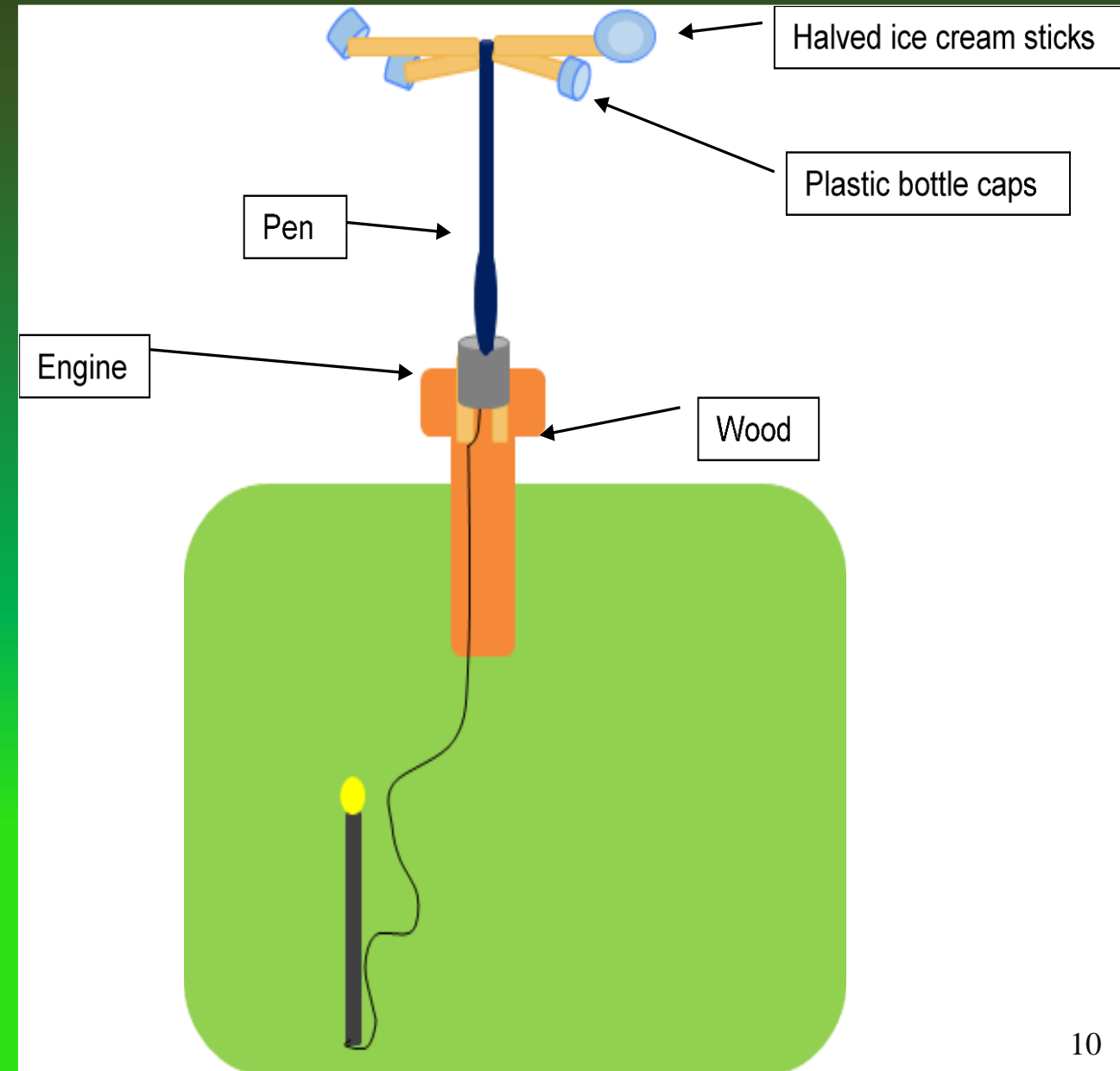
**generates
electricity**

**Led
diode**

**1.Led
diode is
lighting**

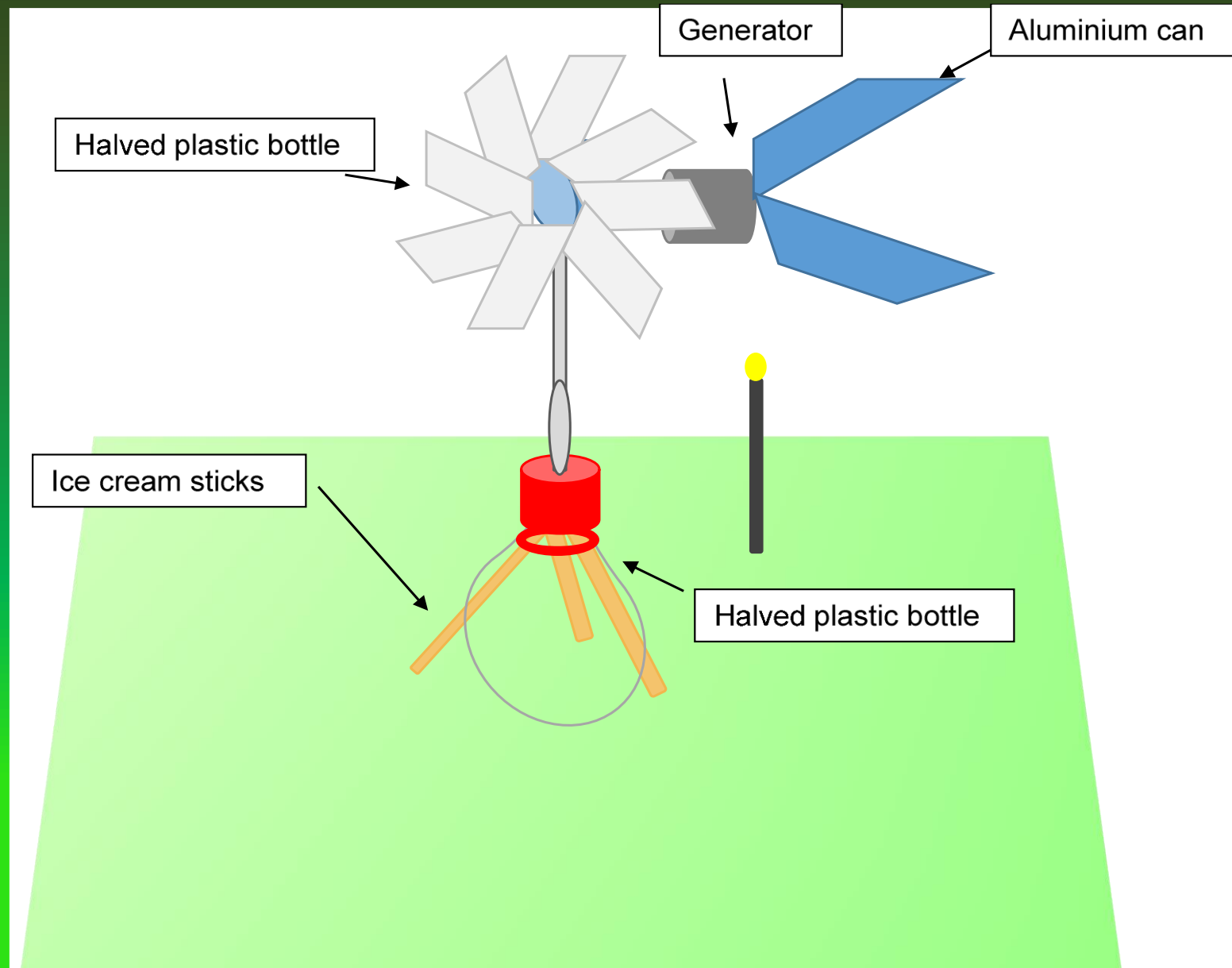
3.2. Previous eolic model option 2.

- Initial design of the model



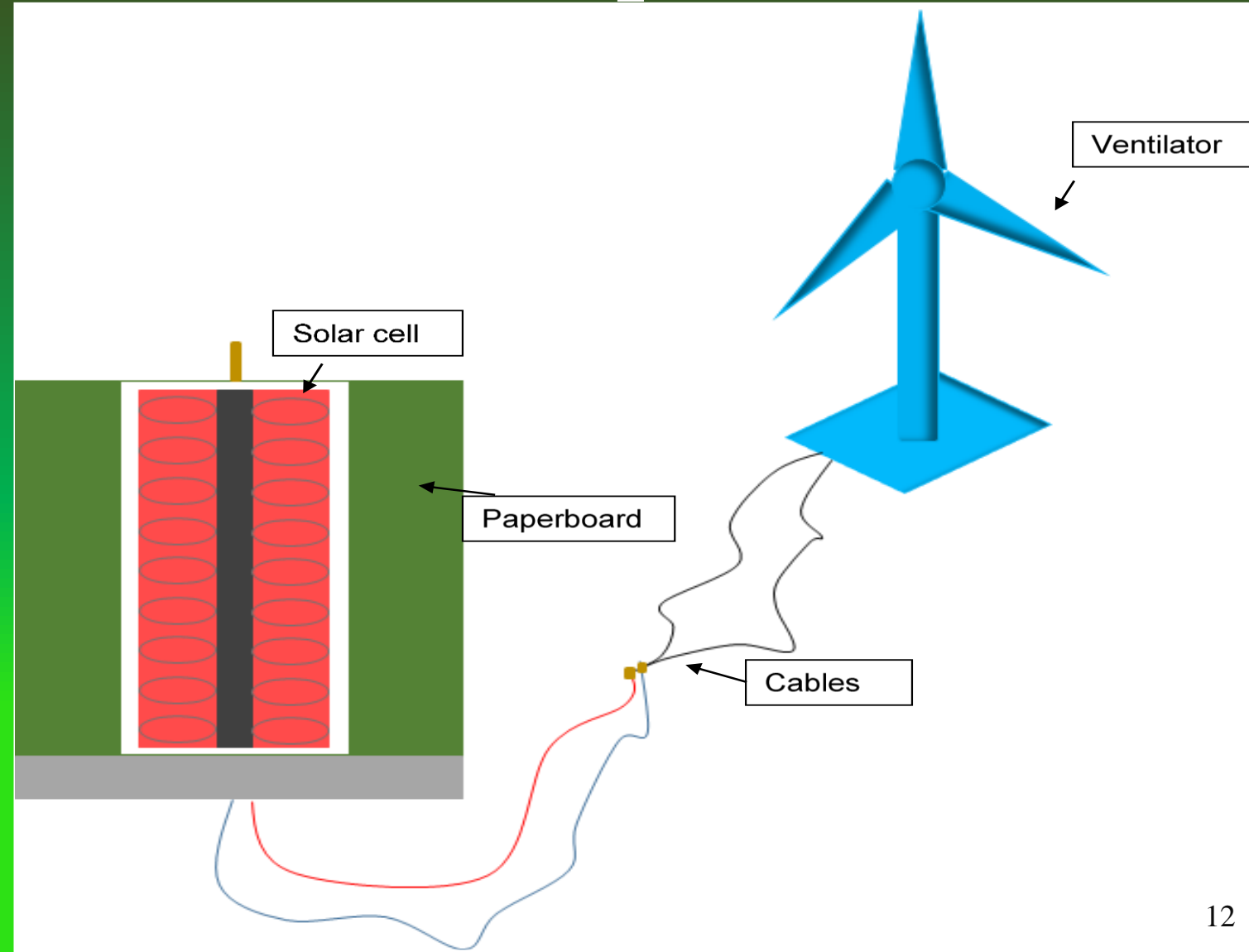
3.3. Previous eolic model option 3.

- Initial design of the model



4.1. Previous photovoltaic model option 1.

- Initial design of the model



Description of the process

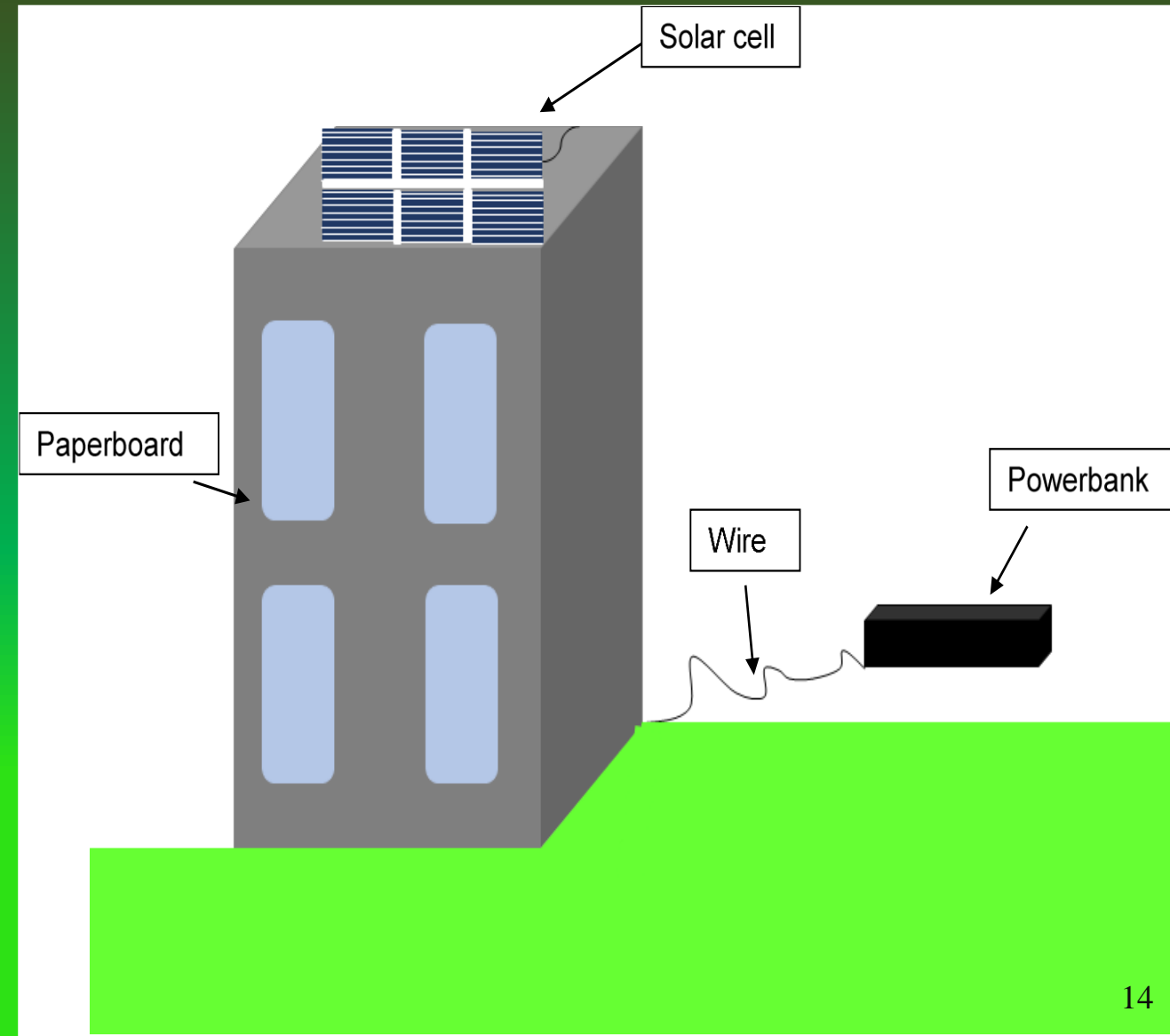
Sun rays get to solar panel

Producing current to battery

Ventilator is turning

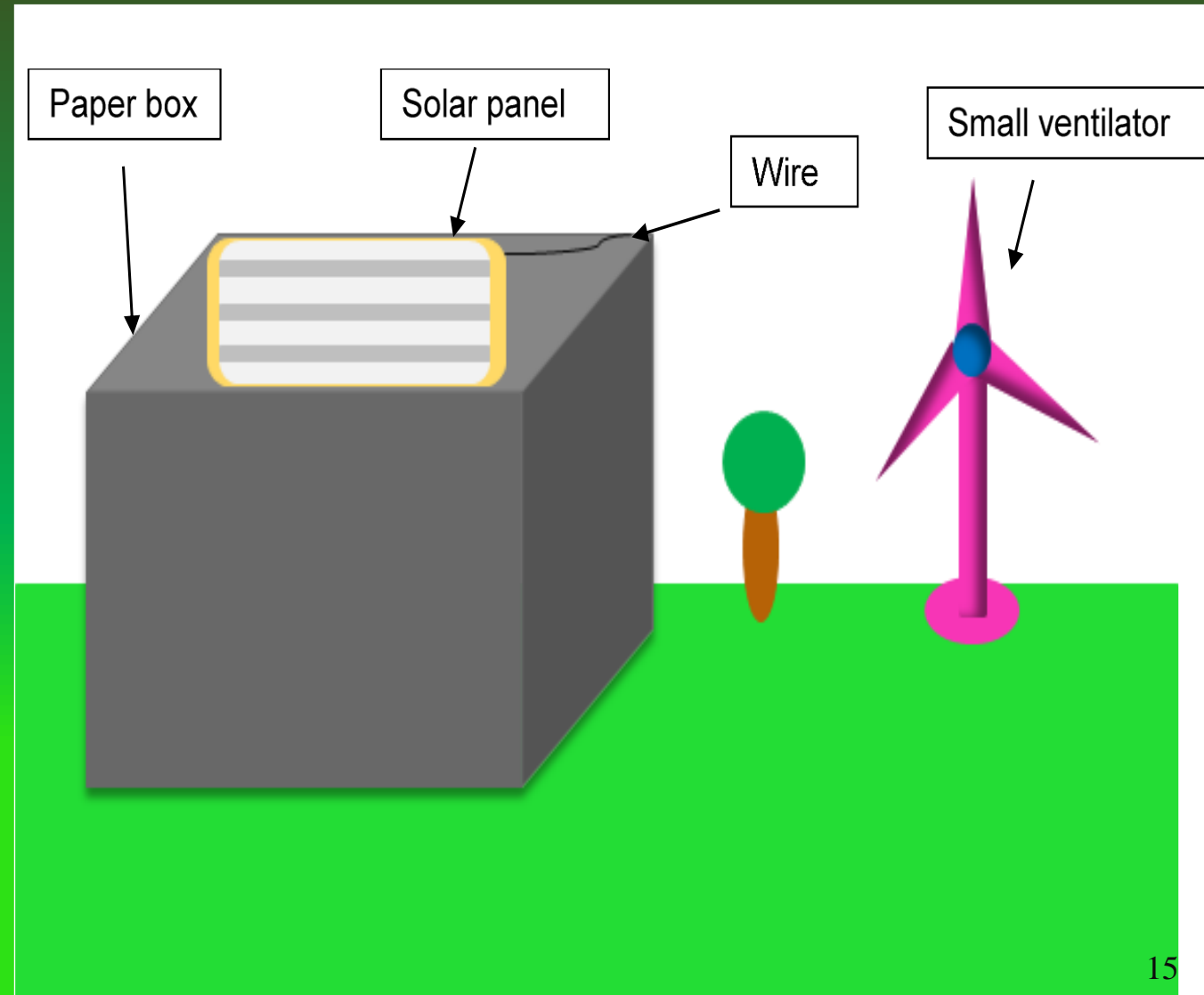
4.2. Previous photovoltaic model option 2.

- Initial design of the model

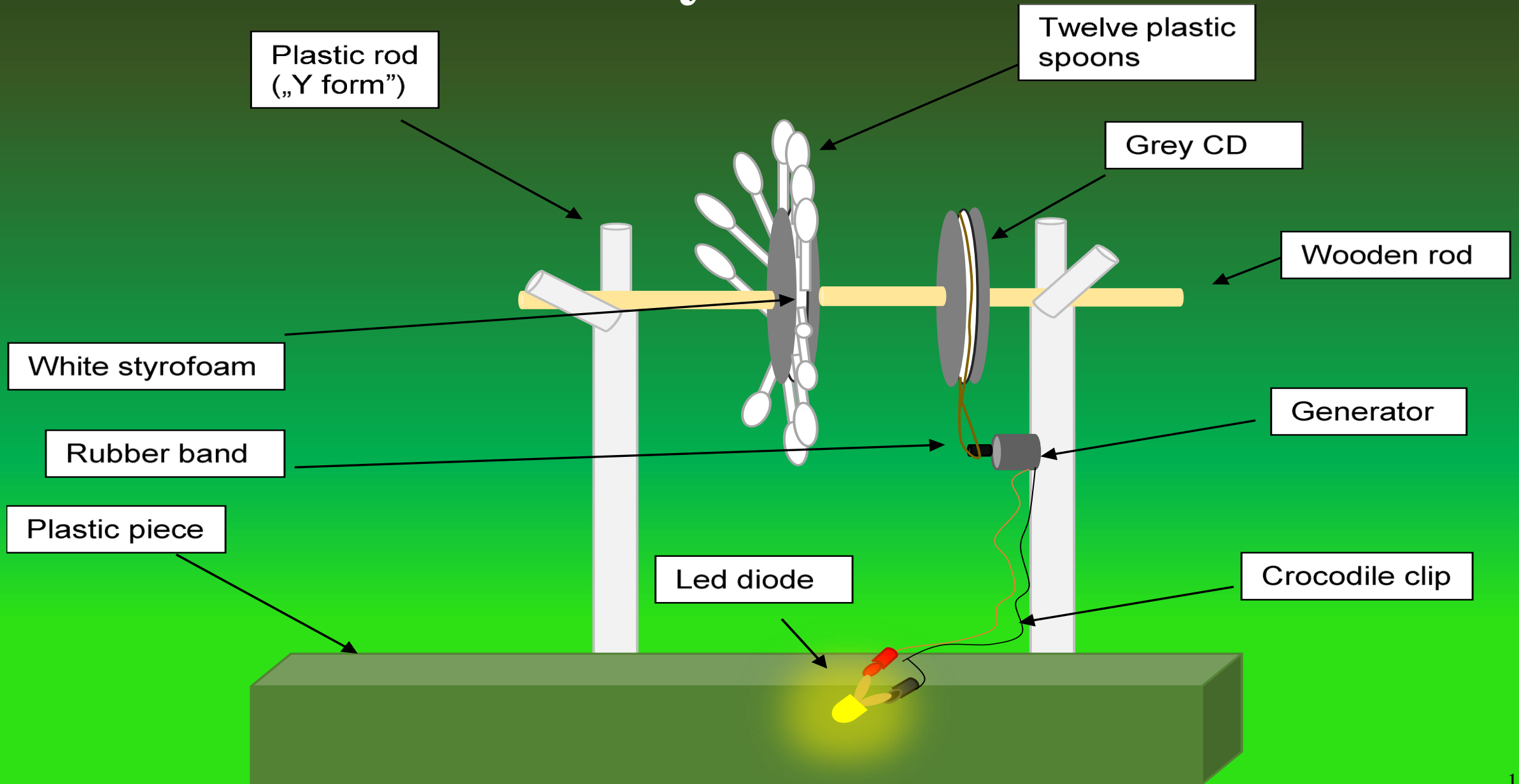


4.3. Previous photovoltaic model option 3.

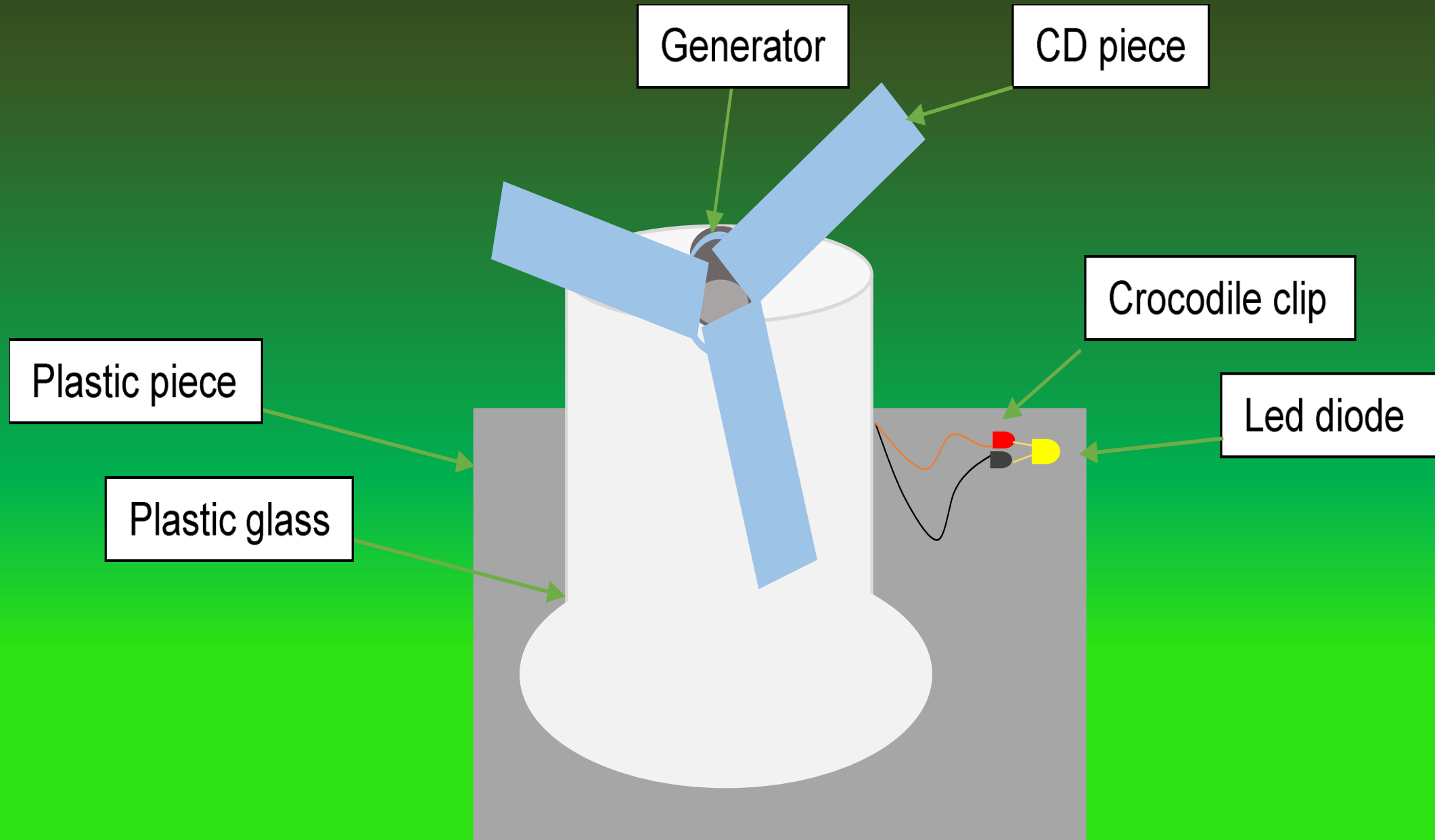
- Initial design of the model



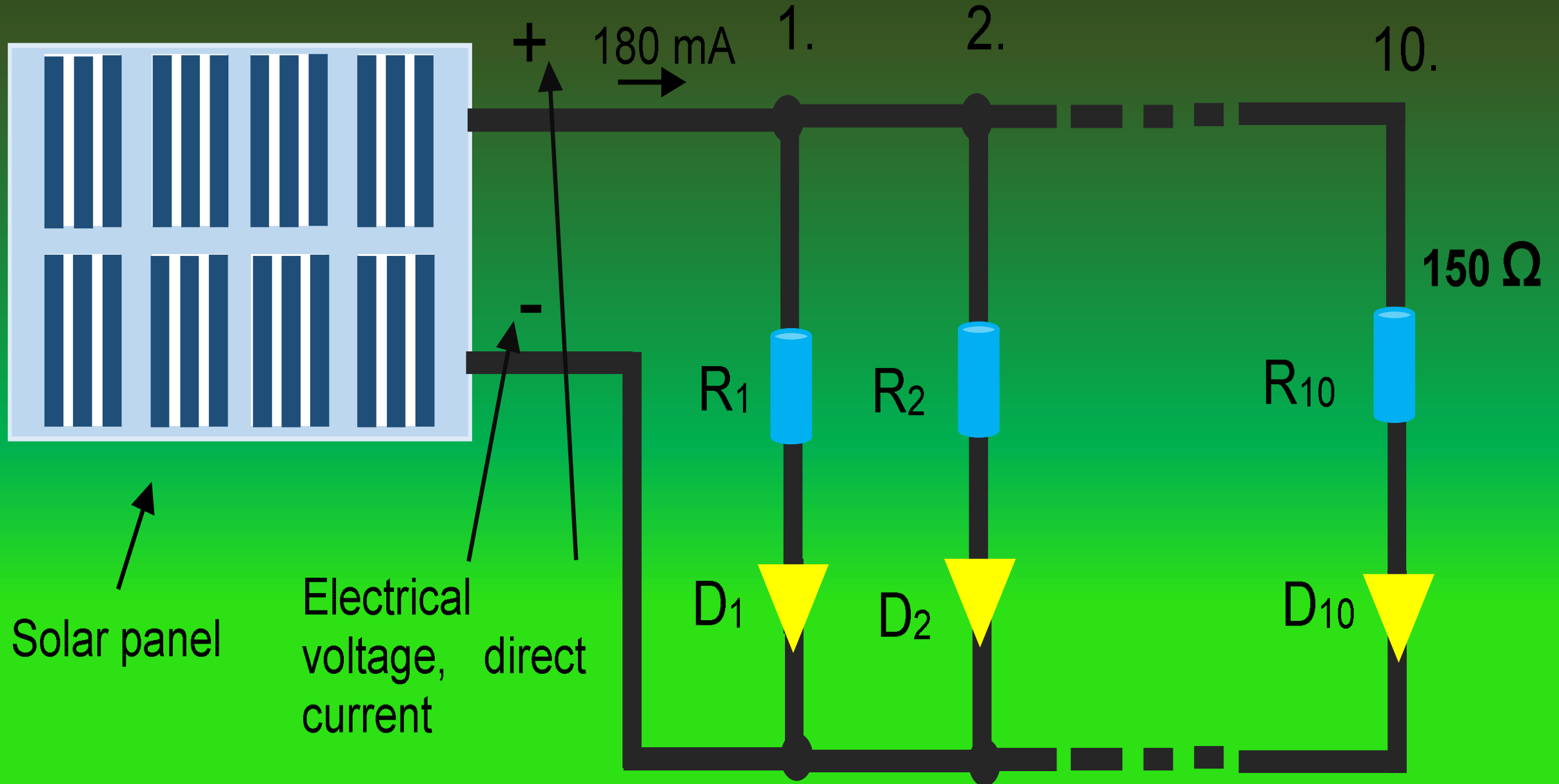
5.1. Final hydraulic model



5.2. Final eolic model



5.3. Final photovoltaic model



Thank you!

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