

# 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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**GEOLIN**

**GENERAL ELECTRIC**

# Outline

## 1. Introduction to the project

## 2. Previous hydraulic models

- 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.
- 3.3. Previous eolic model option 3.

## 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

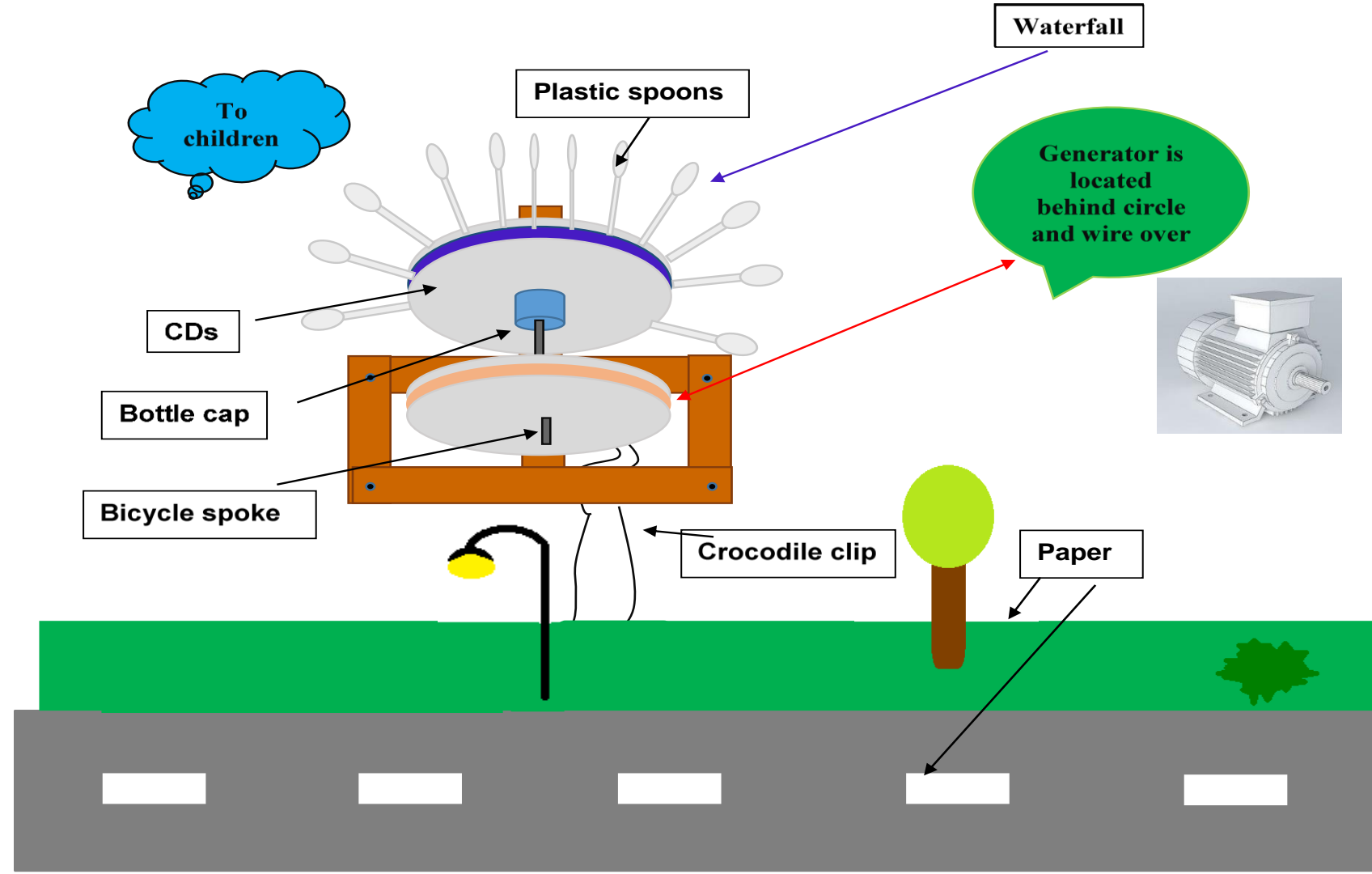
- 5.1. Final hydraulic model
- 5.2. Final eolic model
- 5.3. Final photovoltaic model

# 1. Introduction

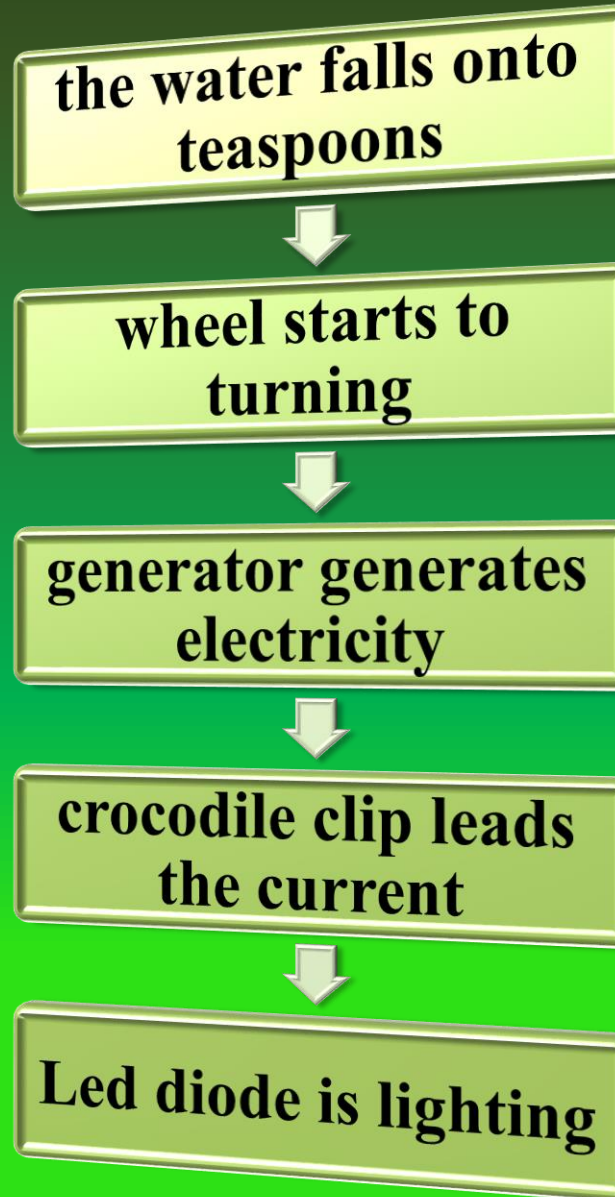
- This case study focuses on children education on renewable energies.
- In this case study, three models will be designed and their respective pedagogical guides will be prepared. Firstly, three different types of models will be analysed: hydraulic, eolic and photovoltaic energy each of them focused 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

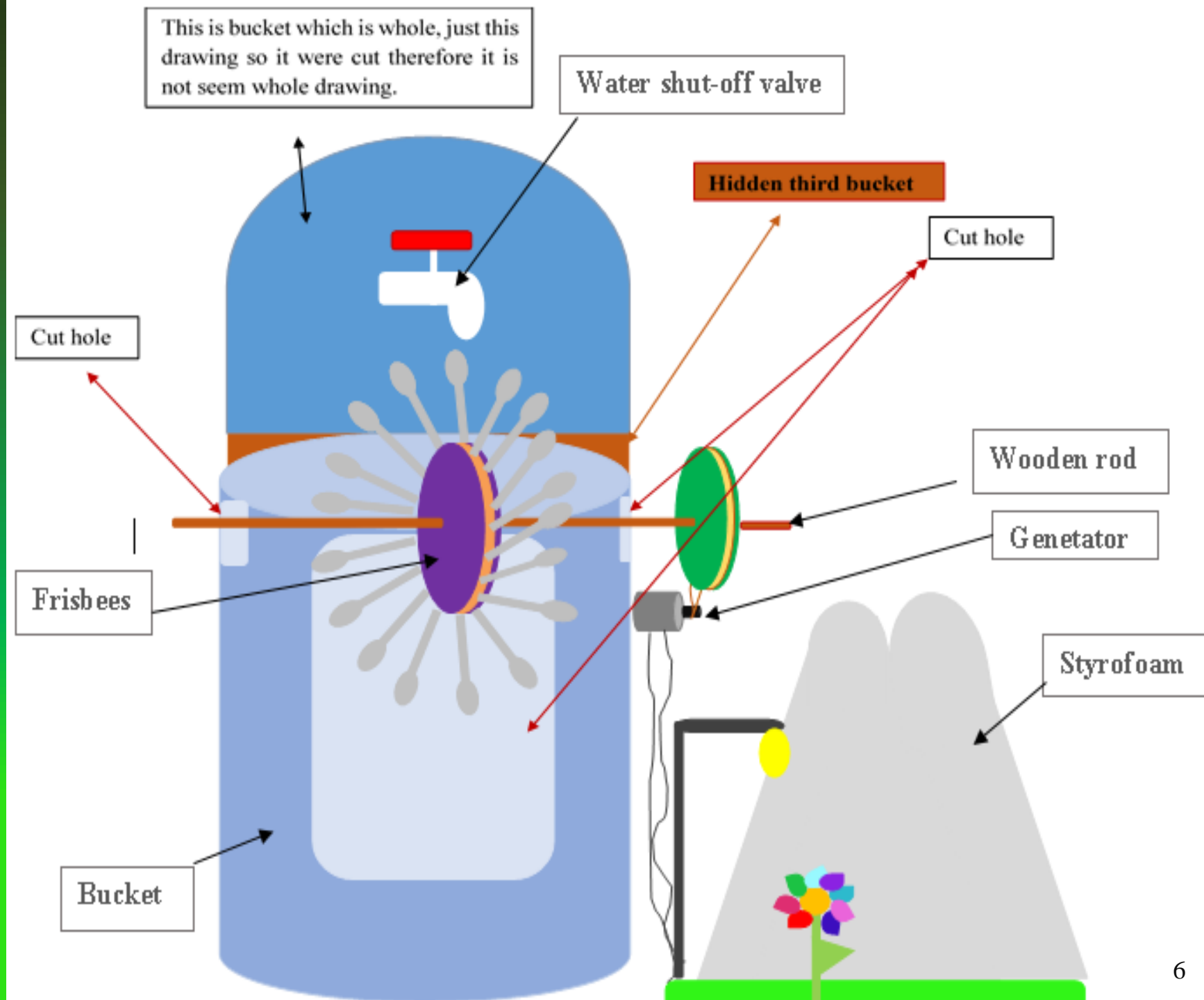


# Description of the process



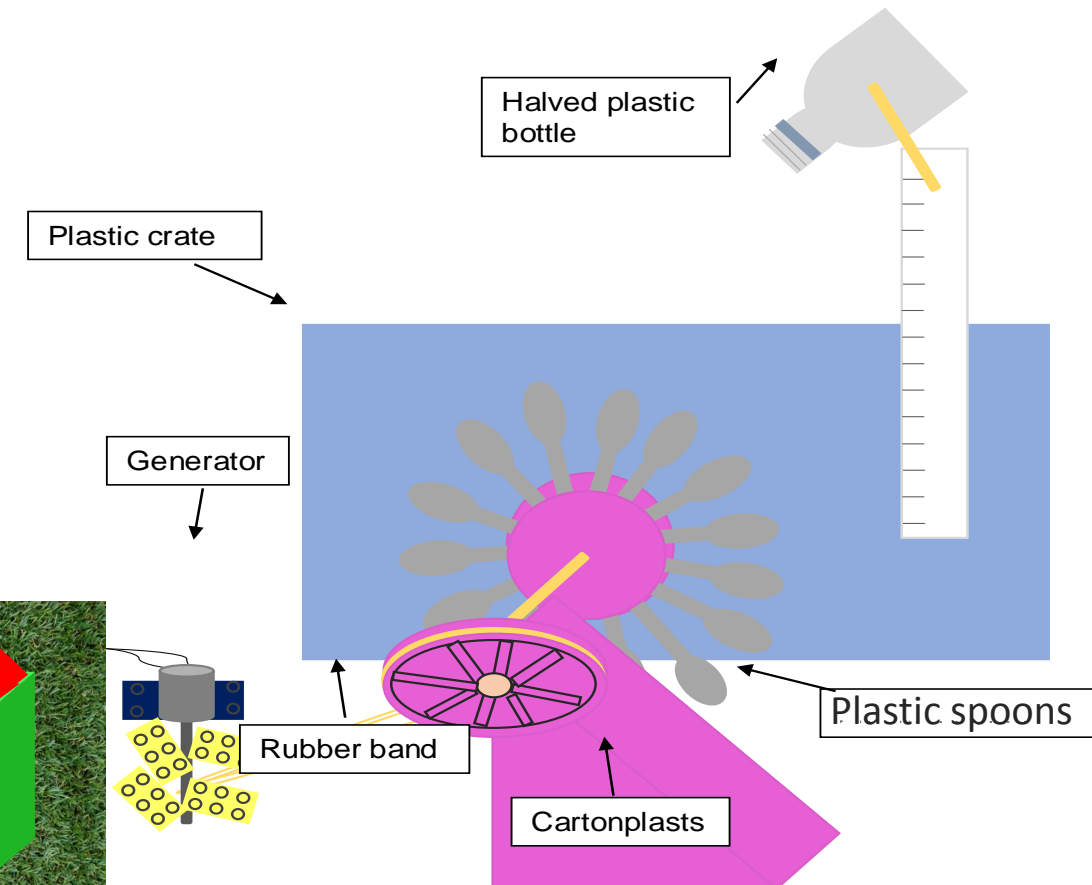
## 2.2. Previous hydraulic model option 2.

- Initial design of the model



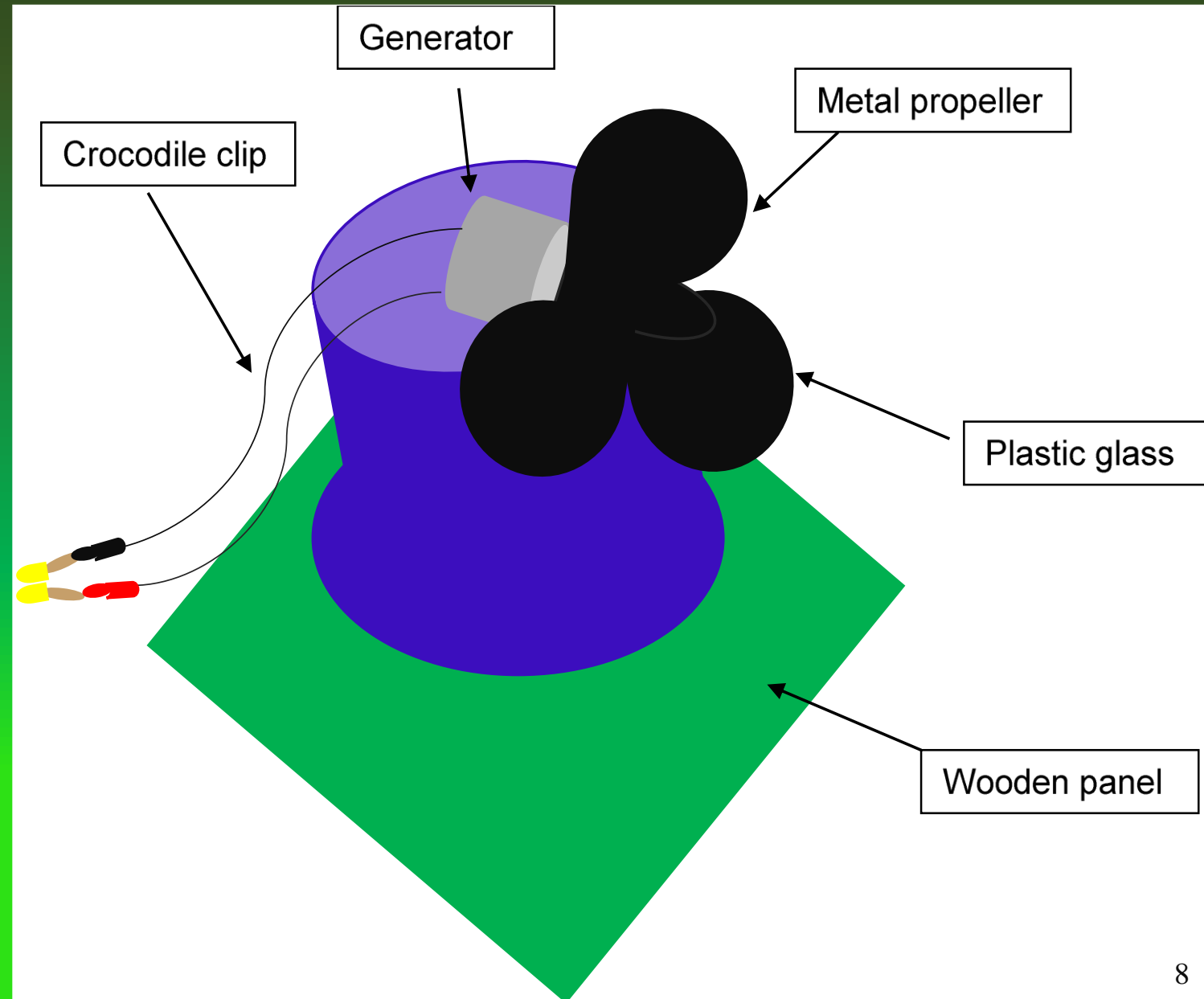
## 2.3. Previous hydraulic model option 3.

- 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**

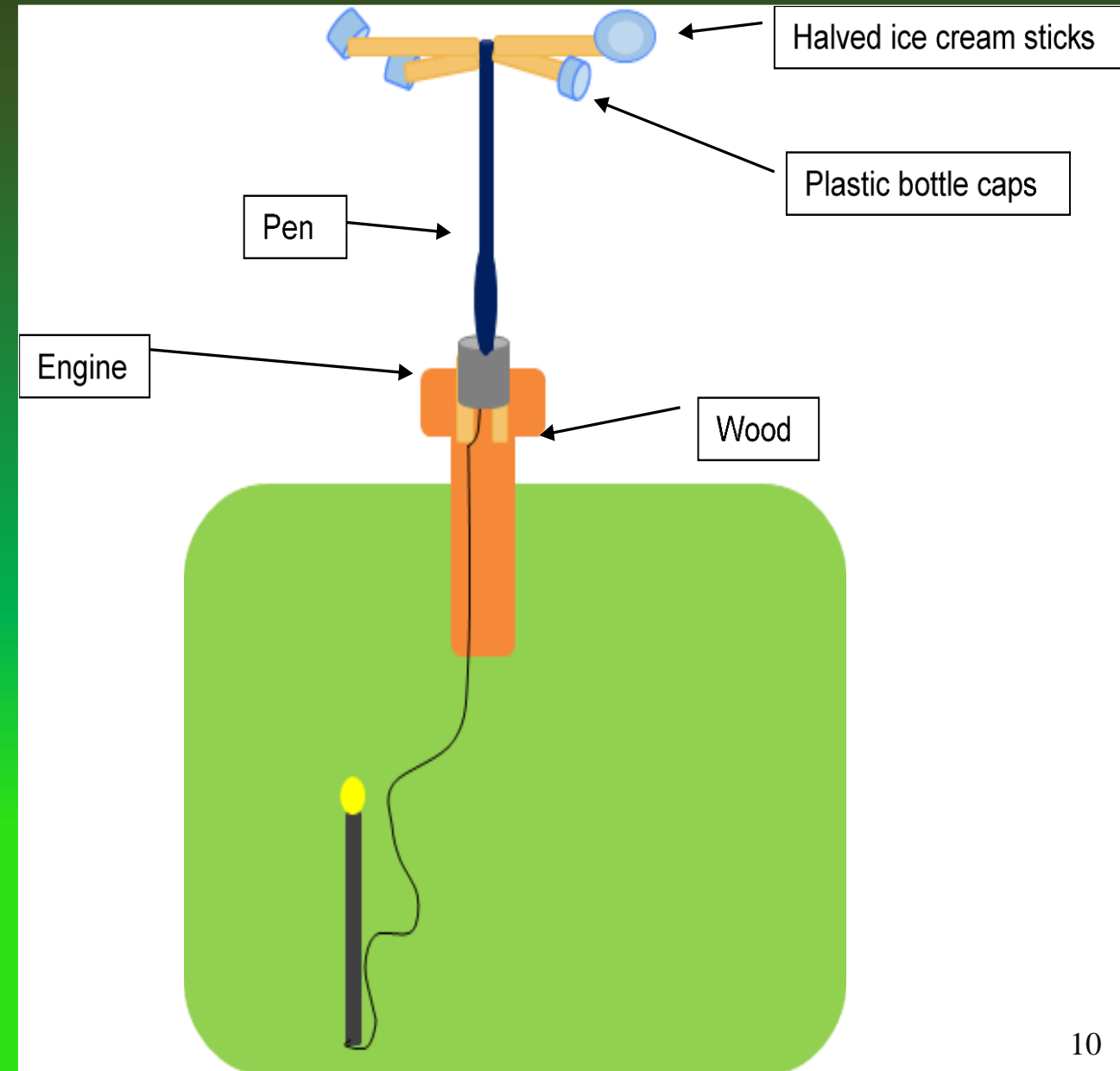
**generates  
electricity**

**Led  
diode**

**1.Led  
diode is  
lighting**

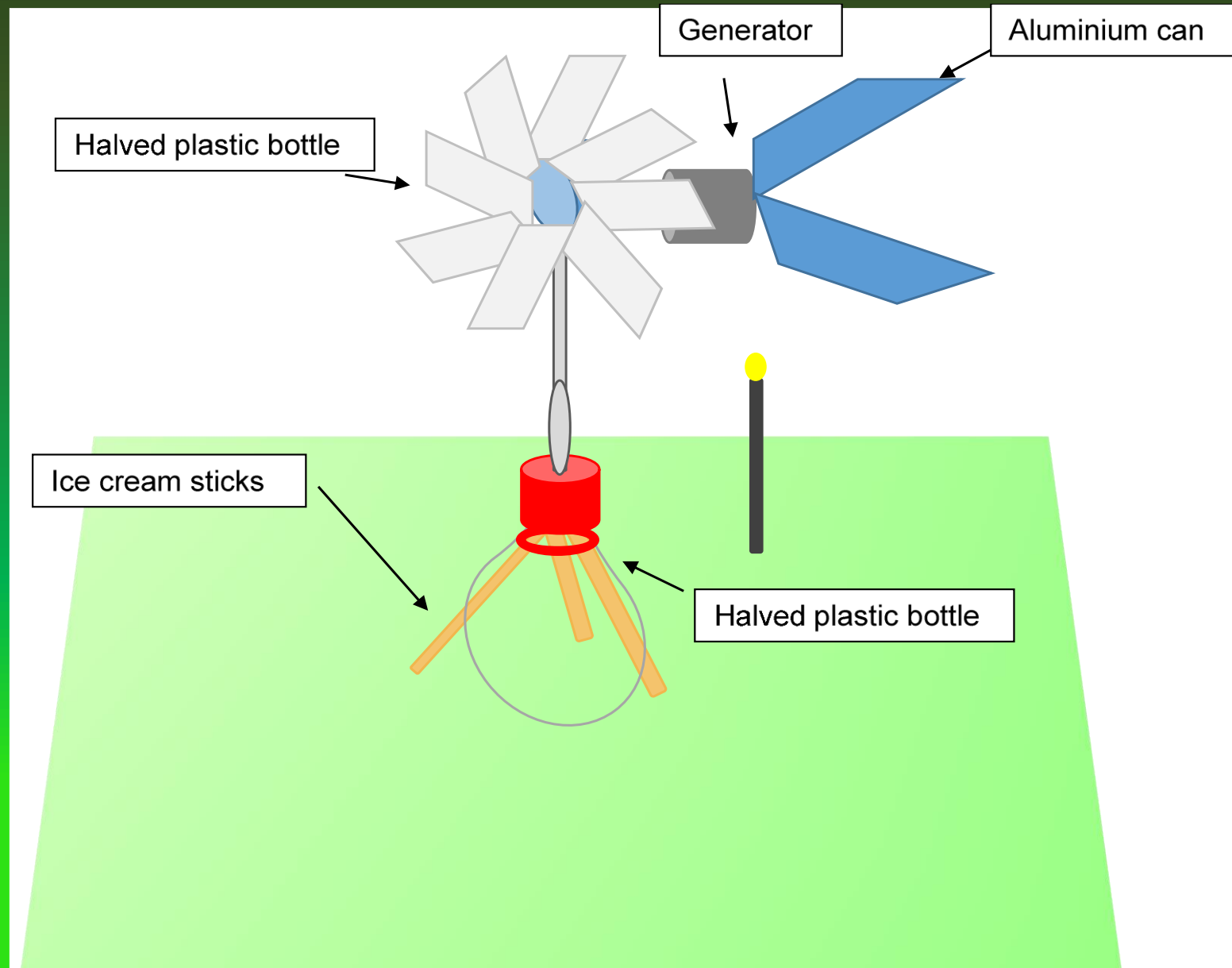
## 3.2. Previous eolic model option 2.

- Initial design of the model



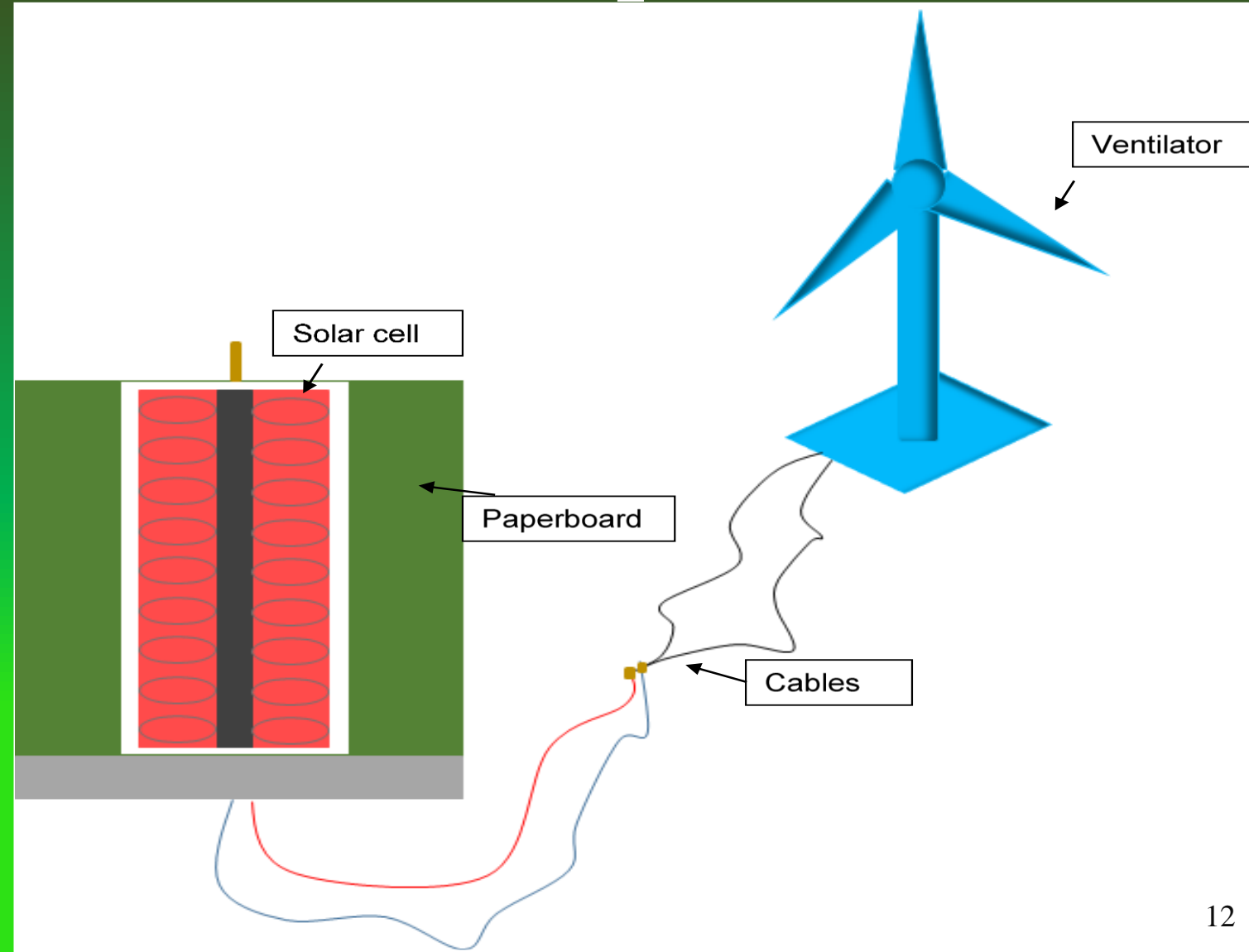
## 3.3. Previous eolic model option 3.

- Initial design of the model



# 4.1. Previous photovoltaic model option 1.

- Initial design of the model



# Description of the process

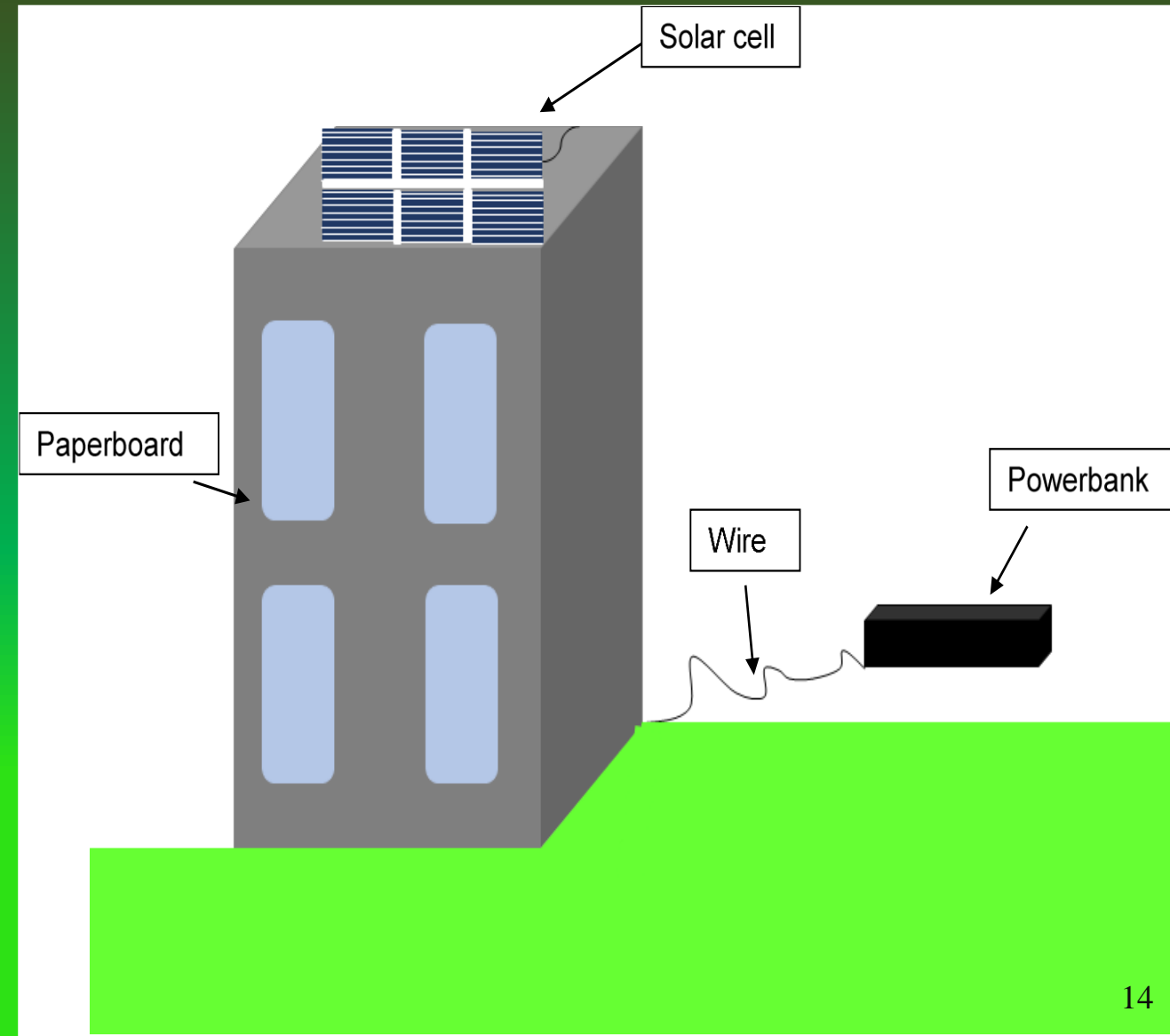
Sun rays get to solar panel

Producing current to battery

Ventilator is turning

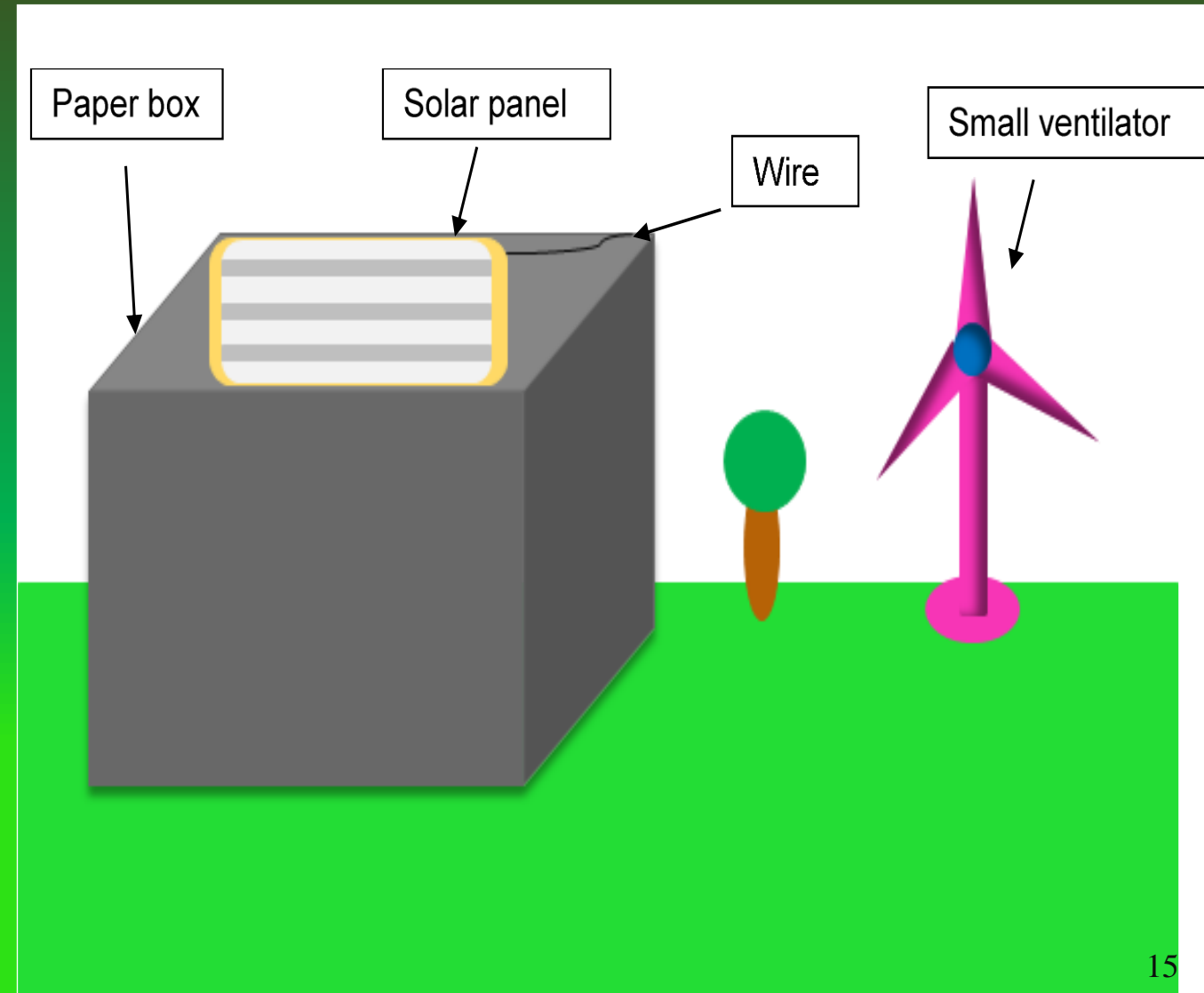
## 4.2. Previous photovoltaic model option 2.

- Initial design of the model

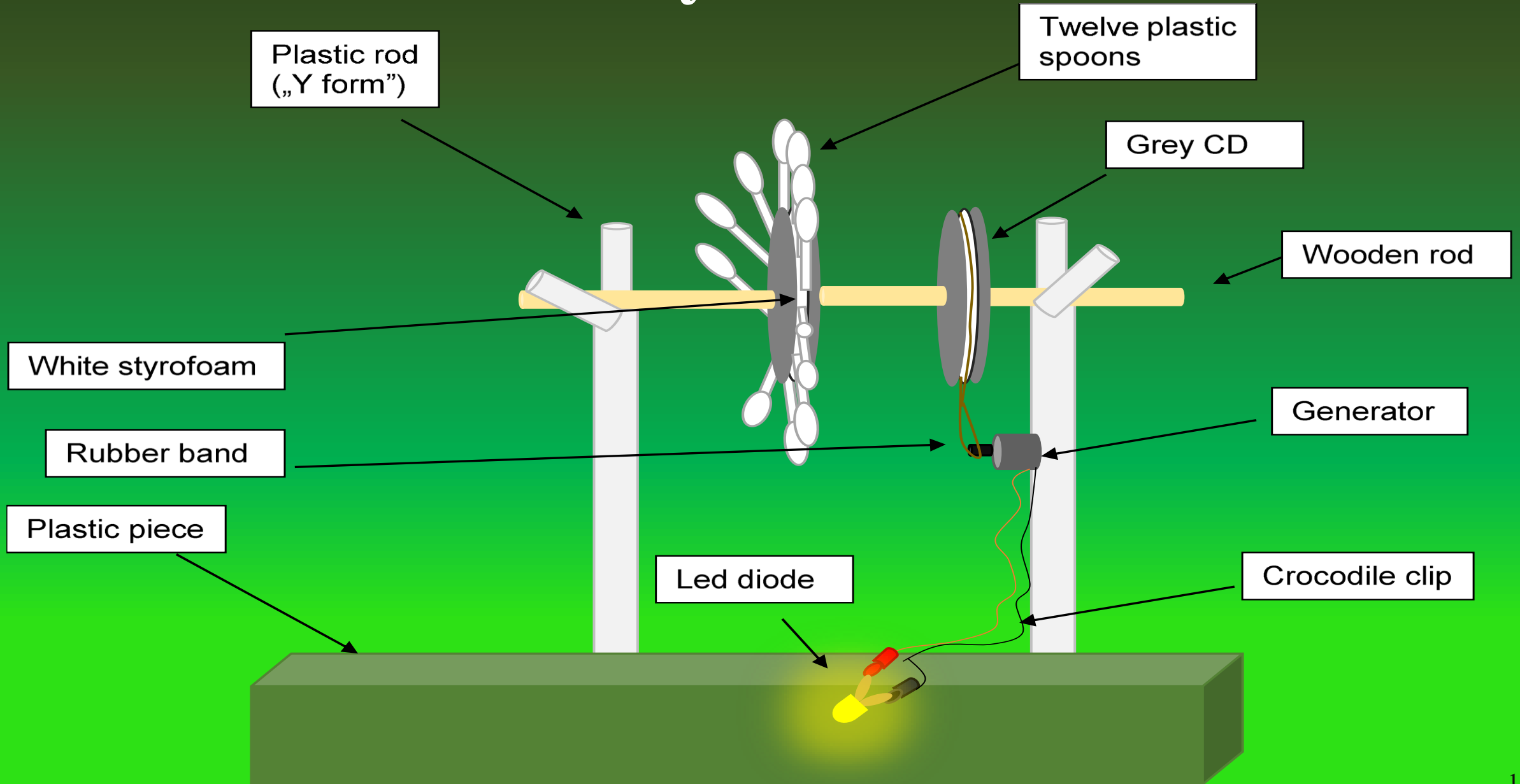


## 4.3. Previous photovoltaic model option 3.

- Initial design of the model

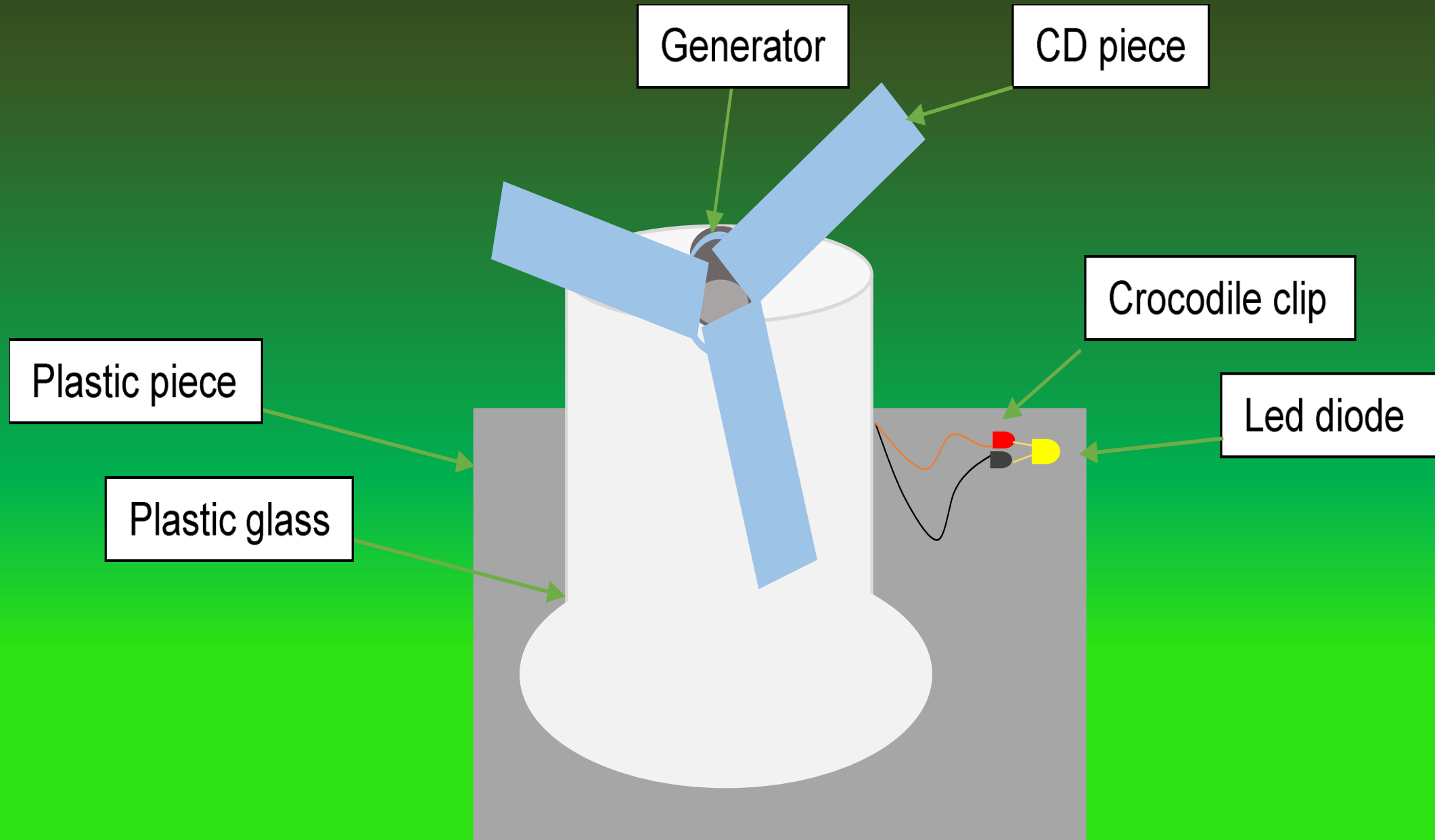


# 5.1. Final hydraulic model

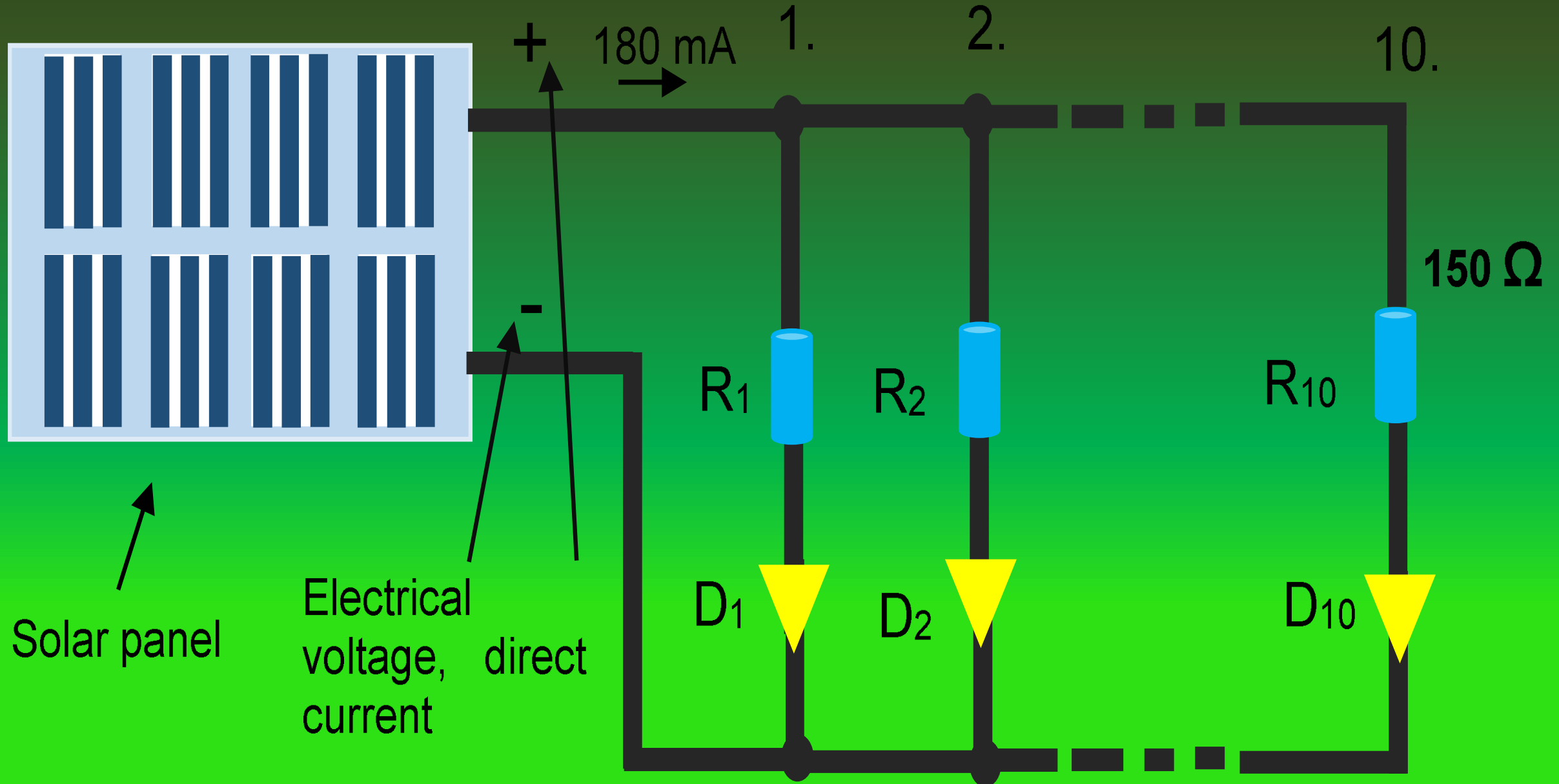




# 5.2. Final eolic model



# 5.3. Final photovoltaic model



# Thank you!

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