

Teacher's Pet

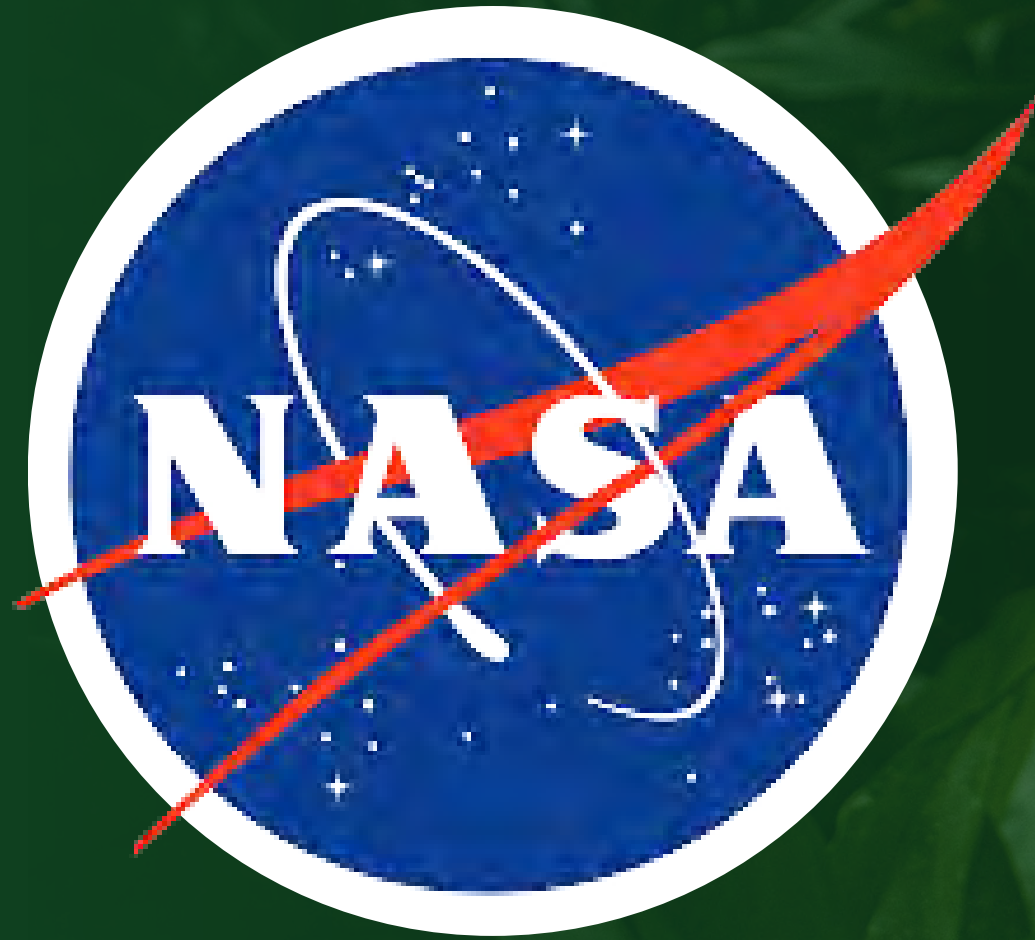
Earth's Changing Climate



What is Citizen Science?

You are a citizen scientist!





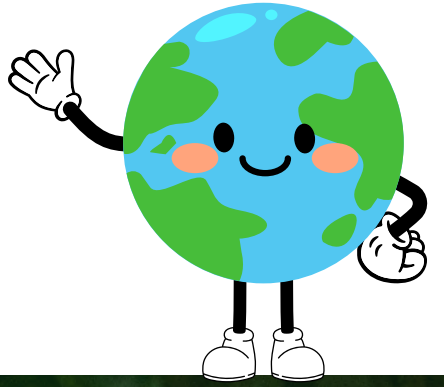
Scientific Agencies

Many agencies like NASA, GLOBE, and CoCoRaHS will recruit citizen scientists so they can collect more data than they ever could.



How Can You Get Involved?

Visit: <https://naturealberta.ca/citizen-science/>



Climate Change

Climate change can cause:

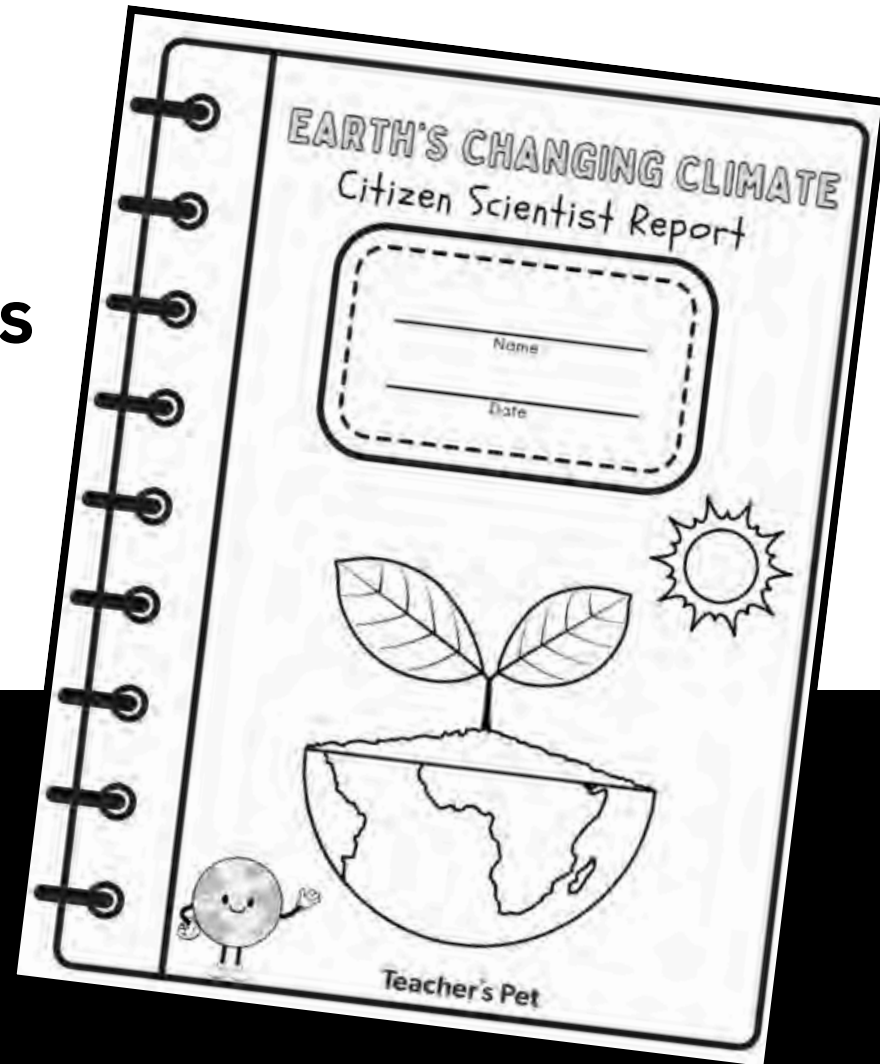
- harsher weather
- more natural disasters
- dangerous conditions
- extinctions

Did climate change cause dinosaurs to go extinct?

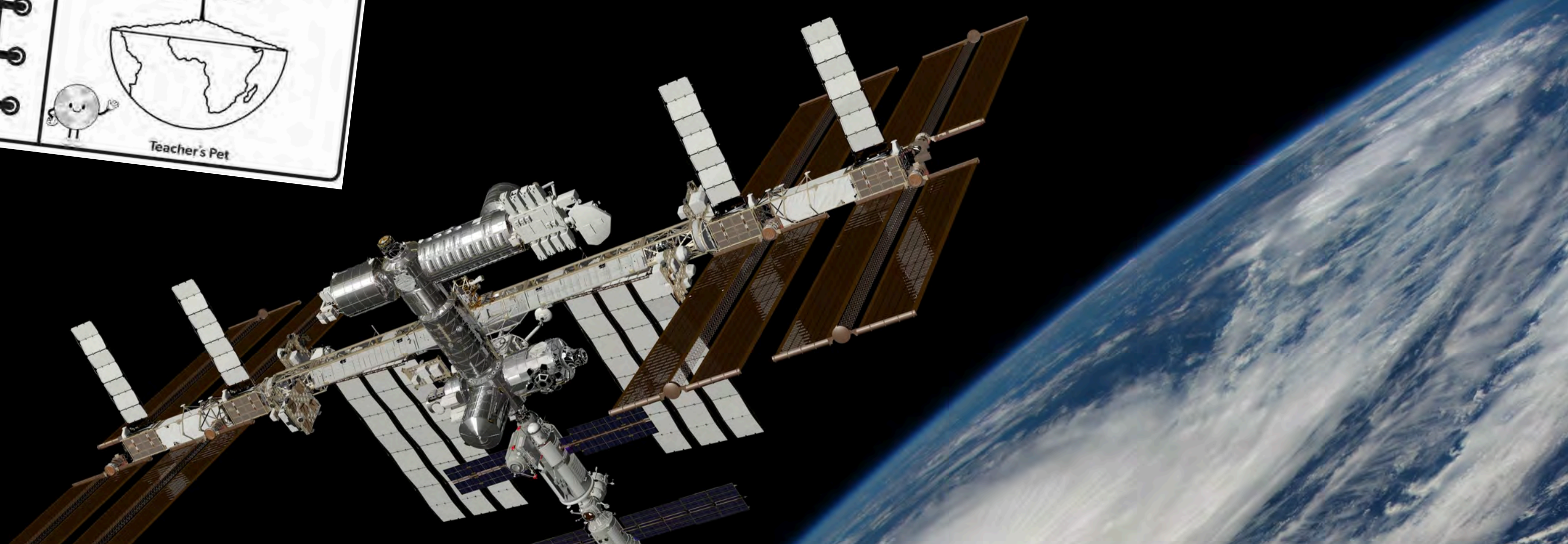


Before We Get Started!

1. Citizen Scientist's Report

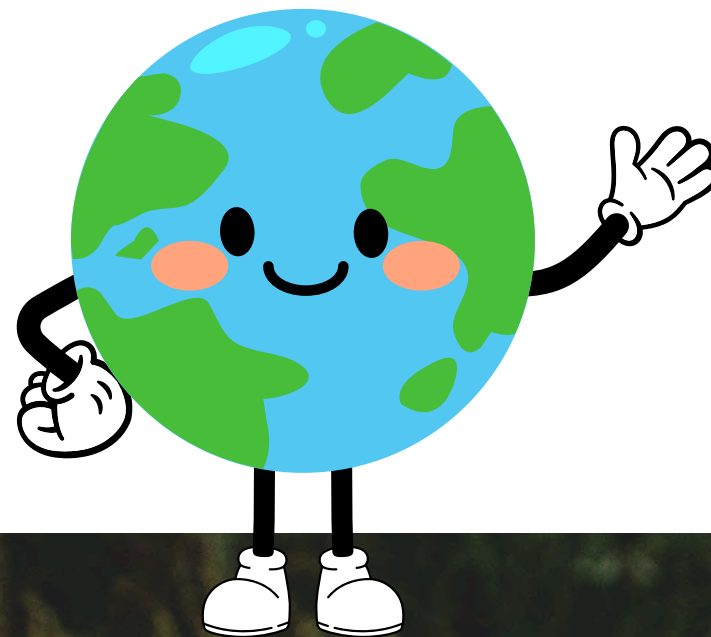


2. Live feed from the International Space Station:
<https://eol.jsc.nasa.gov/ESRS/HDEV/>



Station Rotations

- **Station 1 - Welcome to Tofield, Alberta**
- **Station 2 - The Climate Conundrum Game**
- **Station 3 - VR Earthen Extremes**
- **Station 4 - Let's Get Technical**



The image features a dark green background with a pattern of various leaf shapes and textures, including some with prominent veins and others with more intricate patterns. The leaves are layered, creating a sense of depth and natural texture. The overall color palette is a range of greens, from deep forest green to lighter, almost yellowish-green highlights on some leaves.

Earth's Climate Change Video

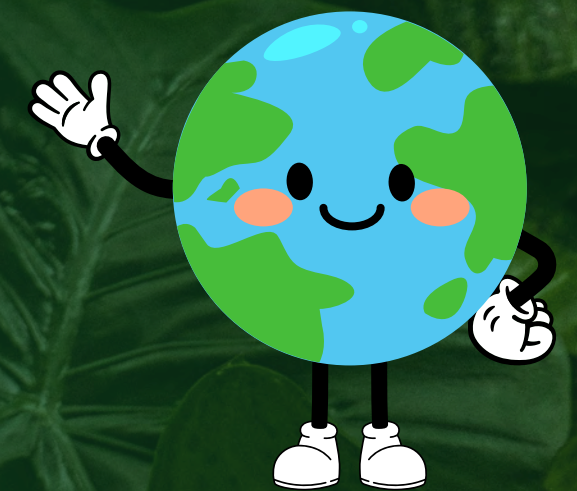
Let's talk energy!

What are Renewable resources?

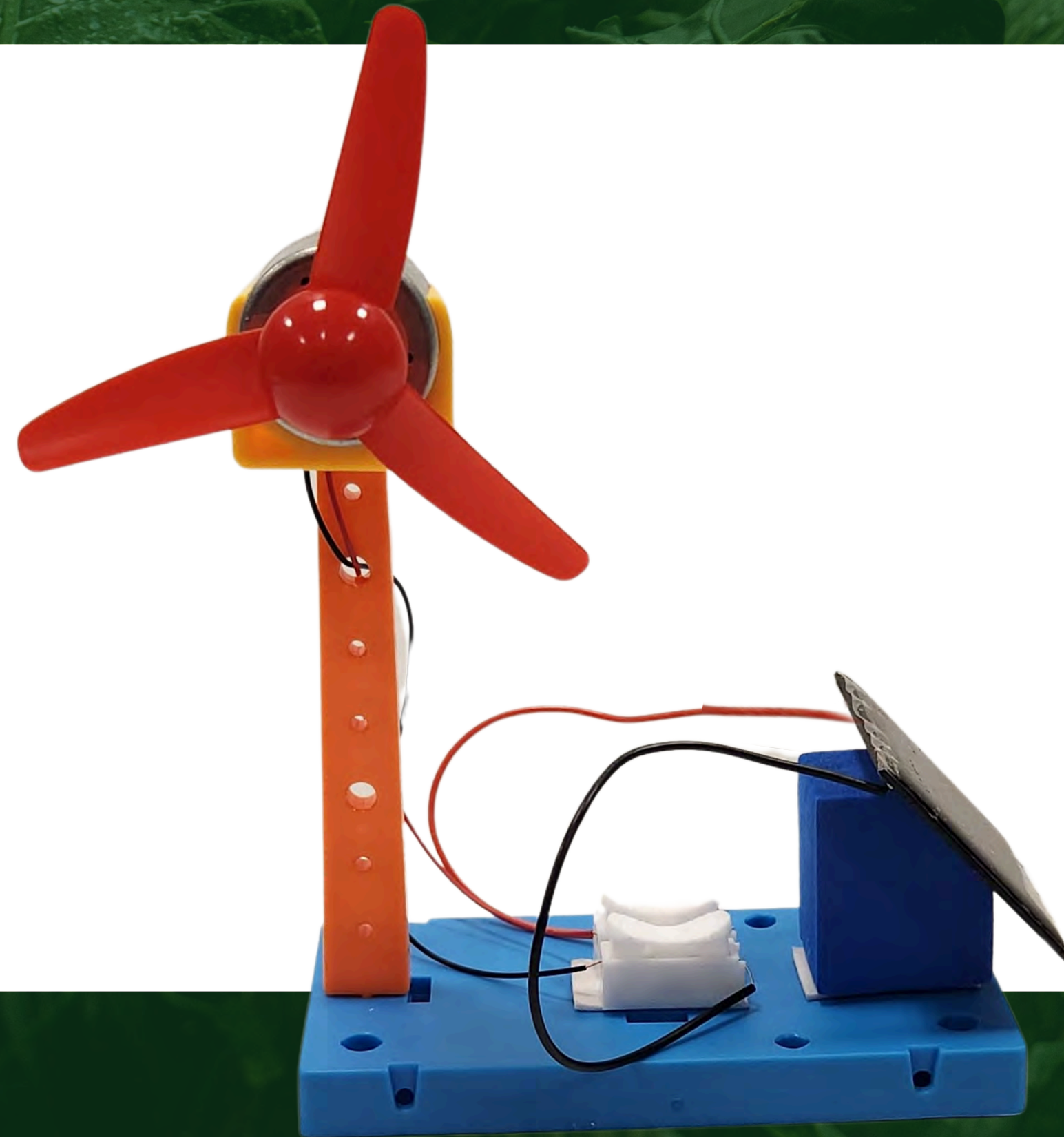
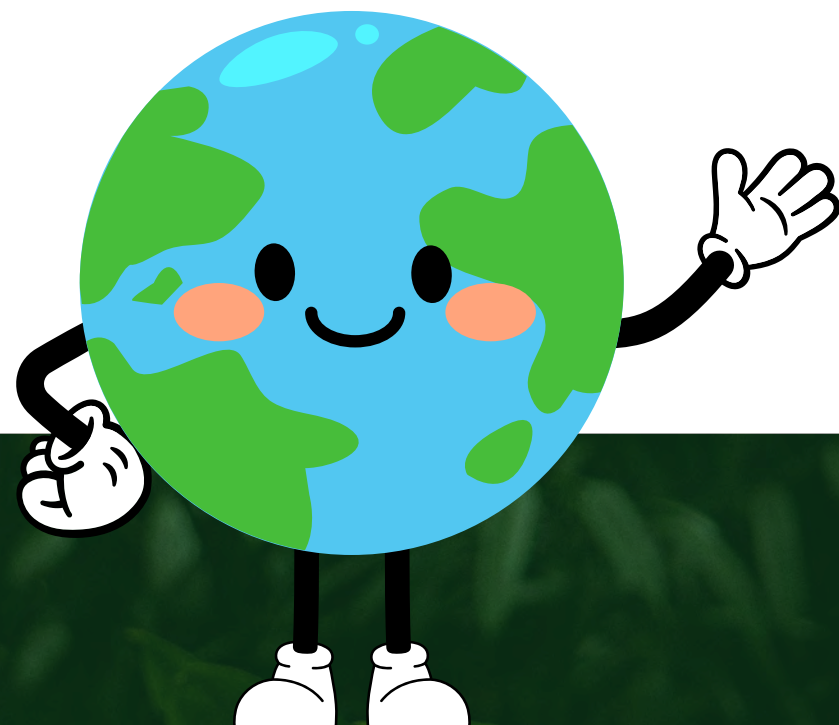
What are Non-renewable resources?

Do you have to process energy
before you can use it?

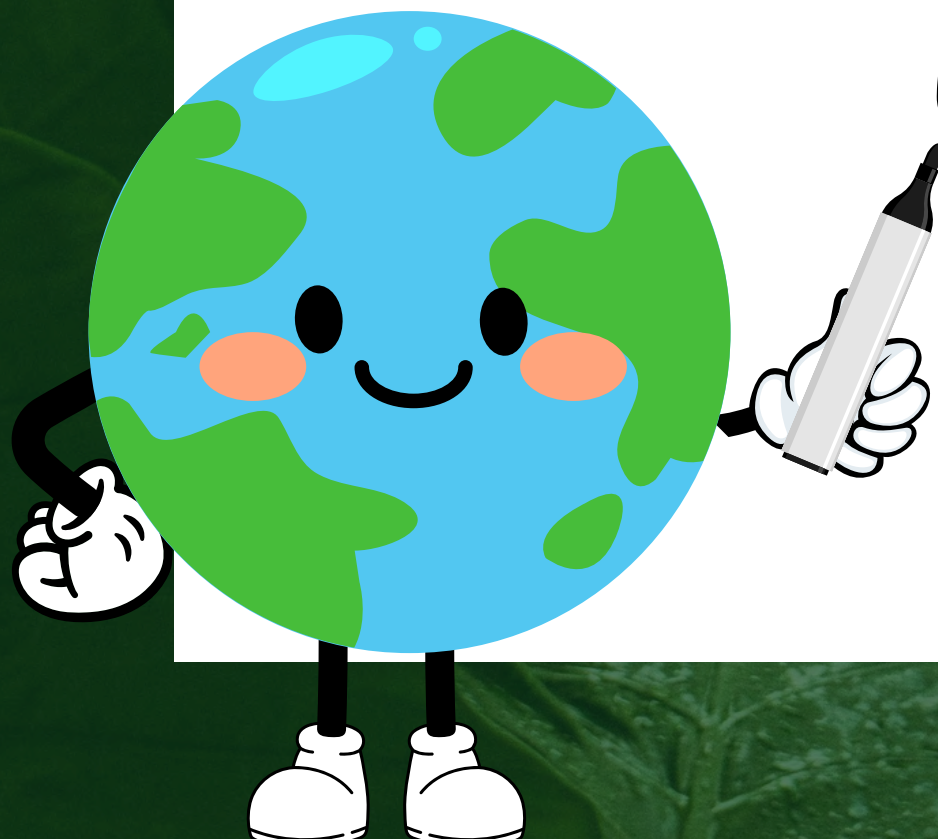
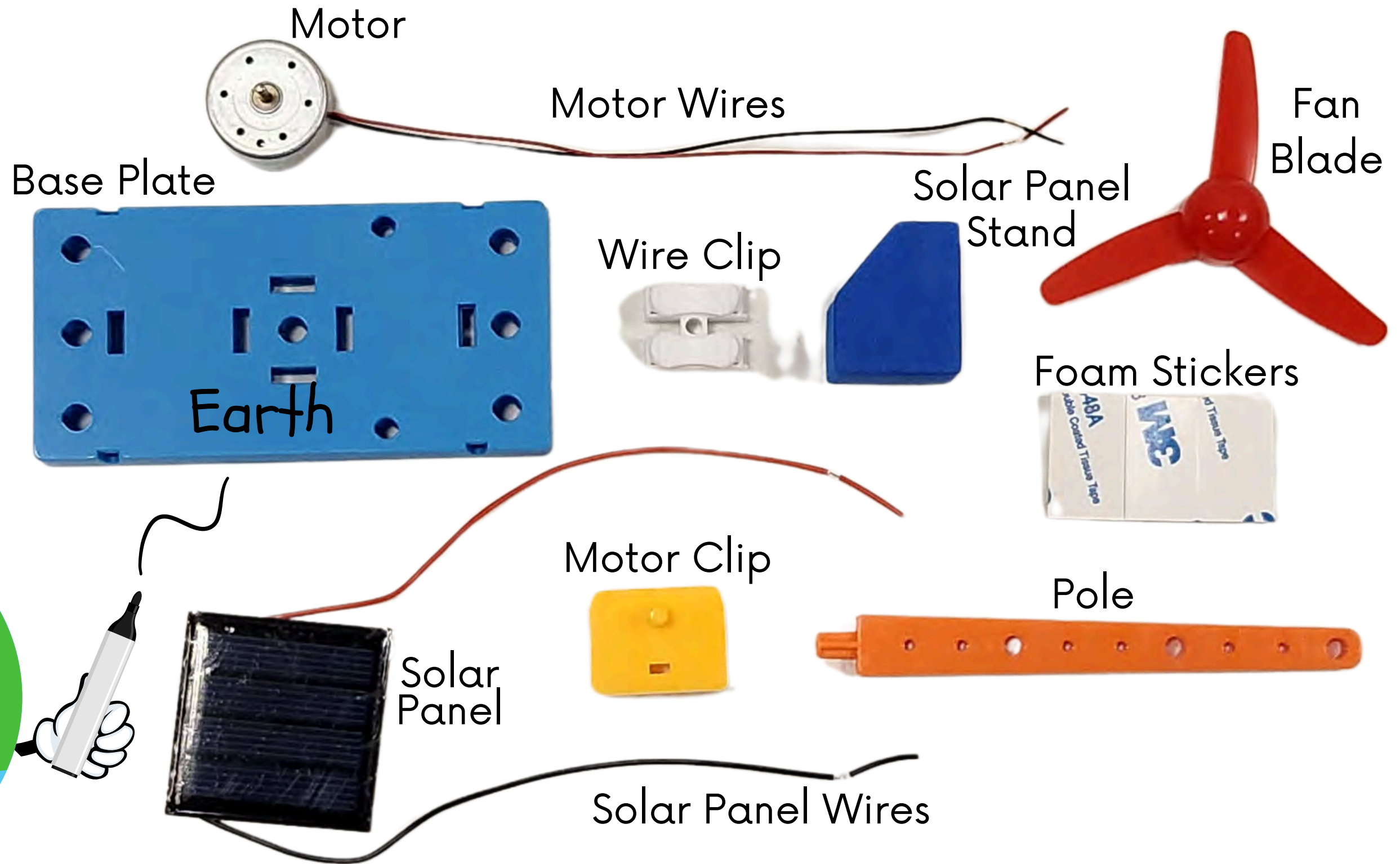
What kinds of energy have we
already talked about during the field
trip?



Solar Wind Turbine Instructions



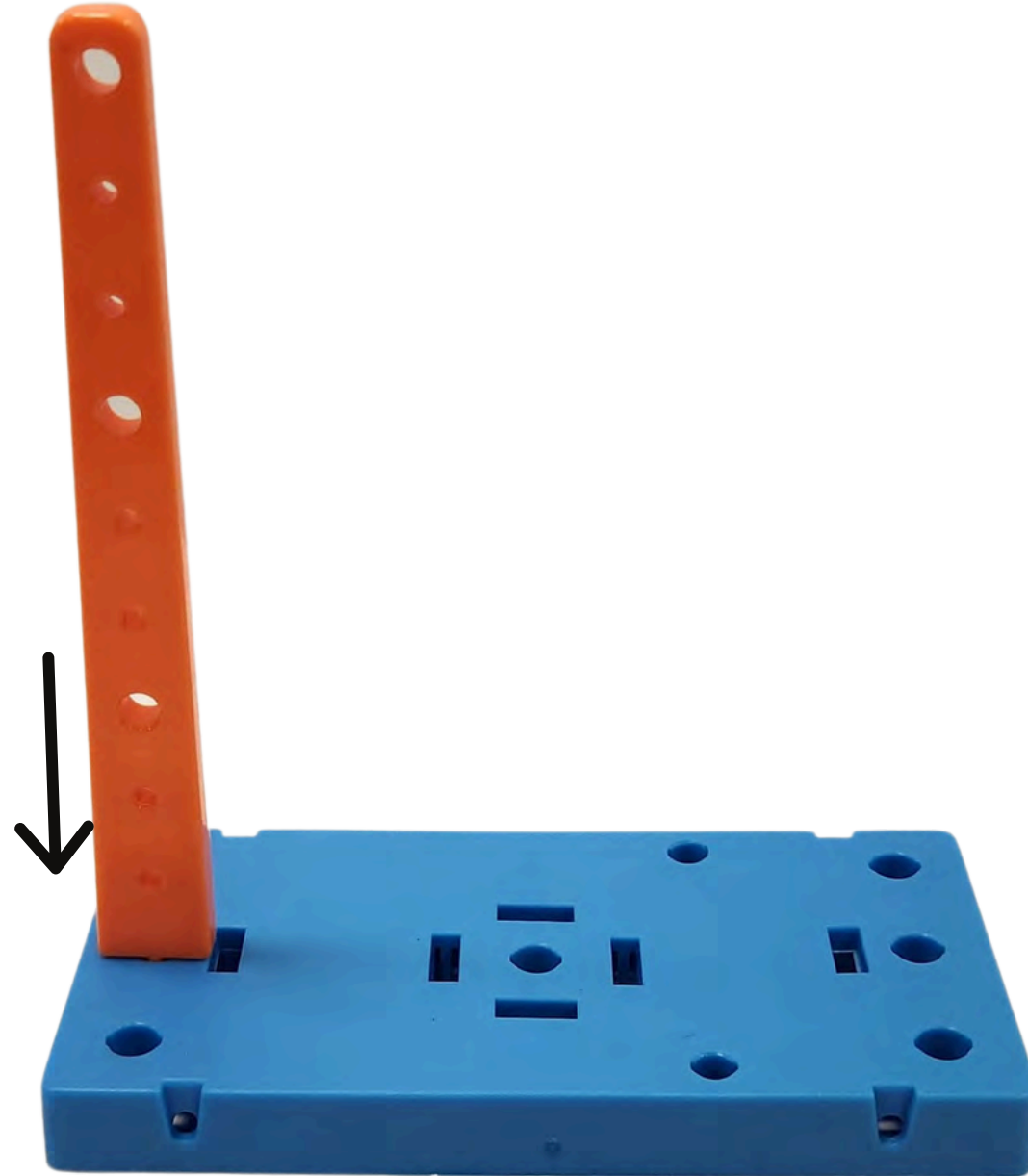
Step 1: Check materials & write your name on the base plate.



Step 2:

Insert the pole into the centre hole on one side of the base plate.

Right here!

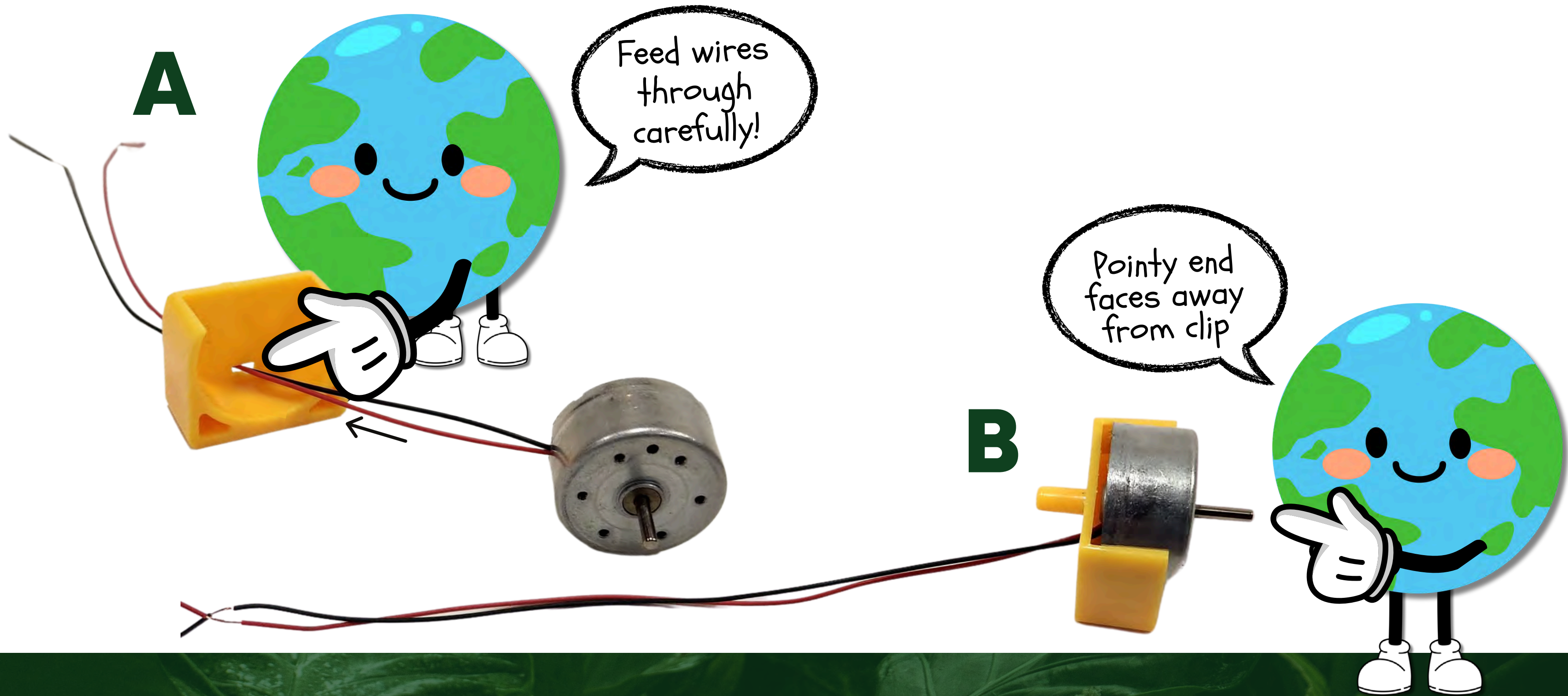


What are
non-renewable
energy resources?



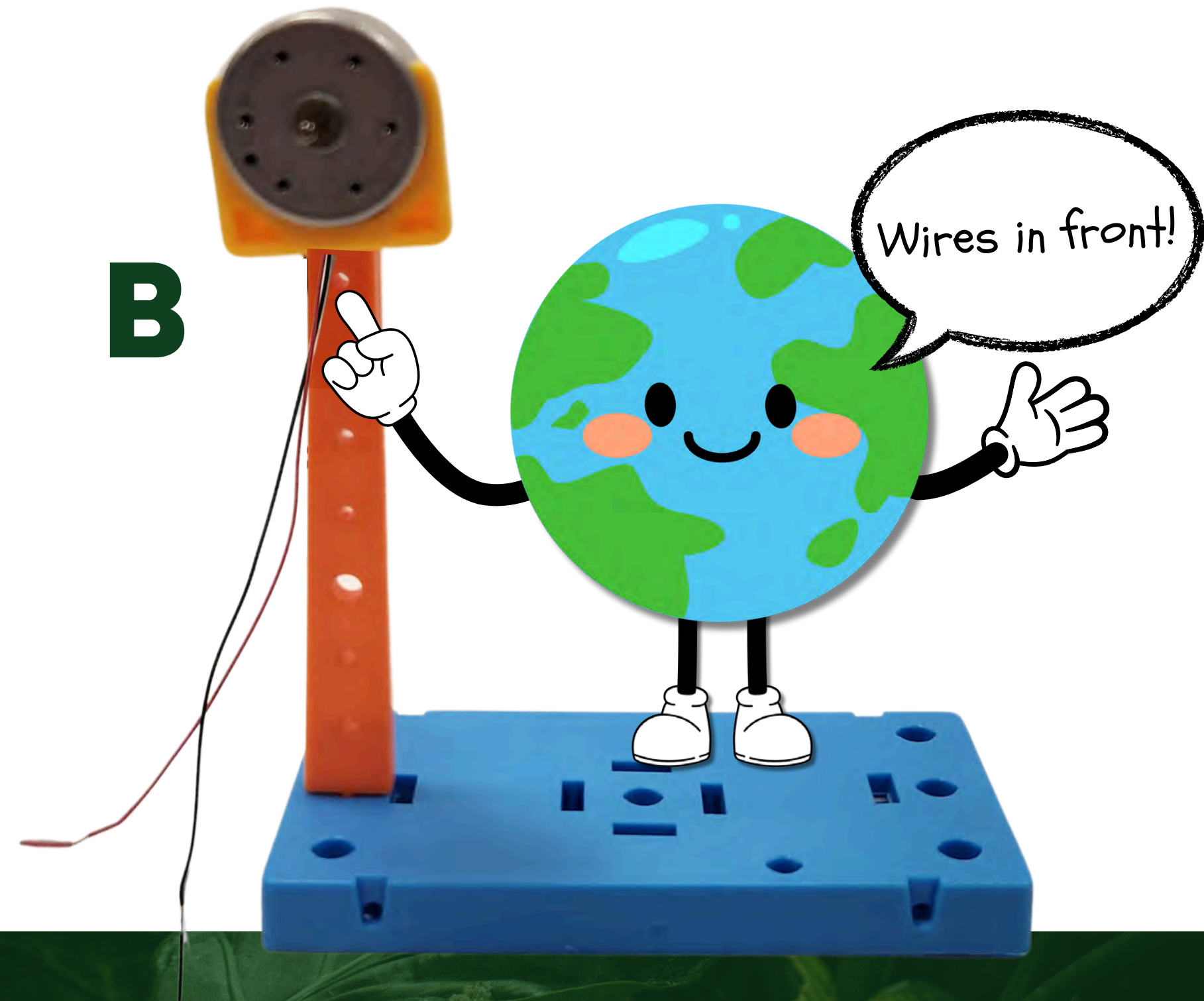
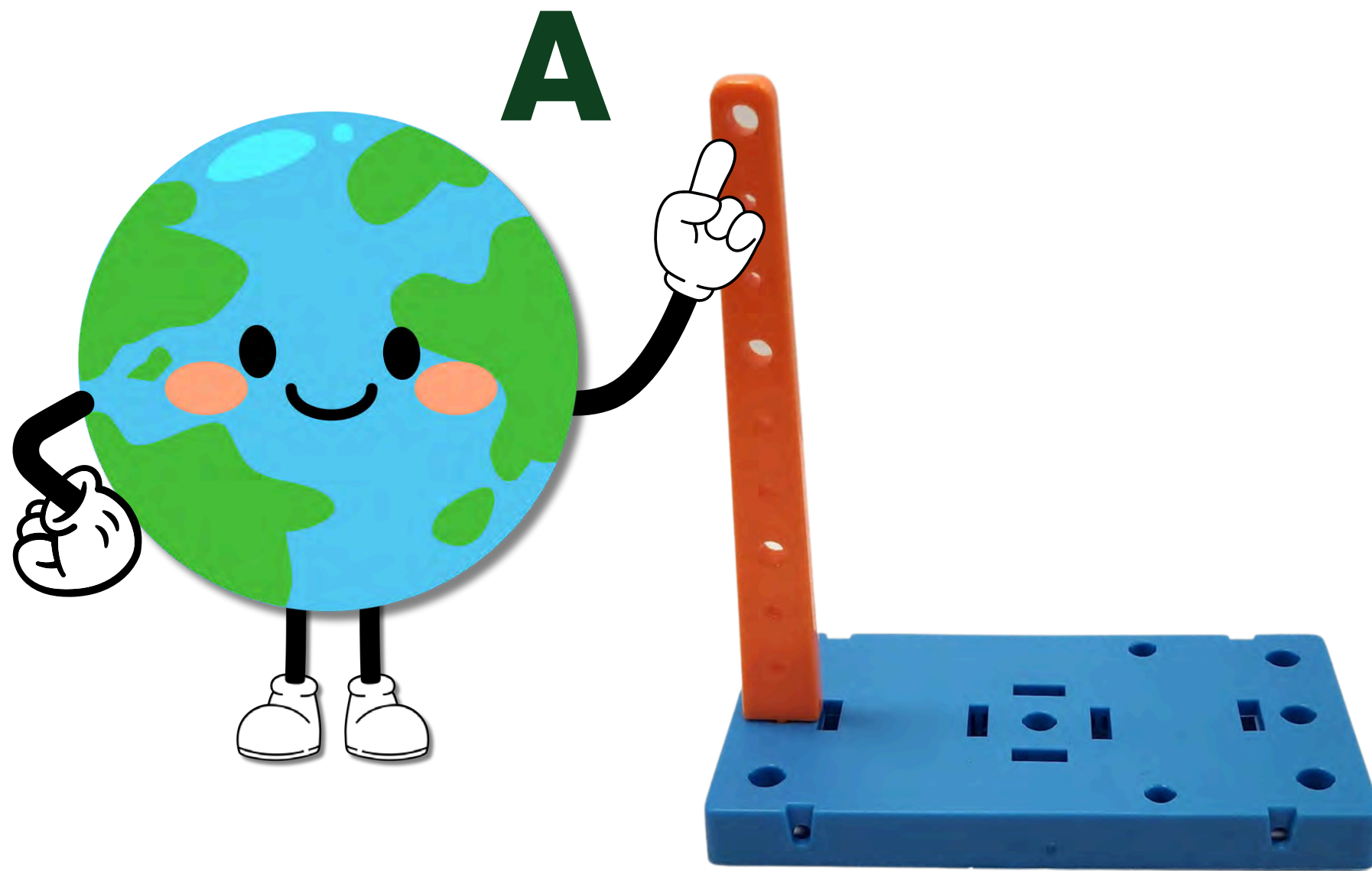
Step 3:

Assemble the motor. Feed motor wires through the motor clip. Gently push the motor in place.



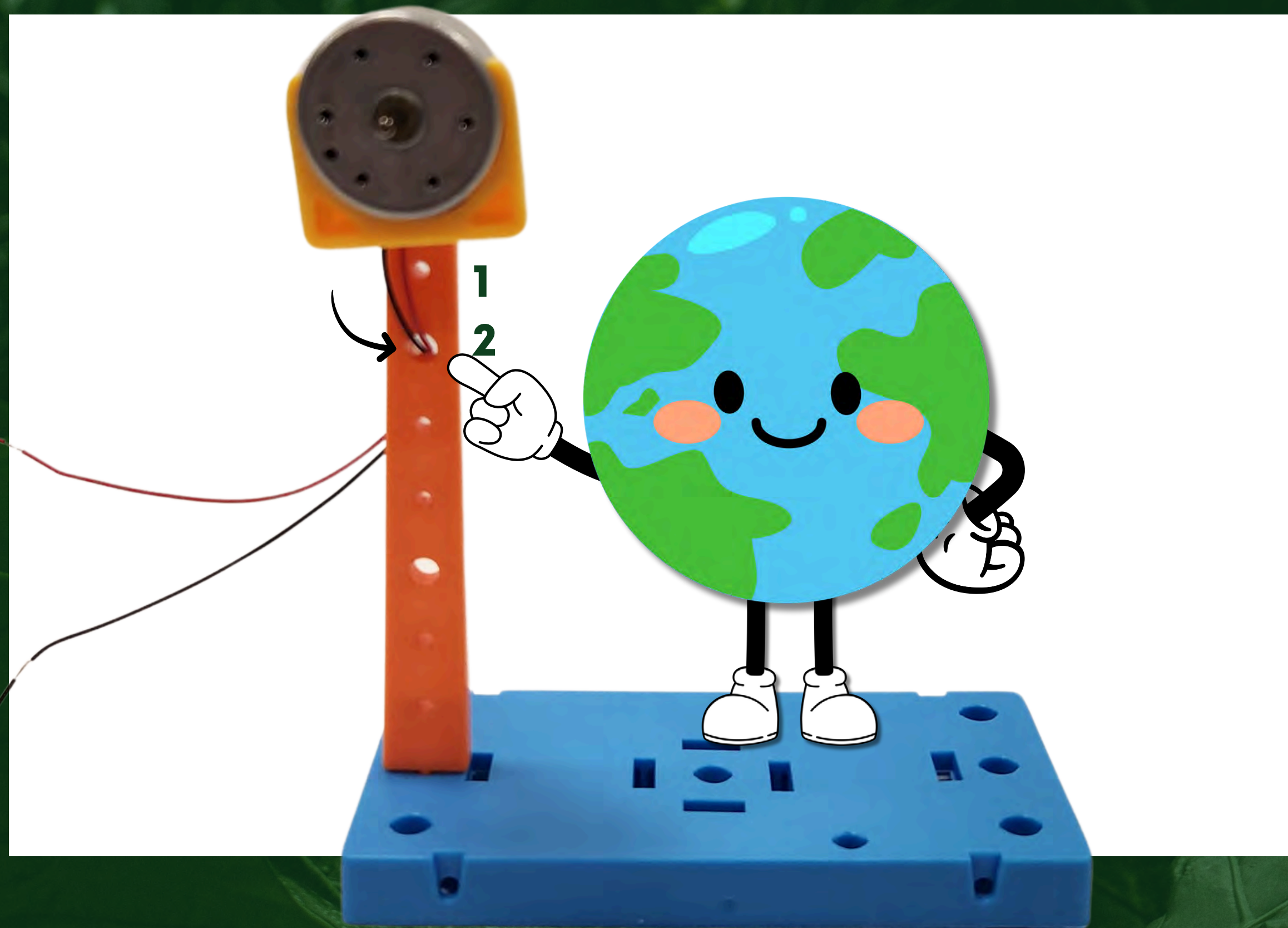
Step 4:

Insert the motor and clip into the hole at the top of the pole, keeping the wires on the front side of the pole.



Step 5:

Feed the wires through the 2nd hole to the back of the pole.



What are examples of renewable energy resources?



Step 6:

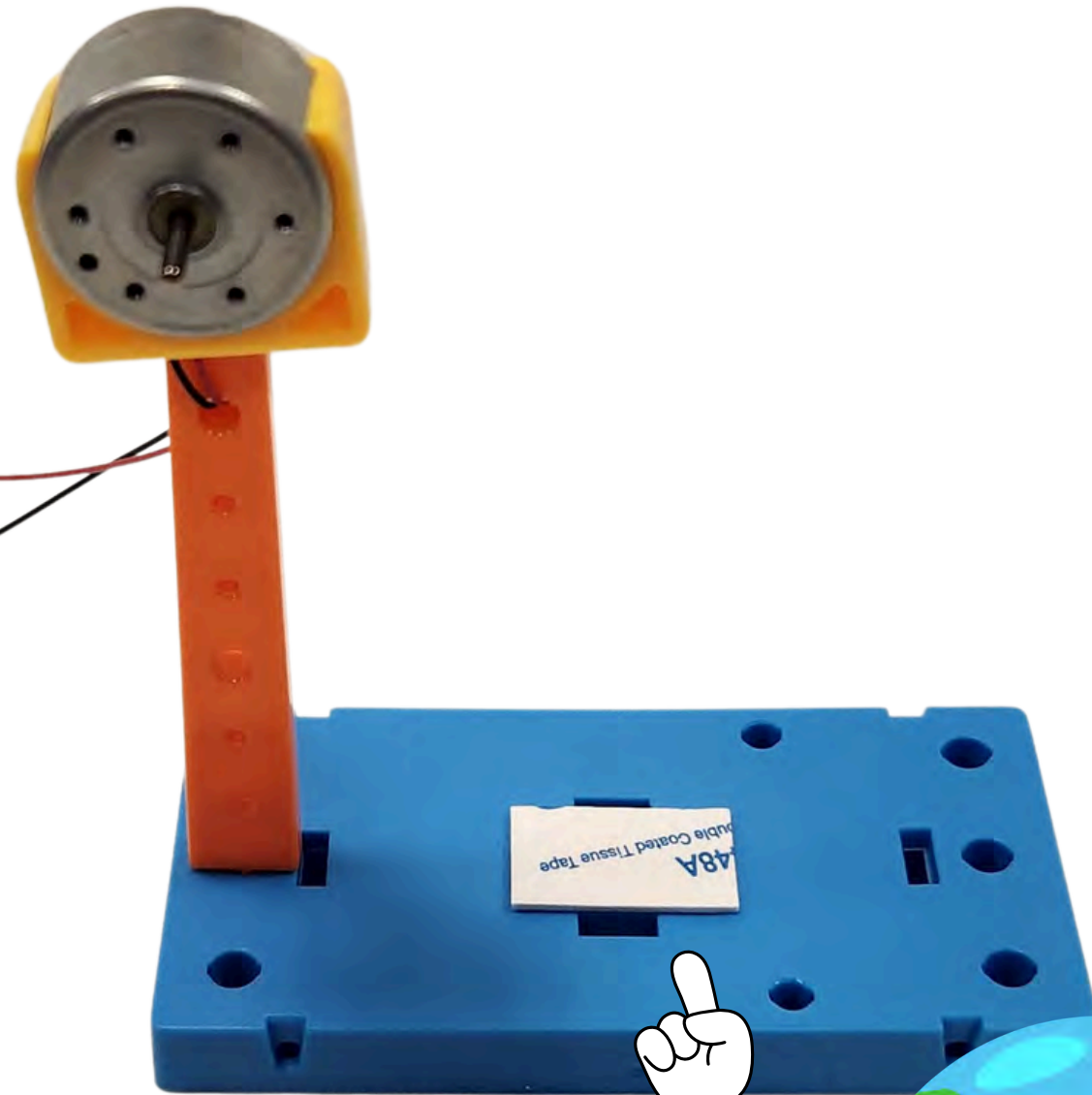
Separate the 3 double-sided sticky foam pieces.



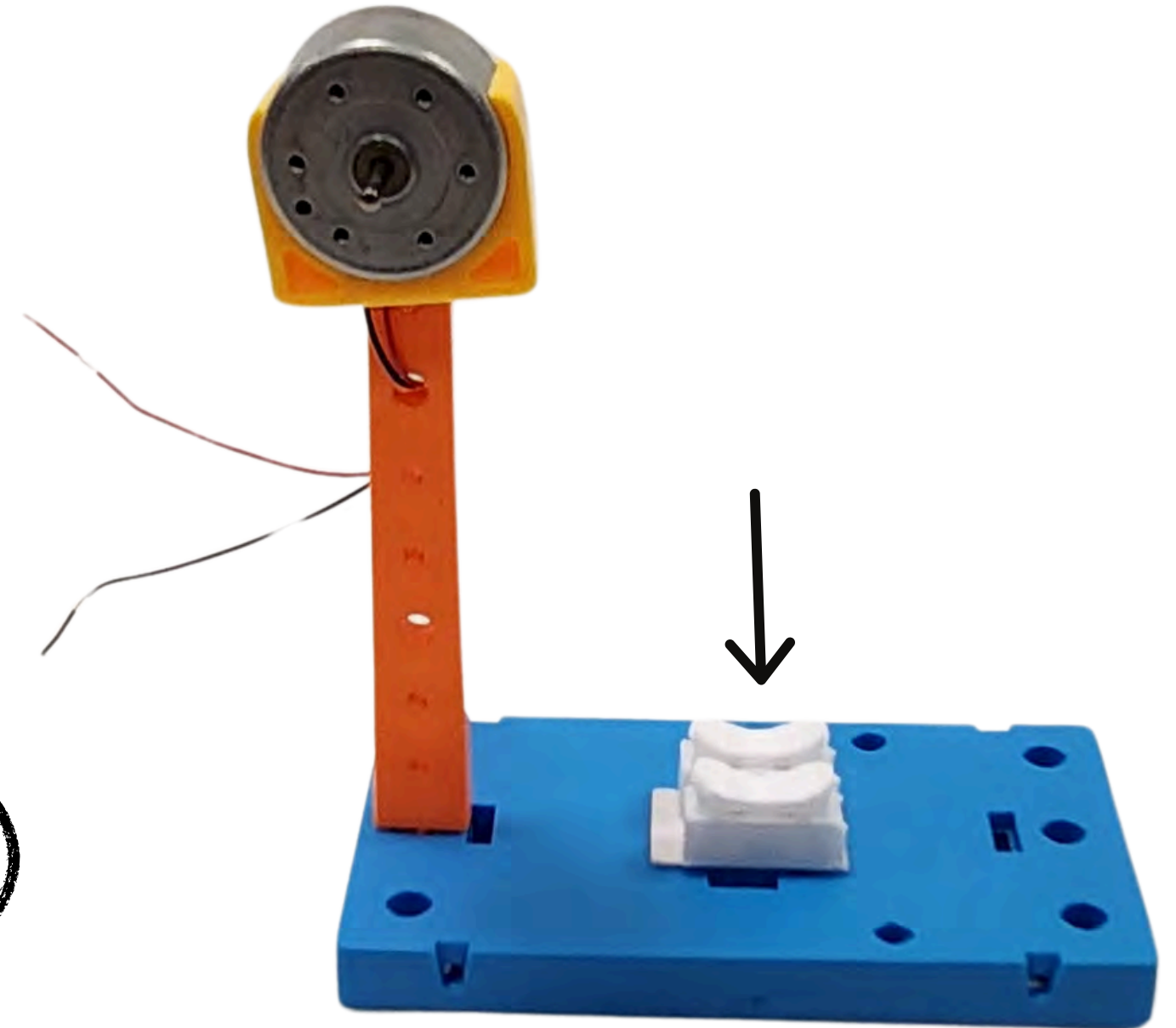
Step 7:

Use one double-sided sticky foam piece to attach the wire clip to the centre of the base plate.

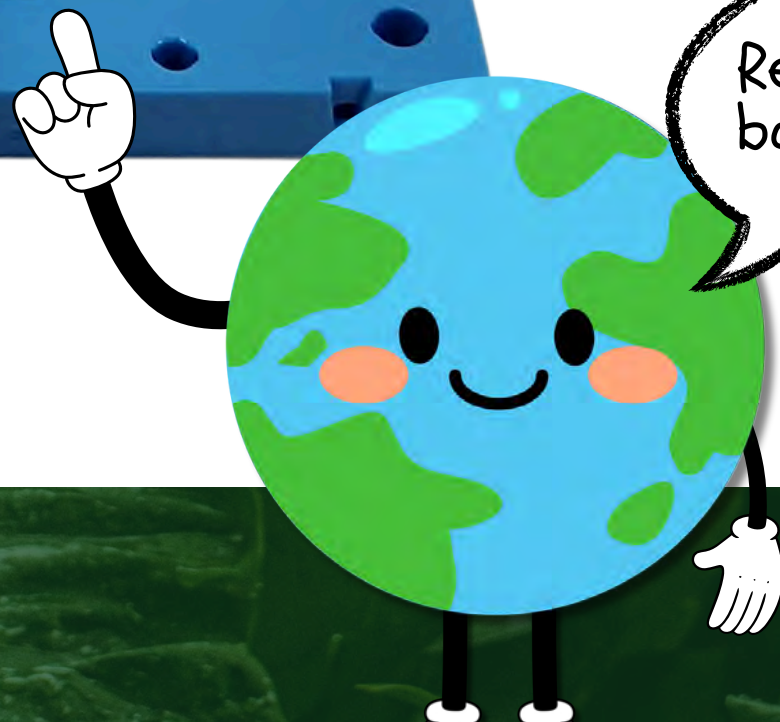
A



B

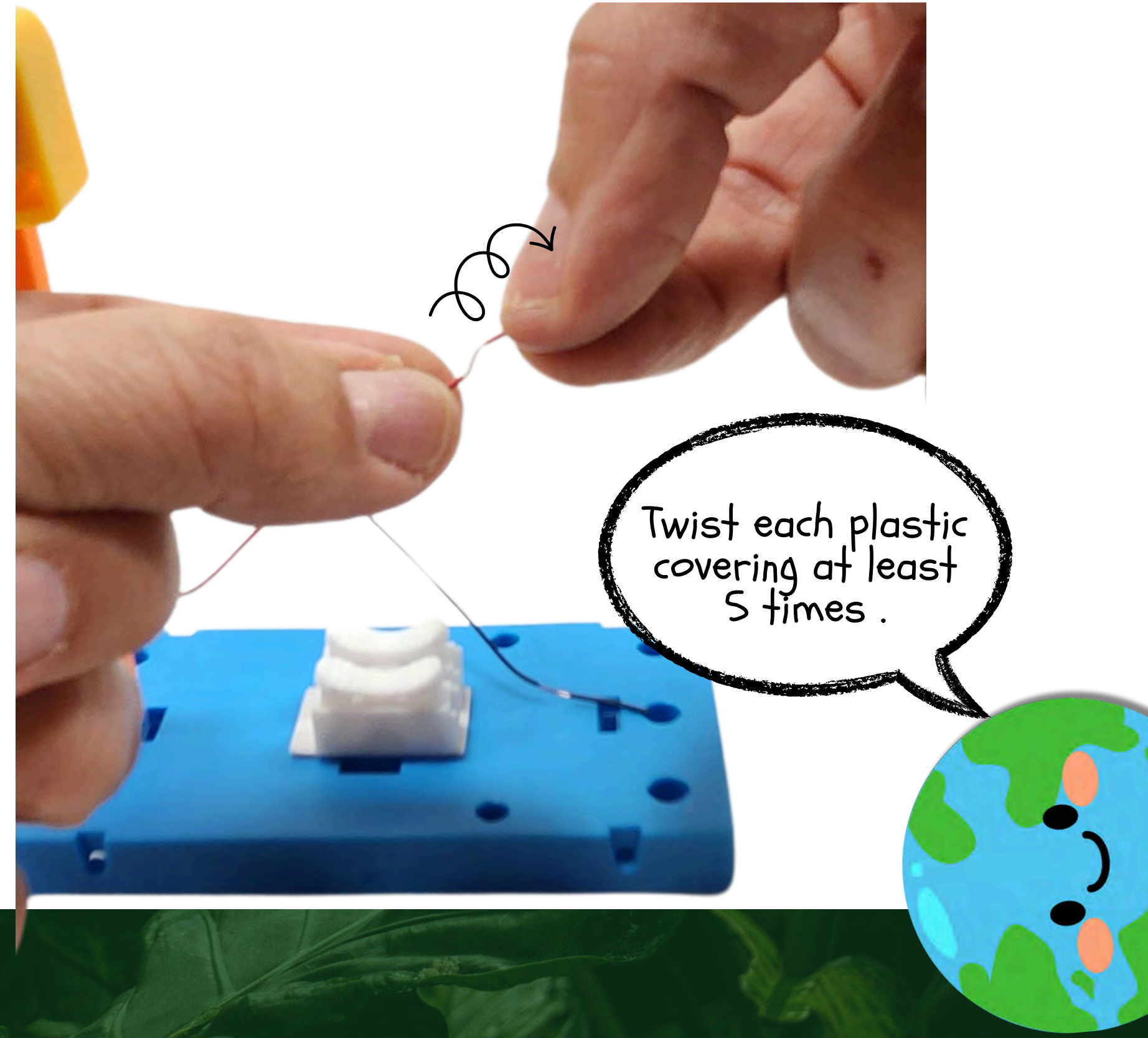
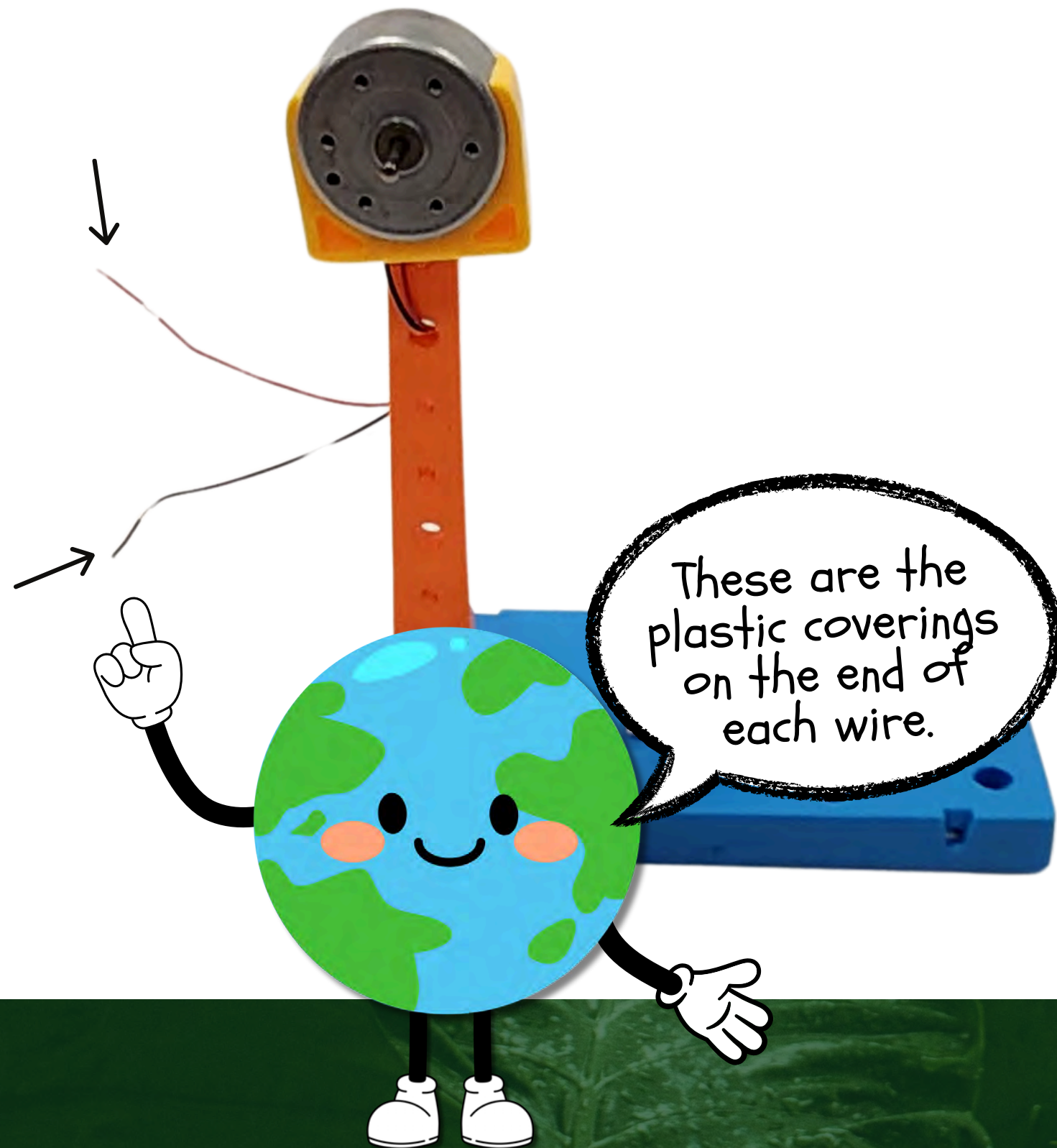


Remove one
backing at a
time.



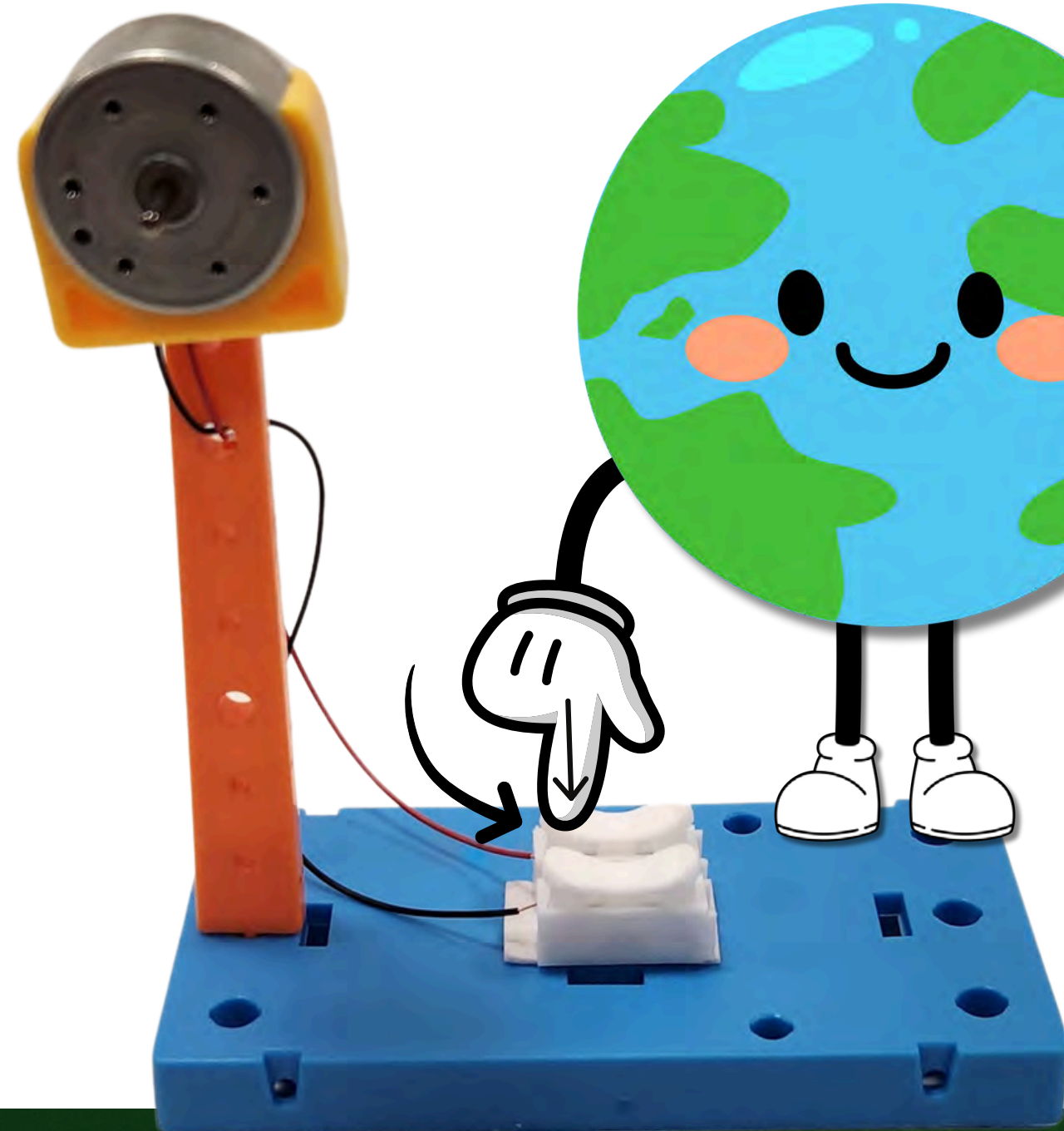
Step 8:

Using the small pieces of plastic coverings on the end of the wires, twist the ends before pulling the coverings off.

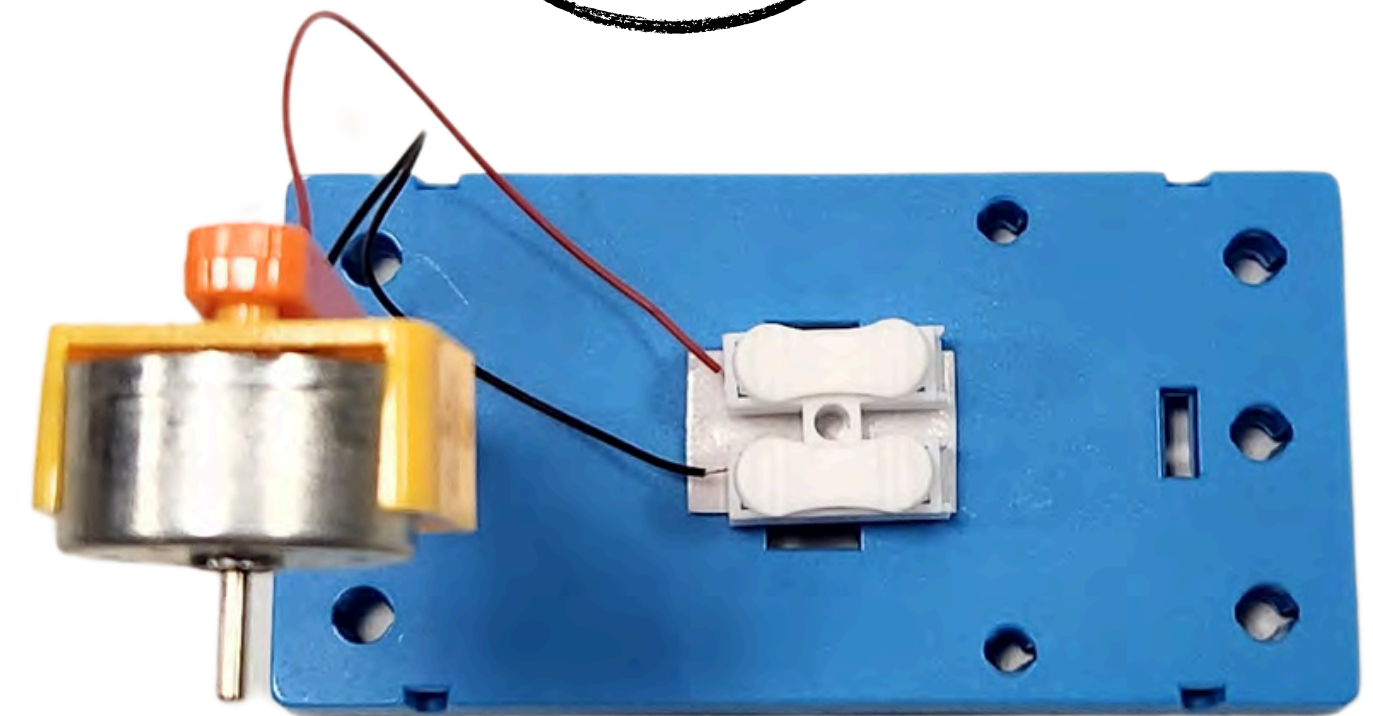


Step 9:

Insert the wires into the wire clip. Press down on the tab closest to the pole, insert the red wire, and release the tab. Repeat with the black wire using the second tab.



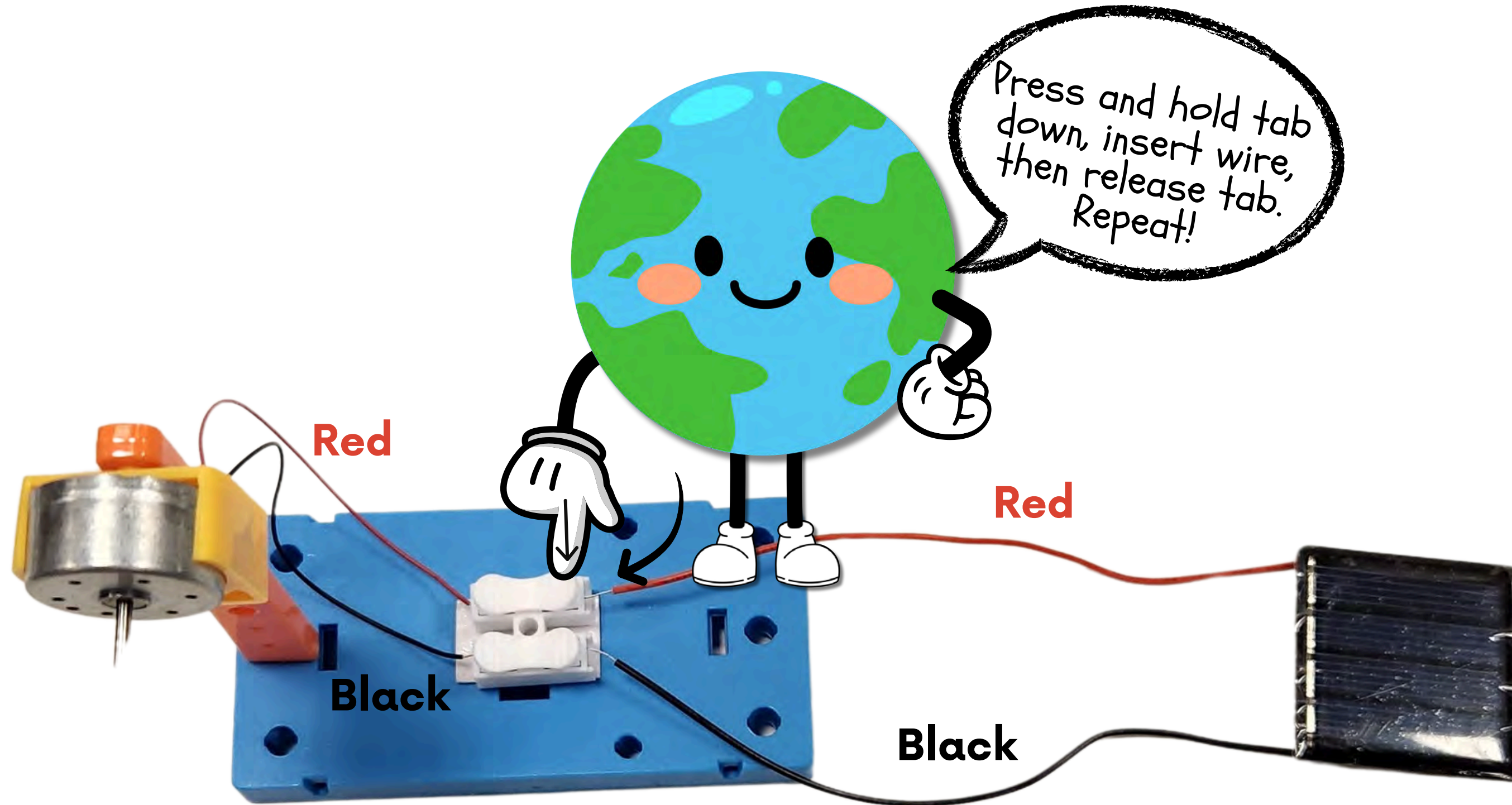
Press and hold tab down, insert wire, then release tab. Repeat!



Top view

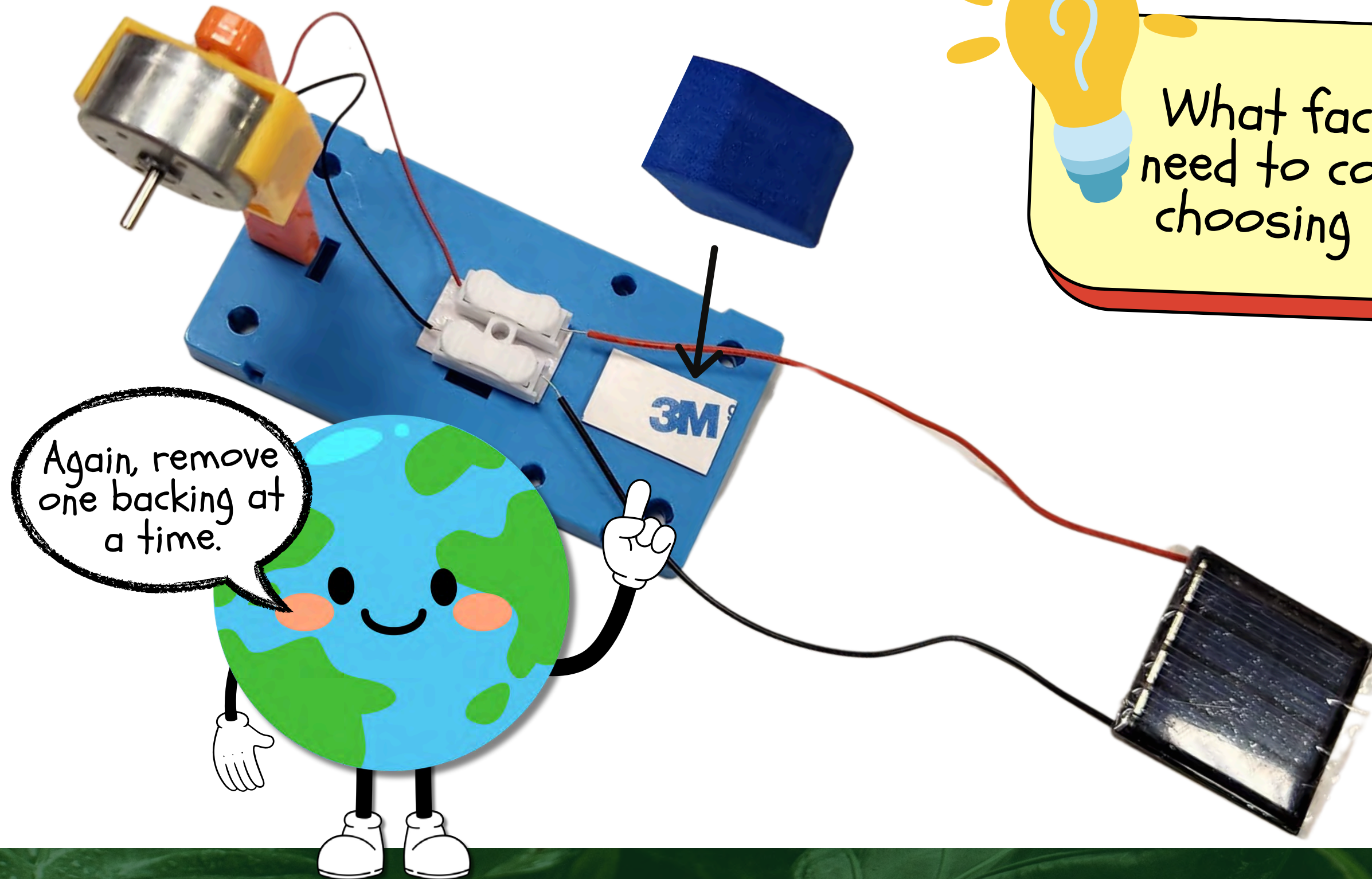
Step 10:

Insert the solar panel wires into the opposite side of the wire clip using the same process. Match the wires across the clip – Red to Red & Black to Black.



Step 11:

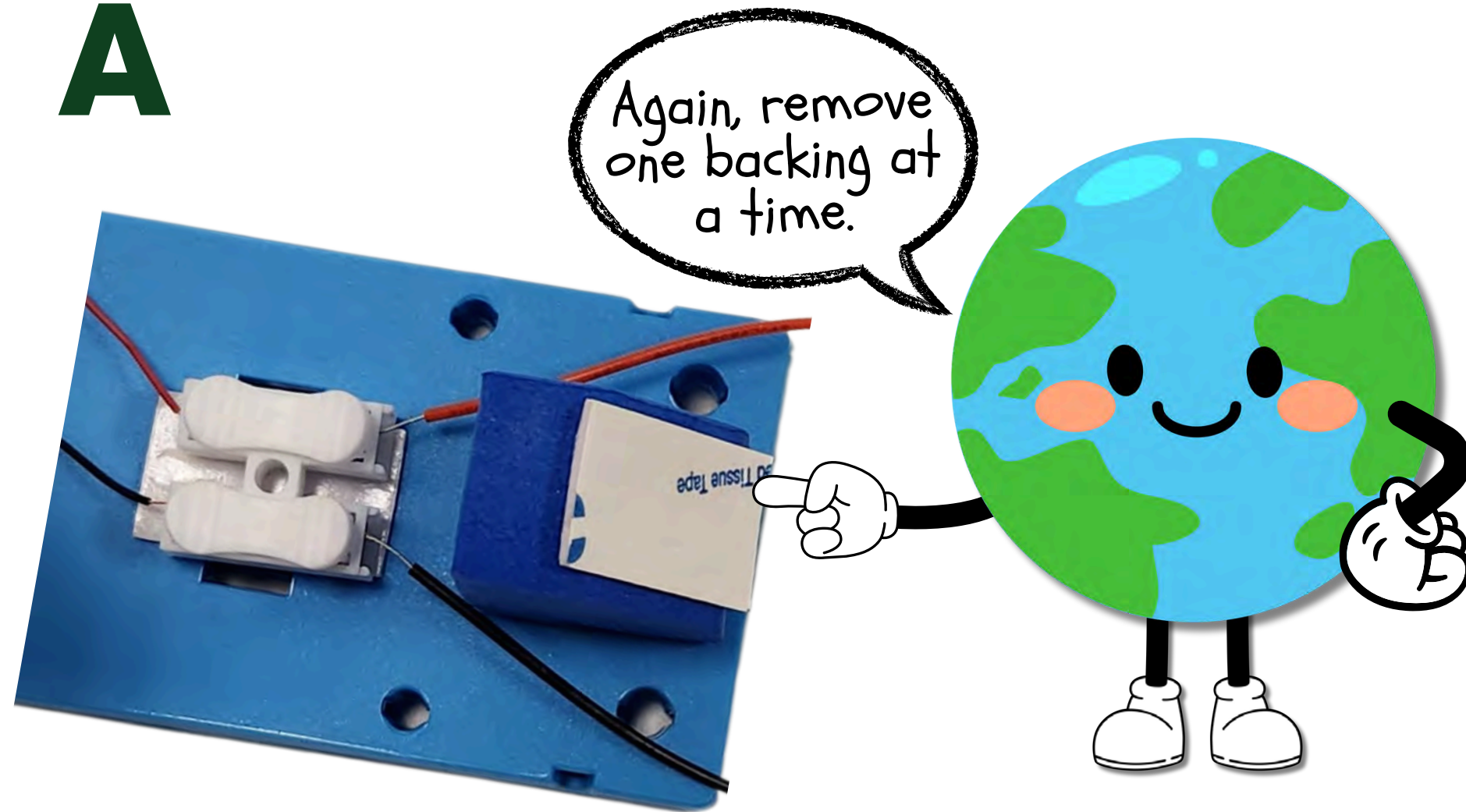
Attach the solar panel stand to the base plate using one of the double-sided sticky foam pieces.



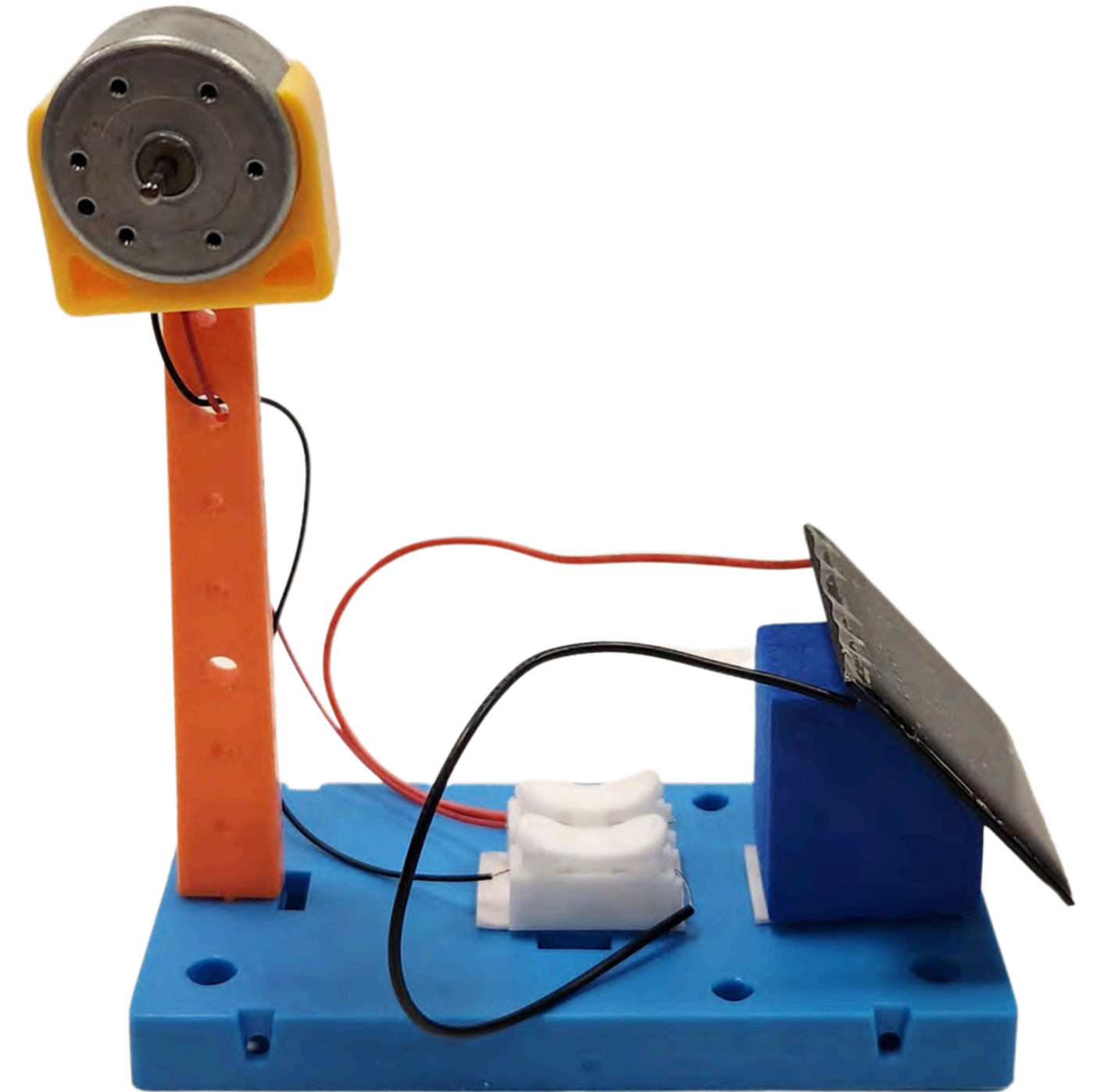
Step 12:

Place the last double-sided sticky foam piece on the top of the solar panel stand and attach the solar panel on top.

A

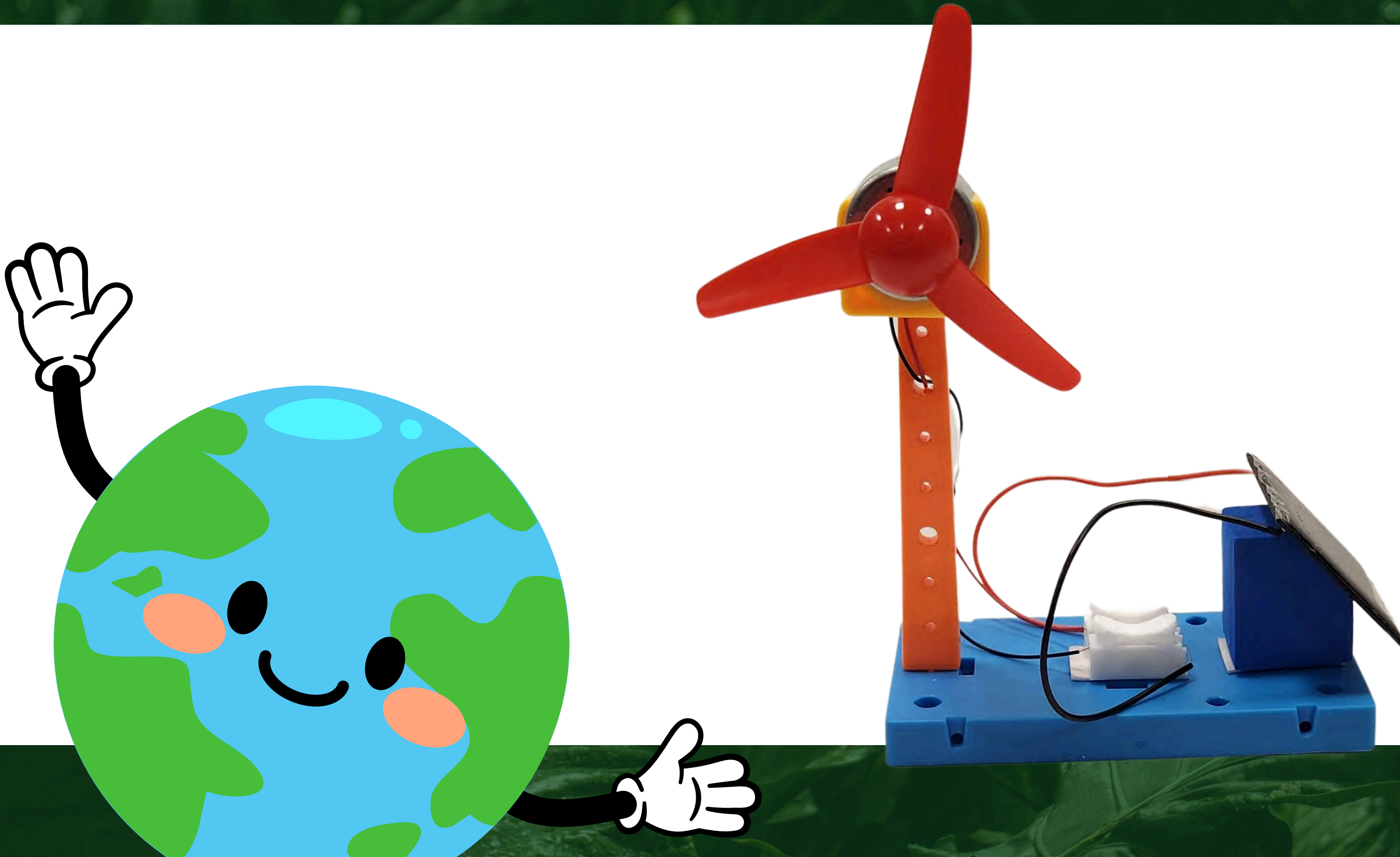


B



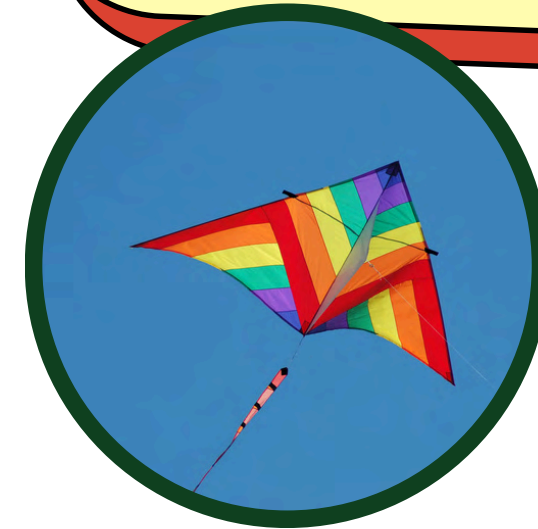
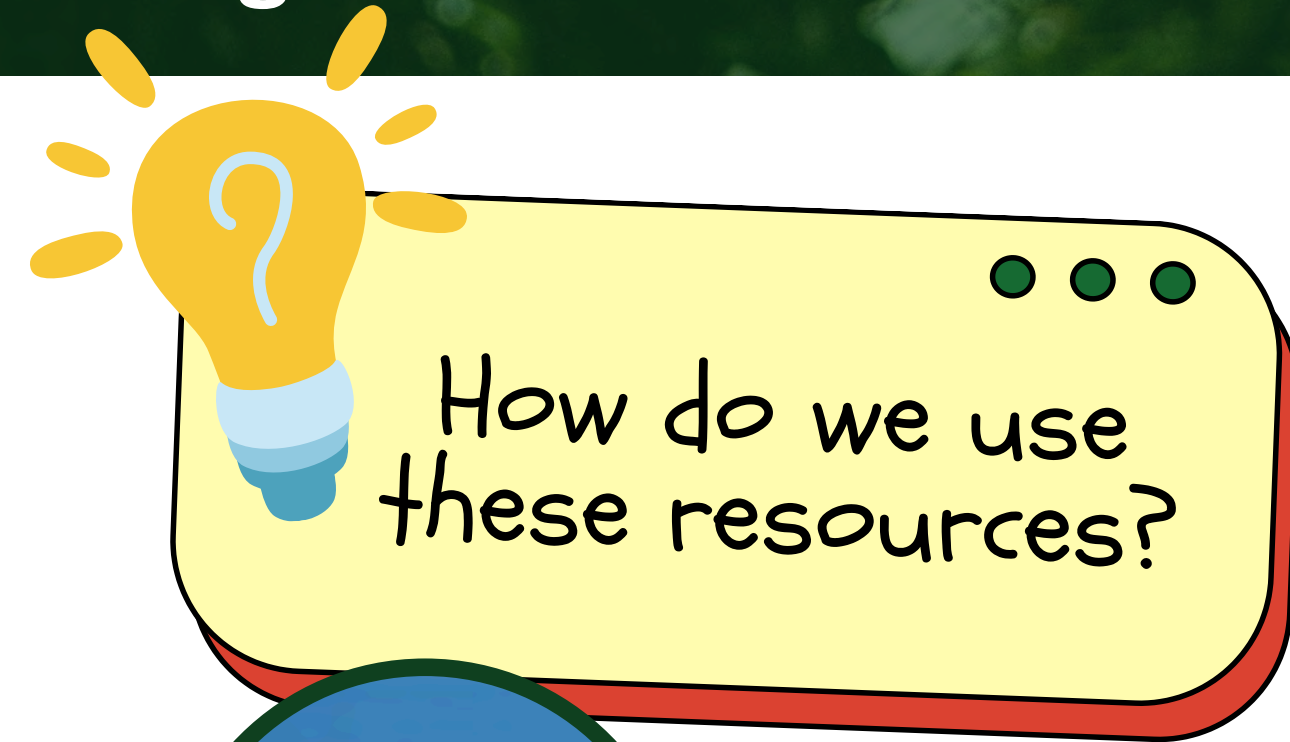
Step 13:

Insert the fan blade over the motor drive shaft.



Step 14:

Remove the plastic film covering the solar panel.
Test the wind turbine with the flashlight.



Processed Electricity



Electricity is a secondary energy resource that we get from processing other natural resources such as coal, oil, natural gas, nuclear power, etc.

What are some ways we can use processed electricity to improve our own lives?



Thank You!

