

How Electricity is Delivered in a Community

1

At Electric Plant:

An electric company creates electricity. Right now, most electricity is made by burning coal.



2

Electric Lines:

The electricity is then sent out of the plant and into wires, which travel to the community.



3

Homes, School, and Buildings:

The electricity continues to travel through wires that go into every single home, school, and building. The wires end at outlets.



4

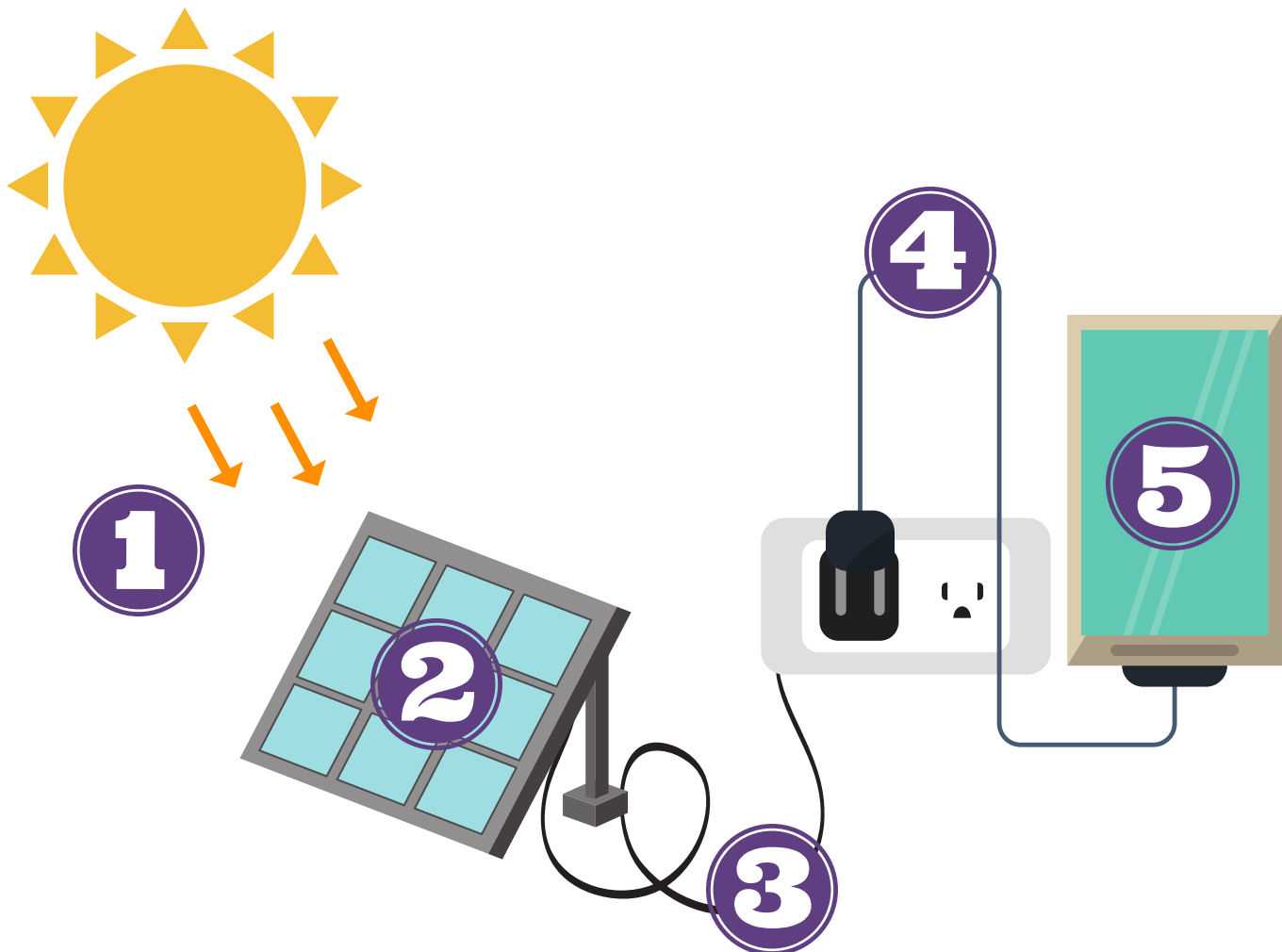
Outlets and Devices:

To use electricity, people plug electric devices into the outlets. The electricity then flows from the wires, through the plug, and into the device. This gives it energy to work.



How a Solar-Powered Device Works

1. Energy from the sun is absorbed into the material inside a solar panel.
2. The solar energy is changed into electricity inside of the solar panel.
3. A wire is connected from the solar panel to the device that needs electricity.
4. The electricity travels from the solar panel and into the wire and from the wire into the device.
5. The device uses solar energy to work!



Solving Problems with Solar Devices

Janet

Age: 35 **Job: Wildlife specialist** **Location: Australia**

My problem: I go to jungles to learn about animals who live there. I always bring a tablet with me so I can take notes about the animals that I see. The problem is that my tablet needs to be charged if I am outside for more than 5 hours. I don't have a place to charge my tablet if I am in the middle of a jungle! I could really use a solar-powered tablet or computer when I am in the wild.



Clarissa

Age: 11 **Job: No job- still a student!** **Location: United States**

My problem: I love to go camping with my family. Every time I go camping, I want to bring my phone with me so I can record videos to put on my family's Youtube channel! Our channel is called "Ross Family Goes Camping!" I would love to have a way to charge my phone using solar energy.



Akida

Age: 59 **Job: Electrical Engineer** **Location: East Africa**

My problem: I am working to bring solar energy to communities in East Africa. Right now, many communities in East Africa don't have electricity. We have a few different ideas of how we can fix this. First, we can put solar panels on tops of homes and schools. Second, we can give people mini-portable solar packs. These packs would be similar to batteries. People can use the packs to create solar energy that can be used to charge a cell phone or have lights in a house or on a street.



Name: _____

My Solar Device

Step 1: Choose which person you want to help design a solar device for. Circle your choice.

Janet

Clarissa

Akida

Step 2: Sketch a picture of what your device will look like.



Step 3: Create a list of steps that will explain how the device will work. Make sure to include information on how your device turns sunlight into electricity. Make sure to also include information on what the electricity will be used for.

1

2

3

4

5
