

# Teachers guide

# The Power Journey



## The aim

To increase pupils awareness of the electrical journey from generation to homes and the risks that are present on the journey.

At the end of the activity pupils will be able to describe:

- The electrical journey and the risks to be aware of
- Some appliances that use electricity



## When

This activity can be used in any classroom setting.



## How

It can be delivered:

- Face to face, or
- As a blended approach with an introduction to all in the classroom and as a homework piece



## Optional activities

The lesson starts and ends with the the amazing power journey 2-minute video.

After watching the video (up to the pause button), there are four optional activities, these are:

1. Creating a picture of the power journey or part of it. (Individual)

Or

2. Spot the Risks. (Group)

Or

3. Creating a Chatterbox, followed by discussion and grading of the 'most powerful' items. (Pairs)

Or

4. Creating a poster of the electrical journey. (Group)

The lesson concludes with the summary points at the end of the video.



## Group size

One activity is for individuals, another is a paired activity and the remaining two activities are for groups.



## Activity duration

45 minutes



## Lesson outline:

Task	Resources	Time
<p>Scene setting and divide pupils into smaller project groups.</p> <p>Play the video and select 'pause' when the pause button appears. Select any of the following activities to supplement the learning from the video.</p>	<ul style="list-style-type: none"> <li>• Laptop</li> <li>• Link to video</li> <li>• Whiteboard for projection</li> </ul>	<p>Introduction 5 minutes</p> <p>Video 2 minutes</p>

## Optional activity 1: Power Journey (Pointillism)

Task	Resources	Time
<p>Ask pupils to create a picture of the Power Journey using 'pointillism'. (This is the use of cotton buds rather than paint brushes).</p> <p>The picture can be the full Journey or one part of it.</p> <p>Pupils can use the template provided or freestyle.</p> <p>This is an individual activity.</p>	<ul style="list-style-type: none"> <li>• Cotton buds</li> <li>• Paints</li> <li>• A3 poster paper</li> </ul>	<p>35 minutes</p>

## Optional activity 2: Spot the Risks

Task	Resources	Time
<p>Circulate the static image of the Power Journey. Ask pupils to 'draw an image' next to the stages of the journey where there might be risks. Write on the poster 'why' it is a risk.</p> <p>This is a group activity.</p>	<ul style="list-style-type: none"> <li>• Copies of the Power Journey</li> <li>• Coloured pens</li> </ul>	<p>35 minutes</p>

## Optional activity 3: Power 'Chatterbox'

Task	Resources	Time
<p>Ask pupils to work in pairs. Using the templates provided ask each pupil to create their own 'chatterbox'.</p> <p>(Ensure each pupil has a different template.)</p> <p>The first player will ask their partner to choose a power source. They will move the 'Chatterbox' spelling out the power source.</p> <p>For example, Sun S U N will be three moves. Then the player will ask their partner to choose a number from 1 - 8 and move the 'Chatterbox' the appropriate number of times.</p> <p>Finally, the player will ask their partner which item requires more power and then reveal the answer. The players will then swap roles.</p>	<ul style="list-style-type: none"> <li>• Chatterbox template 1</li> <li>• Chatterbox template 2</li> </ul>	<p>15 minutes to create the chatterbox.</p> <p>20 minutes to play the game.</p>

## Optional activity 4: Collage Poster

Task	Resources	Time
Ask individual pupils or groups to cut out pictures relating to the Power Journey. The task is to create a 'Collage Poster'. This is a collage of images that show the journey of electricity.	<ul style="list-style-type: none"> <li>• Blank sheet of paper</li> <li>• Glue</li> <li>• Coloured pens</li> <li>• Scissors</li> <li>• Magazines or online pictures (which have images of buildings, roads and towers).</li> </ul>	35 minutes
Play the final 20 seconds of the video for a summary of the 'stay safe' messages.	Talk through the safety tips about being aware of: <ul style="list-style-type: none"> <li>• Damaged plugs</li> <li>• Water near electricity</li> <li>• Frayed wires</li> </ul>	5 minutes

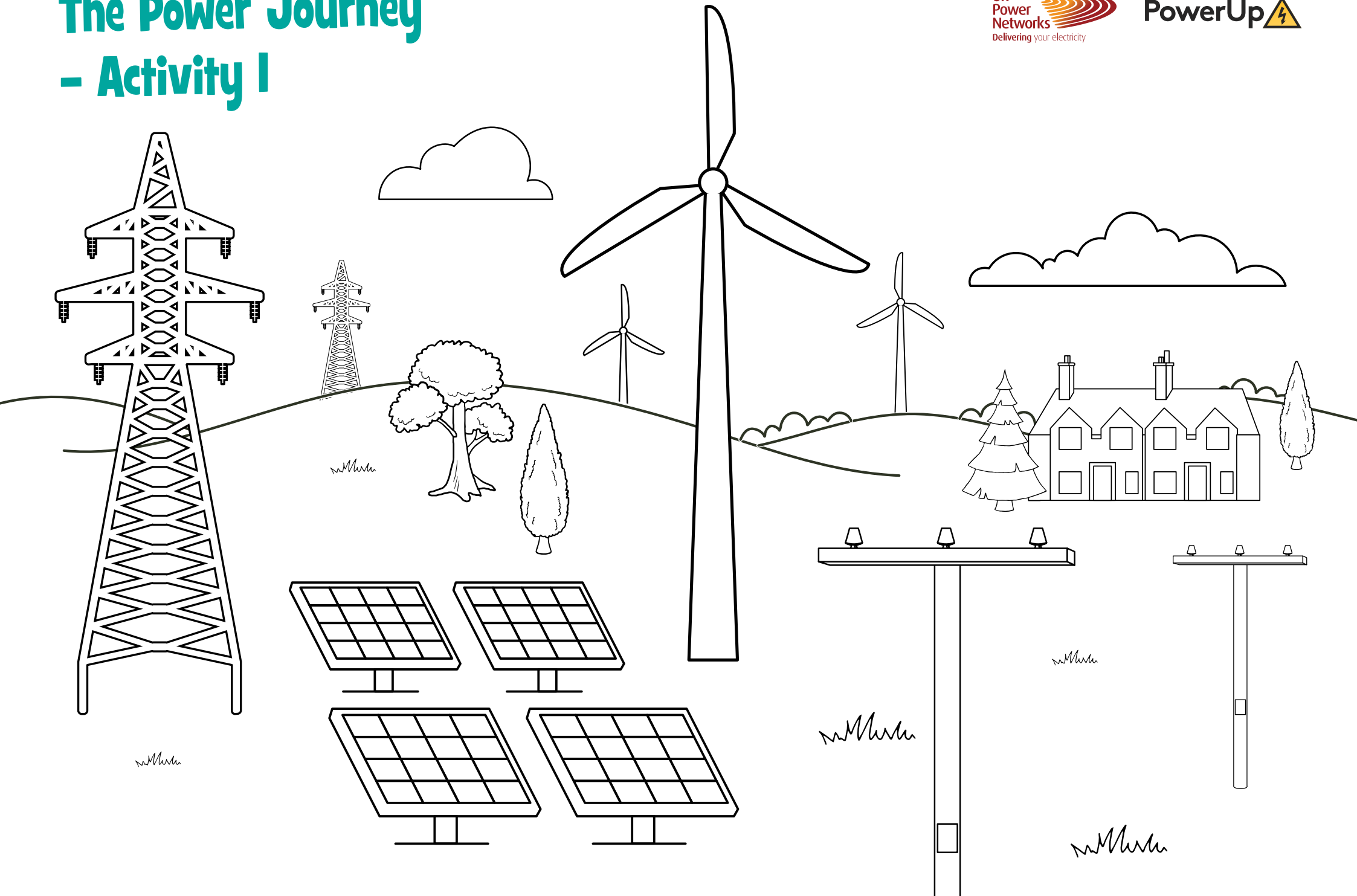
### Expected Learning Outcomes:

- Pupils should have an awareness of the electrical journey to their homes.
- Pupils should have used their ability to identify risks.
- Pupils should have learnt which appliances use electricity.

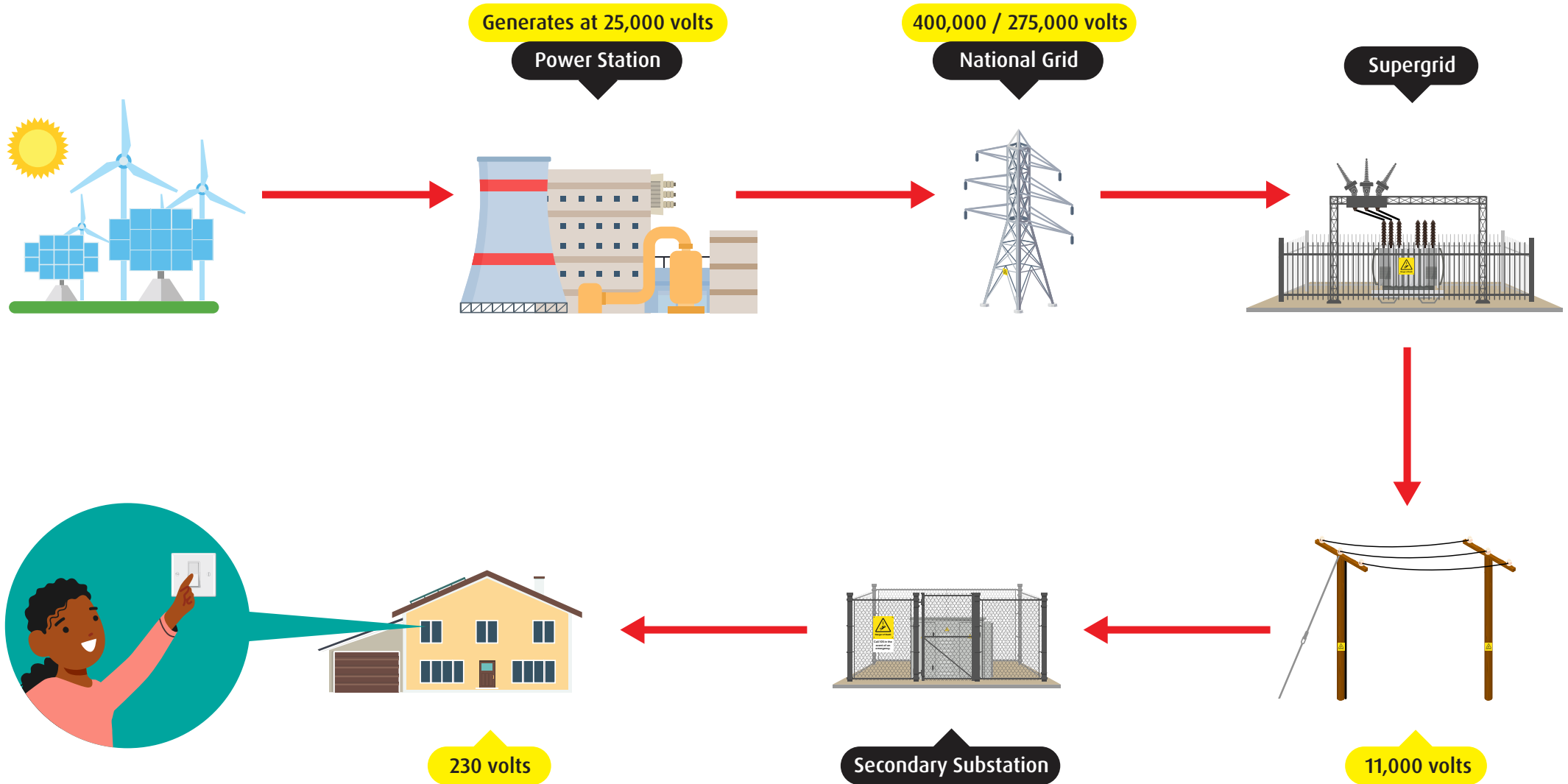
### National Curriculum:

England	Key Stages 1 & 2, physical processes; breadth of study; health and safety.
Wales	Key Stage 1, physical processes; that everyday appliances use electricity and that they should be used with care.
Scotland	Energy and forces; taking responsibility for their own and others health and safety.
Northern Ireland	Key Stage 1 Science; the use of electricity as an energy source and the importance of using it safely.

# The Power Journey - Activity 1

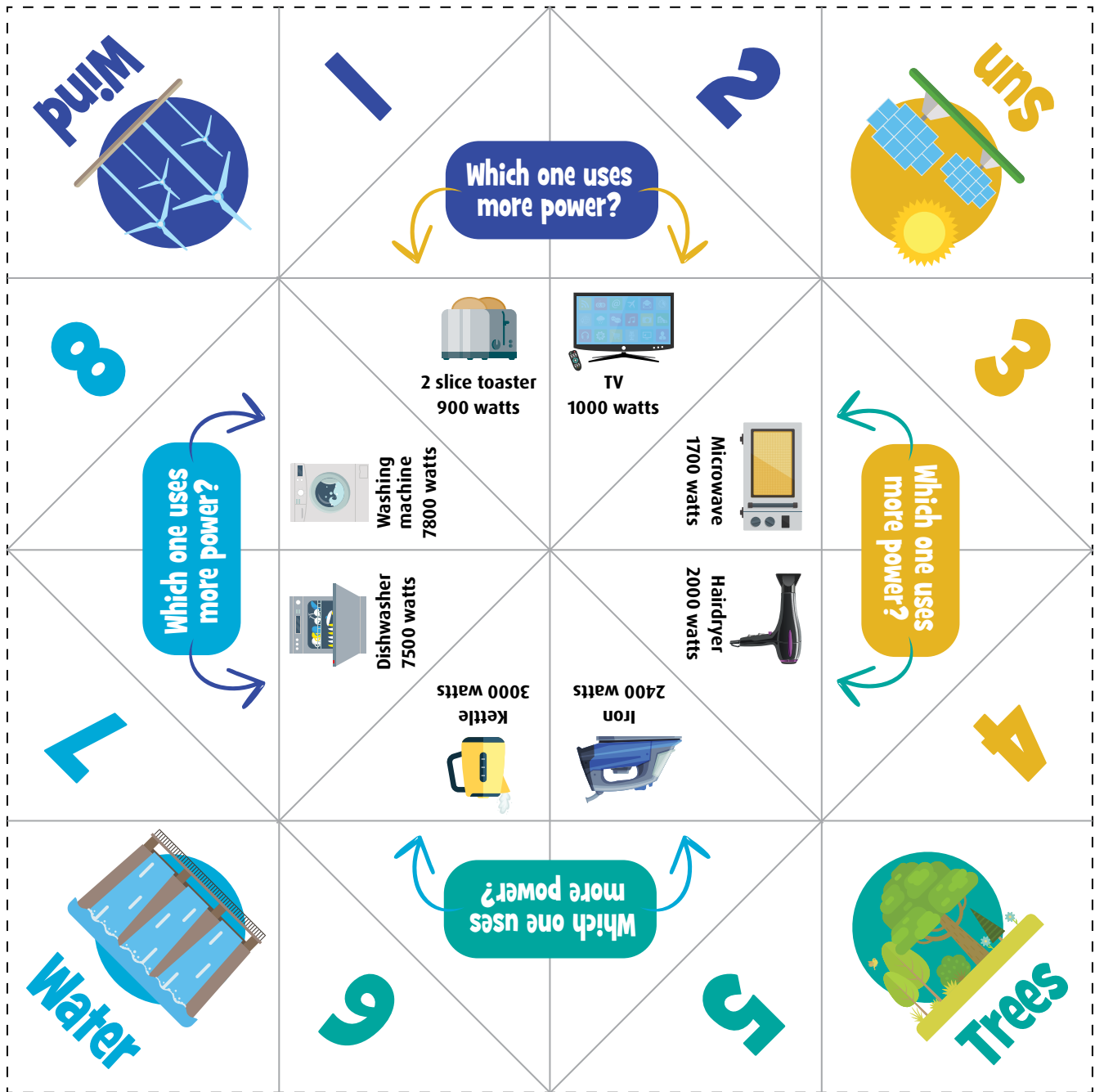


# The Power Journey - Activity 2



# The Power Journey

## - Activity 3



**Which one uses more power?**

**1** Wind

**2** Sun

**3** Which one uses more power?

**4** Trees

**8** Which one uses more power?

**7** Which one uses more power?

**6** Which one uses more power?

**5** Which one uses more power?

2 slice toaster 900 watts

TV 1000 watts

Washing machine 7800 watts

Microwave 1700 watts

Dishwasher 7500 watts

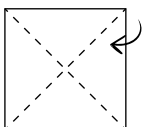
Hairstyler 2000 watts

Kettle 3000 watts

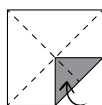
Iron 2400 watts

### Folding Instructions

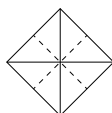
1. Cut along the dotted lines above. With the artwork facing down, fold each corner to the opposite corner.



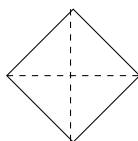
2a. Next, fold all of the corners into the center.



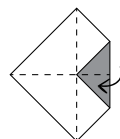
2b. It should now look like the drawing below.



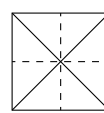
3. Flip the page over so that all of the folds are now facing down.



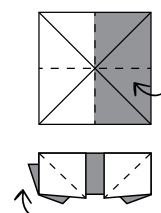
4a. Repeat step 2 by folding all of the corners into the center.



4b. It should now look like the drawing below.



5. Fold your page in half both horizontally and vertically.



6. The final product should look like this. Enjoy!



# The Power Journey

## - Activity 3

**1** Which one uses more power?

- Mobile charger 8 watts
- Radio 5 watts

**2** Which one uses more power?

- Laptop 500 watts
- Electric toothbrush 8 watts

**3** Which one uses more power?

- Games console 500 watts
- Smart speaker 15 watts

**4** Which one uses more power?

- Printer 60 watts
- Desk lamp 60 watts

**5** Which one uses more power?

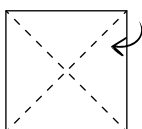
**6** Which one uses more power?

**7** Which one uses more power?

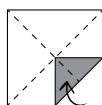
**8** Which one uses more power?

### Folding Instructions

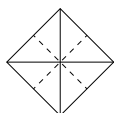
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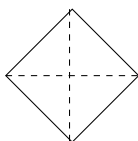
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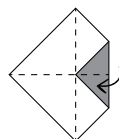
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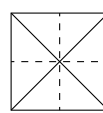
**3.** Flip the page over so that all of the folds are now facing down.



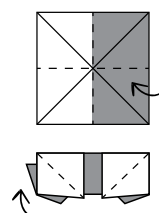
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