

**YEARS 1-2**

# Introducing Electrical Energy

## Hiko ā Pūngao



### OVERVIEW

Find out about energy and electricity. Which appliances and devices around you use electrical energy?

### NZ CURRICULUM LINKS

LEARNING AREAS:	ACHIEVEMENT OBJECTIVES:	LEVELS:	YEARS:
Science: Physical World: Physical inquiry and physics concepts	Explore everyday examples of physical phenomena, such as electricity and magnetism and light.	1-2	1-4
Science capabilities	Gather and interpret data, Use evidence, Engage with science	1-2	1-4
English: Speaking, writing and presenting	Acquire and begin to use sources of information, processes and strategies to identify, form and express ideas	1-2	1-4
Mathematics	Statistics	1-2	1-4

## TEACHER INFORMATION:

### Learning sequence



INTRODUCING  
KNOWLEDGE



EXPLORE AND  
INVESTIGATE



CREATE AND  
SHARE



REFLECT AND  
EXTEND



MAKE A  
DIFFERENCE

### Learning intentions

Students are learning to:

- Begin to understand the concepts of electricity and energy
- Identify which appliances and devices in their environment use electricity

### Success criteria

Students can:

- Explain the concepts of energy and electricity
- Record details about appliances and devices which use electric

### Resources needed

Slideshow: [Exploring Energy and Electricity](#)

School-gen e-book: [Beaky and Bluey see the light - English version](#)

Google sheet: [Things I know use electricity](#)

### Additional Support

Science Learning Hub by University of Waikato: [What is energy](#) article

Video: [Why is energy important?](#)

### Vocabulary

Energy, electricity, potential, appliance, device, wire, magnet, battery, solar, power, electrical.

Any text highlighted in orange represents a link to further material. If you have printed this resource, please return to [schoolgen.co.nz/for-teachers/resources](https://schoolgen.co.nz/for-teachers/resources) to access the linked material.

## LEARNING EXPERIENCE

*Note: These are suggestions only and teachers are encouraged to adjust the activity to suit the needs and interests of their students.*



### INTRODUCING KNOWLEDGE

Allow approximately 15 minutes

- Students can share their prior knowledge about electricity with a partner.
- View the Google slides: [Exploring energy and electricity](#)  
This slideshow introduces the vocabulary: energy, electricity, device, appliance and more. It introduces some basic concepts of electricity and how it is used.
- Read the [School-gen eBook: Beaky and Bluey See the Light](#) with or to students, to find out about energy, electrical energy and what you can do to save energy (see resources on page 2).
- Talk about the dangers of electricity and how students need to be cautious when dealing with electrical appliances, and use them under the supervision of an adult.



### EXPLORE AND INVESTIGATE

Allow approximately 20 minutes

Students can collect information about appliances and devices at home and school, using the spreadsheet template below.

#### THINKING LIKE A SCIENTIST:

Ask questions about where electricity flows in your classroom. How does it get there? Explore how electrical energy is used in your classroom.

Appliance or device	How many?	What does it give us? (Heat/light/sound/movement)	What is the source of its power? (electricity/solar/batteries etc)	How can we save energy when using this?

[Link to Google Docs version](#)



## CREATE AND SHARE

Allow approximately 15 minutes

Students could draw a picture or make presentations or books about how they use electricity in their lives, using appropriate tools or software, such as: Book Creator, PowerPoint or GAFE.



## REFLECT AND EXTEND

Allow approximately 10-20 minutes

- Reflect on how many appliances and devices in your classroom, home or school use electricity.
- Create graphs or pictograms using your [spreadsheet data](#).
- What other questions do students have about energy and electricity?
- Form an inquiry around a big/fertile question.



## MAKE A DIFFERENCE

Allow approximately 15-30 minutes

- Students can use their findings to explore how they could use less electricity in the classroom.
- Create posters or digital presentations which explain how to save electricity.

We hope you have enjoyed this educational STEM resource.

School-gen is a Genesis community initiative to get kaiako, tamariki and whānau enthused about STEM.

For more free resources please visit our [Genesis School-gen website](#) and follow us on Facebook and Instagram @schoolgennz