

# 2

# Electricity

## Subject Area

The World of Science & Technology

## Topics & Curriculum Links

daily life (Civics)

machines (Science)

electricity in nature (Science)

how we make electricity (Science)

batteries (Science)

how we get electricity (Science)

how electricity moves through materials (Science)

pollution (Science; Civics)

being safe with electricity (Science; Civics)

uses of electricity (Science; Civics)

## Vocabulary

household objects; places; daily activities; transportation; machines; materials; sizes; colors

## Grammar

present simple; *can/can't*; question forms; imperative; adjectives; prepositions

## Activities Answers

**Pages 20–21** 1 1 energy 2 work 3 electricity 4 machines 2 1 machine 2 bus 3 train 4 car 3 1 refrigerator 2 stove 3 dishwasher 4 kettle 4 1 Kettles make water hot. 2 Refrigerators keep our food cold. 3 Stoves cook our food. 4 Washing machines wash our clothes. 5 Dishwashers wash our dishes.

**Pages 22–23** 1 1 lightning 2 sky 3 electric shock 4 sun 2 1 false 2 false 3 true 4 true 3 1 Lightning is a type of electricity in the sky. 2 Lightning has lots of energy. 3 Lightning is very, very hot. 4 Lightning can give you an electric shock. 5 An electric shock is when electricity goes into your body. 4 1 Lightning has lots of energy. 2 Lightning is very, very hot. 3 When you see lightning in the sky, go into your home. 3 An electric shock is when electricity goes into your body. 4 Electricity makes amazing colors in the sky in the Arctic and the Antarctic.

**Pages 24–25** 1 1 coal 2 steam 3 turbine 4 generator 5 electricity 2 1 We make electricity in power stations. 2 Many power stations use coal to make electricity. 3 1 power station 2 wind 3 water 4 river 5 steam 4 1 river 2 turns 3 use 4 wind

**Pages 26–27** 1 1 calculator 2 camera 3 cell phone 4 watch 5 batteries 6 machine 2 1 cell phone 2 calculator 3 car 4 watch 5 battery 6 camera 3 1 Most batteries are small. 2 They make electricity for small machines. 3 Some machines use two or more batteries to work. 4 Big batteries make electricity for big machines. 4 1 small 2 watches 3 car 4 satellites 5 batteries

**Pages 28–29** 1 1 electricity 2 office 3 socket 4 school 5 wires 6 plug 2 1 true 2 true 3 false 3 1 Wires take electricity to sockets. 2 We put a plug in a socket. 3 Electricity goes from a socket to a plug. 4 Wires take electricity from a plug to electric machines. 4 1 We put a plug in a socket to use electricity. 2 Electricity moves in wires./Wires take electricity from one place to another place. 3 We can put one plug in a socket. 4 A socket can get hot and burn when we put too many plugs in it.

**Pages 30–31** 1 1 Electricity 2 metal 3 wires, stations 4 water 5 machine, shock 2 1 true 2 false 3 true 4 true 3 1 Plugs have plastic on them. 2 Plastic stops electricity moving to us when we touch a plug. 3 The glass stops electricity moving from wires into a metal pylon. 4 The glass on pylons stops electricity moving to the ground.

**Pages 32–33** 1 1 coal 2 shower 3 electricity 4 pollution 5 lamp 6 bath 7 computer 8 machine 2 1 Power station make pollution by burning coal. 2 To stop pollution we can turn off lamps, computers, and other machines when we are not using them. We can have a shower, not a bath. 3 1 wind, water 2 stations, pollution 3 sun 4 panels, pollution

**Pages 34–35** 1 1 wires 2 powder 3 fire 4 kite 2 1 Don't put electric machines next to water. 2 Firefighters use powder to stop electric machines burning. 3 Don't fly a kite next to electricity wires. 3 1 It isn't safe to put your fingers in sockets or electric machines. 2 Electricity can move from the socket or the machine to you. 3 Electricity can give you an electric shock. 4 free answers

## Teaching Ideas

See also pages 8–9 for general ideas that you can adapt. Or go to [www.oup.com/elt/teacher/readanddiscover](http://www.oup.com/elt/teacher/readanddiscover)

### An Electricity Presentation

After completing Project 1, students present their posters about being safe with electricity to the rest of the class. Posters can then be displayed together, and students can vote for their favorite poster.

### Machines at Home

After completing Project 2, students collect the results from the whole class. They can do this by listening to each student giving their information in turn, or by collecting the information in a big version of the chart on page 37 of the Reader. Students then make a big class display of all the machines at home.

### Machines That Use Batteries

Students work in small groups and think of all the machines that use batteries. They make two lists: machines that use big batteries, and machines that use small batteries. Then students share their results with the class and make two big lists.

### Stop Pollution!

Students make posters about what we can do to stop pollution. They can use language from pages 16–17 of the Reader and they can illustrate each point. Posters can then be displayed together, and students can vote for their favorite poster.

### Power Stations

Students find out about power stations near where they live. They can make a map showing where the places are. On the map, they can write sentences about each power station like this: *This power station is in [name of place]; This power station uses [coal/wind/water] to make electricity.*