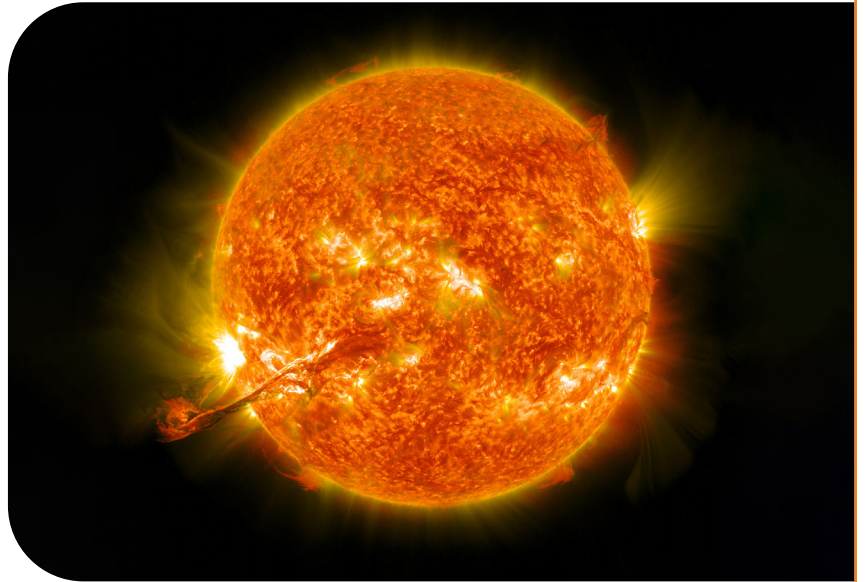


YEARS 1-2

Our Amazing Sun

Ko te Rā Mīharo



OVERVIEW

Learn about why the Sun is so important. Investigate the Sun's heat and light energy and how it influences people on Earth.

NZ CURRICULUM LINKS

LEARNING AREAS:

Science:
Planet Earth and Beyond
Astronomical systems

ACHIEVEMENT OBJECTIVES:

Share ideas and observations about the Sun and the Moon and their physical effects on the heat and light available to Earth.

LEVELS: YEARS:

1-2

1-4

Nature of Science:
Investigating in science

Understand that technological outcomes are recognisable as fit for purpose by the relationship between their physical and functional natures.

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:

- Share ideas about why the Sun is important in our lives.
- Investigate the heat and light from the Sun and make observations about the physical effects of sunlight.

Success criteria

Students can:

- Discuss and record their ideas about why the Sun is important to people.
- Observe and describe shadows and changes to objects from heat and light of the Sun.

Resources needed

Poster: [The Sun's Amazing Energy](#) Slideshow: [Our Amazing Sun](#)

Additional Support

The Sun is our closest star. It is huge, very hot and bright, and provides us with all the heat and light on Earth. Heat and light energy from the Sun is created from the physical reactions in its core. The intense pressure and heat inside the Sun causes hydrogen atoms to go through a process of nuclear fusion to convert to helium.

[The Sun](#) for kids by Homeschool Pop

[Māui and the Sun: Ready to Read](#) story on YouTube

Vocabulary

Sun, light, heat, sunlight, melt, shadow, solar power.

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 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

- View the **Our Amazing Sun** slideshow or The **Sun's Amazing Energy** poster to introduce learning about the topic of the Sun.
- What questions do students have about the Sun?

The Sun's Amazing Energy poster

The Sun's Amazing Energy

genesis school-gen

The Sun is our closest star. It makes huge amounts of **heat and light energy**. This energy travels through space to Earth.

Mercury
Venus
Earth
Mars
Jupiter
Uranus
Saturn
Neptune

How does the Sun's energy help you?

All our energy comes from the Sun
It supports all life on Earth. Our Sun is in the centre of our solar system and the eight planets, including Earth, orbit around it.

Solar energy
Heat and light energy that comes from the Sun is called solar energy. We can make electricity from the Sun's energy using solar panels. These provide energy for us using only the power of the Sun.

www.schoolgen.co.nz



EXPLORE AND INVESTIGATE

Allow approximately 20 minutes

Experiencing sunlight

First, sit in the sun and notice how the sunlight feels on your skin. Does sunlight make you feel warm or cool? Imagine coming back to the same place at night, when the sun is not shining. What will be different?

THINKING LIKE A SCIENTIST:
On a sunny day, head outside to explore sunlight.

Observing objects in the sun

- Experiment with the sun's heat: place various objects in sunlight over time and observe what happens.
- Together, make predictions and observations and record, e.g. bread will go hard, chocolate buttons melt, rock will warm up etc.

Predictions before being in sun	Observations after being in sun
Chocolate button	
Piece of bread	
Marshmallow	
Rock	

[Link to Google Docs version](#)



CREATE AND SHARE

Allow approximately 15 minutes

Shadows

Shadows are dark areas where an object is between a light source (like the Sun) and a surface. Light shines on an object and behind it a shadow is cast.

Making shadows and exploring light

Experiment by casting shadows with your body and other objects such as chairs, drink bottles, pencils, or rulers.

- Discuss what makes a shadow.
- Try making shadows at different times during the day. How does the shape of your shadow change? Why do you think this is?

Making shadow puppets

You will need: cardboard (preferably black), scissors, ice block sticks, tape or glue.

1. Draw the outline of a person or animal on a piece of cardboard or use the templates below to trace around.
2. Cut around the outline.
3. Paint your cardboard black.
4. Stick your puppet onto an ice block stick or cardboard straw.
5. Use a torch or light as a light source to cast the shadows inside, instead of sunlight. Use the shadow puppets to perform a story or legend about the Sun.

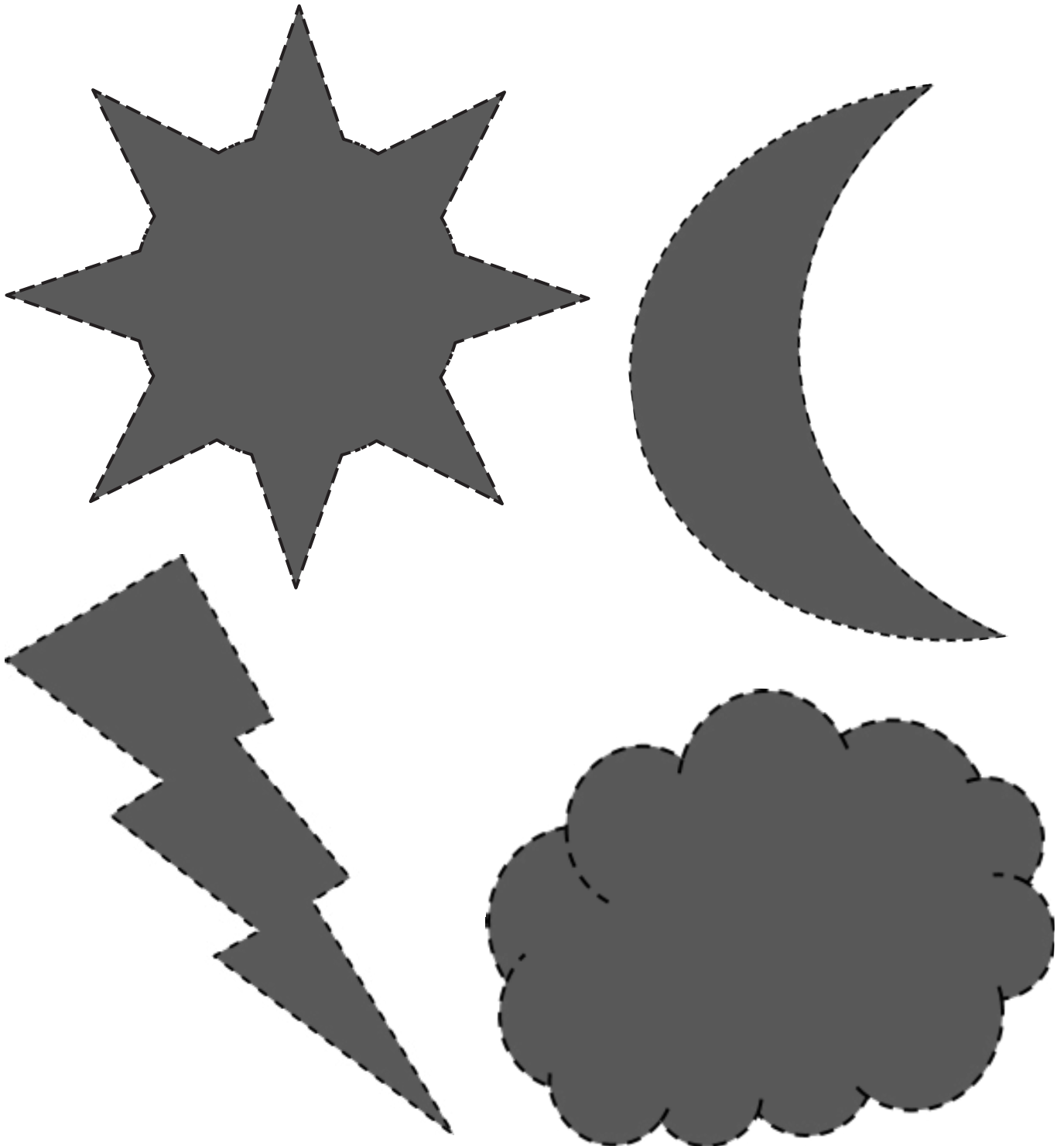


CREATE AND SHARE

Allow approximately 15 minutes

Shadow puppet templates

- Draw around the shapes onto a piece of cardboard.
- Cut out the shape and stick onto an ice-block stick.
- Hold the puppet up to the sun and cast a shadow. Use the puppets to tell a story.





REFLECT AND EXTEND

Allow approximately 10-20 minutes

- Discuss why the Sun is important for people and living things on Earth.
- Record your ideas to make a display about the Sun and what it provides for us.
- Reflect on your learning about the Sun, and identify any other questions you have.
- Research these questions at the library.



MAKE A DIFFERENCE

Allow approximately 15-30 minutes

The Sun is a powerful source of energy. We can make electricity and power small appliances and gadgets using solar power (energy from the Sun).

- Are there any solar powered appliances or gadgets at your school or home?
- How could you use the Sun's energy to power or heat your space?
- What could possibly be solar powered in future? Decide on a solar power goal for your school and make a plan to reach the goal to create more sustainable, renewable energy.

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