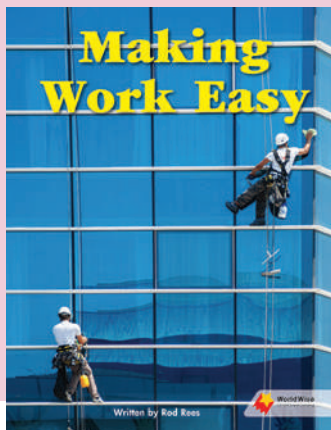


Lesson Plan

**Fluent
reading stage
Levels 19–20**



Making Work Easy explores how pulleys and levers are used separately and together to make the work of lifting and moving things easier. It provides familiar examples of tools and machines that have pulleys and/or levers in their design.

Informative text types:
Explanation

Science Curriculum links

Australia

- **PS (ACSSUO33)** A push or a pull effects how an object moves or changes shape
- **DTKU (ACTDEK002)** Explore how technologies use forces to create movement in products

New Zealand

- **PW:** The effect of forces (contact and non-contact) on the motion of objects
- **NT:** Understand how society and environments impact on and are influenced by technology in historical and contemporary contexts and that technological knowledge is validated by successful function

Key concepts

- Work is the movement of an object by pushing or pulling.
- Pulleys and levers make it easier to reach, lift and move heavy things.
- Using pulleys and levers together makes work easier to do.

Content vocabulary

bottle opener, chain, cranes, handles, heavy, high, lever, lift, loads, move, pulley, reach, rope, scissors, trolleys, wheel, wheelbarrows, work

Text features

- Chapters with headings and sub-headings
- Labelled diagrams
- Glossary and index

Reading strategy

- Making inferences

First reading session

Getting started

Introducing the book

Activate students' prior knowledge. Ask: *How can you move or lift heavy things? Do you know of any devices that can help you to do this work more easily?* Invite students to talk about times when they have moved or lifted heavy things with tools. List these tools on a chart. Ask: *What is the same about each of these tools?*

Ask: *What do you know about pulleys and levers? Have you ever seen one? What was it used for?* Have students turn and talk about this with a partner. Discuss as a whole group.

Provide each student with a copy of *Making Work Easy*. Say: *This book tells about how pulleys and levers are used to move things.* Have students browse through the book.

Exploring vocabulary

Ask: *What words or phrases might be in this book?* Have students work with a partner, then share with the group. List the words on a chart and invite students to make suggestions about what each word means. Where appropriate, have the students add a drawing (for example, a picture or a symbol) to the words on the chart to make the meaning clear. Discuss each word as you list them on the chart. If necessary, introduce the content vocabulary and add these words to the list.

Introducing the reading strategy

Say: *Today we are reading a science book. Good readers look out for how the things they read in science books apply to the world.* Give each student a copy of the Blackline Master (BLM). Say: *As you read, I want you to think about how the information applies to these objects on the BLM. This is the reading strategy of making inferences.* Have students talk to each other about which part of each object on the BLM is a pulley or lever.

Reading the text

Have students turn to pages 4 and 5 and read the introduction independently. Ask: *What have we learnt about levers and pulleys? Where are the pulleys and levers in the photographs? How might they make it easier to do heavy work?*

Have students read chapter 1 independently. Say: *As you read, remember to think about how this information might link to the objects in the BLM. This can help you to understand the text better.*

Second reading session

Building understanding

Ask: *What is a pulley? How does it work? Which of the objects in the BLM have pulleys?* Discuss as a whole group.

Have students read chapter 2 independently.

Ask: *What is a lever? How does it work? Can you think of a time when you have used a lever?*

Have students turn and talk to a partner about their ideas.

Final reading session

Have students read chapter 3 and the conclusion independently. Say: *As you read, think about how the information can help you to understand how the objects in the BLM work.*

Bringing it all together

Ask: *What have you learnt about pulleys and levers?* Have students turn and talk with a partner. Invite students to share their knowledge and create a group chart by recording their responses.

Ask: *Why are pulleys and levers important tools? What else are pulleys and levers used for?* Discuss as a whole group.

Students could complete the Blackline Master about everyday pulleys and levers.

Reflecting on the reading strategy

With a partner, have students discuss how they used what they read to complete the BLM. Ask: *How did the photographs help you to spot the pulleys and levers in the objects on the BLM? What information did you get from the diagrams and the labels?* Invite pairs to share their ideas.

Ask: *How does applying what you read to the outside world help you to understand the book in a deeper way?* Discuss as a whole group.

Going beyond the book

Speaking and listening

Have the students select an object that uses a pulley and/or lever to move things. These could be classroom objects, pictures in books or online images. Say: *Prepare a short explanation about how the object works. Use scientific language in your presentation, such as “lever”, “pulley”, and “lift”.*

Vocabulary

List these words on the white board: *work, pull, push, lever, pulley.*

Say: *These words have a particular meaning in science.* Have the students find examples of where the words occur in the book. Ask: *What does the word mean?* Have the students say sentences with each word in them that show the scientific usage of the word.

Students could then work in pairs to record sentences in a table. For example:

Word	Scientific example	Everyday example
work	Moving an elephant is hard work.	My mum goes to work.

Visual literacy

Have the students discuss the information in the diagrams and illustrations used in the book. Ask: *How do these diagrams help you to understand the information?* Talk about the humour in the illustrations. Ask: *Why did the author include these illustrations?*

Writing

Have students write an explanation about how one of the objects in the BLM works. Provide the students with a template detailing the structure and elements of an explanation.

Planning to write an explanation

Name: _____

Getting started

What is my topic? _____

What do I want to explain? _____

Who am I writing for? _____

Where will I find information? _____

Planning my explanation

1. General statement

What am I explaining? _____

2. Explanation of the process

First _____

Next _____

Then _____

Finally _____

 **Hint:** Explanations tell *how* and *why* things happen. They use words like *as*, *because* and *result*. They use phrases that describe time.

Additional features I could use

- ☐ Maps to show location
- ☐ Text boxes to provide additional information
- ☐ Photographs and diagrams to support text
- ☐ Captions and labels to explain photographs and diagrams
- ☐ Time line to show history of key events

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Say: *Reread information in the book about pulleys and levers. Think about how you are going to write about how they work in your object.* Students can also use research skills to find out extra information.

Encourage students to share their ideas with a partner.

Say: *Talk about how the pulleys and levers work in the object you are explaining. Discuss any other information you will include.*

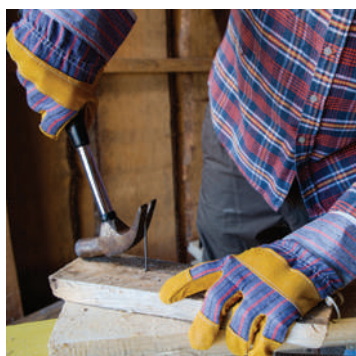
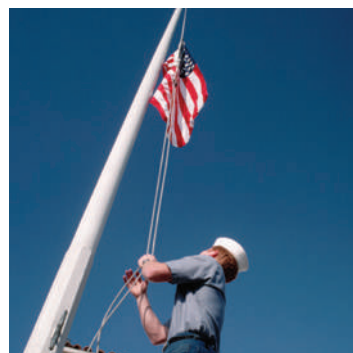
Use the template to remind the students about the structure of an explanation. Say: *Follow the template when you write.*

Remember to use everyday examples as well.

Blackline Master: Everyday pulleys and levers

Name/s: _____

Use labels and captions to show how these objects work.



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