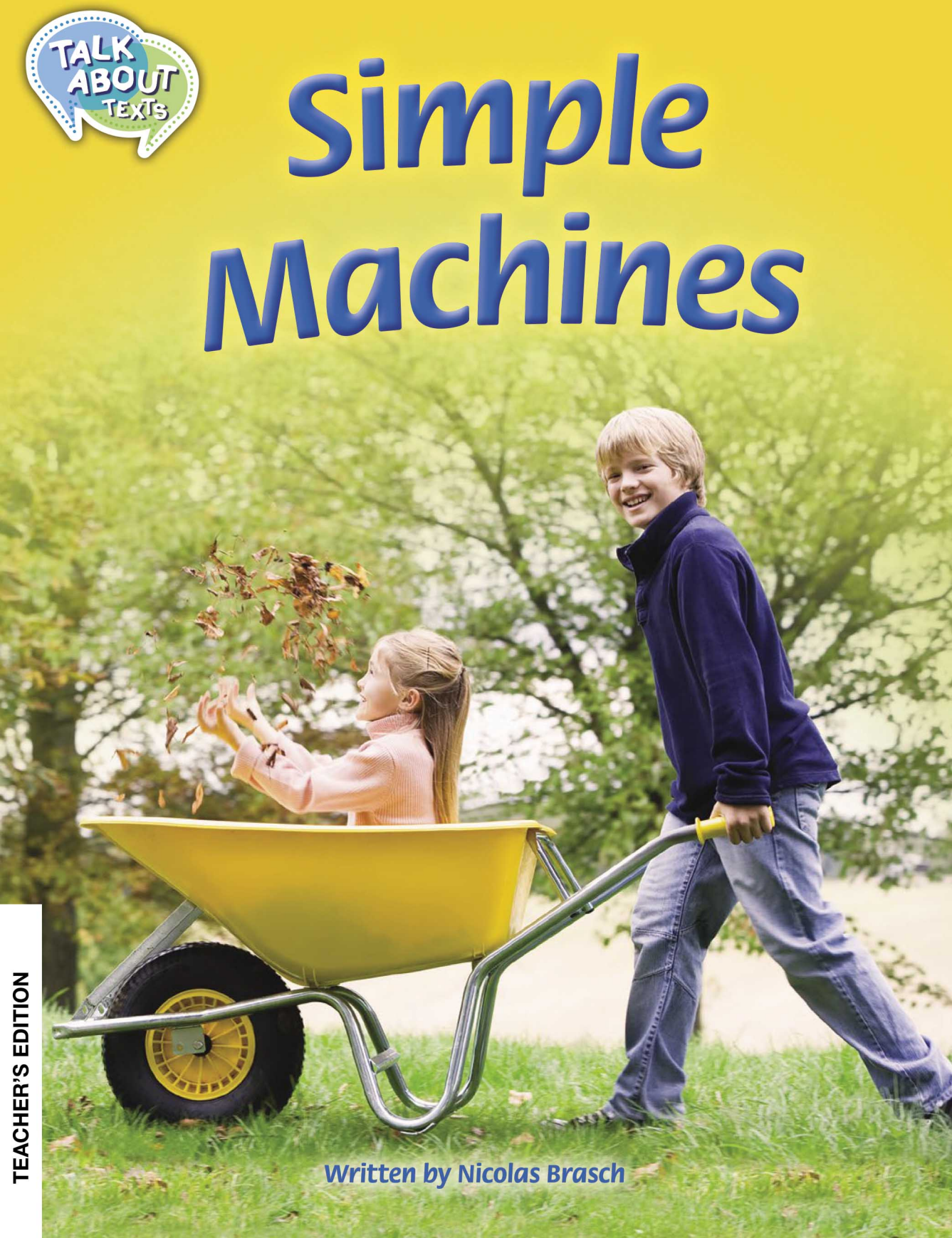
TALK ABOUT TEXTS

Simple Machines



Written by Nicolas Brasch

TEACHER'S EDITION

Simple Machines



For Preview Only

Written by Nicolas Brasch

Teacher's Edition written by Karl Chippindall

macmillan education

Say

'Let's read the contents page together.'

Read

Read the contents page together with the students. Clarify any difficult words.

Check Understanding

- On what page would I learn about pulleys?
- What would I learn about on page 16?
- What does the word 'inclined' mean?

Talk

Why do you think the contents page is important?

The contents page is **important** because _____.



For Review Only

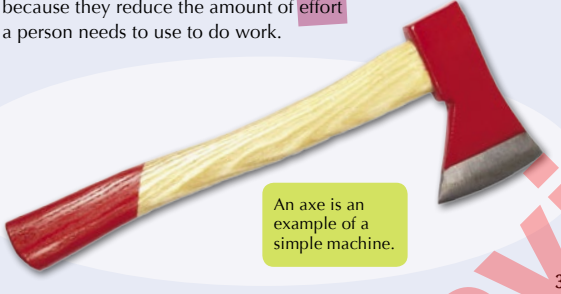
What Are Simple Machines?

Simple machines are tools or objects that make work easier. They have very few parts and are easy to make. Simple machines have been used for thousands of years. They help people to do things more quickly and with less effort.

We often use words such as **work**, **load**, **effort** and **force** when we talk about simple machines.

- Work usually means moving something from one place to another.
- A load is the thing that needs to be moved.
- Effort is the amount of force that we need to use to do something.
- A force may be pushing, pulling or lifting.

Simple machines either add force to the work or change its direction. They are called machines because they reduce the amount of effort a person needs to use to do work.



An axe is an example of a simple machine.

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Say

'Read page 3 to your partner. When you have read it, ask your partner to read it to you.'

Read

Ask pairs of students to take turns to read page 3 to each other.

Check Understanding

- What are simple machines?
- How long have simple machines been used?
- What does a 'force' involve?
- What is another word the author could have used to replace the word 'effort'?

Talk

What does the photograph show and what does the caption help you understand?

The photograph **shows** _____.
The caption helps me **understand** _____.

For Review Only

Say

'Read pages 4 and 5 to yourself. When you have finished, read them again to your partner.'

Read

Ask the students to read pages 4–5 to themselves. Then, students take it in turns to read to their partner.

Check Understanding

- What is an inclined plane?
- What does an inclined plane do for us?
- What might the ancient Egyptians have built using inclined planes?
- What does the word 'inclined' mean?



Inclined Planes

An **inclined plane** is a flat surface that connects a lower level to a higher level. It makes it easier to move heavy loads between levels of different heights. An inclined plane is also called a **ramp** or a slope.

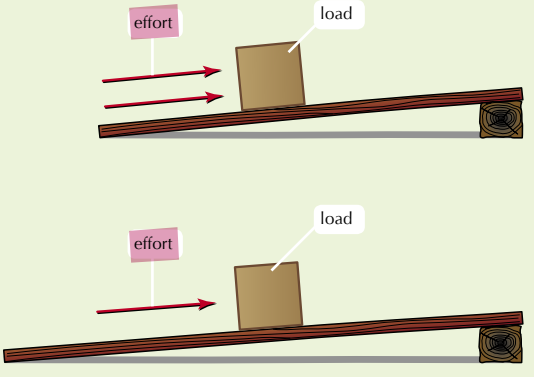
Inclined planes have been used for thousands of years. They are one of the simplest methods known for moving very heavy objects, such as stone and other building materials. Some people think that the ancient Egyptians used inclined planes to move the giant stone blocks used to build the pyramids.

It is easier to wheel these heavy objects into the truck using a ramp.

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For Review Only

An inclined plane, or ramp, usually comes in one piece. One end is placed on the lower level, and the other is placed on the higher level. It takes more effort and force to push something heavy up a short ramp. It takes less effort to push a heavy object up a long ramp.



It takes more effort to move a load up a short ramp, because the shorter the ramp, the steeper the slope.

Talk

How does the diagram help explain the ideas in the text?

The **diagram helps explain** the ideas in the text because _____.

What can you understand from the photograph and caption?

The photograph **shows** _____.
It **helps** me **understand** _____.

For Review Only