TECHNOLOGY:
THE MACHINES



How do you eat soup? Did you know that a spoon is a tool? A tool is a simple machine.

Machines often help you move something (do work) using less force.

A machine uses energy to help us do work. Machines that have only a few parts are called simple machines.
Some machines are made of many simple machines. A bike is a complex machine.

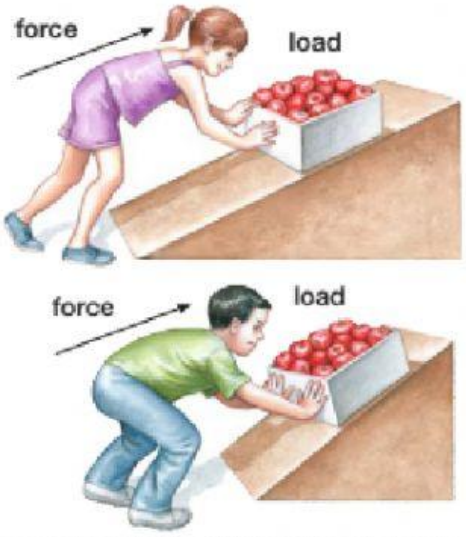
Do You Know?

Animals use tools, too! Apes use sticks to get ants. Sea otters use rocks to open clamshells.



In science, work has a special meaning. It means making something move.
To move something, you use force.
If you push hard to move something, you use a lot of force. If you use a lot of force, you do a lot of work.

FORCE AND DISTANCE



Long ramps make work easier. You can use less force over a longer distance. This helps you to move an object.

Both ramps do the same amount of work. The top ramp requires twice as much force as the bottom ramp. The bottom ramp covers twice as much distance. Which ramp would you rather use?

LIVEWORKSHEETS

Types of Simple Machines

These are the simple machines you will read about in this dossier.



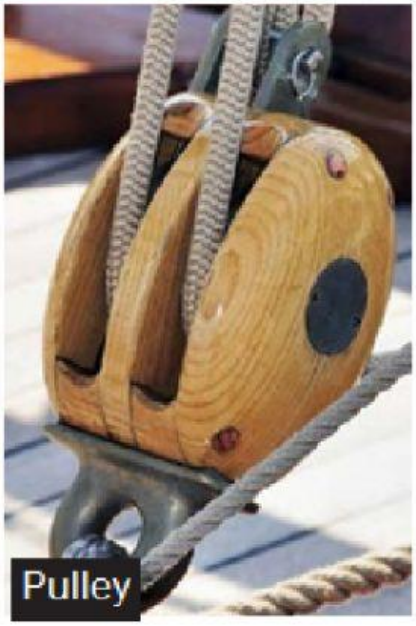








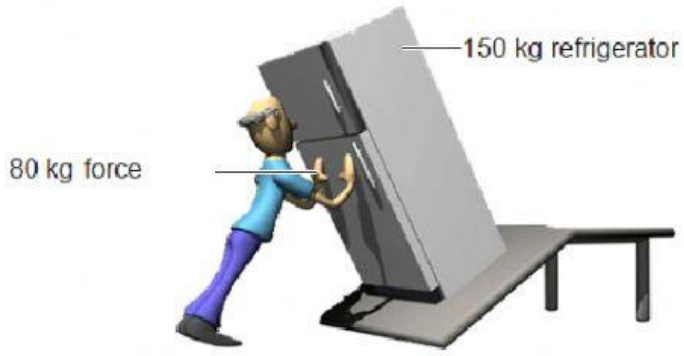




LIVEWORKSHEETS

Inclined Plane

The ramp is a simple machine.
It is also called an inclined plane. A ramp helps people move heavy objects up or down. Movers use ramps. It is easier to slide a box up an inclined plane than to lift
a box straight up. Using a ramp takes less force.



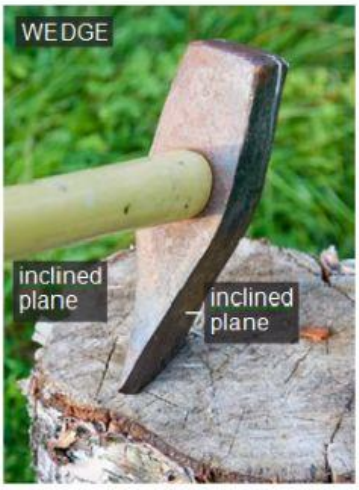
Do You Know?

The Egyptians used inclined planes to build pyramids. They used long ramps to move heavy stones to the top.



Wedge

A wedge is made of two inclined planes put together. A wedge helps you push things apart. The blade of a knife is a wedge. Your front teeth are also wedges. A narrow wedge moves things apart more easily than a wider wedge.



A wedge can split a piece of wood.

LIVEWORKSHEETS