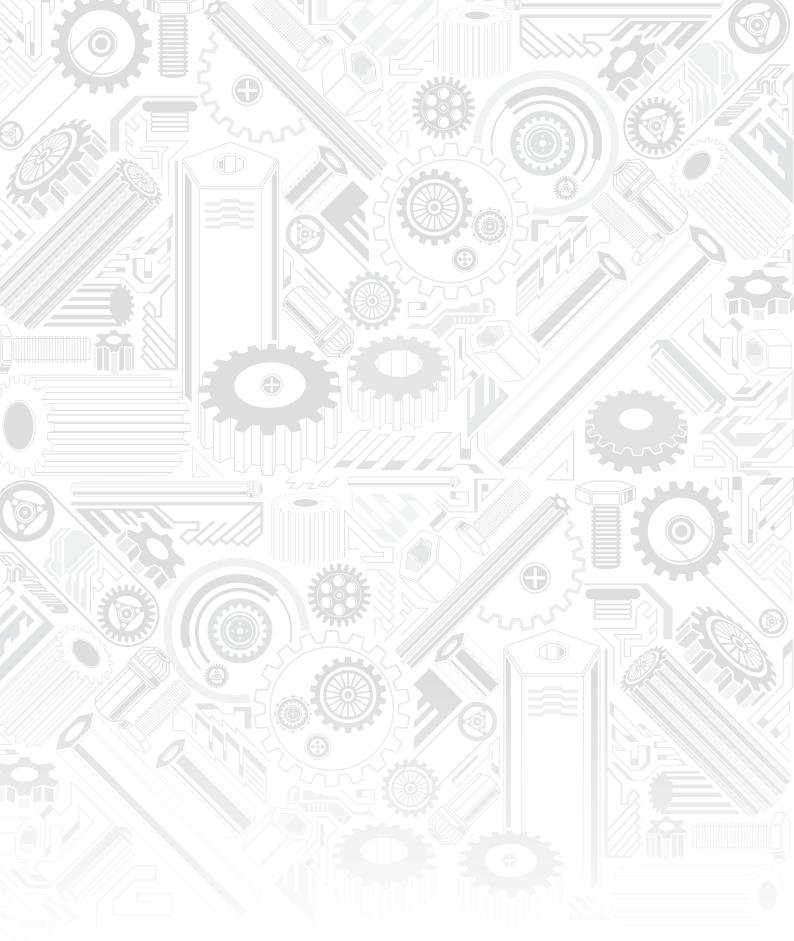


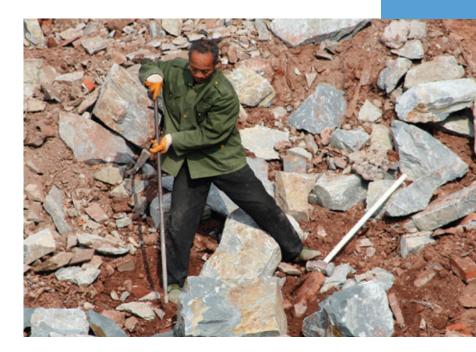
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Copyright © 2013 Board of Trustees of Te Aho o Te Kura Pounamu, Private Bag 39992, Wellington Mail Centre, Lower Hutt 5045, New Zealand. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the written permission of Te Aho o Te Kura Pounamu. Machines help us to do all sorts of things more easily.

A simple machine is a stick or a branch used as a lever to lift a heavy rock out of the ground.



People have been using simple machines for a long time. Some animals, like monkeys, use sticks to help them get food.





Machines need power to make them go. The power can come from the sun, the wind, water, steam and electricity.

Some simple machines use people power, like a lever or a bike.

Talk to your supervisor about all the different types of power and energy that you know of.

Today we have many machines in our everyday lives.

These machines help us prepare and cook food in different ways.



Look around you. Tell your supervisor what machines you can see.

- A lawnmower cuts grass.
- A motorbike gets you where you want to go fast!







- An Xray shows the doctor what is under your skin.
- A digger shifts dirt.
- A cell phone lets us talk to and contact other people.
- Email and Skype connect us to people all around the world.





## Some machines help us get to places.

People use bicycles, wheelchairs, cars, buses, trucks, motorbikes and trains to travel on land.





People use boats, jet skis and hovercrafts to travel on water.

People use planes, helicopters and spaceships to travel in the air.

Talk to your supervisor about the machines you have travelled on.



### Some machines help us do physical work.



- A chainsaw cuts wood.
- A ride on lawn mower cuts grass.
- A digger digs large holes quickly.
- A jackhammer breaks up concrete and stone.

- A vacuum cleaner cleans the floor.
- A haymaker cuts hay.
- Scissors cut paper and materials.
- A weed eater cuts weeds.
- A spade digs holes.

Talk to your supervisor about machines in your home.

Some machines help us to have fun and provide entertainment.

- An iPod plays music.
- A skateboard moves fast.
- An Xbox, Wii or PlayStation plays computer games.

Talk to your supervisor about the machines you have that are fun and entertaining.





### Some machines help us move things.

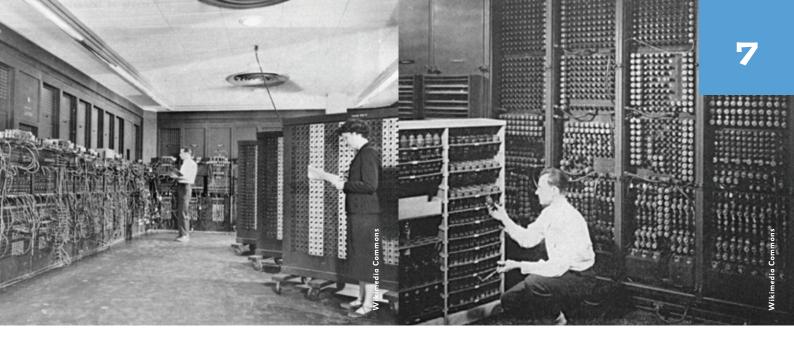
- A car transporter moves cars.
- A crane moves heavy objects.
- A forklift lifts and moves boxes.
- A conveyor belt moves luggage.
- An escalator moves people.
- A cable car moves people.
- A trolley moves shopping items.

Talk to your supervisor about other machines that move things.









#### Computers are machines that help us to work faster.



They help us to write, send, store or find out information. The first computers were made in the 1940s.

They were used by the army and were the size of a large room.

People started to use smaller computers in everyday life from the 1970's.

Computer engineers and software programmers are always working to create faster, smaller and better computers.





Computers are everywhere.

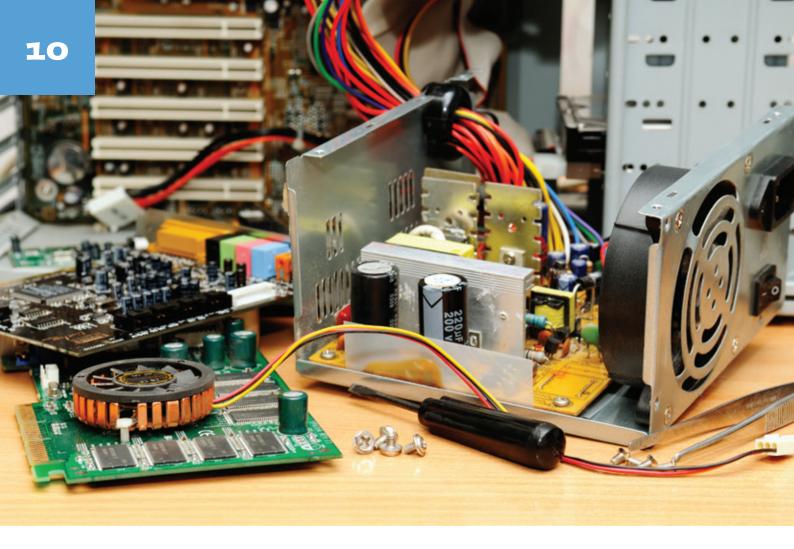
- They are in homes.
- They are in offices.
- They are in hospitals.
- They are in schools.
- They are in airports.
- They are in phones and wrist watches too.











A desktop computer has different parts.

An iPad or tablet is light and is able to be carried easily.

It has its own touch screen keyboard.





A Smart phone is also a computer.

It can send emails, find and store information on the Internet. It can play music and take photos.

# Machines of the future

Engineers and scientists are developing more advanced machines that can do many of the jobs people used to do, with greater speed and safety. Machines will continue to improve how we live.

Today robots work in some factories instead of people.



Robot machines can work in dangerous situations making bombs safe or working with nuclear power.

Some machines are voice activated, they recognise people's voices and do what they are told.



A separate workbook accompanies this reading booklet.

You can choose to complete activities after reading each section of the booklet or at the completion of the whole booklet.

You are encouraged to read the booklet several times to increase your comprehension.

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Mini DV Camera, 1098270 Blu Ray Player, 8581180 Digital Camera, 6644011 Smart phone, 17427005 Digital wristwatch, 7746053 Repair of a computer, 6987665 Touch Screen White Tablet, 20958622 Bomb disposal robot, 10979473 Industrial robotic arm, 24567581 © shutterstock.com Asimo, the humanoid robot, 91757450 © Wikimedia Commons Motorcyclist doing "a mono" by Fir0002/Flagstaffotos, Motorbike\_rider\_mono.jpg X ray of the hand by Dr. Jochen Lengerke, X-ray\_of\_hand.jpg Instalación señales viales en Colombia by Hk6rsf, Colombia\_Jackhammer\_01.jpg A pair of large, Fiskars-brand scissors, by Evan-amos, Fiskars-scissors.jpg Wellington city with Cable Car by Clilly4, Wellington\_city\_with\_Cable\_Car.jpg ENIAC (Electronic Numerical Integrator And Computer) in Philadelphia, Pennsylvania, U.S Army photo (author unknown), Eniac.jpg A technician changes a tube, from M. Weik, "The ENIAC Story", U.S. Army Photo, ENIAC-changing\_a\_tube.jpg Apple IIc with monitor by Bilby, Apple\_IIc\_with\_ monitor.jpg © Johannes Jansson/norden.org

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