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## Section 2: A SHRINKING PLANET

### Once a big place

The world was once a big place, but now it feels a whole lot smaller. Hold on, you may be thinking. The world is the same size as it always was! You are right, of course. But the way we look at the world is very different now than it was a hundred years ago. And that change is to do with technology.

Imagine that a hundred years ago you are living in New York and you wanted to communicate with a friend living in London. You could write them a letter, but this would take weeks to arrive. If you were waiting for an answer to a question, you could not expect to receive your friend's answer with a couple of months. On the other hand, if you wanted to communicate with your friend today, you could **email** your message and expect a reply within a few minutes (if they were sitting at their computer). Or you could pick up the telephone and talk to them immediately. A hundred years ago **communication** was a slow process. Today it is instantaneous. This is to do with technology.

Now, how about if you wanted to travel to London to visit your friend. One hundred years ago you would probably have to get on a ship. This would get you to London in perhaps four or five days. Today you would get a taxi to JFK and catch a flight to London. You could be at your friend's house in less than 10 hours. A hundred years ago it could take you a month to get to Australia. Now you could get there in less than 24 hours.

Even though the world is the same size it always was, technology has made it a smaller place.

#### Key words

email, communication, evolution, speed of light

#### Key concepts

Understand that communications technologies allow people to communicate faster than they could in the past.

Understand that transportation technologies allow people to move from place to place faster than they could in the past.

### Activity 1

What kinds of technologies or inventions can you think of have been invented in the last 100 years that in some way make the world seem smaller? Group these technologies into two categories:

Communications (sending information)	Transport (moving around)



# THINKING MACHINES

## Computers

Ever since people began writing science fiction, writers have imagined machines that can think like humans. In Stanley Kubrick's movie *2001 A Space Odyssey*, a spacecraft flying from Earth to Jupiter was piloted by a computer called HAL who could think and talk. HAL eventually malfunctioned and had a personality breakdown. This movie was made in 1968, before people had landed on the moon and before most people even knew what a **computer** was. It was not for another 10 or 15 years before computers became common enough for people to buy their own personal computer. Engineers in the USA built the first electronic computer in 1946 – this machine was bigger than a small room and no where near as powerful as a Sony Playstation. Now, most homes in the developed world have their own personal computer, some which are as small as a book.

### Key words

computer, cyberspace, virtual experiences

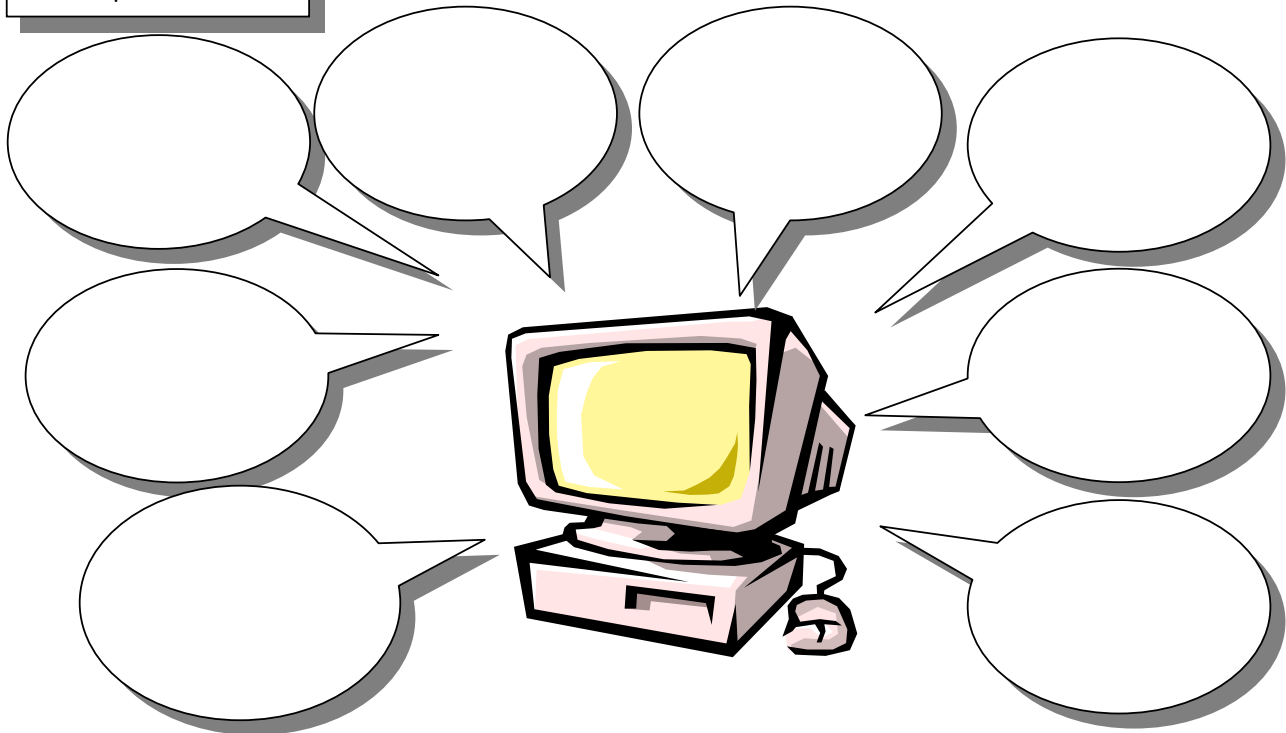
### Key concepts

Understand that computers are one of the most important and useful technologies in the world.

Understand that computers enable people to have virtual experiences.

## Activity 1

Computers are everywhere and they help us to do many things. List as many uses of computers as you can think of in the spaces below. Share these with the class.



# Activity 3

## Design a robot

Imagine you are a technician working for a robot development company. Your director has asked you to develop a robot of your choice, to do anything you want. This robot will be used as a **showcase** to attract new robot-buying customers to the company.

Brainstorm ideas for your robot on this page.

What will your robot do? What function will it perform?

Why do we need a robot to do this?

What will it look like? Will it be humanoid?

How will it be controlled? What will its instructions be?

Draw a quick sketch of your robot here

How will it see? Hear? Touch and feel? Move around? What materials will be used to build it?