

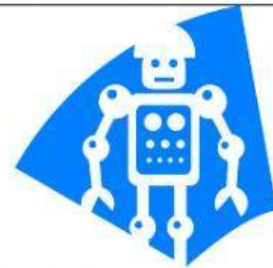
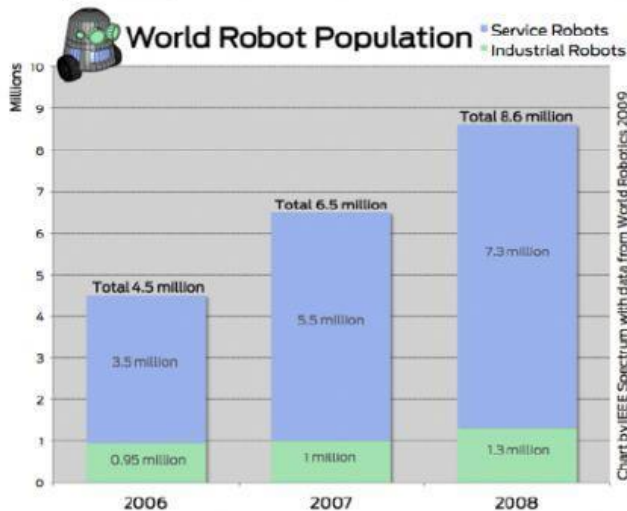
Student Worksheet

Task 3 – Reading into Writing:

Our Future with Robots

Read either Texts A & B or Texts C & D (your teacher will direct you).
Check with your partner that you have fully understood the texts by explaining to each other what you have read.

Text A



Kids who want robots

38% to learn with
38% to play with
25% to help with chores

Text B

Increasingly Human Robots

Robotist, Dr Alexander Lenz asks me to sit in front of his latest robot. I stare at a robot head on a table, and it looks me in the eye and expresses a variety of emotions, happiness, surprise, anger, and sadness. Although the head is clearly not human, I cannot help responding to its emotions as it were a real person. The study of this new scientific development is human-robot interaction.

Dr Lenz explains "we want to build a robotic face that can mimic all the muscles we have". This research is becoming increasingly important as many countries have rapidly ageing populations that will need the help of robots to look after them and they will need robots in which they can interact with easily. This is not easy.

Although we have had robots in car assembly plants since the 1950's, and developed robots that can dive the depth of the ocean, perform tasks on the moon, and more recently robots that can do housework such as vacuuming floors, none of these robots are good at interacting with humans. Dr Lenz clarifies "Non-verbal communication is far more accurate than verbal communication. We need to take into account different cultural rules. For example, the interpersonal space between different cultures determining how close we stand to each other. Building these kinds of social rules into a robot is extremely complex."

Would you be happy to have robots play a more important role in your life in the future?

Jessica	I think it would be really cool to have a robot to do all the housework in my home. It could do all those jobs I hate like doing the washing up and tidying my room.
Steve	I find the idea of robots looking like, and even acting like humans, pretty scary. It is like one of those disturbing futuristic science fiction films.
Kim	It's like any new technology. You have to learn to use it wisely. We will soon get used to more robots in our lives. We will soon wonder how we ever lived without them.
Mahmoud	I have heard there is a robot you can send to school and that will even do your homework for you.
Roberta	@ Steve I read an article on the internet about people falling in love with their robot because it was so realistic.
Rebecca	@ Kim Yes, but aren't all these robots just taking jobs. The only winners will be companies who can save money from not having to employ real people.
Jake	@ Mahmoud I want one! Where can I buy one?

Text D

This week's student blog: What a blessing!

I have had my robot for 3 years now, and it has helped me enormously with my schoolwork. I was unable to go to school because I have a health condition. So the government has provided me with a small robot which I can send to school in my place. The robot transmits information to me in real time and I can ask it to perform a number of functions. It asks and responds to questions from teachers, can move freely around the school, and it even interacts with my classmates. I am really happy with it and my grades have improved dramatically since I have had it. Certainly if I hadn't had the use of my robot, I don't think this would have been the case.

Although it was pretty difficult to get used to using the robot at first, I realise I am really lucky to have him. I was reading in the paper the other day that a lot of kids want robots to learn or play with, or help them with their chores. I suppose a lot more people will have robots in the future as this type of technology continues to develop at a frightening pace.

Exam type questions

Questions 1-5

Read questions 1-5 first and then read Texts A, B, C and D.

As you read each text, decide which text each question refers to. Choose one letter - A, B, C or D - and write it in boxes 1-5. You can use any letter more than once.

Which text

1. finds the increasing sophisticated development of robots a worrying development?
2. describes how someone is being assisted by a robot in his studies?
3. is concerned about robots limiting employment opportunities?
4. investigates why robots are imitating facial expressions?
5. details the increasing numbers of robots in use in our society.

	Text
1.	
2.	
3.	
4.	
5.	

Questions 6-10

Choose the 5 statements from A-H below that are TRUE according to the information given in the texts. Write the letters of the TRUE statements in the boxes provided (in any order).

- A. Some robots are so lifelike that people form a romantic attachment to them.
- B. Robots are already able to understand differing cultural values.
- C. Increasing life expectancy rates have helped to drive the demand for more sophisticated robots.
- D. Many children are excited by the development of robots.
- E. The number of industrial robots has risen at a faster rate than the demand for service robots.
- F. Robots are still unable to interact effectively with teachers in an academic environment.
- G. Some people believe that we must be careful about how we use new technology.
- H. In future years we may find it difficult to imagine how we lived our lives without the use of robots

True Statement

Questions 11-15

The Summary Notes below contain information from the texts. Find a suitable word or a phrase **in the texts** to complete the missing information in gaps 11-15. Write your answers in the spaces provided and you can use **up to 3 words**.

Notes on the different uses of robots

Industrial robots:

- in use in car assembly plants (11) _____.
- for scientific purposes which have been utilised for such things as exploring the oceans and have been employed in space discovery in projects, e.g. (12) _____.

Service robots:

- for doing household chores such as vacuuming and tidying up the home.
- for assisting students who are unable to attend school because they may have a (13) _____.
- for aiding elderly people as societies struggle with (14) _____.

A great challenge for roboticists in future:

- programming robots so they learn to interpret human emotions, are able to interact naturally with humans, and even understand differing (15) _____.

Reading into writing

Use the information from the 4 texts you have read to write (**200-230** words) for a teenage science magazine. The title of your article is:

What will the relationship between humans and robots be like in the future?

Plan your short article **before** you start writing. Think about what you want to say and make some notes to help you.