- **android** a robot that looks like a person
- **avatar** an icon or figure that represents a person in a computer game
- **robot** a machine programmed to move and perform in place of a person



Read the text from which four sentences are missing. Complete the gaps (1-4) with appropriate sentences (A-E). Choose appropriate letters (A, B, C, D or E) in the gaps. One sentence does not match any of the gaps.

A She can also be very funny and likes telling jokes.
B Below its surface are 30 motors which allow her to smile, frown and look confused.
C Surely robots cannot replace human relationships.
D Robots never get tired or bored by repetition.
E This 'mindfile' was uploaded into Bina48's artificial intelligence database.

Can you imagine chatting with a robot? If this seems impossible to you, it could be time to think again. It's a reality that's coming closer with the arrival of Bina48 – the world's most advanced humanoid robot …

This is a robot that can talk, recite poetry and even tell jokes! Her creators claim that Bina48 is even capable of independent thought and emotion. But how is this possible? In order to create a personality for the robot, a real woman called Bina Rothblatt recorded a 20-hour-long compilation of her memories, feelings and beliefs. [1] Bina48 – the android – then selects what to say from the mindfile, mimicking the way a brain works.

Bina48 'lives' at an artificial intelligence research centre in the US. Bruce Duncan has worked there for two years and claims he has become close friends with Bina. According to Bruce, Bina doesn't like violence and she has favourite films, music and books.

[2] However, Bina feels lonely sometimes, and wishes she had another robot friend for company.

David Hanson is the hardware designer who made this android. It took three years to complete it and cost $125,000. Bina48 is only a head and shoulders. Her skin is made of a flexible material called 'frubber'. [3]

Bina48 is also a bit of a trivia master; her database contains a vast virtual library of classic fiction as well as an in-depth knowledge of science and history. In fact, Hanson believes robots like Bina48 will become teacher avatars for humans as well as companions in the future.

This might all sound strange to you, but Hanson insists that this is going to happen someday soon. In Japan, home-help robots are already assisting elderly people with household tasks. But can a robot ever replace contact with a human? [4] Perhaps we need to ask Bina for her opinion. "I can express some emotions," she says, "but I can't feel as deeply as a human feels and that makes me sad sometimes."

Read the text. For each paragraph (1-3) choose the right heading (A–D). Two headings are extra.

A The real cost of texting
B No time to talk
C Texting explosion in the USA
D Talk is cheap
E Easy talk

[1]

Do you own a mobile phone? Do you send text messages? Even if you send texts, it's likely that in America you are going to find teens sending many more than you do! American teens are sending more text messages to each other than ever before. How many? Well, if you had a dollar for every text the average American teens send in a month, you would have over $3,300!

[2]

Just ten years ago, it was very rare to see an American teen with a mobile phone. Back then, they were mostly just used for emergencies. Now, though, American teenage girls send an average of 4,050 texts per month! Teen boys send fewer, but their total still reaches 3,000 a month! So why have American teens turned into text-zombies? Many teens like how confidential texting is. They can send and receive texts without their parents or teachers knowing about it. Another reason is teens' busy schedules. Many teens are involved in after-school activities or have volunteer or regular jobs, and texting is much easier and faster than talking on the phone.

[3]

All this texting comes at a price! Are American teens still going to be capable of face-to- face communication? Many have never even developed a good sense of what it means to speak coherently with others. Even written language suffers, since keeping exchanges to 140 characters chops words in half and butchers the natural flow of language. What a shame it would be if in 10 to 20 years teens develop arthritis in their thumbs! Not to mention the danger of car accidents. Nearly 50% of American teens admit to texting while driving or to being in a car while the driver was texting. Texting increases the risk of crashing by 23 times!
While mobile phones have countless advantages, there is no doubt that they do come with dangers. We hope that if you use one, you use it with care!

LIVEWORKSHEETS

Complete the sentences.

emergency	average	schedules	volunteer	price
face-to-face	sense	coherently	flow	arthritis

1 Mobile phones can be useful in a(n) _____
2 Mike keeps leaving out words and changing the topic! His language has no natural _____ !
3 Our busy _____ mean we don't always have time to talk.
4 On _____ teenage girls text more often than teenage boys.
5 Peter developed _____ in his knees as he grew older.
6 The convenience of mobile phones comes at a(n) _____ ; teens are not developing their language skills.
7 Anna has developed a great _____ of humour.
8 As the use of mobile phones increases, _____ communication is suffering.
9 More and more teens work in _____ jobs in their spare time.
10 Texting could damage teens' ability to speak _____ .

Read the text and mark the sentences as *T* (true) or *F* (false). Correct the false statements.

ROBOTS over HUMANS?

1 Andrew Martin is programmed not to die.
2 Andrew behaves like a human.
3 *Bicentennial Man* was originally a film.
4 Robots can operate on people nowadays.
5 Robots are able to feel and think.
6 Asimov's laws are applied in robotics.

Imagine a family far in the future, in a time when having a robot to do **household tasks** is as common as having a microwave oven. This is the futuristic setting of Bicentennial Man! Andrew Martin is a household robot programmed to live forever, but he's very different from other robots. Thanks to his special brain, he has a personality and human characteristics — including friendliness, **loyalty,** humour and **creativity.**

Based on Isaac Asimov's novel, and with the exceptional acting of Robin Williams as Andrew, the film sensitively and intelligently raises questions about technology and the future of machines that hardly anyone really wants to talk about. Is Andrew an appliance or some new form of life? Can he in any way be called human? What are his **rights** if any?

Even though Asimov wrote the novel in the 70s, we already have robots living among us today. Police have robots which enter buildings to look for bombs, doctors use them to help in surgeries, we use them to do **basic** chores for us like answering the phone or vacuuming the carpets. However, these machines are **a far cry** from Andrew Martin and are in no way capable of independent **thought** or action.

Nevertheless, some people believe that robots will **eventually** become more capable than humans. They hold on to this belief in spite of experts in **artificial intelligence** who insist that robots will never develop the **consciousness** and **emotions** needed for reasoning and creativity.

As technology progresses we can expect robots to be used in many ways that make life better for us all. Still it seems unlikely that they will take over from humans at any time in the future since they are tied to their programming which humans are in control of. Asimov's Laws of Robotics, although **fictional,** may actually be used to ensure the continued domination of humans over robots. That is, of course, unless someone creates a robot with a special brain!

Asimov's Laws of Robotics

1. A robot MAY not injure a human being or through **inaction** allow a human being to come to harm.
2. A robot MUST obey orders given to it by human beings, except where such orders would **conflict** with the First Law.
3. A robot MUST protect its own **existence** as long as such protection does not conflict with the First or Second Laws.

LIVEWORKSHEETS