How do we see the future?

In this unit you will:

Experience
- United States
- United Kingdom
- Japan

Read
- a poem
- fiction
- an online article
- a comic

Create
- an essay
- science fiction
- research an invention
- journal entries

All you who are dreamers too,
Help me to make
Our world anew
I reach out my dreams to you
From 'To You' by Langston Hughes

What do you think of when you think of the future? Across the world and across the centuries people have had many different ideas and visions. In 1516 Thomas More wrote *Utopia*, which is about an island state in the future where people lived communally in peace. Such idealistic visions of the future are called 'utopian'.

Word origins

*utopia* comes from the ancient Greek word *ou* for 'not' and *topos* for 'place'.

It's opposite, the word *dystopia*, is formed from the Greek prefix *dys-*, which means something bad, abnormal or difficult.
What are dreams of the future?

Abraham Lincoln said, ‘The good thing about the future is that it comes one day at a time.’ What do you think he meant by this? What hopes do people have for the future of their own lives and for those of their children?

People often call these hopes ‘dreams’. It might be a hope to change society or a hope to find a cure for a disease. New technologies and new inventions often feature in people’s ideas of human progress.

Talking points

1. What are your dreams for the future?
2. Do you have any dreams for the future of the world?

Writing an essay

Write an essay about how you see the world in fifty years time! It only needs to be 500-700 words.

- As you work through this unit, think about your ideas for a winning essay.
- Plan your paragraphs carefully. Decide on the main points you will make in each one.
- Use examples or case studies to make your points effectively.

Essay Competition for young people

Tell us about how you see the world in fifty years’ time. Write no more than 700 words!
Speech

This extract comes from the famous 'I have a dream' speech made by the American Civil Rights leader Martin Luther King in Washington USA in 1963. It is one of the most passionate and powerful speeches of the twentieth century. Tragically, King was assassinated five years later in 1968.

King was a great speaker. Pay attention to his use of persuasive language and rhetorical devices, such as repetition, alliteration and metaphor.

**I Have a Dream**

I have a dream that one day this nation will rise up and live out the true meaning of its creed: 'We hold these truths to be self-evident, that all men are created equal.'

I have a dream that one day on the red hills of Georgia, the sons of former slaves and sons of former slave owners will be able to sit down together at the table of brotherhood.

I have a dream that one day even the state of Mississippi, a state sweltering with the heat of injustice, sweltering with the heat of oppression, will be transformed into an oasis of freedom and justice.

I have a dream that my four little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character. ...

This is our hope, and this is the faith that I go back to the South with.

With this faith, we will be able to hew out of the mountain of despair a stone of hope. With this faith, we will be able to transform the jangling discords of our nation into a beautiful symphony of brotherhood. With this faith, we will be able to work together, to pray together, to struggle together, to go to jail together, to stand up for freedom together, knowing that we will be free one day.

**Martin Luther King**

Comprehension

1. What are the four points in Martin Luther's dream?
2. In your own words, describe what is the 'hope' and 'faith' which Martin Luther King wants to return home with?
3. In your own words, describe which three things Martin Luther King says he can do 'with this faith'?
4. Choose two metaphors. What do they mean and how do they convey Martin Luther King's message?
**Toolkit**

Alliteration is the repetition of the initial consonant. There should be at least two repetitions in a row.  

For example: Peter Piper picked a peck of pickled peppers. The first letter, 'p', is a consonant. It is repeated many times. (If you use a syllable rather than a consonant, it is assonance.)

Which words are repeated the most in the Martin Luther King speech? What is the effect of this repetition? Find an example of alliteration from the speech. Explain its effects.

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**Poem**

The following poem was written in 1944 by the author of the opening quotation, the black American poet Langston Hughes. He dreamed of a time when black and white people would be equal in America, but died before he saw his dream fulfilled.

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I, too, sing America.
I am the darker brother.
They send me to eat in the kitchen
When company comes,
But I laugh,
And eat well,
And grow strong.

Tomorrow,
I'll be at the table
When company comes.
Nobody'll dare
Say to me,
'Eat in the kitchen',

Besides,
They'll see how beautiful I am
And be ashamed –
I, too, am America,
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**Comprehension**

1. 'I, too' too means 'I, as well as'. Who else is the poet thinking of?
2. Who are the 'company' that is referred to? What kind of company would the person who is the subject and writer of the poem be excluded from?
3. What is the darker brother going to do until 'tomorrow'?
4. How is the poem optimistic about the future?
How do we see the future?

As the great Indian leader, Gandhi said, 'the future depends on what we do in the present.' Visions of the future can be described as utopian or dystopian. Science fiction can act as a warning for what could happen in the future if we do not change some aspects of our life today.

Fiction

From *The Time Machine* by H.G. Wells

The following extract comes from the final part of *The Time Machine*, one of the very first science fiction stories written by H.G. Wells more than one hundred years ago in 1895. In the story, an inventor travels to other civilizations in his time machine which enables him to travel backwards and forwards in time. The text below describes the end of his travels when he is propelled far into the future. He sees a desolate and chilling world.

The narrator is the inventor who is addressing his colleagues on his return.

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**My Return**

I stopped and sat upon the Time Machine, looking around. The sky was no longer blue. Ahead, it was inky dark, and out of the blackness shone brightly and steadily the white stars. Overhead it was starless and a deep red and behind it was glowing scarlet where lay the huge sun, red and motionless. The rocks about me were of a harsh reddish colour, and all the trace of life that I could see at first was the intensely green vegetation that covered every projecting point. It was the same rich green that one sees on plants which grow in a perpetual twilight.

The Time Machine was standing on a sloping beach. The sea stretched to a sharp bright horizon against the pale sky. There were no waves, for not a breath of wind was stirring. Only a slow swell, which rose and fell like a gentle breathing, showed that the sea was still living. Where the water sometimes broke was a thick incrustation of salt, which appeared pink under the lurid sky. The air forced me
to breathe very fast which reminded me of my only experience of mountaineering.

Looking round me again, I saw that what I had taken to be a reddish mass of rock was moving slowly towards me. It was a monstrous crab-like creature. Can you imagine a crab as large as that table, with its many legs moving slowly, its big claws swaying, its long antennae waving and feeling, and its eyes on stalks gleaming at you? Its back was covered with ugly lumps and a greenish incrustation. I could see its complicated mouth flickering as it moved.

As I stared at this sinister creature crawling towards me, I felt a tickling on my cheek as though a fly had lighted there. I tried to brush it away with my hand, but in a moment it had returned, and almost immediately came another by my ear. As I tried again to brush it away, I caught something threadlike which was drawn swiftly out of my hand.

In fright, I turned and saw that I had grasped the antenna of another monster crab that stood just behind me. Its evil eyes were wriggling on their stalks, its mouth was all alive with appetite, and its vast claws, smeared with an algal slime, were descending upon me.

In a moment my hand was on the lever of my Time Machine, and I had placed a month between myself and these monsters. But I was still on the same beach, and I saw them distinctly; dozens of them were crawling in the sombre light. I cannot convey the sense of abominable desolation that hung over the world. The red eastern sky, the blackness northward, the dead sea, the stony beach crawling with these slow-stirring monsters, the poisonous-looking green of the plants, the thin air that hurt my lungs: all contributed to an appalling effect. I moved on a hundred years, and all was still the same.

I then travelled on a thousand years or more, drawn on by the mystery of the earth's fate, watching with a strange fascination the sun grow larger and duller in the westward sky, and the life of the old earth ebb away. At last, more than thirty million years hence, the huge red-hot dome of the sun
had come to obscure nearly a tenth part of the dark sky. Then I stopped once more, for the crawling multitude of crabs had disappeared, and the red beach seemed lifeless. Now it was flecked with white and a bitter cold assailed me as white flakes came eddying down. There were fringes of ice along the sea margin, but the main expanse of that salt ocean, all bloody under the eternal sunset, was still unfrozen.

I looked about me to see if any traces of animal life remained but I saw nothing moving, in earth or sky or sea. The green slime on the rocks alone testified that life was not extinct. Suddenly I noticed that the circular outline of the sun had changed. For a minute perhaps I stared aghast at the blackness that was creeping over the day, and then I realized that an eclipse was beginning. Either the moon or the planet Mercury was passing across the sun’s disk. The darkness grew; a cold wind began to blow in gusts, and the white flakes in the air increased in number.

From the edge of the sea came a ripple and whisper. Beyond these lifeless sounds the world was silent. Utterly silent. All the sounds of man – the bleating of sheep, the cries of birds, the hum of insects, the stir that makes the background of our

Looking closely

1. Which are the dominant colours used to describe the landscape in the first paragraph?

2. What was the ‘reddish mass of rock’? (line 21)

3. What does the description of the crab’s mouth as ‘alive with appetite’ mean? (line 36–37)

4. What does the inventor mean by the ‘sense of abominable desolation’ which hung over the world? (line 43)

5. Write down the words from the text that mean the same as the following: ‘sticking out’, ‘recede’, ‘totally’, ‘plentiful’, ‘swirling’, ‘climbed clumsily’.
lives – all that was over. As the darkness thickened, the snow flake grew more abundant and the cold of the air more intense. At last, one by one, swiftly, one after the other, the white peaks of the distant hills vanished into blackness. The breeze rose to a moaning wind. I saw the black central shadow of the eclipse sweeping towards me. In another moment all was rayless obscurity. The sky was absolutely black.

A horror of this great darkness came on me. I was cold to my marrow, and the pain I felt in breathing overcame me. Then in the sky appeared the edge of the sun again as a red-hot arc. I got off my Time Machine to recover myself. As I stood sick and confused, I saw again a thing moving towards the shore. It was a round thing, the size of a football perhaps, and tentacles trailed down from it. It seemed black against the blood-red water and it was hopping fitfully about. I felt I was fainting. A terrible dread of lying helpless in that remote and awful twilight sustained me while I clambered upon the saddle of my Time Machine.

Then, gentlemen, I returned.

H.G. Wells

Writing science fiction

Now it's your turn to create a work of science fiction. Use your imagination to create a utopia or a dystopia.

Think of a frightening and chilling scenario or a utopian vision. It could be a short story or the introductory chapter to a novel if you prefer.

Concentrate on your use of descriptive vocabulary and using some really exciting expressions so that the reader can imagine what it would be like to be there.
What is a robot?

The first robot fair was held in Tokyo, Japan, in 2008. This type of robot works in hospitals delivering medicines to patients.

Is a robot something that looks or behaves like a human or an animal? Or is it simply a machine that performs a job that might have previously been carried out by a human? There are many famous robots from literature, television and movies. These creatures can be affectionate and sometimes menacing and terrifying.

Aristotle, the ancient philosopher, wrote the first theory of robotics. 'This condition would be that each instrument could do its own work, at the word of command or by intelligent anticipation, ... as if a shuttle should weave of itself, and a plectrum should do its own harp playing.' As Aristotle points out, using the example of the threading arm on a loom used to weave cloth, and the implement used to pick the strings of an instrument, the ideal robot combines mechanical perfection with an aspiration towards the most intelligent solution.

Ultimately, a robot must have some kind of use value. The first industrial robot, Unimate, was built in 1961 and the first computer controlled artificial robotic arm was designed in 1963 for use by the disabled.

1 If you had a robot, what would you want it to do?
2 Do you think Robots are useful to society?

Word origins

The word robot was first used in 1923 in a play called Rossum’s Universal Robots by Karel Capek who made up the word from a Czech word robotnik, which means slave or forced labour. anthropomorphism comes from the Greek word anthropomorphous for human being and the word morphe which means 'to form'. It is used to refer to something that takes on human form.
Have you ever seen an actual robot or visited a trade fair where robots are for sale? Asimo, has been developed to assist people in a variety of ways and will be available for people or companies to purchase.

The Honda Motor Company developed ASIMO, which stands for Advanced Step in Innovative Mobility, and is the most advanced humanoid robot in the world. According to the ASIMO Web site, ASIMO is the first humanoid robot in the world that can walk independently and climb stairs.

In addition to ASIMO's ability to walk like we do, it can also understand preprogrammed gestures and spoken commands, recognize voices and faces and interface with IC Communication cards. ASIMO has arms and hands so it can do things like turn on light switches, open doors, carry objects, and push carts.

Rather than building a robot that would be another toy, Honda wanted to create a robot that would be a helper for people — a robot to help around the house, help the elderly, or help someone confined to a wheelchair or bed. ASIMO is 4 feet 3 inches (1.3 meters) high, which is just the right height to look eye to eye with someone seated in a chair. This allows ASIMO to do the jobs it was created to do without being too big and menacing. Often referred to as looking like a 'kid wearing a spacesuit,' ASIMO's friendly appearance and nonthreatening size work well for the purposes Honda had in mind when creating it.

ASIMO could also do jobs that are too dangerous for humans to do, like going into hazardous areas, disarming bombs, or fighting fires.

To perform these duties, ASIMO has to be specially programmed to know the layout of the buildings and the appropriate way to greet visitors and answer questions.

http://science.howstuffworks.com/asimo1.htm
**Comprehension**

1. How is Asimo like a human? What makes him humanoid? Would he be better with more human-like features?
2. Why do you think he doesn't have these?
3. In what specific ways did Honda make him more human-like?
4. What are some benefits of Asimo? Why is he being created?
5. What do you think are some advantages and disadvantages of creating robots?

**Toolkit**

*Ellipsis (...)*

There is a bit missing from the first sentence of How Asimo Works. Can you work out what it is? The symbol used for missing words out from a sentence is called an ellipsis. It happens frequently in speech, but writers may also make use of it to create a particular effect. The missing part in this sentence is: 'Do you want a robot to cook your dinner, do your homework, clean your house, or get your groceries?' and lends the text an informal tone.

**Researching an Invention**

Which are the inventions that will change our future? Find out about one of them.

- Research inventions that could change the future. Decide on one that you would like to research.
- Find out how it works. Does it use any new technology?
- Consider how it will affect people in the future. How might it be developed further?
- Create a visual display or a leaflet for the invention you are researching.
Will Robots be part of our future?

Fears about science and technology have been with us for a long time. Have you heard of the novels Frankenstein and Dr Jekyll and Mr Hyde where science had unforeseen consequences? These were written during a time when science and technology was advancing like never before.

Many people are worried about robots. What are people's fears about robots? That they will malfunction? That they will take over the world? 'It all started out when they took on the little jobs ...'

Artificial Intelligence (AI) is the area of computer science focused on creating intelligent machines. Today, with access to computer technology, smart machines are becoming a reality. Researchers are creating machines that can mimic human thought, understand speech, and beat us at a game of chess.

Plot synopsis

The following extract is a summary of the film iRobot written by a film fan, for a film review website.

iRobot. (Dir. Alex Proyas, 2004)

It's the year 2035, and the community now has the help of robots. These robots have three laws integrated into their system. One, they cannot harm a human being or, through inaction, allow a human being to come to harm. Two, they must do whatever they’re told by a human being as long as such orders don’t conflict with law one. Three, they have to defend themselves as long as such defense doesn't conflict with laws one or two. One day, the writer of the three laws, Alfred Lanning, is murdered, and Detective Del Spooner thinks the number one suspect is a Nestor Class-5 robot who calls himself Sonny. However, if it was Sonny, then that means he would’ve had to have broken the three laws. With the help of Dr Susan Calvin, Spooner must now discover the truth before it's too late.

Written by Lora Riley
Science fiction

From *Reason* by Isaac Asimov

Isaac Asimov is the most famous of all science fiction writers. His stories highlight the possible unexpected results from our technological advances. *Reason* is a short story written in 1941 that was published in a collection of stories called *I, Robot*.

In the story, Cutie the robot becomes convinced that he is superior to humans. He must take control of the ship for he knows only he can save it. Without the crew being aware of it, Cutie is following the first law of robots: a robot must not harm or allow a human to be harmed. In the extract below, Cutie uses reason to convince himself that his action of taking over the ship is justified.

**A Superior Robot**

Powell stood up and seated himself at the table's edge next to the robot. He felt a sudden strong sympathy for this strange machine. It was not at all like the ordinary robot, attending to his specialized task at the station with the intensity of a deeply ingraved positronic path.

He placed a hand upon Cutie's steel shoulder and the metal was cold and hard to the touch.

'Cutie,' he said, 'I'm going to try to explain something to you. You're the first robot who's ever exhibited curiosity as to his own existence - and I think the first that's really intelligent enough to understand the world outside. Here, come with me.'

The robot rose up smoothly and his thickly sponge-rubber-soled feet made no noise as he followed Powell. The Earthman touched a button and a square section of the wall flickered aside. The thick, clear glass revealed space - star-speckled.

'I've seen that in the observation ports in the engine room,' said Cutie.

'I know,' said Powell. 'What do you think it is?'

'Exactly what it seems - a black material just beyond this glass that is spotted with little gleaming dots? I know that
our director sends out beams to some of these dots, always to the same ones – and also that these dots shift and that the beams shift with them. That’s all.’

‘Good! Now I want you to listen carefully. The blackness is emptiness – vast emptiness stretching out infinitely. The little, gleaming dots are huge masses of energy-filled matter. They are globes, some of them millions of miles in diameter – and for comparison, this station is only one mile across. They seem so tiny because they are incredibly far off.

‘The dots to which our energy beams are directed, are nearer and much smaller. They are cold and hard, and human beings like myself live upon their surface – many billions of them. It is from one of these worlds that Donovan and I come. Our beams feed these worlds energy drawn from one of those huge incandescent globes that happens to be near us. We call that globe the Sun and it is on the other side of the station where you can’t see it.’

Cutie remained motionless before the port, like a steel statue. His head did not turn as he spoke, ‘Which particular dot of light do you claim to come from?’

Powell searched, ‘There it is. The very bright one in the corner. We call it Earth.’ He grinned, ‘Good old Earth. There are three billions of us there, Cutie – and in about two weeks I’ll be back there with them.’

And then, surprisingly enough, Cutie hummed abstractedly. There was no tune to it, but it possessed a curious twanging quality as of plucked strings. It ceased as suddenly as it had begun, ‘But where do I come in, Powell? You haven’t explained my existence.’
The rest is simple. When these stations were first established to feed solar energy to the planets, they were run by humans. However, the heat, the hard solar radiations, and the electron storms made the post a difficult one. Robots were developed to replace human labor and now only two human executives are required for each station. We are trying to replace even those, and that's where you come in. You're the highest type of robot ever developed and if you show the ability to run this station independently, no human need ever come here gain except to bring parts for repairs.'

His hand went up and the metal visi-lid snapped back into place. Powell returned to the table and polished an apple upon his sleeve before biting into it.

The red glow of the robot's eyes held him. 'Do you expect me,' said Cutie slowly, 'to believe any such complicated, implausible hypothesis as you have just outlined? What do you take me for?'

Powell sputtered apple fragments onto the table and turned red. 'Why, it wasn't a hypothesis. Those were facts.'

Cutie sounded grim, 'Globes of energy millions of miles across! Worlds with three billion humans on them! Infinite emptiness! Sorry, Powell, but I don't believe it. I'll puzzle this thing out for myself. Good-bye.'

He turned and stalked out of the room. He brushed past Michael Donovan on the threshold with a grave nod and passed down the corridor, oblivious to the astounded stare that followed him.
Mike Donovan rumpled his red hair and shot an annoyed glance at Powell, "What was that walking junkyard talking about? What doesn't he believe?"

The other dragged at his mustache bitterly. "He's a skeptic," was the bitter response. "He doesn't believe we made him or that Earth exists or space or stars."

'Sizzling Saturn, we've got a lunatic robot on our hands.'

'He says he's going to figure it all out for himself.'

'Well, now,' said Donovan sweetly, 'I do hope he'll condescend to explain it all to me after he's puzzled everything out.'

He seated himself with a jerk and drew a paper-backed mystery novel out of his inner jacket pocket, 'That robot gives me the willies anyway – too inquisitive!'

Mike Donovan growled from behind a huge lettuce-and-tomato sandwich as Cutie knocked gently and entered.

'Is Powell here?'

Donovan's voice was muffled, 'He's gathering data on electronic stream functions. We're heading for a storm, looks like.'

Gregory Powell entered as he spoke, eyes on the graphed paper in his hands and dropped into a chair. He spread the sheets out before him and began scribbling calculations.

Donovan stared over his shoulder, crunching lettuce and dribbling bread crumbs. Cutie waited silently.

Powell looked up, 'The Zeta Potential is rising, but slowly. Just the same, the stream functions are erratic and I don't know what to expect. Oh, hello, Cutie. I thought you were supervising the installation of the new drive bar.'

'It's done,' said the robot quietly, 'and so I've come to have a talk with the two of you.'

'Oh!' Powell looked uncomfortable. 'Well, sit down. No, not that chair. One of the legs is weak and you're no lightweight.'
The robot did so and said placidly, 'I have come to a decision.'

Donovan glowered and put the remnants of his sandwich aside. 'If it's on any of the screwy –'

The other motioned impatiently for silence, 'Go ahead, Cutie. We're listening.'

'I have spent these last two days in concentrated introspection,' said Cutie, 'and the results have been most interesting. I began at the one sure assumption I felt permitted to make. I, myself, exist, because I think'.

Powell groaned, 'Oh, Jupiter, a robot Descartes!'  

'Who's Descartes?' demanded Donovan. 'Listen, do we have to sit here and listen to that metal maniac –'

'Keep quiet, Mike!'

Cutie continued imperturbably, 'And the question that immediately arose was: Just what is the cause of my existence?'

Powell's jaw set lumpily. 'You're being foolish. I told you already that we made you. '

'And if you don't believe us,' added Donovan, 'we'll gladly take you apart!'

The robot spread his strong hands in a deprecatory gesture, 'I accept nothing on authority. A hypothesis must be backed by reason, or else it is worthless – and it goes against all the dictates of logic to suppose that you made me.'

Powell dropped a restraining arm upon Donovan's suddenly bunched fist. 'Just why do you say that?'

Cutie laughed. It was a very inhuman laugh – the most machine-like utterance he had yet given vent to. It was sharp and explosive, as regular as the metronome and as uninflected.
‘Look at you,’ he said finally. ‘I say this in no spirit of contempt, but look at you! The material you are made of is soft and flabby, lacking endurance and strength, depending for energy upon the inefficient oxidation of organic material – like that.’ He pointed a disapproving finger at what remained of Donovan’s sandwich. ‘Periodically you pass into a coma and the least variation in temperature, air pressure, humidity, or radiation intensity impairs your efficiency. You are makeshift.

‘I on the other hand, am a finished product. I absorb electrical energy directly and utilize it with an almost one hundred percent efficiency. I am composed of strong metal, am continuously conscious, and can stand extremes of environment easily. These are facts which, with the self-evident proposition that no being can create another being superior to itself, smashes your silly hypothesis to nothing.’

Isaac Asimov

Comprehension

1. Why does Powell have sympathy for Cutie?
2. What is Cutie sceptical about and why is he sceptical at all?
3. What argument does Cutie come up with to convince himself that he is superior to humans?
4. What do you think is the difference between how a human can think and the way that a robot thinks?
5. How convincing is the author’s portrayal of artificial intelligence?

Looking closely

1. Robots sometimes mimic human behaviour and cause us to reflect on what it is to be human. Find two good examples of how Cutie mimics human behaviour.
2. Find the words in the text that mean the same as ‘unbelievable’, ‘propoition’ ‘undaunted’ and ‘ridiculous’.
3. Which statements made by Cutie reveal what he considers to be the more inferior attributes of humans?
4. How does the writer describe the way Cutie laughs? What simile does the writer use to support his description?
5. What does Cutie mean by the word ‘makeshift’? How does Cutie describe himself to make clear the contrast between a robot and a human?

Journal

Describe the operations of a machine using language more often associated with human behaviour. Give it a name and a decide whether it should be male or female.