

Unit 1. Robot Helpers

Robots are already a part of (1) daily life. (2) Factories use robots to make (3) products.

Robot (4) servers can take food (5) orders in (6) restaurants. Future robots will be able to do even more. (7) Engineers are working on a (8) variety of helper robots for people to use in hospitals and in their homes.

Some robots can move and talk a little like people. These provide fun (9) interactions. But robots can teach valuable lessons, too. They can guide a person's movements to help them (10) overcome (11) physical (12) challenges. They can help that person learn important body motions. Some people have (13) difficulties with (14) social skills and (15) speech. Robots can help them practice.

People need special care as they get older. Fewer people are having children, and humans are living longer. So the number of (16) elderly people who need help is growing. Robots are (17) especially good for the elderly. They can help a person get out of bed, make food, and clean the house. They can even keep an elderly person (18) company.

These helper robots are not very common yet. But they will be someday. Exciting (19) technological (20) advances are happening quickly. In the future, these helper robots might make our lives easier.

Unit 2. Confidence Through Volunteering

Many of us try to be (1) kind to the people we see every day. We help our (2) friends and family, and we usually feel good (3) afterward. However, helping (4) strangers is important as well. (5) Volunteering isn't just a nice thing to do. It can even make us more confident.

A (6) researcher studied kids between the ages of 11 and 14. Every year for four years, she asked them to (7) describe how they helped others. She also asked them how they (8) felt about themselves. Teens who helped both loved ones and strangers had higher (9) self-esteem one year later. Teens who only helped friends and family did not.

Volunteering is more (10) rewarding for teens because it is more (11) challenging. You must meet and talk with people you don't know. You may also learn new skills. This builds (12) confidence. Volunteering can also make you feel (13) satisfied. You have to work hard, but you are doing very good things.

It only takes a few (14) extra hours a week to volunteer. Reading to elderly people, putting away food in a (15) crisis center, and (16) organizing books in the (17) library are just a (18) few ideas. You will feel (19) wonderful about helping others. You will also feel (20) great about yourself.

Unit 3. A National Hero

Terry Fox was (1) born in Canada in 1958. (2) While growing up, Terry loved to play (3) sports. When he was 18, Terry (4) developed (5) pain in his right (6) knee. He went to a doctor and got some (7) terrible news. He had (8) cancer. The doctors had to cut off Terry's right leg.

Terry didn't let that stop him. He learned how to use an (9) artificial leg. He (10) continued to play sports. But now, Terry wanted to do more. While in the hospital, Terry met other young cancer (11) patients. He (12) decided to run (13) across Canada to raise money for cancer (14) research. He called this the (15) Marathon of Hope.

Terry started his Marathon of Hope on April 12th, 1980. (16) Unfortunately, after 143 days and 5,373 kilometers, Terry had to (17) quit. His cancer had come back. Terry Fox died a few months later at the age of 22.

(18) Although Terry never finished his Marathon of Hope, he (19) inspired many people.

Now, once a year, people around the world do the Terry Fox Run. They run in memory of this Canadian (20) national hero and continue to raise money for cancer research. So far, more than \$400 million has been raised thanks to Terry Fox.

Unit 4. The Boy Who Grew His Hair

Vinny Desautels has always been a (1) generous boy. When he was five, he (2) found out that some (3) kids get cancer. Often, they lose their hair because of their (4) medicine.

They need wigs. Vinny wanted to help, so he (5) decided to (6) donate his hair. But first, he had to (7) let it grow long.

Vinny stopped getting (8) haircuts. His hair grew (9) below his (10) shoulders. Some other kids thought he looked (11) strange. They even (12) laughed at him. But Vinny didn't (13) mind the (14) criticism. He knew it was for a good cause.

After two years, Vinny finally got a haircut. He (15) proudly sent 33 centimeters of his hair to a charity called Wigs for Kids. A few weeks later, Vinny's eye became (16) swollen. He also had a painful bump on his hip. Doctors discovered that Vinny had a (17) rare bone cancer. Now he had to fight his own (18) battle against the (19) disease. Vinny took medicine that made his hair fall out. It was difficult, but Vinny was brave and never stopped smiling.

He was right to be (20) optimistic. Today, the generous boy who donated his hair is healthy again. Now he helps raise money for research on children's cancers.

Unit 5. How to Be a Writer

Before the internet, it was harder for young writers to (1) publish their work. Today, all they need is a blog. Blogs are a good way for writers to (2) share their ideas, (3) improve their skills, and build a (4) career.

Blogs provide (5) freedom for writers. Bloggers can write about anything they (6) choose.

Many write about their (7) hobbies or travels. Some just write about their daily lives. Blogs let writers write about their (8) passions.

Also, blogs can help improve a writer's work. There are (9) millions of blogs online. To (10) succeed, the writing must be interesting and (11) original. This will help a blogger (12) attract readers. Bloggers can get feedback from readers and other writers. That way, their writing gets better and better.

When a writer has a lot of readers, (13) advertisers begin to notice. They want the (14) opportunity to (15) reach those readers. Advertisers might ask the blogger to write about their products. Popular bloggers can (16) begin to make money by working with advertisers.

If you dream of being a writer, (17) consider starting a blog. It will help you (18) explore your (19) interest in writing and decide (20) whether it is the right career for you.

Unit 6. The Time Machine

One of the earliest and most famous (1) science (2) fiction books is *The Time Machine*. It was written by H. G. Wells in 1895. *The Time Machine* is about a (3) creative man who (4) insists it is (5) possible to travel through time. He builds a time-travel machine. When he (6) tries it out, it takes him 800,000 years into the future!

The future Earth is very different. The people he (7) meets call themselves the Eloi. The Eloi are a happy, simple, and (8) peaceful people. They help him and give him food to eat. At first, he enjoys his visit to the future very much. The future Earth seems like (9) paradise.

But then he (10) loses his time machine. He begins to (11) look for it because he wants to go back to his (12) own time. While (13) searching, he (14) discovers a (15) second, less friendly people called the Morlocks. They live (16) underground, and they have taken his time machine! He has many (17) adventures trying to get the machine back, and some of them are (18) quite (19) scary.

Will he get the time machine back and return to the past? Read the book and find out. This story has (20) entertained science fiction fans for more than 100 years.

Unit 7. The Two Faces of Dr. Jekyll

One night in 1884, the (1) Scottish writer Robert Louis Stevenson had a bad dream. It was about a good man who (2) suddenly became (3) evil. Stevenson couldn't (4) forget his dream. He turned it into a famous short (5) novel, *Strange Case of Dr. Jekyll and Mr. Hyde*.

In the story, Dr. Jekyll is a nice, (6) hard-working scientist. He is always doing research in his (7) laboratory. He has a (8) troublesome friend named Mr. Hyde. Hyde is dangerous and (9) violent. He even kills someone. But the story has a big surprise: Jekyll and Hyde are the same person! Dr. Jekyll has (10) invented a special (11) liquid. When he drinks it, he becomes the dangerous Mr. Hyde. For a while, he enjoys (12) being two different people. But then something goes wrong. He cannot change back into Dr. Jekyll. Now what should he do? Can he live as Mr. Hyde (13) forever?

This story is about (14) human (15) nature. It shows how people can be (16) both good and evil. This (17) idea is (18) obviously interesting to readers, because the novel is (19) popular to this day. It has even become part of the English language. When someone's (20) personality changes suddenly, people say that he or she is "like Jekyll and Hyde."

Unit 8. The Real Robin Hood?

For hundreds of years, English people have told stories about a (1) hero named Robin Hood. He lived in the (2) forest, taking things from rich people and giving them to poor people. (3) According to the stories, he did this because he was an (4) enemy of the king.

We know that in the (5) early 1300s, a man named Robert Hood lived in England. He (6) joined a group to fight (7) against the king, but the group lost. They then had to (8) hide in the (9) woods. For years, he was part of a group of robbers living in the forest. Maybe he was the hero that people now call Robin Hood.

But not everything about Robert Hood's life (10) matches the stories. One (11) difference is Maid Marian. In the stories, Robin Hood fell in love with a woman named Maid Marian. (12) In contrast, Robert was (13) married long before he became a (14) robber. His wife's name was Matilda.

The Robin Hood stories are (15) legends. This (16) means they are very old, and they may or may not be about (17) real people. It is hard to be (18) sure about (19) events so far in the past. But people will continue to enjoy sharing these exciting stories (20) either way.

Unit 9. Living Longer

Humans have a (1) natural (2) drive to (3) survive. They want to live for (4) as long as (5) possible. This is why scientists study health and aging. They want to know how people can live (6) healthier, longer lives.

(7) Average (8) lifespan means how long the average person will live. A hundred years ago, the average lifespan (9) worldwide was only about 34 years! This does not mean that people (10) often died in their 30s. Sadly, because of (11) disease, almost half of children did not survive to age 10. Most other people lived into their 50s or 60s. This is why the average lifespan was low.

Over the past (12) century, (13) medical (14) advances have improved children's health. People of all ages get better medical care as well. Now the average lifespan for (15) women is just over 72 years. For men, it is just over 68. Of course, some people live much longer than average. The oldest person in (16) history lived to 123.

Lifespans in most (17) countries are (18) still going up. But they (19) probably cannot keep rising forever. Most scientists say that 123 is close to the (20) maximum lifespan for humans.

Unit 10. People with Super Taste

Some people love (1) spicy foods. Others can't (2) stand them. Scientists now think they know why. Studies have found that people can be (3) divided into three groups: nontasters, (4) medium-tasters, and super-tasters.

The (5) difference (6) among these groups is the number of (7) taste buds that they have.

Taste buds are the parts of your (8) tongue that taste food. They are in the (9) tiny (10) bumps that you can see on your tongue. Some people have a lot more of these bumps than others do. That means they have more taste buds. (11) Count how many bumps you have in one (12) square centimeter. Non-tasters have about 96, while super-tasters have about 425! (13) Interestingly, studies show that there are many more super-taster women than men. About 35 percent of all women are super-tasters, while only 10 percent of men are.

Super-tasters (14) experience (15) flavors more (16) strongly than other people. They are also more (17) sensitive to a (18) certain (19) bitter (20) chemical. Foods such as grapefruit, chocolate, and coffee have a lot of this chemical. These foods are hard for super-tasters to eat. Medium-tasters do not mind eating such bitter foods, and non-tasters may not notice any bitter taste at all.

Unit 11. Children's Heights

If you have a younger brother or sister, you may (1) remember how fast he or she grew as a baby. If not, look back at your own baby (2) photos. (3) During the first year of life, a baby usually grows between 18 and 25 centimeters. That is a lot, (4) considering most babies are about 50 centimeters at (5) birth. Growth (6) slows down during the (7) second year of life, when most babies grow only 10 to 12 centimeters more.

After the first year, growth becomes more (8) regular. (9) Between the ages of 2 and 9, most children grow about 6 centimeters (10) per (11) year. This growth may be faster during some months. These are called "(12) growth (13) spurts." (14) Typically, growth spurts (15) happen more often in (16) spring and (17) summer than at other times of the year.

When children reach middle-school age, they start growing faster again. Most girls start this (18) growth (19) period before boys. It starts between the ages of 8 and 13 in girls and between 10 and 15 in boys. On average, this stage of life lasts two years. Most girls add 18 centimeters to their height. (20) In contrast, most boys add about 20 centimeters to theirs.

Unit 12. Your Powerful Lungs

Many people think of the heart as the most important (1) organ in the human body.

(2) However, your (3) lungs are (4) equally important. They are (5) responsible for

(6) putting (7) oxygen into your (8) blood. Without your lungs, your heart would not have any healthy blood to (9) circulate.

Your lungs are in your (10) upper (11) chest. They are not equal in (12) size, as the left

lung is a little smaller to make (13) room for your heart. (14) Healthy lungs are pink and

look like (15) giant sponges. When you (16) breathe in, your chest gets bigger because

(17) tiny pockets in your lungs (18) fill with air. Air has oxygen, and the lungs send the

oxygen into your blood. Your blood then carries this oxygen to the (19) rest of your body.

You breathe around fifteen times every minute, so your lungs never stop working.

Your body needs oxygen to keep all your organs healthy. So you use your lungs to breathe

and to survive. But you also use the air you breathe to do other things, like talk, (20) sing,

laugh, and whistle. Your powerful lungs keep you alive, but they also help you enjoy life!

Unit 13. Big Data and Math

Big data is big (1) business today. (2) Companies (3) collect (4) large (5) amounts of (6) data from most online (7) activities. Data becomes big (8) quickly because people spend so much time on computers.

(9) For example, think about a video game you like. Data is collected (10) each time you go online to play. This data (11) includes how long you played, (12) players you talked with online, even how many times you played that day.

Of course, just (13) gathering data is not enough. In order to be useful, the numbers must be studied. (14) Experts (15) in statistics look for (16) patterns and (17) trends. By studying gaming data, they learn the average age of the players. They learn which cities have the most players. They (18) discover what players like and don't like. This helps companies find new (19) customers and improve their games.

Big data is also helpful in education. Teachers can find out how long students have worked online. They learn who may need more help. Data also helps teachers (20) figure out which techniques work better than others.

Big data can be very useful, but only with the help of math experts. If you love math, you should think about working with big data as a career.

Unit 14. The Origin of Measurement

If you visit the U.S., you will (1) notice something about the road signs: They measure (2) distance in miles, not kilometers. Miles, feet, and inches are (3) units (4) of measurement in the Imperial system. It is called “Imperial” because it was used in the (5) former (6) British Empire. This system is (7) centuries old. An inch was originally (8) defined as (9) the width of a (10) thumb. A foot was the (11) length of a man’s foot. A mile was (12) 1,000 steps. (13) Similar units were used in other countries, but their (14) exact lengths (15) differed from (16) place to place. This caused a lot of (17) confusion.

In the 1790s, a team of French scientists decided to develop a common system of measurement. The result was the metric system. The meter is the basic unit. One meter is (18) one ten-millionth (1/10,000,000) of the distance between the (19) equator and the North Pole. One hundred centimeters make up one meter. One thousand meters equals one kilometer. At first, the people of France did not accept the metric system. However, they were required to use it (20) officially in 1840. Today, it is used around the world.

Unit 15. Balance in Nature

(1) Symmetry means something has parts of the same shape (2) facing each other or around a (3) center line. Honeycombs, peacocks, and spider webs are all beautiful (4) examples of symmetry.

Honeycombs have (5) wallpaper symmetry. The shapes in the (6) pattern are (7) repeated over a (8) surface. Bees use (9) wax to form the pattern of a honeycomb. They make shapes that have six equal sides. These shapes are called (10) hexagons. They fit together perfectly so that no space is (11) wasted. This creates the maximum amount of room to (12) store honey.

Peacocks are an example of (13) bilateral symmetry. That is when an (14) object can be (15) divided into two halves that are (16) exactly the same. Peacocks, which are male birds, have this symmetry in their body shape and on their tail feathers. It makes them very (17) attractive to female birds of their kind.

Spider webs have (18) radial symmetry, or symmetry around a center point. Each web has lines that (19) extend out from the center. These lines are almost equally spaced apart. They are connected by lines that circle around the web. This design (20) strengthens the webs.

Nature is full of symmetrical objects. Look around you. What other examples of symmetry can you find?

Unit 16. Probability

When we (1) predict future (2) events, we usually can't be (3) certain we're right. That is when (4) probability is useful. The probability of an event is (5) how likely it is, (6) expressed as a number. (7) Simply (8) divide (9) the number of outcomes you are (10) predicting by the number of (11) all possible outcomes.

A good example is the (12) roll of a die. (13) Imagine you want to roll a 3. That is one possible outcome. But there are six (14) total possible outcomes: a 1, 2, 3, 4, 5, or 6. (15) Therefore, there is a (16) one-in-six (17) chance of rolling a 3.

You can use the same (18) technique with a game of (19) Rock, Paper, Scissors. With two players, there are nine outcomes: three ways for you to win, three ways for the other player to win, and three ways to tie. Therefore, there is a three-in-nine probability that you will win.

How about getting hit by lightning? Experts say your probability of getting hit in your lifetime is one in 12,000. This number is based on (20) population and the number of people who have reported getting hit by lightning. The chance is much higher than winning a big lottery, where your chances drop to one in 175 million!