

Lesson A Vocabulary and Grammar

A Complete the sentences with the words in the box. One word requires a different form.

creativity	device	electronic	habit	invention
outcome	purpose	significant	solution	success

- Some people develop the bad _____ of constantly checking their phones.
- It looks nice and expensive, but I don't understand its _____.
- The 1960s were a time of great _____ in western art.
- The problem seemed impossible, but we found a _____.
- The process has started, but we won't know the _____ for a few weeks.
- You can install this antivirus software on all your _____.
- It looks like the experiment was a great _____.
- The *e* in *email* stands for _____.
- The _____ of the steam engine started the Industrial Revolution in 18th century Britain.
- Marie Curie won Nobel Prizes for her _____ contributions to two different sciences.

B Complete the sentences with the correct form of the words in the box.

create	invent	solve	succeed
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- A bad invention can (1) _____ more problems than it
(2) _____. When plastic was (3) _____,
many everyday problems were (4) _____, but it also
(5) _____ in becoming a major source of pollution.

C Change each sentence into the future using the words given. There may be more than one possible answer.

- She can swim very well.
I'm sure _____ well after a few more lessons.
- You need to see a dentist now.
_____ soon, even if you don't want to.
- The principal can see you now.
Wait here, _____ in ten minutes.
- He needs to study for the exam tomorrow.
_____ hard over the next few weeks.
- I can't give you an answer now.
_____ until I've talked to my parents.

Lesson **B** Listening

A  26 Listen to the conversation. Who invented the telephone?

- | | |
|--------------------------|----------------------------|
| 1. Alexander Graham Bell | 3. Elisha Gray |
| 2. Antonio Meucci | 4. We don't know for sure. |

B  26 Read the sentences and write *T* (true) or *F* (false). Then listen again and check your answers.

- _____ 1. A patent is a document that says that you own an invention.
- _____ 2. It is possible that Bell based his telephone on other people's work.
- _____ 3. Meucci was a Cuban inventor who emigrated to Italy first.
- _____ 4. Meucci wanted to build a telephone to help his sick wife.
- _____ 5. Meucci applied for a one-year patent because he didn't want to pay for a longer patent.
- _____ 6. Meucci and Bell didn't know each other.
- _____ 7. Western Union treated Meucci very well.
- _____ 8. Bell died before he could defend himself from the accusations.

C Complete the text about the invention of the telephone. There is more than one correct answer for each space, but do not use the same word more than once.

On March 10th 1876, just three days after he had received his (1) _____ for it, Alexander Graham Bell used a (2) _____ to call his assistant in another room and said, "Mr Watson, come here. I want to see you." However, he may have been using a (3) _____ that he had not (4) _____ himself. It is certain that part of it was based on Elisha Gray's design, which Bell had seen. However, Bell only used that part for the model in that experiment. After that, he did not use it for commercial purposes.

What happened with Antonio Meucci's design is less clear. It looks like Bell's telephone (5) _____ based on the model that Meucci had (6) _____, which Bell was familiar with. However, as Meucci was too (7) _____ to pay for a long patent, Bell had the (8) _____ to develop Meucci's design. In (9) _____, the US Congress stated that if Meucci had been able to pay for a (10) _____ patent, Bell would not have been allowed to apply for one himself. Meucci (11) _____ as poor as he was born and Bell became a very (12) _____ man.

A Complete each sentence with a word in the box.

ambitious	beneficial	curious	enthusiastic
essential	practical	smart	versatile

- It's _____ that we get an answer before we do anything else.
- Rice is one of the most _____ foods I know. I can make at least 30 dishes with it.
- Most medicines are _____ only if you take them for a short time.
- I don't think going there three times this week will be very _____.
- She's very _____ about the project and puts a lot of energy into it.
- He was so _____ that he was prepared to break rules to become rich and powerful.
- He was always very _____ about nature, so he became a biologist.
- She's incredibly _____ and always gets good grades.

B Circle the correct options to complete the conversations.

- A:** Do you have any plans for tonight?
B: Yes, I'm *going* / *ll go* to the basketball game with Jamal. His dad gave him two tickets.
- A:** What time is your bus?
B: It *will leave* / *leaves* the station at five o'clock, so it should be here in 20 minutes.
- A:** Can you wait for me here? I need to get some cash from the ATM around the corner.
B: I'll *come* / *'m coming* with you, if you don't mind. I've just realized I need cash, too.
- A:** I'm *probably going to make* / *probably make* pizza tonight. Why don't you come over?
B: Oh, great! I think I *do* / *will*, thanks! Can I bring anything?
- A:** What *are you going to* / *do you get* Mario for his birthday?
B: I don't know yet. I'm *going* / *go* shopping on Saturday morning. Do you want to come?
- A:** Don't worry, Mom, I promise I'm *texting* / *ll text* you when I get there.
B: Don't forget! I just know I *won't be able to* / *don't sleep* until I know you're OK.

C Complete the conversation with the correct form of the verbs in parentheses. There is no verb for one of the spaces because you need to give a short answer.

- Ilya:** I (1) _____ (go) to the football game tonight. (2) _____ (you, want) to come?
- Amy:** Great idea—I think I (3) _____. What time?
- Ilya:** The game (4) _____ (start) at seven o'clock, but if we want good seats we (5) _____ (need) to be there at least an hour earlier.
- Amy:** OK. No, wait! I forgot! I (6) _____ (babysit) my brother tonight! I promised my parents! It's their anniversary today, and they (7) _____ (go out) for dinner.
- Ilya:** Can't you get anyone else to do it?
- Amy:** I (8) _____ (try) Grandma. Let me call her.

Landscapes, Illustrations, and Humor

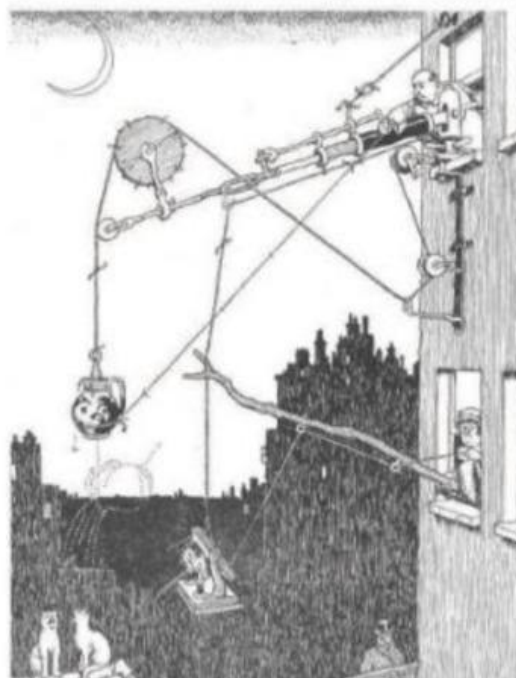
William Heath Robinson was a British cartoonist and illustrator who was born in London in 1872 into a family of artists: his father was an illustrator, and both his older brothers also became illustrators before him. He studied art at Islington Art School and then at the Royal Academy to become a landscape painter, but he soon realized that he wouldn't have been able to earn enough money to pay the bills. So, he put aside his landscape painting ambitions and started working as a book illustrator.

Until that time, printed illustrations could only be simple because the technique used for printing them, called woodblock printing, would have required too much time and work to reproduce complicated drawings. Additionally, they could only be printed in black and white. However, recent innovations allowed illustrations to go straight to print without going through the woodblock process, which meant that much more complex artworks could be reproduced in books. At the same time, more innovations made printing in color also possible.

Heath Robinson took full advantage of the new technology to show what he could do. In the year 1900, he created beautiful, complex pen and ink drawings to illustrate a collection of poems by Edgar Allan Poe, and in 1902, he produced wonderful watercolor images for a full-color edition of *Don Quixote* by the Spanish author Miguel de Cervantes.

Things seemed to be going well: 1902 is also the year in which he wrote and illustrated his first book of children's stories, *The Adventures of Uncle Lubin*, and the following year, he married Josephine Latey. However, they had just had their first daughter when the publisher with which Robinson had a large contract went **bankrupt**, so he had to find another source of income to feed his family.

That's when he started publishing the cartoons he is best known for: illustrations of enormously



▲ *The Multimovement Tabby Silencer*

complicated machines built to achieve ridiculously simple outcomes, which he used to make gentle fun of people's confidence in technological solutions to solve problems that did not need technology. His crazy inventions use the steam power of pots, the heat of candles, and complex systems of wheels, ropes, **parachutes**, and balloons to do things like throw water at a noisy cat. It's not just the images of the inventions that are crazy—they also have names like *The Multimovement Tabby Silencer*. His huge and complex machine for making holes in blocks of cheese involves a giant fork and four men to operate it.

He was so successful that, in the UK at that time, "Heath Robinson" was the term used to refer to unnecessarily complicated machines. His serious work has remained very influential with illustrators, and his humor lives on in Wallace, the inventor of crazy machines in the stop-motion animation movies from British director Nick Park about the adventures of Wallace and his much smarter dog: Gromit.

bankrupt unable to pay what you owe and having to close your business

parachute a large piece of special cloth and long ropes used to slow down a person's fall after jumping from an airplane

tabby a house cat with dark marks on gray or brown fur

A Skim the article and circle *T* (true) or *F* (false).

- | | | |
|------------------------------------|---|---|
| 1. Heath Robinson was an inventor. | T | F |
| 2. Heath Robinson was an engineer. | T | F |

B Read the article. Then read the sentences and write *T* (true) or *F* (false).

- _____ 1. Illustrating books was Heath Robinson's first choice of career.
- _____ 2. He was a very skilled artist.
- _____ 3. He was not very interested in the details of the printing process.
- _____ 4. He illustrated Poe's poems with black and white drawings.
- _____ 5. He published more than one children's book.
- _____ 6. He didn't like unnecessary technology.
- _____ 7. His work was only appreciated after his death.
- _____ 8. Recent animated movies carry on Heath Robinson's ideas.

C Answer the questions in full sentences.

1. Why did Heath Robinson study art?

2. Why did he become a book illustrator?

3. Why was he able to produce complex linework illustrations?

4. Why was he able to produce watercolor illustrations?

5. Why did he start creating cartoons?

6. What was *The Multimovement Tabby Silencer* for?

Lesson E Writing

A Read the blog post about the first science fiction story. Then match the sentence halves.

Mary Shelley's *Frankenstein* is considered the novel that started both the horror and the science fiction genres and asks essential questions about science, its responsibilities, and the long-term effects of inventions.

It tells the story of a brilliant scientist, Victor Frankenstein, whose mother dies when she is young, so he decides that the purpose of his research will be to fight death and give back life to the dead. He steals bodies from graveyards to build a "creature" and invents a machine to make it come to life. The experiment is successful, but Frankenstein is scared by the monstrous appearance of his creation, and abandons the man he has given life to. However, first of all, Victor never thinks about the effects his actions may have on others in general and on the creature in particular; and secondly, he fails to take responsibility and manage the results of his blind ambition.

At first, the creature tries to fit in, learns to speak by observing and listening to others, and teaches himself to read, but people reject him, and he ends up with no human connections. He finds Victor's notes with the details of his own monstrous birth, so he meets his "father" to explain to him what horror life is when your body has experienced death before, when you don't know *what* you are, when people run away when they see you, and as a result, all you feel is anger. He wants Victor to accept his responsibility, stop hating him, and make him a female companion to share his life with. When Victor fails to do any of these, many innocent people die before the creature and his "father" die, too.

- | | |
|---|-------------------------------------|
| _____ 1. Victor's purpose is to | a. make his creature come to life. |
| _____ 2. Victor wants a device for | b. fight death. |
| _____ 3. Victor uses body parts to | c. building a creature. |
| _____ 4. For Victor, body parts are for | d. bringing people back from death. |
| _____ 5. Victor builds a machine to | e. accept responsibility |
| _____ 6. The creature wants Victor to | f. build a creature. |

B Read the sentences and write *T* (true) or *F* (false).

- _____ 1. Victor was extremely upset by his mother's death.
- _____ 2. Victor thinks about how the relatives of the people whose bodies he steals might feel.
- _____ 3. Victor thinks about whether the body parts will give memories to the creature.
- _____ 4. Victor thinks about how the creature will feel when it comes to life.
- _____ 5. Victor thinks about how society will respond to the creature.
- _____ 6. Victor wanted to do something good for humanity.
- _____ 7. Victor takes care of the creature when it comes to life.
- _____ 8. The story asks if anything that is possible should be made.

- A** Complete the sentences with *have to* or *be able to*. Then state whether each one describes an *ability* or a *necessity*.

- _____ *necessity* 1. He might _____ *have to* _____ get creative if he wants to find a solution.
- _____ 2. You will _____ turn off all electronic devices before we take off.
- _____ 3. Clara won't _____ invent something for that purpose because she doesn't know how.
- _____ 4. He will _____ quit his bad habits in order to be successful.
- _____ 5. She will _____ discover something significant if she continues her research.

- B** Complete the sentences using the verbs in parentheses so that they explain what will happen in the future.

1. The store _____ (open) at eight o'clock.
2. Wait! Zara _____ (go) with you to collect the money.
3. The flight _____ (depart) at noon, so we should check in at ten o'clock.
4. I'm _____ (babysit) my niece this evening.
5. He _____ (purchase) tickets as soon as they go on sale.
6. He _____ (play) in a tournament this weekend, so he can't meet us.

- C** Complete the text with the words in the box.

ambitious	beneficial	curious	enthusiastic
essential	practical	smart	versatile

I have never been particularly (1) _____ about science fiction, but after watching a movie called *Arrival*, I've become (2) _____ and have started reading and watching sci-fi. I realized that sci-fi is not really about the future. I mean, some of it is like that, and all it does is show the (3) _____ (or sometimes damaging) effects of (4) _____ scientific discoveries in people's lives. But as a story genre, sci-fi is very (5) _____, so it can be much more than that. It can ask questions like, "What if ...?" and use a story about robots to explore the relationships between humans and machines. Some authors and directors with (6) _____ purposes have produced some (7) _____ works that use sci-fi to ask not simply important, but (8) _____ questions about what it means to be human, and I like that a lot.