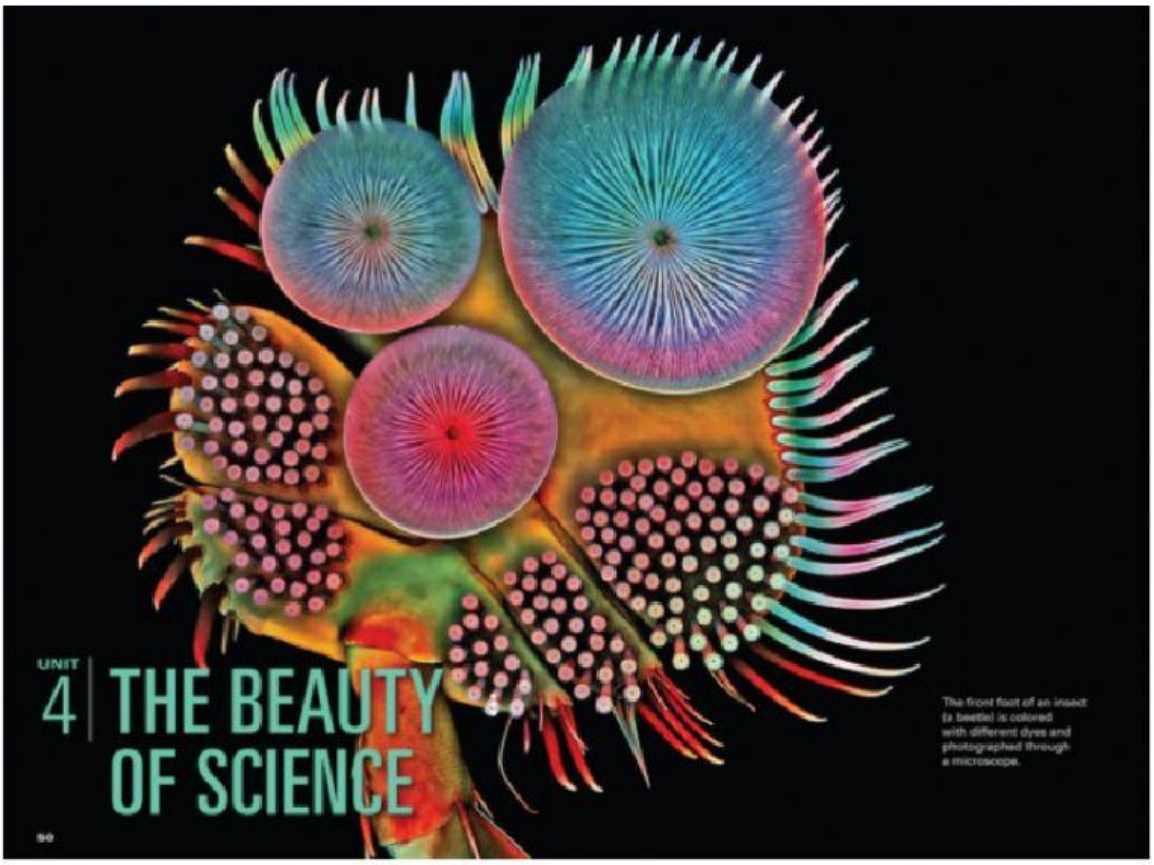


UNIT 4: THE BEAUTY OF SCIENCE

A VOCABULARY Listen to the words. Match the words with the definitions. 4.1

disease (n)	fall (v)	heavy (adj)	light (n)	prove (v)
experiment (n)	gravity (n)	hit (v)	medicine (n)	scientist (n)

LIVEWORKSHEETS

1. _____ move or drop to the ground
2. _____ a person who studies or works in science
3. _____ opposite of light in weight
4. _____ something that you take when you are ill or sick
5. _____ to touch someone or something quickly and with force
6. _____ an illness
7. _____ something that allows us to see things
8. _____ the force that pulls things toward each other and to the ground
9. _____ to show that something is true
10. _____ a test to learn something new

LISTEN TO 5 CONVERSATIONS AND WRITE TRUE OR FALSE.

Science Fact or Science Fiction?

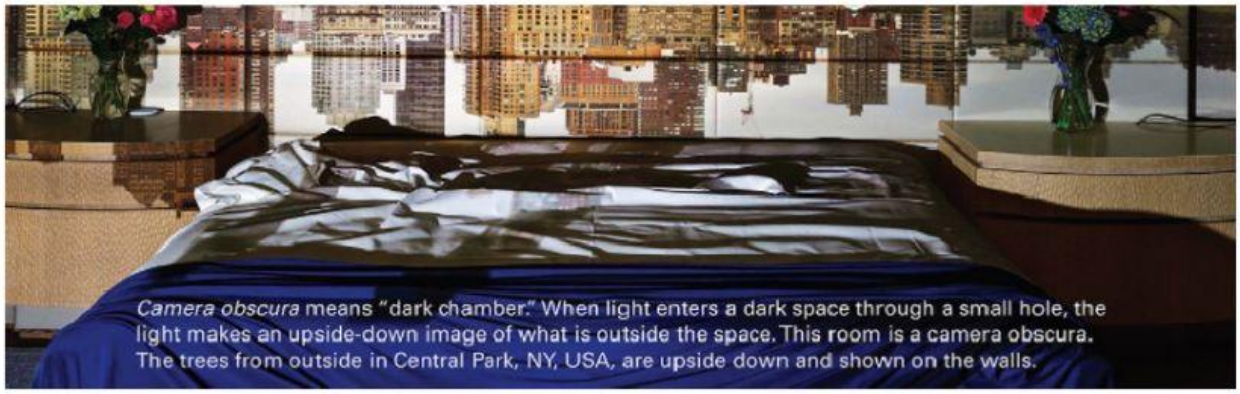
1. _____ If a penny falls from a very tall building and hits someone on the ground, it can kill them.
2. _____ Gravity makes heavy things fall faster than light things.
3. _____ It takes 8 minutes for light from the sun to reach Earth.
4. _____ Malaria has killed more people than any other disease in history.
5. _____ Before Albert Einstein became a brilliant scientist, he was a very bad student at school.

LIVEWORKSHEETS

D Listen again. Complete the sentences with one or two words. Then check your answers with your partner. 4.2

1. The penny might hurt you, but it wouldn't _____ you.
2. Gravity _____ heavier things fall faster than lighter things.
3. The sun is 93 _____ from Earth.
4. Malaria has killed more people than any other _____ in history.
5. Einstein was always a good student, but he didn't like the way of _____.





Camera obscura means "dark chamber." When light enters a dark space through a small hole, the light makes an upside-down image of what is outside the space. This room is a camera obscura. The trees from outside in Central Park, NY, USA, are upside down and shown on the walls.

Listen and choose the correct answer

LIVEWORKSHEETS

B MAIN IDEAS Use your notes and choose the correct answer.

1. What did Alhazen's experiment show?
   a. We see when light enters our eyes.
   b. We see because we have light in our eyes.
   c. We need lamps to see.
2. What did Galileo's experiment show?
   a. Heavy things fall faster than light things.
   b. Heavy things fall at the same speed as light things.
   c. Heavy things fall slower than light things.
3. What did Tu Youyou's experiment show?
   a. Artemisinin comes from the plant *Artemisia annua*.
   b. Artemisinin can help people with malaria.
   c. Artemisinin is not safe for people with malaria.

C DETAILS Listen again. Write T for *True* or F for *False*. Then correct the false statements. 4.3

Alhazen

1. _____ Alhazen was born 1,000 years ago in Egypt.
2. _____ There were two lamps outside the room and a small hole in the wall.
3. _____ The two lamps made one spot of light on the wall.

Galileo

4. _____ Galileo dropped two similar balls from the Leaning Tower of Pisa.
5. _____ The two balls hit the ground at the same time.
6. _____ On the moon, the hammer hit the ground before the feather.

Tu Youyou

7. _____ Tu and her team wanted to find a new medicine for malaria.
8. _____ Tu made a medicine called artemisinin from a plant.
9. _____ Nobody dies from malaria anymore.

LIVEWORKSHEETS

LISTENING SKILL Understand cause

To explain the cause of an event, we often use *because* followed by a clause (subject + verb).

They believed this ***because it seemed natural****.*

We can also use *because of* and *due to* followed by a noun, noun phrase, or pronoun.

They believed we can see ***because of a light in our eyes.***

Due to her interest in plants, *Tu Youyou began studying traditional plant medicines.*

E Listen to a description of another experiment. What was the disease, and what was the "medicine"? 4.4

In the 16th and 17th centuries, [ ] often became ill with a disease called *scurvy*. Sailors with scurvy lost their teeth and became very [ ]. Many of them died because of the disease. In 1747, a Scottish doctor, James Lind, wanted to find a [ ] for scurvy. He believed that poor [ ] was the cause of the disease. He decided to carry out an experiment. He found some sailors with scurvy. He gave [ ] and limes to two of the sailors. Those two sailors got better quickly. The others didn't get better. We now know that sailors got scurvy because they didn't have enough vitamin C. The two sailors got better due to the vitamin C in the oranges and limes. From then on, British sailors always took [ ] with them on long trips and because of this they got the name "limeys."

F APPLY Listen again. Then complete each sentence with one or two words. 4.4

1. Many of the sailors died _____ the disease.
2. We now know that sailors got scurvy _____ they didn't have enough vitamin C.
3. The two sailors got better _____ the vitamin C in the oranges and limes.
4. British sailors took limes on long trips and _____ this, they got the name "limeys."

LIVEWORKSHEETS

H GRAMMAR Complete the sentences with the simple past form of the verbs.

Problem: This [1]_____ (happen) to me a few months ago. I [2]_____ (notice) that something was wrong. When I [3]_____ (go) to bed, I couldn't sleep because I [4]_____ (not feel) tired.

Idea: I [5]_____ (decide) to try an experiment with coffee.

Experiment: Before the experiment, I [6]_____ (drink) four cups of coffee every day. For the experiment, I [7]_____ (stop) drinking coffee for two weeks. It [8]_____ (not be) easy!

Conclusion: When I stopped drinking coffee, I [9]_____ (not have) sleeping problems. After two weeks, I [10]_____ (start) drinking coffee again, and the sleeping problems [11]_____ (come) back. My experiment [12]_____ (prove) that coffee was the cause of the problem.

PRONUNCIATION *-ed* endings 4.5

- Remember to pronounce an additional syllable only when *-ed* is added after a verb ending in a *-t* or *-d*.

  list-en (2 syllables) → list-ened (2 syllables; no additional syllable)
  re-port (2 syllables) → re-port-ed (3 syllables; additional syllable)

- Remember that the *-ed* can sound like /t/, /d/, or /ɪd/.

I PRONUNCIATION Write the number of syllables of each past tense verb. Circle the pronunciation of *-ed*. Then listen and repeat each word. 4.6

1.	watched	_____	/t/	/d/	/ɪd/
2.	noticed	_____	/t/	/d/	/ɪd/
3.	wanted	_____	/t/	/d/	/ɪd/
4.	happened	_____	/t/	/d/	/ɪd/
5.	talked	_____	/t/	/d/	/ɪd/
6.	needed	_____	/t/	/d/	/ɪd/

LIVEWORKSHEETS