

## Exercises of Activity Book

### Unit-4 Science and scientists

#### VOCABULARY

1 Complete the words and phrases from each column to find the definitions of the words in the first column. Then, write the definitions in full sentences.

ecology botany  
zoology astronomy  
geology  
environmental  
science

a branch of  
working for  
studying how  
study relating  
the study  
a natural science  
that deals

the earth is made of  
different rocks  
biological science  
concerned with plants  
protection of the natural  
world  
with the stars and planets  
of relationships between  
living organisms and the  
world they live in  
to the animal kingdom

#### Answers:

Ecology is the study of the relationships between living organisms and the world they live in.

Botany is a branch of biological science concerned with plants.

Zoology is the study relating to the animal kingdom.

Astronomy is a natural science that deals with the stars and planets.

Geology is studying how the earth is made of different rocks.

Environmental science is working for the protection of the natural

world.

## GRAMMAR

### 2 Complete the sentences with the correct form of the verbs in the first column.

- |         |                                                                  |                                                               |
|---------|------------------------------------------------------------------|---------------------------------------------------------------|
| 1 think | I <b>think</b> studying Science at university is my best option. | I <b>am thinking</b> about studying Science at university     |
| 2 look  | He <b>looks</b> very healthy!                                    | He <b>is looking</b> at a hair through the microscope.        |
| 3 have  | <b>Do you have</b> a car, or should I pick you up?               | We <b>are having</b> dinner with all the family this evening. |
| 4 enjoy | I <b>enjoy</b> studying in the garden whenever I have exams.     | Don't turn off the TV! I <b>am enjoying</b> this film         |

### 3 Complete the telephone conversation with the correct form of the verbs in brackets.

A: Hello Tareq. What are you doing?

B: Hi Ramzi. I (1) **am studying** (study) for my entrance exam next week.

A: (2) **Are you planning** (plan) on applying to the Jordan University of Science and Technology?

B: Yes, I am. I (3) **want** (want) to become a science teacher, and they (4) **have** (have) one of the best programmes in the country.

A: Wow, that's amazing! (5) **Do you think** (think) it is possible to get accepted?

B: Of course it is! Where there's a will, there's a way!

4 Complete the table with the verbs from the box. Then, choose two verbs from each column to write your own sentences.

Think run know mean taste study love eat have

State	State and Dynamic	Dynamic
Know, mean, love	Think, taste, have	Run, study, eat

Example answers:

I know how much you enjoy school because I do too!

I think I know the answer to your question. (state)

I run for 30 minutes every day before school. (dynamic)

### VOCABULARY

5 Solve these riddles to find out the Words related to science.

Muneen: I use a telescope to observe stars and outer space.

Who am I? **astronomer**

Jaber: I use the microscope a lot to observe and study the organs of animals.

Who am I? **biologist**

Amal: I study and forecast the weather conditions.

Who am I? **meteorologist**

Randa: I don't only work in a laboratory. I study the outer layer of

the earth.

Who am I? **geologist**

6 Read the text and list all the words for people connected with science. Then complete the table.

Mohammad Ibn Zakariya Al Razi (865 CE-925 CE) was a physician, a chemist, musician and mathematician. He was born in Rayy, near the city of Tehran, Iran. He worked at the Royal Hospital at Rayy.

Al Razi was also a writer of many books on medical and scientific subjects. Al Mansuri and Al Hawi, his reviews of medicine, were translated into several languages.

Al Razi was also a researcher. In chemistry, he was the first to produce sulfuric acid.

As a biologist, Al Razi developed an early system of classifying substances into plants, animals and minerals.

For all these reasons, Al Razi is known as a very important scientist in history.

Noun (person)	Noun (subject)	Adjective or participle
1 <i>physician</i>	<i>physics</i>	<i>physical</i>
2 chemist	chemistry	chemical
3 mathematician	mathematics	mathematical
4 biologist	biology	biological
5 scientist	science	scientific

7 Look at the first paragraph of the text. What theory do you think the text is going to explore?

Students' own answer.

### 8 Read the text and check your answers.

Do you want to improve your study skills or write a book? Do you want to become a distinguished student? Surrounding yourself with the right colour might help!

The question of the effect colour has on the brain has always amazed scientists. Many have witnessed that red makes people feel stronger and more powerful, specifically the deep red colour.

In a study, researchers at a top university carried out tests on 600 people to see how well they used their skills. They were trying to test their hypothesis that the colour red or blue affects us in different ways.

The findings showed that people could remember details better when they looked at images against a red background, for example, a computer screen. On the other hand, they were able to be more creative when the background colour was blue.

The hypothesis is that red, which is connected with emergency and warning (fire engines, traffic lights, etc.), makes people feel more alert, and so they are able to pay attention to detail. Blue is a relaxing colour, which helps to bring out people's creativity.

Answer:

The text explores-the theory that having the right colours around you when you study might help.

### 9 Answer the following questions.

1. How did scientists carry out their research?

Scientists carried out tests on 600 people.

2. According to the report's findings, which would be a better background colour for someone revising for a science test? Why?

Red; it makes you pay attention to detail.

3. According to the report's findings, which would be a better background for someone writing a poem? Why?

Blue; it helps you to be more creative.

4. Why do people respond to red with more focus and attention to detail?

Red is associated with emergencies and warnings.

5. What type of red is likely to make people feel stronger and more powerful?

Deep red is likely to make people feel stronger and more powerful.

6. Do you agree with the research you have read about? Why?

Students' own answers

## VOCABULARY

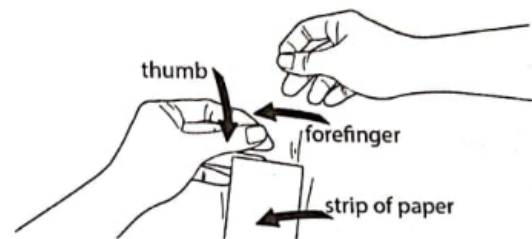
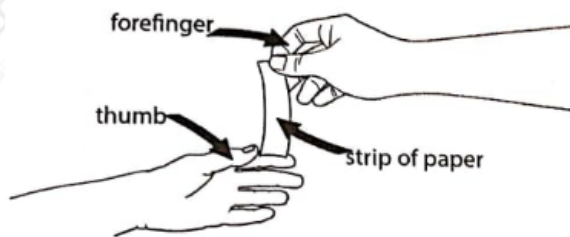
10 The following words are found in the text you just read. Find them and write their definitions. Then, write your own sentences using these words.

1. distinguished: line 3 - successful, respected and admired.
2. witness: line 7 - to have knowledge of something from personal observation and experience.
3. hypothesis: line 21 - a suggested idea that is not yet proved.

## Writing

11 Work in pairs. Carry out the following experiments with paper. Use the pictures and the words to describe the experiments.

### 1 PAPER DROP

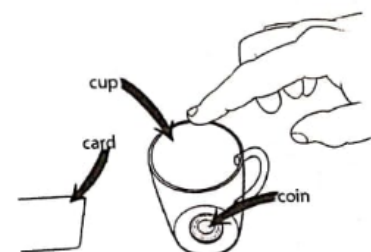
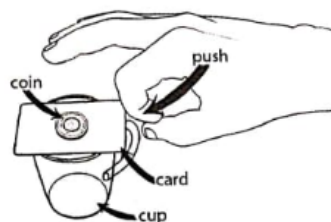
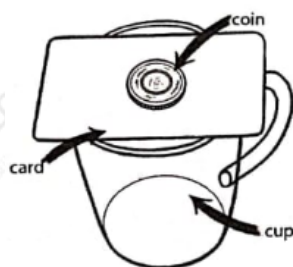


We carried out an experiment dropping a slip of paper between our thumb and forefinger. The aim was to find out whether our brains were able to react quickly enough to catch the paper before it dropped. To carry out this experiment, two people were needed one to drop the paper, and the other to try to catch it.

The experiment was set up other to try to catch it. The experiment was set up by carefully placing the lower end of the paper strip between one person's open thumb and fingers, and then letting it go.

it was difficult to catch the paper as it fell too quickly.

### 2 COIN DROP INTO CUP



The next experiment used a cup, a coin and a playing card. The

aim of the experiment was to find out what happened to the coin when we pushed the card. The coin was placed in the centre of the card, and these two items were placed on the cup, which was standing the correct way up. When the apparatus had been set up, the card was pushed across the cup, length-ways, until it fell off the other side of the cup.

The coin fell into the cup it did not stay on the card.

12 Now write the finding (explanation) of both experiments. What happened, and why?

1. Our brains are too slow to send a messages to our fingers, to catch the paper when it drops
2. The coin proves that objects in one place want to remain in that place. This is called inertia.