Unit 5 · Science and Experiment

WORKSHEET

Full marks 32

Name _____ Class _____ Roll no. ____ Date _____ Marks _____ / 32

1 Words from the article [3]

Match each word in Column A with its meaning in Column B. Write the letter in the box. One meaning in Column B is not needed.

Column A		Column B
1. altitude	☐	a. to cause something to happen
2. equilibrium	☐	b. a space with almost all the air taken out
3. condense	☐	c. a state of balance between two opposite changes
4. vacuum	☐	d. height above sea level
5. plunger	☐	e. to change from gas to liquid
6. induce	☐	f. lasting forever, without end
		g. the part of a syringe that slides in and out of the tube

2 Words from the poem [3]

Fill in the blanks with the correct words from the box. Two words are not needed.

beautify	descend	drought	eternal	impalpable	latent	origin	vaguely

The monsoon clouds _____ onto the hills in the evening. After two years of _____, the farmers had no water for their fields. The talent was _____ in her: nobody saw it until she joined the music club. The river has its _____ in a glacier high in the Himalaya. Hope is _____: it never dies. In the morning fog, we could see the temple only _____.

3 Reading I: Yes, You Can Boil Water at Room Temperature [4]

Read "Yes, You Can Boil Water at Room Temperature" on pages 68–72 of your English textbook. Then choose the correct answer.

i. According to the article, rice must cook a little longer in Denver because … [1]

a. the rice there is harder.
b. water boils at a lower temperature at high altitude.
c. the air there is colder.
d. people in Denver use less water.

ii. The bubbles in boiling water are made of … [1]

a. air.
b. hydrogen and oxygen.
c. water vapor.
d. carbon dioxide.

iii. Water boils when … **[1]**

a. it reaches 100 °C, wherever it is.

b. its vapor pressure equals the pressure on its surface.

c. its molecules stop moving.

d. all the air has left it.

iv. The writer warmed the water in the syringe a little before pulling the plunger because … **[1]**

a. cold water cannot boil.

b. the plunger was stuck.

c. he could not make a perfect vacuum, and warmer water needs less pulling to boil.

d. hot glue works only on warm plastic.

4 Reading II: The Voice of the Rain **[4]**

Read the poem "The Voice of the Rain" on page 77 of your textbook. Then answer the following questions.

a. What does the rain call itself? **[1]**

b. Where does the rain rise from? **[1]**

c. What would happen to the seeds without the rain? **[1]**

d. Why is the rain compared to a song? **[1]**

5 Reading III: an unseen article [3]

Read the article below. Write ✓ for the true statements and ✗ for the false ones in the box.

Why the Pressure Cooker Whistles

In almost every kitchen in Nepal, the morning begins with the whistle of a pressure cooker. But few people know why it cooks dal so much faster than an open pot.

In an open pot in Kathmandu, water boils at about 95 °C, because the air pressure in the valley is lower than at sea level. However long you heat it, the water will not get hotter while it boils: the extra heat only turns more water into steam.

A pressure cooker has a lid that locks and a rubber ring that seals it, so the steam cannot escape. The trapped steam presses down on the water, and the higher the pressure, the higher the temperature at which water boils. Inside a working cooker, the water boils at about 120 °C. At that temperature, beans and lentils soften in a fraction of the time.

The weight on top of the lid lets out a little steam when the pressure gets too high: that is the whistle. And if the weight is blocked, a safety valve opens. Even after the whistling stops, the steam inside is still under pressure, so a cooker should never be opened until the steam has gone.

The idea is more than three hundred years old. In 1679, the French scientist Denis Papin showed his "steam digester", which could soften even bones.

i. In an open pot in Kathmandu, water boils at about 100 °C. ☐

ii. The rubber ring seals the cooker so that the steam cannot escape. ☐

iii. Denis Papin showed his steam digester in 1879. ☐

6 Reading III: short answers [2]

Answer the following questions about the same article.

a. Why does food cook faster in a pressure cooker? [1]

b. Why should a cooker never be opened until the steam has gone? [1]

7 Grammar: conditional sentences [6]

Complete the sentences using the correct form of the verbs in brackets.

a. If you heat ice, it ..... (melt). [1]

b. If it ..... (rain) tomorrow, we will cancel the picnic. [1]

c. If I ..... (be) the mayor, I would plant trees along every road. [1]

d. If we had left earlier, we ..... (not/miss) the bus. **[1]**

e. ..... (have) I known about the test, I would have studied harder. **[1]**

f. The plants will die unless you ..... (water) them. **[1]**

8 Writing: a letter to the editor **[5]**

Write a letter to the editor using the clues given below.

Write a letter to the editor of a national daily about the loud music played on loudspeakers in your locality during the exam season. Clues: loudspeakers at weddings and parties until late at night ... students cannot study or sleep ... old and sick people disturbed ... suggestions: a time limit, lower volume, the ward office to act

9 Think **[2]**

Answer the following question in your own words.

Water boils at about 95 °C in Kathmandu and at about 71 °C on the top of Everest. How would this change life for people who live or climb high in the mountains? Give two points.