CLASS 8 · SCIENCE

Exploring the Investigative World of Science

Sample paper · 15 questions · 22 marks

10 objective questions × 1 mark. Five written-response questions: 12 marks. Write your working where needed. Suggested time: 45 minutes. Answers and marking guidance follow the questions.

Original Evater practice material aligned with these school topics. Not an official NCERT paper or marking scheme. No automatic grading is implied.

Section A · Objective questions (10 marks)

1. A scientific investigation usually begins with:

A. Buying new equipment

B. Careful observation and a question

C. Publishing the result

D. Copying an old answer

2. Which of these is a focused, testable question?

A. Are experiments fun?

B. Does the size of a paper plane's wings change how long it stays in the air?

C. Why is the kitchen interesting?

D. Why do people like science?

3. Kunal suspects wet clothes dry faster on windy days. Which condition should he deliberately change to test this?

A. Whether identical wet cloth pieces hang in moving air or still air

B. The time of washing

C. The detergent used

D. The colour of the clothes

4. In Kunal's drying test, which conditions should be kept the same for both cloth pieces?

A. The day of the week

B. Nothing needs to match

C. Only the hanger

D. Cloth type, wetness, and where the sun falls on them

EVATER

5. Which of these observations gives a number that can be measured?

A. Whether the cloth feels nice

B. Whether the cloth smells fresh

C. The time the cloth takes to dry completely

D. Whether the cloth looks neat

6. Why should an investigator keep notes of everything seen during an experiment, even smells and splashes?

A. Teachers require decoration

B. Unexpected details can later explain the result or suggest new questions

C. It makes the work longer

D. Notebooks look scientific

7. A good investigation usually ends with:

A. A conclusion supported by evidence, and often fresh questions

B. A promise never to repeat it

C. No further doubts

D. A single reading

8. Why do scientists prefer changing only one thing at a time in an experiment?

A. It makes experiments shorter

B. It saves money

C. It shows which change caused the observed difference

D. It avoids measurement

9. A drying test gives 18 minutes on one trial and 26 minutes on another. What is the most useful next step?

A. Declare all measurements useless

B. Repeat the test and check whether the conditions changed

C. Erase the slower result

D. Choose whichever result is preferred

10. Which features of Earth does the chapter highlight as making life possible here?

A. Its rings

B. It is the largest planet

C. Liquid water, and an atmosphere that gives oxygen and shields harmful ultraviolet rays

D. Its many moons

EVATER

Section B · Written responses (12 marks)

Attempt all five. Use a separate sheet if you need more space. The marks for each question are shown.

11. A younger student says, 'Science is only done in laboratories with costly instruments.' Using an example from daily life, explain why this is not true. [2 marks]

12. In a teacher-led demonstration, two equal volumes of water start at the same temperature. One contains a measured amount of salt. The teacher compares the times taken to reach boiling. Name the changed factor, two controls and the measured outcome. [2 marks]

13. While testing whether thicker paper makes stronger planes, Arnav changes both the paper thickness and the wing shape, and the new plane flies longer. Why can he not conclude that thicker paper helped? [2 marks]

14. Describe a simple investigation you could do at home to answer: 'Does a fan make wet clothes dry faster?' State your question, your plan, what you will observe or measure, and one new question your result might raise. [3 marks]

15. An investigation produces a result that disagrees with the student prediction. The student wants to delete that trial. Explain why this would weaken the investigation, and suggest two better next steps. [3 marks]

EVATER

Answers & marking guidance

Use these after attempting the paper. Accept equivalent correct reasoning and sensible units. These are Evater model answers, not an official marking scheme.

Section A · 1 mark each

1. B — Investigation starts from noticing something and asking a focused question about it.

2. B — A testable question names what will be changed and what will be observed or measured.

3. A — The investigator picks one condition to change (air movement) so its effect on drying can be seen.

4. D — Keeping the other conditions the same makes it a fair comparison, so any difference is due to air movement.

5. C — Some observations are yes/no, while others, like drying time in minutes, are measurable numbers.

6. B — Honest, complete records let the conclusion rest on evidence and often spark the next question.

7. A — Each answer typically opens new questions; that is how science keeps moving.

8. C — If several things change together, their effects mix and no single cause can be identified.

9. B — Repeated measurements and checking conditions can help explain variation.

10. C — Earth lies at a distance where water stays liquid, and its atmosphere supplies oxygen while blocking harmful ultraviolet rays.

Section B · Model answers

11. Science begins with curiosity and careful observation, which need no special equipment. A kitchen or playground works: noticing that wet clothes dry faster on a windy balcony, or that one vessel of milk sours sooner than another, can start a real investigation. Asking what happens if we change something, and testing it step by step, is doing science.

Marking: 1 mark for rejecting the lab-only idea using curiosity and observation; 1 mark for a valid everyday example of a simple investigation.

12. Changed factor: presence or measured amount of salt. Controls include starting water volume, starting temperature, vessel and heating setting. Outcome: time to reach boiling, measured consistently. Only the teacher handles hot equipment.

Marking: 1 mark for the changed factor and outcome; 1 mark for two appropriate controls.

13. Because two things changed at once, their effects are mixed: the longer flight could be due to the thicker paper, the new wing shape, or both together. To find the cause, he must repeat the test changing only one feature at a time while keeping the other the same.

Marking: 1 mark for recognising mixed effects; 1 mark for stating the one-change-at-a-time remedy.

EVATER

14. Plan: take two identical cloth pieces, wet them equally, and hang one in front of a running fan and the other in still air in the same room, keeping sunlight and room conditions the same for both. Observe or measure: which dries first, or the drying time of each in minutes. The result might raise new questions, such as whether warm air dries clothes even faster than moving air, or whether thin cloth behaves differently from thick cloth.

Marking: 1 mark for a fair plan changing only air movement; 1 for a clear observation or measurement; 1 for a sensible follow-up question.

15. Deleting a result just because it disagrees biases the evidence. Better steps include checking the method or measurement, repeating the test under the same conditions, and recording all outcomes before revising the explanation. A surprising result can reveal a new factor or a problem in the method.

Marking: 1 mark for explaining bias from selective deletion; 1 mark for each of two sound next steps.

Topic references

NCERT Class 8 Science, Curiosity, Chapter 1: Exploring the Investigative World of Science.

https://ncert.nic.in/textbook/pdf/hecu101.pdf

Concept reference only. Questions and model answers are original Evater practice material, not an official NCERT paper.

Questions, contexts, values, options and model answers in this edition were written for Evater. Source references support the concepts; textbook exercises, illustrations and third-party question-bank wording are not reproduced. Edition: 16 November 2026.

EVATER