Year 5 reading comprehension

A fair test for insulation

Non-fiction | 6 questions

Name: _____ Date: _____

Read once for the main idea. Look back at the passage while answering. Find words that support each answer.

A class wants to compare three materials that might slow the cooling of warm water. They wrap identical cups in one equally sized layer of felt, paper and bubble wrap, choosing pieces of similar thickness. A fourth cup has no wrapping, so they can compare each material with an unwrapped cup.

For a fair test, the cups begin with the same amount of water at the same temperature. They stand in the same room, away from direct sunlight. The class measures each cup after the same number of minutes. Changing several conditions at once would make the results harder to interpret.

Before measuring, the pupils predict which cup will stay warmest. Their predictions are ideas to check, not results. If a measurement surprises them, they record it rather than replacing it with the value they expected.

A single reading may be affected by an error. Repeating the investigation can show whether a similar pattern appears again. Even then, the conclusion should describe the tested materials and conditions. A material that works well around a cup is not automatically the best choice for every building, coat or lunch box.

Questions

Choose one answer for each question. You can refer to the passage. The answer notes start on a separate page.

1. Why is one cup left unwrapped?

A. To hold all the thermometers
B. To replace every other cup halfway through
C. To make the water start colder
D. To compare the wrapped cups with an unwrapped cup

2. Which conditions are kept the same at the start?

A. The wrapping material on every cup
B. The predictions made by each pupil
C. The final measured temperature
D. The amount and temperature of the water

3. What does “interpret” mean here?

A. Work out what the results mean
B. Choose the warmest prediction
C. Wrap the cups more tightly
D. Change the recorded readings

4. Why should an unexpected measurement be recorded?

A. Evidence may differ from a prediction
B. A prediction is always the correct measurement
C. Surprising readings do not need checking
D. It proves the material works in every situation

5. How can repetition help?

A. It removes the need for equal water amounts
B. It turns a cup experiment into a test of buildings
C. It can show whether a similar pattern occurs again
D. It ensures every material gives the same result

6. What is the main purpose of this passage?

A. Give instructions for building a house
B. Describe the history of warm drinks
C. Explain how to make and interpret a fair comparison
D. Prove that bubble wrap is always best

Answers and explanations

Try the questions before reading these notes. A practice score is not an exam grade.

1. D. To compare the wrapped cups with an unwrapped cup

The first paragraph explains the unwrapped cup’s comparison role.

2. D. The amount and temperature of the water

The water starts with the same amount and temperature; the wrapping material is what changes.

3. A. Work out what the results mean

Keeping conditions alike makes it easier to understand what the results show.

4. A. Evidence may differ from a prediction

The passage distinguishes a prediction from a result, so evidence should not be replaced by an expectation.

5. C. It can show whether a similar pattern occurs again

Repeating helps check the pattern and reveal a possible one-off error.

6. C. Explain how to make and interpret a fair comparison

It explains controlled conditions, honest recording, repetition and limits on conclusions.

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