Qualitative, quantitative, observation & interpretation

Date _____ Topic 1/2

CUES · QUESTIONS

1. Qualitative vs quantitative?
2. Observation (class definition)?
3. Interpretation?
4. Which statement type can be both qualitative and quantitative?

Cover the notes. Answer each cue from memory.

NOTES

1 · Worked example Copy one example from the page. Next to each line write WHY in a few words.

2 · Fill in the blanks Cover the steps and redo it. Leave a gap where you are unsure.

3 · Your turn A new question. Then check it against the answer.

SUMMARY — IN MY OWN WORDS, TWO SENTENCES

Data, experiment, hypothesis, theory & law

Date _____ Topic 2/2

CUES · QUESTIONS

1. Data (class definition)?
2. Hypothesis?
3. Theory vs law in two words each?
4. Is the Law of Conservation of Mass an explanation?

Cover the notes. Answer each cue from memory.

NOTES

1 · Worked example Copy one example from the page. Next to each line write WHY in a few words.

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3 · Your turn A new question. Then check it against the answer.

SUMMARY — IN MY OWN WORDS, TWO SENTENCES

🔬 Science Basics · Formula and trap sheet

Everything you need before a test, on the fewest pages. Fold it and keep it in your binder.

Qualitative, quantitative, observation & interpretation

REMEMBER

- Qualitative = senses, no numbers. Quantitative = measured or counted numbers.
- Observation = qualitative, sensed directly. Interpretation = what it means, not directly seen.

WATCH OUT

- "4 beakers" is qualitative → it is a count, so quantitative.
- "A gas was produced" is an observation → interpretation; "bubbles formed" is the observation.

Data, experiment, hypothesis, theory & law

REMEMBER

- Data = numbers from an experiment; it supports or does not support a hypothesis, never proves it.
- Hypothesis = one unproven, testable guess ("If..., then..."). Experiment = test that gives a result.

WATCH OUT

- "The data proves the hypothesis" → "the data supports the hypothesis".
- "A theory becomes a law when proven" → they never convert; why vs what.