1.2 Doing Scientific Investigation:

Part Three

Part I : answer the following questions as True/False

1. Scientific investigation is a process of learning about the world using observation, hypothesis testing, and analysis.
2. The first step of the scientific method is forming a hypothesis.
3. A good scientific question should be measurable and answerable.
4. Background research helps scientists avoid repeating previous mistakes.
5. A hypothesis is always correct.
6. A hypothesis must be based on scientific knowledge and logical reasoning.
7. Experiments in science must be repeated to ensure reliability of results.
8. If an experiment does not support the hypothesis, the data should be changed to fit the prediction.
9. Analysing results helps scientists decide whether their hypothesis is supported or not.
10. Communicating results is unnecessary in science since experiments speak for themselves.
11. Other scientists repeating your experiment and getting the same results makes

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your hypothesis stronger.

12. The candle experiment proves that air is not necessary for burning.
13. In the candle experiment, the flame goes out because oxygen inside the jar is used up.
14. The scientific method is applied only in physical sciences like physics and chemistry.
15. The last step in a scientific investigation is communicating results to others.

Part II : Match the concepts in column "A" with descriptions in bolumn "B". put the correct number in the space provided.

Column A (Concepts)	**Column B (Descriptions)**
1. Ask a Question	…….. Tentative explanation or prediction that can be tested
2. Background Research	…….. The first step of scientific investigation often starting with "how" or "why"
3. Hypothesis	…….. Collecting information to avoid repeating mistakes and guide the investigation
4. Experiment	…….. Testing the hypothesis by conducting repeated

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procedures

5. Analyse Results …….. Determining whether the data supports or rejects the hypothesis

6. Communicate Results ……. Sharing findings with others through reports, papers, or presentations

7. Accuracy ……. How close a measurement is to the true or accepted value

8. Precision …….. How close repeated measurements are to each other

9. Variable …….. A factor that can change in an experiment

10. Control …….. A factor kept constant to ensure fairness in an experiment

11. Candle Experiment …….. Demonstrates that oxygen is necessary for burning

12. Observation …… Information gathered using the senses

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