

[SCIENCE TEST ANSWERS]

Student Name: John Doe

Class: 8B

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[QUESTION 1]

Explain the process of photosynthesis in plants.

[ANSWER 1]

Photosynthesis is how plants make their food using sunlight. It happens in the leaves where chlorophyll captures sunlight energy. The plant uses carbon dioxide and water to make glucose and releases oxygen as a byproduct. The chemical equation is:  $6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$ .

[QUESTION 2]

What are the three states of matter? Give one example of each.

[ANSWER 2]

The three states of matter are:

1. Solid - example: Ice
2. Liquid - example: Water
3. Gas - example: Water vapor

[QUESTION 3]

Define what a chemical reaction is and give one example.

[ANSWER 3]

A chemical reaction is when substances combine or break apart to form new substances. An example is burning wood - the wood combines with oxygen to produce ash, smoke, and gases.

[QUESTION 4]

What is the difference between an element and a compound?

[ANSWER 4]

An element is a pure substance made of only one type of atom (like oxygen). A compound is made of two or more different elements chemically bonded together (like water  $\text{H}_2\text{O}$ ).

[QUESTION 5]

Describe the water cycle in nature.

[ANSWER 5]

The water cycle has four main steps:

1. Evaporation - water turns to vapor
2. Condensation - vapor forms clouds
3. Precipitation - water falls as rain/snow
4. Collection - water gathers in rivers/oceans

Then the cycle repeats.