



**Questions:**

1. What do you observe after blowing into the water?

**The clear lime water turns milky.**

2. Give an explanation for your observation.

**Carbon dioxide turns clear lime water milky.**

**Conclusions:**

**People (living organisms) produce carbon dioxide during respiration.**

## Exercise 2: Page 26

1.1 Respiration

1.2 Oxygen, sugar

1.3 Carbon dioxide, water

2.1 Photosynthesis

2.2 Respiration

2.3 Photosynthesis

2.4 Photosynthesis

2.5 Respiration

3. Muscles produce lactic acid continuously.

When you exercise, your muscles work harder than usual and more lactic acid is produced. One is not always capable of taking in and processing enough oxygen during exercise. If you continue to work your muscles hard, the lactic acid levels in your blood reach a peak and the glucose or glycogen levels reach a low point which leads to muscle fatigue. That is why a burning sensation is experienced.

4. Anaerobic respiration is essential for the production of yogurt and cheese.

Cells such as yeast also perform anaerobic respiration. It is important in the production of wine, beer and bread.

5.

Photosynthesis	Respiration
Only takes place in plants.	Takes place in plants and animals.
Oxygen and sugar are formed during this process.	Water and carbon dioxide are formed during this process.
Sunlight is required for photosynthesis.	Light is not required for respiration.
Food is produced.	Food is broken down.
Energy is stored.	Energy is released.
Only takes place in cells that contain chlorophyll.	Takes place in all living cells.
An anabolic (constructive) metabolic process	A catabolic (destructive) metabolic process