Unit 22 – Photosynthesis and Respiration - Check List

Check your learning ! Can you do all the things on the list below ?

I can:

- ❒ name the vessels that carry water and minerals through a plant from the roots to the leaves.
- ❒ draw a labeled diagram of an experiment that shows where these vessels are found in a celery stem.
- ❒ describe an experiment and draw a labeled diagram to show that water is absorbed by plant roots.
- ❒ describe with a labeled diagram a method to show that water leaves the leaves of a plant by transpiration.
- ❒ describe a method to show that the liquid leaving leaves is water.
- ❒ state why the soil in a plant pot must be covered with a plastic bag if demonstrating transpiration in a bell jar.
- ❒ state that transpiration carries water to the leaves for photosynthesis.
- ❒ state that water evaporating off leaves cools the plant and drives transpiration.
- ❒ name the pores on the underside of the leaves that are controlled by guard cells.
- ❒ name the vessels that carry the products of photosynthesis away from the leaves to the rest of the plant.
- ❒ state that photosynthesis is the process by which green plants make food.
- ❒ state that photosynthesis is an example of an energy conversion where light energy from the Sun is converted into chemical energy in the leaf.
- ❒ name the pigment chlorophyll that is found in chloroplasts.
- ❒ describe adaptations of typical leaves that make them well suited for photosynthesis such as being flat and thin, with air spaces between cells and tiny pores called stomata on their undersides.

- ❒ write a word equation for photosynthesis.
- ❒ name the reactants for photosynthesis as carbon dioxide and water.
- ❒ name the products of photosynthesis as sugar and oxygen.
- ❒ state that the sugar produced in photosynthesis is stored by the plant as starch.
- ❒ describe with the aid of a labeled diagram a test to show that a photosynthesizing plant produces starch.
- ❒ identify respiration as a characteristic of living things and know that it is carried out by all living cells.
- ❒ write a word equation for respiration.
- ❒ state that aerobic respiration requires oxygen.
- ❒ think of respiration as equivalent to burning fuel in a fire in a process called combustion but that it is carried out in a much more controlled manner.
- ❒ define respiration as a process that releases energy from food.
- ❒ describe with the aid of a labeled diagram an experiment to show that respiration produces carbon dioxide.
- ❒ describe with the aid of a labeled diagram an experiment to show that respiration produces water vapour.
- ❒ describe with the aid of a labeled diagram an experiment to show that respiration produces energy.
- ❒ describe with the aid of a labeled diagram an experiment to show that exhaled air contains more carbon dioxide than inhaled air.
- ❒ draw and label a diagram that shows the structure of the human respiration system to include the nose, mouth, trachea, lungs, bronchi, bronchioles, alveoli and diaphragm.
- ❒ draw a diagram of an alveolus with its blood capillary showing oxygen diffusing into the red blood cells from the alveolus and carbon dioxide diffusing out of the blood plasma into the alveolus.