Resource 4 – Tree Cycle

Note: the proper order should start with photosynthesis in box one (top left) and end with respiration in box 6 (bottom right).

Photosynthesis

Light from the sun gives the tree energy to convert CO_2 and water into sugars and lots of oxygen.

The sugars containing the carbon from photosynthesis are transported through the inner bark of the trunk around the tree, called phloem.

Dead leaves and twigs collect at the bottom of the tree. This is called detritus. Much of the carbon stored by the tree goes into the soil.

The roots grow by using the sugars created by photosynthesis. This causes small amount of CO_2 to be produced.

Much of the detritus on the ground is eaten by detritivores such as worms or is decomposed by fungi and bacteria. This causes small amounts of CO_2 to be produced.

Respiration

The tree needs to use some glucose (sugar) and oxygen to survive and grow. This means a small amount of CO_2 is produced.