Photosynthesis & Respiration Cycles in the Carbon Cycle Name Period

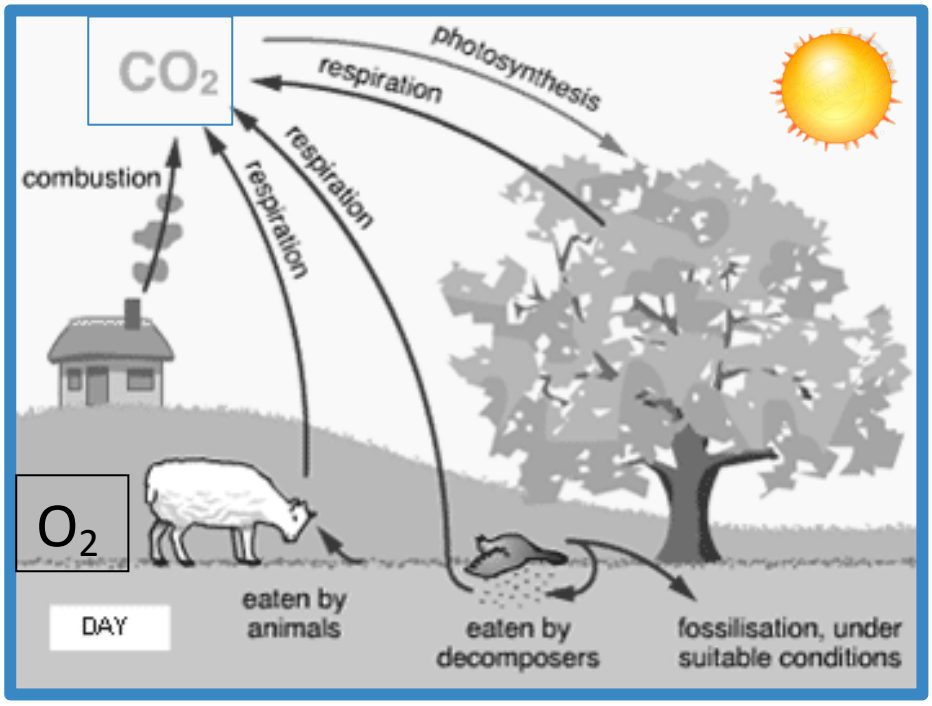
1. _G_____ plants do photosynthesis. Write the chemical equation for photosynthesis.

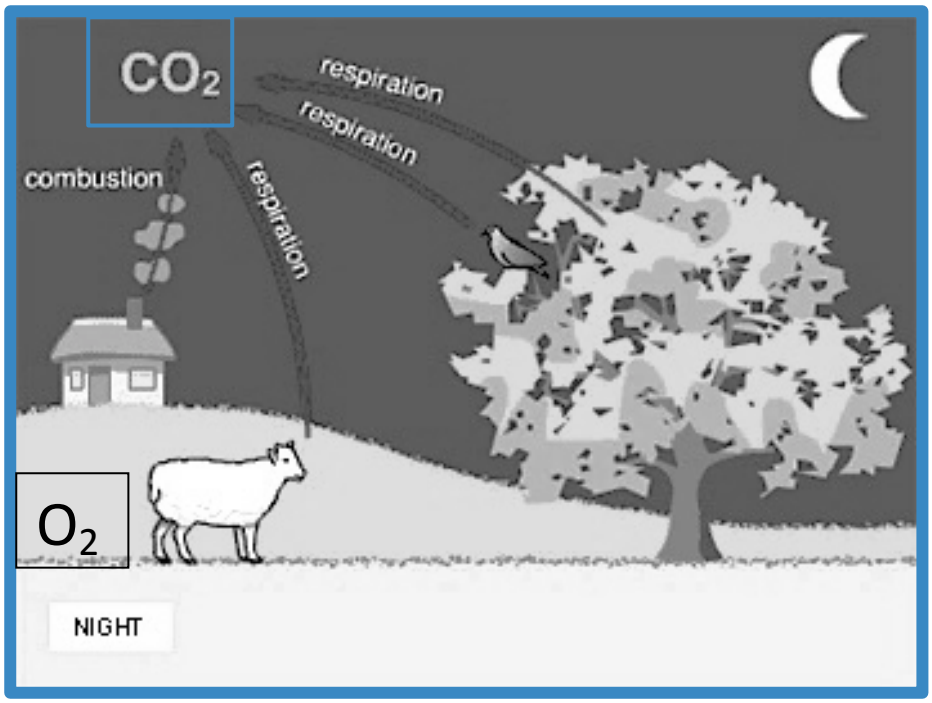
2. Plants & animals use ____ during respiration. Write the equation for respiration.

3. Color the arrows in the diagrams below.

Red = Carbon Dioxide Blue = Oxygen

4. Add Blue Arrows for Oxygen.
5. Add green to those that do the process of photosynthesis.





Photosynthesis & Respiration Cycles are part of the **Carbon Cycle.** **Name** **Period**

The Carbon Cycle: **Box carbon dioxide each time you find it below.**

All cells contain carbon, because they all contain proteins, fats and carbohydrates, which themselves contain carbon. For example, plant cell walls are made of cellulose, a carbohydrate.

Carbon dioxide also contains carbon. Carbon dioxide is one of the *greenhouse gases*. It is present in the atmosphere in small concentrations, about 0.038%. Carbon dioxide is recycled constantly through various processes that form the carbon cycle.

Processes that remove carbon dioxide from the air:

1. Photosynthesis is done by plants.
2. Dissolving in the oceans.

Processes that return carbon dioxide to the air:

1. Respiration by plants, animals and microbes.
2. Combustion (burning wood and fossil fuels such as coal, oil and gas)
3. Thermal decomposition of limestone (for example, in the manufacture of iron, steel and cement).

Decomposers, such as microbes and fungi, meanwhile play an important role in the carbon cycle. They "eat" and break down the remains of dead plants and animals and, in doing so, release carbon dioxide through respiration.

The main carbon transfer process during the night is respiration, through which carbon dioxide enters the atmosphere. There is also combustion, i.e. the burning of fuels.

During the day, in addition to respiration and combustion causing carbon dioxide to enter the atmosphere, there is photosynthesis, which is the reverse of respiration, and which takes carbon dioxide from the atmosphere.

Note that nearly all living things respire (carry on respiration)- including the microbes that break down the remains of dead organisms. Note also that when a living thing dies, the carbon in its body - especially the bones - may fossilize (which has nothing to do with day or night.)

Do the other side. →

[*This page has been adapted from www.bbc.co.uk/schools/gcsebitesize/science*]