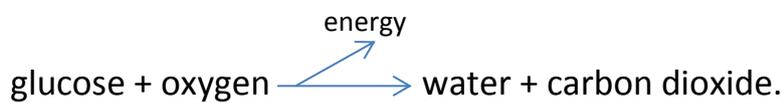


S1 Biology Unit 2 Healthy Planet

- Plants are used by humans for many things including clothing, building materials, food, medicines.
- A plant cell contains nucleus, cell membrane, cytoplasm, chloroplasts, vacuole and cell wall.
- Photosynthesis is the process of plants making their own food using light energy from the sun.
- The word equation for photosynthesis is:
 - $$\begin{array}{c} \text{Light energy} \\ \searrow \\ \text{water} + \text{carbon dioxide} \longrightarrow \text{glucose} + \text{oxygen} \end{array}$$
- The rate of photosynthesis can be measured by counting the number of bubbles given off by an underwater plant in a certain time.
- The test for starch is that iodine will turn from brown to blue/black in the presence of starch. To prepare a leaf for this test, it must be boiled in water, boiled in ethanol and then rinsed.
- An organism is a living thing.
- A habitat is a place where an animal lives.
- A community is all the organisms living together in an ecosystem.
- A population is the total number of one type (species) of organisms living within a community.
- An ecosystem is the combination of living and non-living things in an area.
- The natural habitat of a fox is woodland. The natural habitat of a camel is desert.
- Light is a factor which affects the population of a species. It is measured using a light meter.
- Soil moisture is a factor which affects the population of a species. It is measured using a moisture meter.
- Animals are adapted to live in their habitat. The adaptation is then passed on to the next generation. An example of an adaptation is the colour of a polar bear's fur which makes it harder to see.
- We sample organisms as it would take too long to count every single individual in a habitat.
- Three sampling techniques are quadrats, pitfall traps and branch beating.
- Quadrats used to sample plants.

- When using a quadrat place it randomly and do more than one sample.
- The abundance score is the number of squares of the quadrat that the plant appears in.
- A pitfall trap samples invertebrates at ground level.
- When setting up a pitfall trap make sure it is level with the ground and camouflaged from birds.
- Branch beating is used to sample invertebrates living in trees.
- When beating, make sure that the invertebrates fall onto a white sheet.
- Keys can be used to identify organisms.
- Organisms need energy for warmth and movement.
- Respiration is the process of taking in oxygen and glucose to release energy.

- The word equation for respiration is:



- Climate change is a long-term change in temperature or weather patterns.
- Global warming is an increase in a planet's temperature over a period of time.
- The greenhouse effect is the process of trapping heat from the sun by the atmosphere.
- Examples of greenhouse gases are carbon dioxide, methane and water vapour.
- It is thought that the increase in carbon dioxide in the atmosphere caused by burning fossil fuels and deforestation is causing climate change.
- The carbon cycle describes how the gases in the air are kept in balance:

