

Topic 2b – Living Environment

· A habitat is the natural home or environment where an animal or plant lives. Animals are adapted to live in their habitat.
· Habitats can change over time because of human activity, natural disasters or seasons.
· Abiotic factors are factors affecting the non-living components of an ecosystem (sunlight, temperature, water moisture, soil pH). They can be measured using specific equipment such as a light meter, thermometer pH paper and anemometer.
· Biotic factors are factors caused by living things that affect the living components of an ecosystem (predation, disease etc).
· I can explain how different organisms need different requirements to survive and how we can improve their habitats.
· 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.
· We sample organisms as it would take too long to count every single individual in a habitat. Sampling techniques are quadrats, pitfall traps, sweep nets, pooters, pond nets and branch beating.
· Plants are used by humans for many things including clothing, building materials, food, medicines, industry and the environment.
· 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: water + carbon dioxide → glucose + oxygen. Light energy is required.
· The rate of photosynthesis can be measured by counting the number of bubbles given off by an underwater plant in a certain time.
· Producers are organisms (green plants) that can make their own food by photosynthesis.
· Consumers are organisms which must consume other organisms for food.
· A food chain is a diagram that show how plants and animals get their energy.
· Branching 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: glucose + oxygen → water + carbon dioxide. Energy is released.
· There are several ways of artificially increasing quality and quantity of crops: - Pesticides, Herbicides, Fertilisers, GM crops, Biological control · I can state the advantages and disadvantages of each.
· Intensive farming - yield of crop plants per unit area of farmed land can be increased but it can have an adverse effect on the environment, health of animals and humans.
· The three nutrients required for healthy plant growth are <u>Nitrogen</u> (N): leaf growth; <u>Phosphorus</u> (P): Development of roots, flowers, seeds, fruit; <u>Potassium</u> (K): Strong stem growth, movement of water in plants, promotion of flowering and fruiting;