Lesson 4

The living factors

- Living factors are organisms that affect other organisms around them, and can also change populations.

- If organisms cannot get the resources they need , they cannot be part of a community or their populations will be small.

Factors affecting the size of population:

- 1) animals compete with each other for food , water and space.

- 2) plants compete for light , water , nutrients and space.

- 3) competition for resources may cause populations of some organisms to decrease   { food sources – mates – space }

- 4) diseases can kill organisms and reduce their population.

- 5) changes in living factors affect populations

Examples:-

- a)Number of predators affect number of prey in the habitat.

- b) Number of births and deaths of organisms affect the size of population

- 6) changes in physical environmental factors can also affect the distribution of population

Example:-

When it gets cold in winter , some animals migrate from their environment to new places so their populations decrease in these places

Lesson5

Competition :

Organisms compete with each other in a habitat for food and other resources

Adaptations :

- Organisms have developed special features to help them cope with the conditions in which they have to live , they have become adapted to survive in different environments.

- The organisms with the best adaptations for competition are more likely to survive and reproduce , others may die off or migrate.

- If the populations of an organism get too low, the organisms may become endangered or even extinct.

- Death can be caused by starvation , disease , old age or by being eaten

Lesson6

Feeding relationships

- Animals depend on plants or other animals for food.

- Food chains are a good way of showing the feeding relationships between organisms in a habitat.

Food chains:

- Show how living things feed on other living things.

- Animals depend on plants or other animals for food.

- Food chains are a good way of showing the feeding relationships between organisms in a habitat.

- Example of a food chain:-

- Lettuce ⟶ rabbit ⟶ fox

- Lettuce is eaten by a rabbit which is eaten by a fox.

- lettuce= producer ,   rabbit(herbivore), fox(carnivore) = consumers

A food chain always starts with a producer , even if it is dead and ends with a top predator

- Each organism contains chemical energy which is passed on to the animal which eats it.

- As you go along a food chain , there are fewer and fewer individuals at each level.

- Energy is lost at each stage .

- Animals feed on plants and use the energy released from carbohydrates to move and grow .

These animals may be eaten by other animals and so energy passes along the food chain

- At each stage in the food chain energy is lost.

- Only a small part of the energy is saved as new growth.

- Because of this waste , the number of animals at each stage in the chain decreases.

- If the population of one organism changes , the number of the other organisms will also change.

- Organisms depend on each other for things besides food .

- Examples:-

- Birds use trees for shelter.

- Plants use animal waste to grow (mineral salts)

Food web:

- A net work of linked food chains.

- In a food web there is more than one food chain.

- Many animals eat more than one type of food

- Living things can be part of several food chains.

Food webs give more information about organisms than food chains

- Example:-

- fox   eagle ⬅ bird

- rabbit ⬅ lettuce ➡ snail
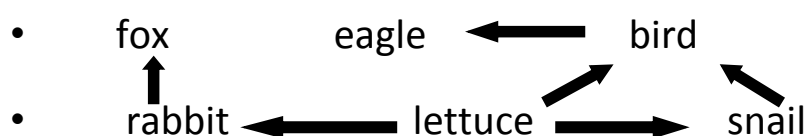
- In this food web :–

- If rabbits die due to a disease .

- Foxes will decrease in numbers

- {less rabbits means less food.}

- Snails will increase in numbers

- {less rabbits means more food }

Questions:

1-List three factors affect the size of populations?

2-Name two non-living conditions you could measure in an environment?

3-Explain how changes in living factors affect populations?

4-Explain this term (at each stage in the food chain energy is lost.)

5-A habitat is where an organism lives. What three things must a habitat provide?