

S2 Ecology

Revision Sheets

Abiotic Factors

•An abiotic factor is a non-living factor which affects the organisms living in a habitat. Examples of abiotic factors are:

•Temperature – measured with a soil thermometer



•Light intensity – measured with a light meter



•Rainfall – measured with a rain gauge

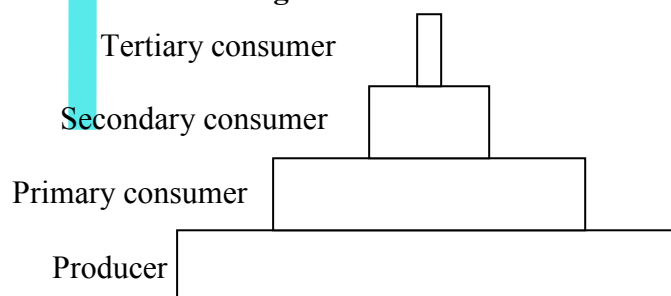


•Soil pH – measured with a pH meter



Pyramids

•Pyramids of numbers show how many organisms can be found at each feeding level in a food chain. As you move up a pyramid of numbers the organisms normally become larger, but the number of each organism becomes smaller.

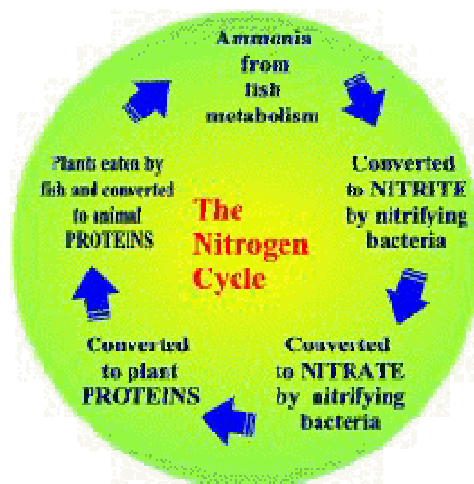


•Sometimes a pyramid of numbers does not look very pyramid shaped. This is normally because the producer is a very large organism (such as an oak tree). In this case we draw a pyramid of biomass instead.

•Pyramids of biomass show the mass of each population in a food chain.

Nitrogen Cycle

•Nitrogen is used to make protein, enzymes and nucleic acids. As the amount of Nitrogen on Earth is finite (limited) it must be constantly recycled in a process called the nitrogen cycle. This process depends on decomposition of dead plant and animal material by bacteria and fungi.



Charles Darwin, Evolution and Natural Selection

- Charles Darwin is a famous biologist who lived in the 1800's. He described many species of plants and animals for the first time. He is most famous for being the first person to describe the theories of Evolution and Natural Selection.
- Evolution is the gradual change of a species over time, resulting in a species better adapted to their environment.
- Natural selection is the process by which gradual changes of environment lead to changes in the organisms which live there. The organisms which adapt best to the changes in the environment survive and leave similarly adapted offspring. Those who do not adapt die.

Extinction

- Extinction occurs when there are no more of a particular species left. Extinction may be a local extinction – such as no bears left in Britain – or a global extinction – such as no Dodos left in the world. There have been five main periods of global extinction in the past.
- Possible reasons for extinction include disease, meteor strikes, global warming and ice ages. Humans can also cause extinctions through habitat destruction, pollution and hunting.