

BIOSPHERE - *Checklist*

Investigating an Ecosystem

1. An **Ecosystem** is an part of the natural world that has some key features which identify it eg rainforest, freshwater loch, moorland. In an ecosystem all the organisms present are called the **community** and live in a delicate **balance** with one another
2. A **habitat** is the place in an ecosystem where an organisms **lives** and **feeds**. It can be wide ranging (eg a woodland) or restricted (eg the undersides of leaves) depending on the organism studied
3. Whether a habitat is suitable for a particular organism or not depends on a number of factors. These are called **abiotic** factors.
4. **Abiotic** factors are due to physical conditions eg **temperature, light, moisture, pH, flow rate of rivers, oxygen level**. Measuring instruments (eg the light/moisture meter) are used to study abiotic factors.
5. The distribution of organisms is affected by abiotic factors. Certain plants will not grow in soil which is too alkaline or too acidic. Some water animals disappear when the oxygen levels fall.
5. Studying an ecosystem involves **sampling**. There are various methods of sampling the living things in an ecosystem eg using **quadrats** for sampling plants and **pitfall traps** for sampling soil organisms.
6. Whatever method of sampling is used the sample must be taken at **random** and be **large enough** to be representative.
7. Organisms found in an ecosystem are **identified** using a **key**. This can be a **branching** key or a key of **paired statements**.
8. Small organisms (flies, beetles etc) can be collected using a **pooter**.
9. All sampling and measuring techniques have possible **errors** which must be avoided to obtain reliable results.
10. The possible link between the distribution of organisms and various abiotic factors can be studied by doing a **transect**. This could show for example the connection between the abundance of a woodland plant and light level by doing a transect running from inside a woodland to outside