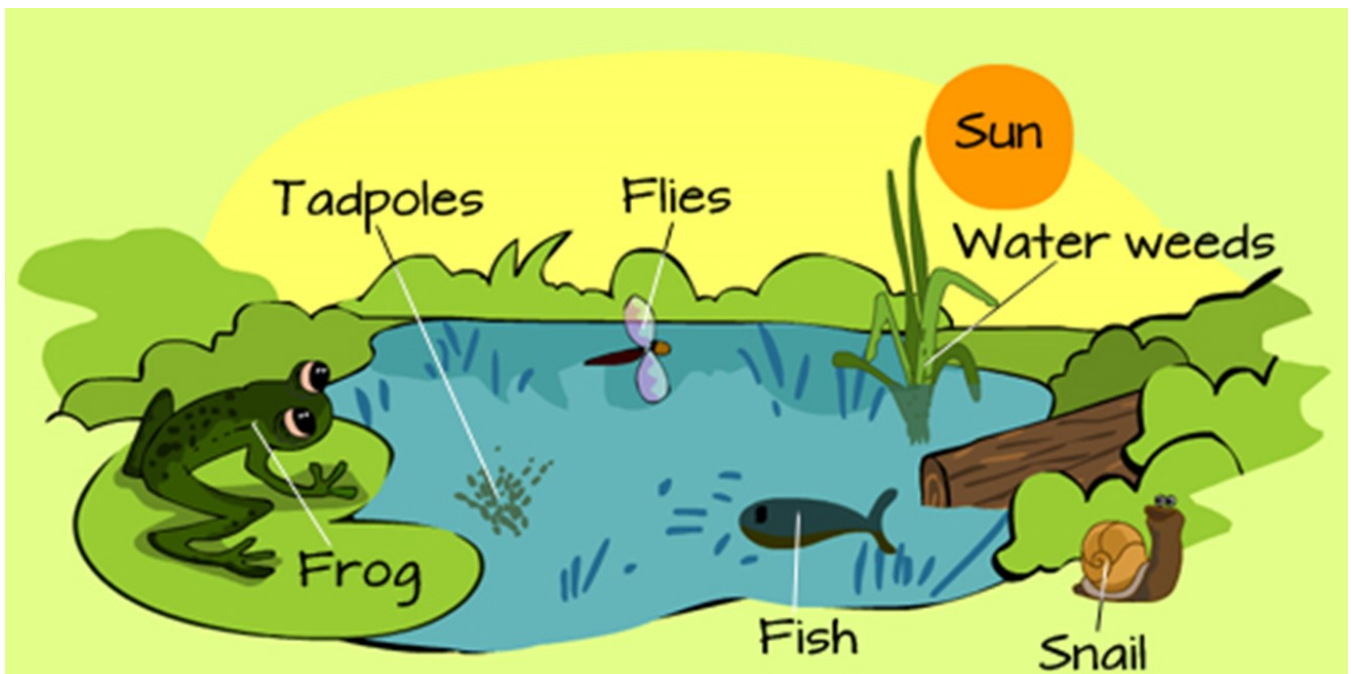# BGE Summary Notes

Biodiversity

Biodiversity

An **ECOSYSTEM** is all the organisms that live in a particular area and the non-living factors (eg temperature, light intensity) that affect them. Examples of ecosystems include tropical rainforest and desert.

A **HABITAT** is a place where an organism lives eg pond and woodland. The total number of living organisms of one type (species) living in an ecosystem is the **POPULATION**.

All of the plants & animals living in an ecosystem make up a **COMMUNITY**. The number of different types of organism found in an ecosystem is the **BIODIVERSITY**. Biodiversity in an ecosystem can be affected by BIOTIC and ABIOTIC factors.

Biotic factors are ways in which living organisms can affect other organisms living in an ecosystem eg disease, predation, competition, lack of food.

Abiotic Factors are the non-living components (parts) of an ecosystem with affect the organisms living in an ecosystem eg soil pH. Light intensity, temperature and soil moisture.

Light intensity and soil moisture are measured using a light/ moisture meter like the one in the diagram.


Sampling Methods

Sampling methods are used to investigate the types of plants and animals in an ecosystem; why they live there and how abundant (common) they are.

Quadrat

A quadrat is used to estimate the abundance of plants or slow moving animals.

Quadrat sampling

The quadrat is placed randomly and the number of

squares containing the plant being sampled are
counted. A large number of samples must be taken
and an average calculated to make the results reliable.
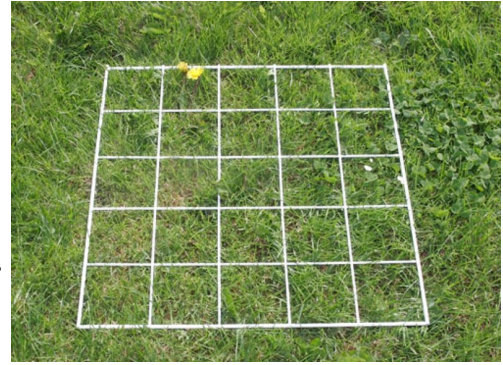

Pitfall Trap sampling

This is used to sample the insects

living on the soil surface or amongst the leaf

litter. The pitfall trap must be placed level
with the soil and camouflaged to prevent
birds eating trapped animals.

Line Transect

A line transect can be used to investigate

the effect of abiotic factors on the

distribution of plants in an ecosystem.

Light intensity is one factor which would affect
the distribution of plants as they need light for
photosynthesis.
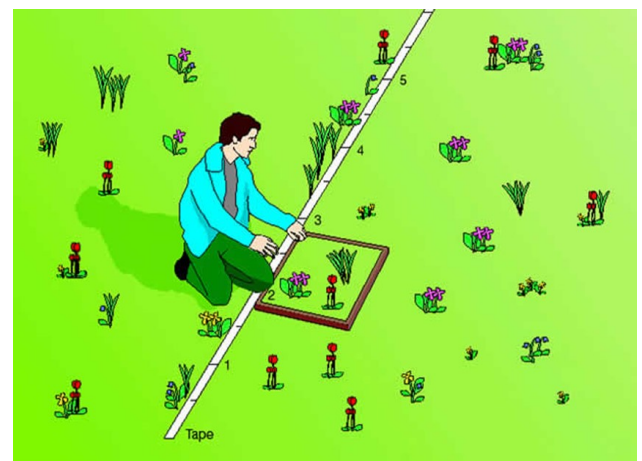
Branching Keys

A branching key can be used to help identify plants or animals. For example, a branching key can be constructed to identify the insects below.