

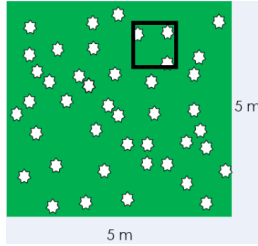
Week 1

Measuring Plant Distribution

Sampling is used to give a picture of an area or population as a whole, where it would be impractical to count every single organism.

Random sampling can be used to give information about the population as a whole.

Systematic sampling can be used to investigate the effect of a factor (such as light or water availability).



Estimating a population using a sample. How many daisies in this 25 m² field?

Each quadrat is 1m²

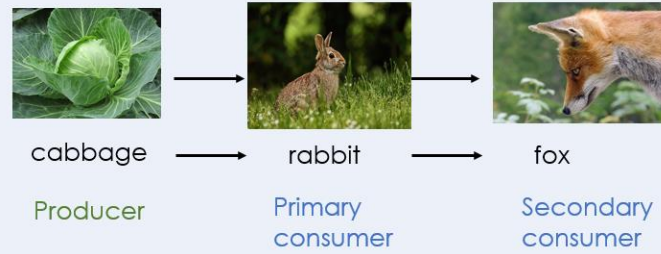
There are 3 daisies in the quadrat
3 x 25 = approximately 75 daisies in the field

We can make our estimate more accurate by taking more samples and taking a mean

Week 2

Food Chains and Food Webs

Food chains show the **energy transferred** between organisms.



Key word	Definition
Predator	Consumers that kill and eat other animals
Prey	Animals that are eaten
Producer	A plant that makes its own food using sunlight (by photosynthesis)
Primary consumer	An animal that eats plants
Secondary consumer	An animal that eats a primary consumer
Tertiary consumer	An animal that eats a secondary consumer

Week 3

Biotic and abiotic factors

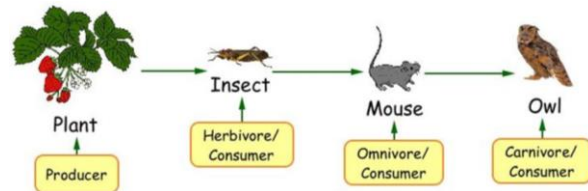
Biotic factors are **living organisms** that have an effect. Biotic factors include **predators**, availability of food (**prey** or **producers**) and **disease**.

Abiotic factors are **non-living things** that have an effect. This includes all the environmental things that make up the non-living parts of an ecosystem. Abiotic factors include **water availability**, **sunlight**, **wind**, **pH** (how acidic or alkaline something is), **temperature** and availability of **carbon dioxide** and **oxygen**.



Biotic Factors (living)
Availability of food
New diseases
New predators arriving

Abiotic factors (non-living)
Carbon dioxide levels
Light strength
Moisture levels
Oxygen levels
Soil mineral content
Soil pH
Temperature
Wind strength and direction



Year 7 Science: Term 5 Interdependence, Mixtures



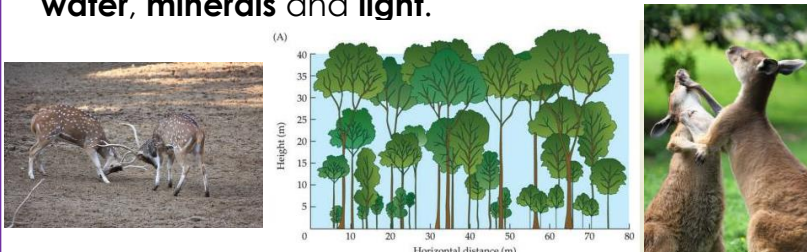
Week 4

Competition

Competition is when organisms compete for **limited resources**.

Animals compete with each other for **space**, **mates** and **food**.

Plants compete with each other for **space**, **water**, **minerals** and **light**.



Some animals compete for **dominance**.

This means they control the territory and access to food and mates.

Week 5

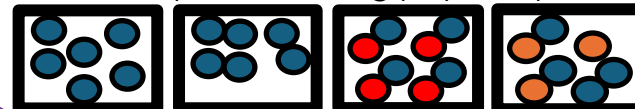
Mixtures

Atoms are the smallest part of an element that can exist. A substance that is made of only one sort of atom is called an **element**.

A **molecule** is a group of two or more atoms. Molecules of the same element or compound always contain the same number of atoms of each element.

A **compound** is a substance that contains two or more types of elements that are chemically combined.

A **mixture** consists of two or more types of atoms/compounds that are not chemically joined, and can be separated using physical processes.



Key words:

Competition - Where organisms need a resource that has a limited supply

Ecosystems - Interaction between a community of living organisms and their environment.

Photosynthesis - The process by which green plants use sunlight to make their own food (glucose)

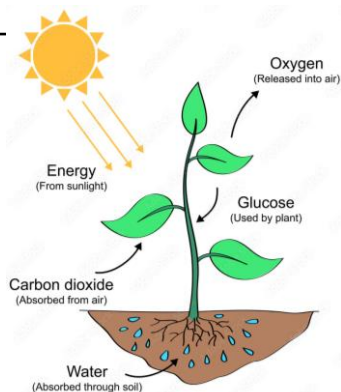
Solvent - A substance in which a solute can dissolve

Solute - A substance that can be dissolved in a solvent.

Solution - A mixture of a dissolved solute and a solvent.

Week 1

Questions	Answers
When to use systematic sampling	This can be used to investigate the effect of a factor.
Name the piece of equipment that is used to count organisms within it.	Quadrat
Why is it important to take repeat measurements	To ensure that data is reliable.
Why is it important to make repeat measurements?	Counting every individual would be very time-consuming.

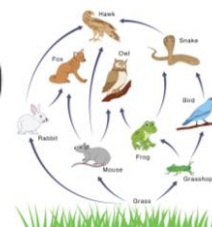


Week 2

Questions	Answers
What are green plants?	Producer
Describe a food chain	A food chain shows the direction of energy transferred.
Describe a secondary consumer	A secondary consumer eats the primary consumer.
What is prey?	Animals that are eaten by other animals.
What is a predator?	A consumer which kills other animals.

Week 3

Questions	Answers
Define a biotic factor	Biotic factors are living organisms that have an effect. Biotic factors include predators , availability of food
Define an abiotic factor	Abiotic factors are non-living things that have an effect. This includes all the environmental things that make up the non-living parts of an ecosystem.
How might new predators affect a population	Their prey will decrease as the predators eat them.
List some biotic factors	Disease, new predators and competition for resources.
List some abiotic factors	Wind, temperature, rainfall, soil pH, oxygen levels and CO ₂ levels



Year 7 Science: Term 5 Interdependence, Mixtures

Week 4

Questions	Answers
What do animals compete for?	Mates, food and space
What do plants compete for?	Space, water, minerals and light.
Describe dominance	They control the territory and access to food and mates.
Define competition	When organisms compete for limited resources.
How do plants compete for light?	They grow taller

Week 5

Questions	Answers
The smallest parts of matter are	Atoms
Describe a compound	Two or more elements joined by a chemical bond
How are mixtures and compound different	Compounds have a chemical bond mixtures don't.
A molecule is	Two or more non metal atoms joined by a chemical bond
If all the atoms are the same you have	An element

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