1	2											3	4	5	6	7	0
							1 **H** hydrogen 1										4 **He** helium 2
7 **Li** lithium 3	9 **Be** beryllium 4											11 **B** boron 5	12 **C** carbon 6	14 **N** nitrogen 7	16 **O** oxygen 8	19 **F** fluorine 9	20 **Ne** neon 10
23 **Na** sodium 11	24 **Mg** magnesium 12											27 **Al** aluminium 13	28 **Si** silicon 14	31 **P** phosphorus 15	32 **S** sulfur 16	35.5 **Cl** chlorine 17	40 **Ar** argon 18
39 **K** potassium 19	40 **Ca** calcium 20	45 **Sc** scandium 21	48 **Ti** titanium 22	51 **V** vanadium 23	52 **Cr** chromium 24	55 **Mn** manganese 25	56 **Fe** iron 26	59 **Co** cobalt 27	59 **Ni** nickel 28	63.5 **Cu** copper 29	65 **Zn** zinc 30	70 **Ga** gallium 31	73 **Ge** germanium 32	75 **As** arsenic 33	79 **Se** selenium 34	80 **Br** bromine 35	84 **Kr** krypton 36
85 **Rb** rubidium 37	88 **Sr** strontium 38	89 **Y** yttrium 39	91 **Zr** zirconium 40	93 **Nb** niobium 41	96 **Mo** molybdenum 42	[98] **Tc** technetium 43	101 **Ru** ruthenium 44	103 **Rh** rhodium 45	106 **Pd** palladium 46	108 **Ag** silver 47	112 **Cd** cadmium 48	115 **In** indium 49	119 **Sn** tin 50	122 **Sb** antimony 51	128 **Te** tellurium 52	127 **I** iodine 53	131 **Xe** xenon 54
133 **Cs** caesium 55	137 **Ba** barium 56	139 **La*** lanthanum 57	178 **Hf** hafnium 72	181 **Ta** tantalum 73	184 **W** tungsten 74	186 **Re** rhenium 75	190 **Os** osmium 76	192 **Ir** iridium 77	195 **Pt** platinum 78	197 **Au** gold 79	201 **Hg** mercury 80	204 **Tl** thallium 81	207 **Pb** lead 82	209 **Bi** bismuth 83	[209] **Po** polonium 84	[210] **At** astatine 85	[222] **Rn** radon 86
[223] **Fr** francium 87	[226] **Ra** radium 88	[227] **Ac*** actinium 89	[261] **Rf** rutherfordium 104	[262] **Db** dubnium 105	[266] **Sg** seaborgium 106	[264] **Bh** bohrium 107	[277] **Hs** hassium 108	[268] **Mt** meitnerium 109	[271] **Ds** darmstadtium 110	[272] **Rg** roentgenium 111	Elements with atomic numbers 112 – 116 have been reported but not fully authenticated						

Key

relative atomic mass
atomic symbol
name
atomic (proton) number

* The Lanthanides (atomic numbers 58 – 71) and the Actinides (atomic numbers 90 – 103) have been omitted.

Relative atomic masses for **Cu** and **Cl** have not been rounded to the nearest whole number.

Forces

Key Vocabulary:

Acceleration: The rate at which an object's velocity changes
Air resistance: The force of air acting on a moving object
Balanced forces: Two forces of equal size acting in opposite directions
Contact force: A force that must touch an object to affect it
Friction: The force caused by one surface touching another surface
Gravity: A force that attracts an object towards the centre of another object
Magnetism: The force between two magnets or between a magnet and a magnetic material
Motion: Movement
Newton: The unit for force
Non-contact force: A force that can affect an object without touching it
Tension: The force acting on an object that has been stretched
Thrust: A 'pushing' force
Up-thrust: The force that acts upwards on an object, often from air-resistance or water
Velocity: The scientific word for 'speed'
Weight: The force that results from an object's mass and the effect of gravity

Life.

7 life processes: (MRS GREN). Movement, Respiration, Sensitivity, Growth, Reproduction, Excretion, Nutrition.

Habitat: Is where an organism lives, it contains everything the organism needs to survive.

Ecology: the relations of organisms to one another and to their physical surroundings.

Environment: everything within the surroundings of a specific area.

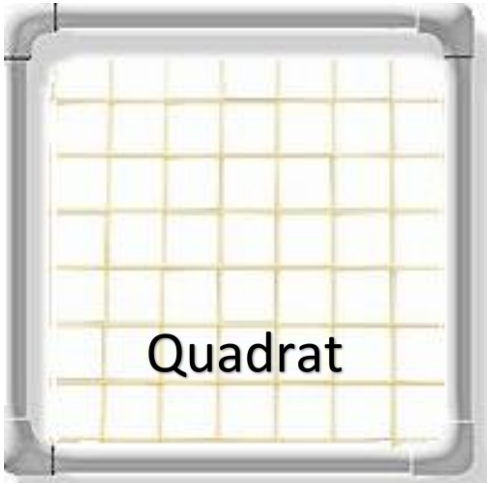
Sample: A small part or quantity intended to show what the whole is like.

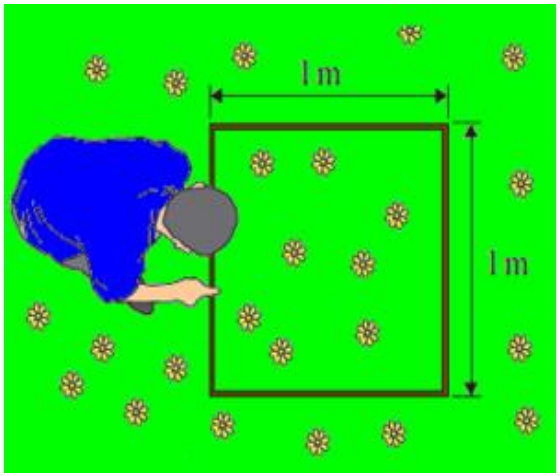
Population: the number of organisms of the same species within a certain area

Abundance: A measure of how common or rare something is.

Distribution: Where particular types of organisms are found within an environment.

Quadrat: A square frame randomly placed, to estimate number of plants and animals in a given area.





Feeding Relationships.

Food Chain: a series of organisms each dependent on the last as a source of food.

Food webs: many food chains linked together to show the feeding relationships of organisms in an ecosystem.

Producer: A plant (or photosynthesizing microbe) can make its own food (glucose) using photosynthesis.

Consumer: An organism that obtains its food by feeding off of other organisms.

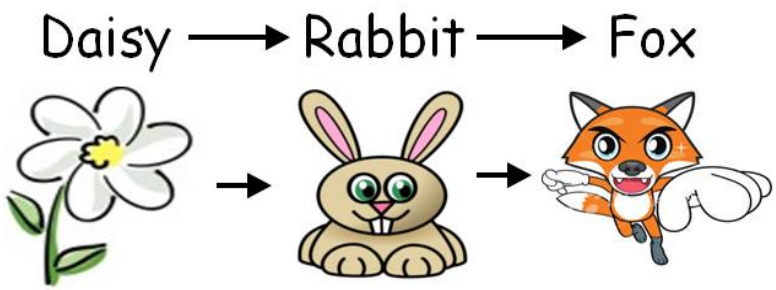
Trophic level: the position an organism occupies in a food web, shown by the number of steps it is from the start of the chain.

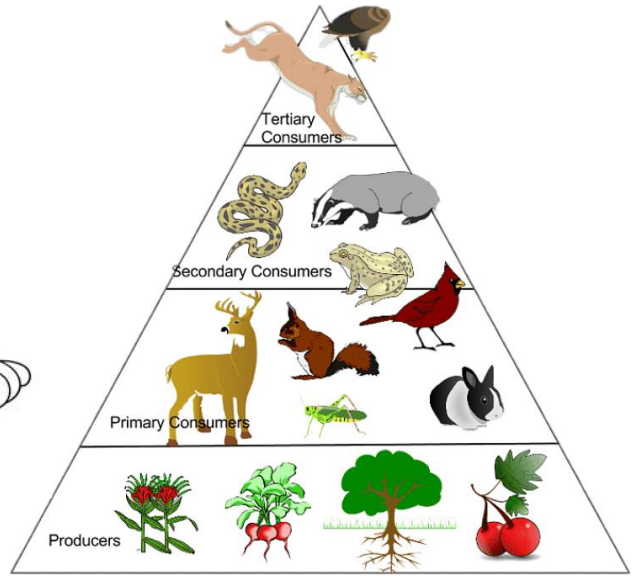
Pyramid of numbers: is a graphical representation that shows the number of organisms at each trophic level.

Biomass: the total quantity (kg) of organisms in a given area or volume.

Pyramid of biomass: A graphical representation of the amount of organic material found in a particular habitat at ascending trophic levels of a food chain.

Food Chain.
* → Shows the movement of energy.





Keyword	Definition
Habitat	The area in which an organism lives
Ecosystem	The interaction between plants , animals, and their habitats in a particular location
Community	The collection of different types of organisms present in an ecosystem
Adaptation	Characteristics that help an organism to survive in its environment
Structural adaptation	Physical feature that the animal has to help it survive
Behavioural adaptation	Something the animal does to aid survival e.g. migration , hibernation
Extremophile	An organism that can survive and reproduce in extreme conditions

Habitats are places where organisms live.

Examples of habitats include:
Desert, meadow, woodland, grassland
forest, seashore, ocean.

Living things are adapted to their habitats. Animals and plants have special **adaptations or** characteristics that help them survive in the habitats.

An African elephant, for example, lives in a hot habitat and has very large ears that it flaps to keep cool.

An Arctic fox lives in a cold habitat, it has thick fur to keep it warm.

Large ears and thick fur are examples of **structural adaptations.**