

SPRING 1

Section 1 - Vocabulary

Species	A group of similar organisms (living things) that share similar genetics and can breed together.
Origin	Where something comes from.
Evolution	The theory that the animal and plant species living today descended from species that existed in the past.
Natural selection	The process by which species change over time in response to environmental changes and competition for resources
Microorganism	A living thing that can only be seen with a microscope. E.G. virus, bacteria.

Section 4 – Inheritance and variation

Reproduction is the name for when species produce offspring (a person's child or animals young). Living organisms inherit characteristics such as hair and eye colour from their parents. There are subtle differences between organisms in each species. Cats, for example, have different fur colours and thickness. This is called variation.

"SURVIVAL OF THE FITTEST"

Section 2 – Fossils and rocks

Fossil – The remains or impression of a prehistoric plant or animal embedded in rock and preserved
Igneous rocks include granite, basalt, pumice, diorite, fire opal.
Sedimentary rocks include sandstone, limestone, flint, slate, mudstone.
Metamorphic rocks include marble, slate, quartzite, phyllite.

Identifying rocks

Igneous	Metamorphic	Sedimentary
		
Formed from cooling magma or lava.	Formed from igneous or sedimentary rocks which have been either melted, bent, folded or squashed.	Formed from small parts of other rocks settling one on top of the other (compaction).
<ul style="list-style-type: none"> Has tiny crystals Sharp rough edges Can look like black glass There will not be fossils! Usually quite tough 	<ul style="list-style-type: none"> It can look wonky There might be squashed layers. There wont be any crystals or fossils. 	<ul style="list-style-type: none"> There may be fossils present There will be different stones mixed in. Easy to break or chip.

Section 5 – Sketching skills

Try different mark-making methods – light lines, bold outline, cross-hatching, shading
Vary your lines – small lines, join them together bit by bit, longer strokes for a larger outline
Avoid smudging – use an extra piece of paper under your hand to stop smudging. Right-handed, start shading from left to right; left-handed, shade right to left.
Look often, sketch less – Look at the subject you are sketching every 3 seconds to check your work.

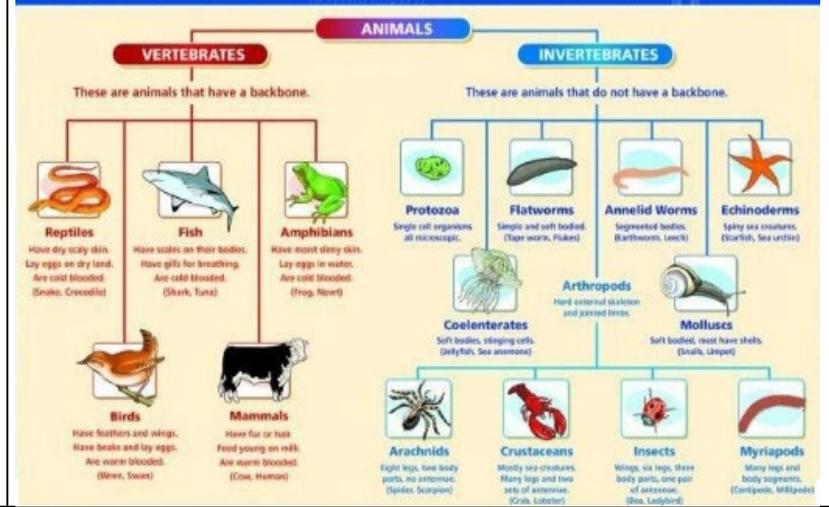
Science and Art KNOWLEDGE ORGANISER

Section 3 – Classification

The classification of organisms means putting them into groups of similar organisms based on their characteristics.
 There are five kingdoms of living organisms: animals, plants, fungi, bacteria and protocists.

CLASSIFICATION OF ANIMALS

This is the grouping together of animals with similar characteristics. Animals can be classed as either vertebrates or invertebrates.



Section 6 – Adaptation

Adaptation

Living things are adapted to their habitats. This means that they have **special features** that help them to **survive**. An African elephant, for example, lives in a hot habitat and has very large ears that it flaps to keep cool. A polar bear, on the other hand, lives in a cold habitat and has thick fur to keep warm. A cactus is well adapted for survival in the desert: they have long roots to collect water from a large area and a stem that can store water for a long period of time. The animals and plants in one habitat are **suited** to live there and may not be able to **survive** in other habitats. When a habitat changes, the animals and plants that live there are affected. If a species cannot adapt quick enough, to be suited to the new environment, it will die out and become extinct.