

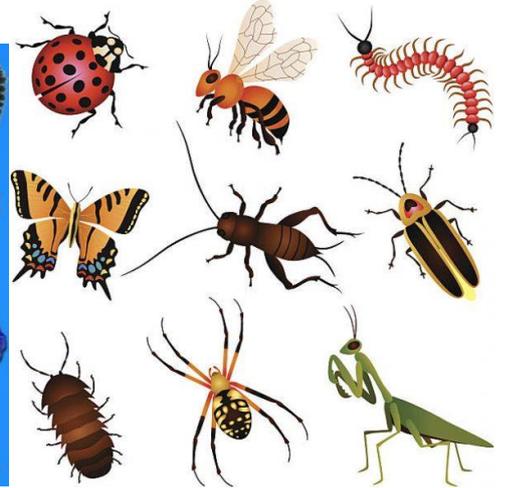
Science

For this unit of science we have been looking at animals and how they have been classified into groups using their features and characteristics. We have looked at reptiles, birds, mammals and amphibians. This week we are going to be comparing fish and insects and identifying their similarities and differences.

FISH



INSECTS

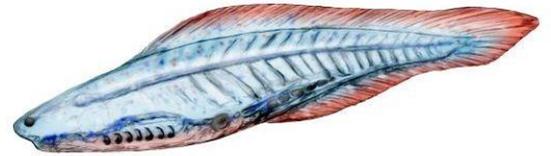


These two groups of animals look very different, but like all living organism, there are some similarities among all of their differences.

Insects are incredible creatures. There are 1.4 billion insects on the Earth for every person, and don't forget that there are over 7.5 billion people on this planet! The total mass of all the insects in the world is over 70 times the mass of all the people. There are so many insect species. Over 1 million have been discovered and scientists believe there may be up to 10 million species on the Earth. If you remember, there are only 8000 species of amphibians that we looked at last week. Insects make up 90% of all species of animals and are 50% of all living things. Insects are crucial to life on Earth and the world would be very different without them. Insects are one of the oldest life forms on the planet. They evolved over 350 million years ago and when the Earth's atmosphere was richer in oxygen, insects reached huge sizes. One species of dragonfly had a wingspan of nearly 1m and there is an artist's impression of it under the ladybird picture.



Fish are also one of the oldest forms of animals on our planet. They first evolved during the Cambrian explosion 530 million years ago. Fish are the ancestors of all the vertebrate animals on the planet, including you. The first known animal with vertebrae (backbone) was a small fish called Haikouichthys which lived 518 million years ago. This fish was only 2.5cm in length and is one of the oldest known ancestors in the human evolutionary tree. Fish evolved into all manner of shapes and sizes. One group, the placoderms, evolved teeth made of bone that could cut through armour! Eventually, one group of fish, lobe-finned fish, evolved to live on land and are our evolutionary ancestors. The photo to the



right is of a modern fish called a coelacanth, which is often called a living fossil as it was thought to have become extinct 65 million years ago when the dinosaurs died out. However, no one had told the fish it was extinct as it was, and is, living quite happily off the east coast of Africa.

Your body is full of evidence of our fish ancestors. Your jaw and larynx (vocal chords) are evolved from the gills of fish into a new purpose! There are over 34000 known species of fish that live all over the world in fresh and salt water, including sharks and rays. The largest species of fish in the world is the whale shark, which despite its size, eats the smallest food in the ocean – plankton.



Your task is to read the texts (which are in the home learning page on the school's website) and then complete the similarities and differences sheet (also on the home learning page). Example answers: Similarity – Fish and Insects both lay eggs. Difference – Fish have scales. Difference – Insects have an exoskeleton.

If you would like to do more research to help you complete the task then there is a link to other useful websites on the school's website in the home learning folder.