Ocean Academy Poole
an Aspirations Academy
Self-Worth | Engagement | Purpose

Learning Journey Map

Year: **6** Term: **SPRING 2**
Subject: **SCIENCE** Topic: **LIVING THINGS AND THEIR HABITATS**

Driving Question: see Evolution
Power Skill: see Evolution

National Curriculum Learning Objectives

- describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals
- give reasons for classifying plants and animals based on specific characteristics

Key Vocabulary

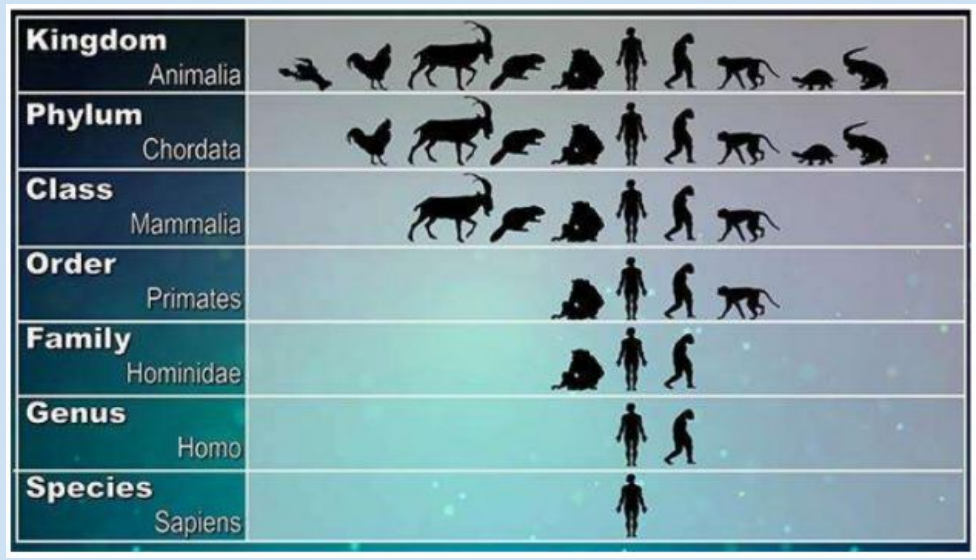
Classify	Classification	Taxonomist	Kingdom	Phylum
Class	Order	Family	Genus	Species
Vertebrate	Invertebrate	Non-seed bearing plants	Seed bearing plant	Microorganisms

Key Learning

Classification

Classification is a way of grouping different living things together by their features. Grouping things together can make understanding living things easier.
Classification involves placing living things into progressively smaller and smaller groups.

These groups are: kingdom, phylum, class, order, family, genus and species.



The three most well-known kingdoms of multicellular organisms are animals, plants and fungi.

Thinking Point
Why is it important to classify living things?

Animals, Plants and Microorganisms

A vertebrate is an animal with a bony spinal column or backbone (mammals, birds, reptiles, fish and amphibians).

An invertebrate has no internal skeleton or backbone (insects, arachnids, crustaceans, molluscs, myriapods and worms).

Plants can be divided into two main groups: flowering and non-flowering plants.

A microorganism is an organism that is too small to see without a microscope.

Thinking Point
Can microorganisms be good for you?

Classification keys

Classification keys are a means of identifying unknown organisms based on their distinct features.

The scientist Carl Linnaeus invented the current system of naming all living things in the mid 1700s.

Pre-reading: Carl Linnaeus

Explanation: Classification

Explore and Investigate

Small Question	Enquiry	Big Idea(s)	Enquiry Type
What makes bread rise?	Chn are shown how yeast, sugar and warm water causes a reaction; they then investigate what happens to this reaction when they change particular variables of their choice (sugar/no sugar, water temperature, adding chemicals, etc)	**B3:** The different kinds of life, animals, plants and microorganisms, have evolved over millions of generations into different forms in order to survive in the environments in which they live.	Observing over different periods of time Fair testing

Resources: Yeast, Sugar, Beakers

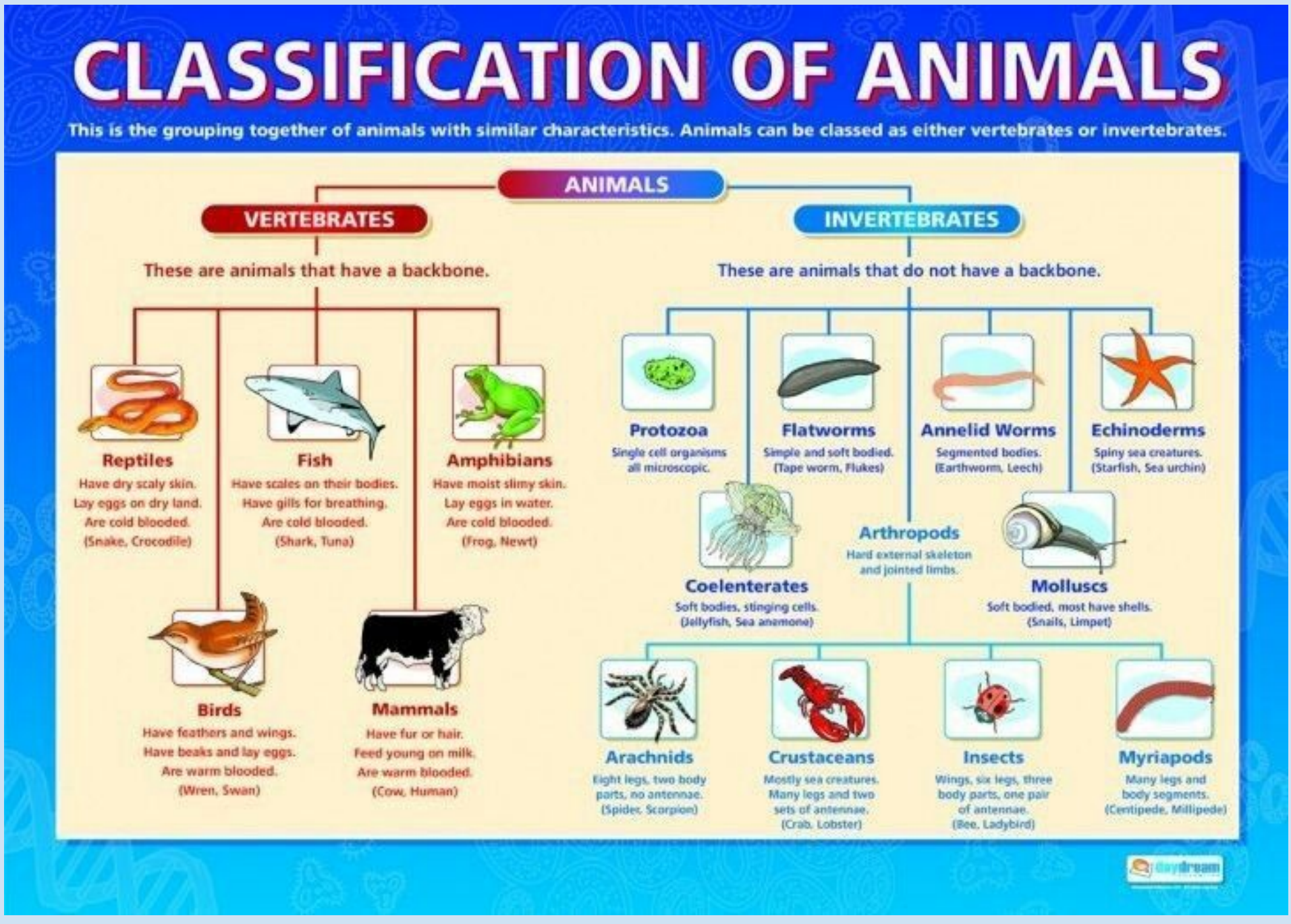
Key Learning

Common misconceptions:

- Children may misidentify an organism such as coral as a plant.
- There are many plants that children might not immediately think of as plants since they don't have flowers such as mosses and ferns.
- Mushrooms are not plants as they do not contain chlorophyll and they are classed as fungi. Point out the lack of green on the fungus, and stress that, without the green pigment chlorophyll, a fungus is unable to manufacture food from sunlight. Instead, fungi absorb their nutrients from plants or animals.
- Children can get confused about dolphins, whales and fish. Dolphins and whales, unlike other mammals, are not furry, and they may be wrongly classified as fish as they resemble sharks.
- Children can get confused about snakes, which may be misclassified as invertebrates since they are very flexible and may appear to have no skeleton.
- It might not be obvious to children which parts are the flowers in some flowering plants. For example, the flowers in grasses are small and green, rather than the brightly coloured parts that we normally think of as flowers.

Thinking Point
Why is a mushroom not a plant?

Thinking Point
Why do we give things Latin names?



Demonstration:

Model classification by creating a key to organise types of sweets, biscuits or characters from a film or computer game.