

What is the difference between living and surviving?

SCIENCE – Living things & their habitats



National Curriculum Links:

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.
Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
Identify scientific evidence that has been used to support or refute ideas or arguments.

Essential Prior Learning:

Living things can be grouped in a variety of ways.
Living things live in habitats to which they are suited.
Environments can change and this can have an effect on living things.
Children should be able to explore and use classification keys and group living things.

Progression in Skill:

Use classification keys, tables and Carl Linnaeus' taxonomy to identify, classify and describe living things. Develop own classification keys and tables to identify, classify and describe living things.
Recognise when and how secondary sources might help you answer a question that cannot be answered through practical investigations:

- books
- photographs
- videos

Draw and annotate diagrams and graphs with increasing complexity (classification keys).

Look for naturally occurring patterns and relationships, both during events and over decades and centuries.

Use disciplinary writing and scientific vocabulary to answer the enquiry question.

Know how scientists have developed ideas over time and improved efficiency, building on the work of other scientists and exploring the work of Carl Linnaeus, Joseph Lister and Charles Darwin.

Describe how living things (micro-organisms, plants, animals) are classified into broad groups according to common observable characteristics, based on similarities and differences.

Give reasons for classifying plants and animals based on specific characteristics.

Classify microorganisms, including bacteria, viruses, fungi, and protists, and understand the crucial role they play in various aspects of life on Earth.

Long-term Memory Knowledge:

Living things (animals, plants and microorganisms) can be grouped according to their observable characteristics, looking for their similarities and differences.
Demonstrate classifying a group of living things, giving reasons for decisions made.
Know what Charles Darwin, Joseph Lister and Carl Linnaeus are known for and why their work is important to our understanding of science.

Key Vocabulary

vertebrate	an animal that has a backbone or spine inside its body
non-vertebrate	an animal that does not have a backbone or spine
taxonomy	the science of naming and classifying organisms
dichotomous key	A specific type of key where every step offers exactly two choices
classification key	used to identify and group living or non-living things based on observable traits
microorganism	tiny living things that are so small that they cannot be seen without a microscope

Progression in Resources:

- Classification keys
- Images of a broad range of living things, including insects, algae, moss, fern, conifer, bacteria, arachnids, crustaceans, millipedes, annelids, echinoderms, molluscs, coelenterates, ginkgoes, angiosperms, fungi, protists
- Information texts

Relevance

Now	Children develop an understanding of how science helps us to understand the world; they can make links between living things in their environment and those they have only read or heard about.
Future	Children recognise the impact humans have on changing environments and how this can affect other living things; they make lifestyle choices that minimise the impact on other living things.
Aspiration	Children pursue a career in conservation – or volunteer for such an organisation.