



The Moorlands Primary Federation Science Plan



School: The Valley Primary School **Class:** 3
Termly Learning Plan: Classifying Living Things **Term:** Autumn Term 1

Unit Overview:

Children build on their learning about grouping living things in Year 4 by looking at the classification system in more detail. The topic is divided into two units, Children first revisit their knowledge of classification and creating keys, before developing their knowledge by looking at fungi and bacteria. Children also look at the work of Carl Linnaeus, the scientist who first made important the function of naming and classifying to 'identify' organisms.

STEAM:

Invite into class

Biologist, botanist from a local university outreach group to work with children, help identify plants and animals and teach Latin names. Arrange for a STEM ambassador to work with the children. An artist to teach children how to do observational drawings. Local wildlife group to talk with children.

Visit

Local wildlife reserve for children to work with staff. Local botanic gardens for children to work with staff. Local marine centre for children to work with staff. Local secondary school to use microscopes.

Learning Sequence & Objectives	Working scientifically skills	Resources
Give reasons for classifying plants and animals based on specific characteristics.	Give reasons for classifying plants and animals based on specific characteristics.	Liquorice allsorts Lollipop sticks Dry-wipe pens and rubbers Chalk Activity Resource 1.1 PowerPoint Slides 6 and 7 Interactive activity Video: Classifying living things
Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.	Give reasons for classifying plants and animals based on specific characteristics. Identify scientific evidence that has been used to support or refute ideas or arguments.	Collecting trays Identification keys and books Hand lenses and magnifiers Activity Resources 1.2 and 1.3 Cameras
Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals	Give reasons for classifying plants and animals based on specific characteristics.	Glitter PowerPoint slides 8–21
Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. 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	PowerPoint slides 13–15, 22–24 Range of foods created by fungi, e.g. bread, yoghurt, salami, cheeses Hand lenses Knives Chopping boards

		Mushrooms Clear sandwich bags Sticky labels Fresh bread (avoid long-life bread)
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Activity Resources:

ACTIVITY RESOURCES: 1.1 Animal, vegetable or mineral? 1.2 Looking at leaves 1.3 Leaf record sheet 1.4 Carl Linnaeus cards

ONLINE RESOURCES: Teaching slides (PowerPoints): Classifying living things CPD video: Classifying living things Pupil video: Classifying living things Interactive activity: Classifying living things Word mat: Classifying living things Editable Planning: Classifying living things Topic Test: Classifying living things.

Cross-Curricular Activities:

English

Derivation of words and build new names of groups and classification of objects from Latin or Greek meanings. Folk tales related to plants, stories behind plants e.g. Shepherd's Purse. Read Beatrix Potter stories and write in the same genre. Research, take notes, create a biography of Carl Linnaeus, Beatrix Potter.

Computing / ICT

Use a branching database to use and make classification keys. Use digital microscope. Plan, script and record a public health video about microorganisms.

Design and technology

Investigating yeast in baking. Design and make a microbe.

Geography

Explore the range of flora and fauna in other countries and contrast with UK.

History

Use of plants, e.g. in medicine. Preserving food through the ages, e.g. pickling, salting, and smoking. Research Carl Linnaeus, Charles Darwin.

Art

Observational drawings of plants and animals. Biological drawings, with Latin names. Look at work of Beatrix Potter as a mycologist (studying fungi).

Outdoor learning

Explore the range of wildlife, plants and animals in the local environment. Use classification keys.

Vocabulary:

- amphibian: an animal with an internal skeleton that lives both in and out of water
- bacteria: single-celled organisms, most of which can only be seen with a microscope
- bird: an animal that can often fly and has an internal skeleton
- fauna: living things that are animals
- fermentation: a change brought about by ferment (e.g. yeast into alcohol)
- fish: an animal with an internal skeleton that lives in water and has gills
- flora: living things that are plants
- fungi: taxonomic kingdom comprising all the fungus groups and sometimes also the slime moulds
- genus: the group that an organism belongs to
- insect: an animal with six legs
- invertebrate: animal without a backbone
- mammal: an animal that gives birth to live young
- microbe: tiny single-celled bacteria
- mushroom: any of various fleshy fungi
- including the toadstools, puffballs, coral fungi and morels
- organisms: living things
- reptile: are animals that are cold-blooded. Most reptiles lay eggs and their skin is covered with hard, dry scales
- species: the sub-group within the genus that an organism belongs to
- toadstool: any of various mushrooms having a stalk with an umbrella-like cap
- vertebrate: animal with a backbone
- **SCIENTIFIC VOCABULARY: CLASSIFYING LIVING THINGS**
- Children may believe ... That there are only two groups of living things – animals and plants. That plants are green and 'traditionally plant-like'. That coral is a plant. That fungi aren't alive. That mushrooms and other fungi are plants. That microbes are always bad. That all animals move and have legs.
- Children already know ... That there are ways to classify living things. That there are invertebrates and vertebrates. That two of the main groups of living things are animals and plants. Some of the features of animals and plants. That fungi and microbes exist. That 'germs' cause diseases.

- CHILDREN'S MISCONCEPTIONS - might belong to, or resemble. He started to classify plants into 24 classes according to the number and position of their stamens and pistils. Although later botanical knowledge revealed that this system was inadequate, it did lay the foundation for the science of plant taxonomy.

Christian Distinctiveness:

Celebrating nature.