

National Curriculum:
Science

Pupils should be taught to:

- distinguish between an object and the material from which it is made
- identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- describe the simple physical properties of a variety of everyday materials
- compare and group together a variety of everyday materials on the basis of their simple physical properties
- identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

Key Learning



ocean



coastal



woodland



rainforest

Habitats provide food and shelter for the animals and plants that live there.



A woodland food chain



nettle → caterpillar → blue tit

A **microhabitat** is a small area with different conditions to the surrounding area.



Minibeasts are small creatures without a backbone.

Minibeasts are small creatures without a backbone.



Minibeasts live in microhabitats that provide them with **food** and **shelter**.

Scientists use **super Science skills** to find answers to questions.

| Super Science skills | |
|------------------------------|---------------------------------------------------------------------------------------|
| Researching |  |
| Observing over time |  |
| Comparative and fair testing |  |
| Grouping |  |
| Spotting patterns |  |

Vocabulary

Excretion To get rid of waste.

Growth Animals and plants changing over time.

Life processes The things every living thing does.

Movement Change of place or position.

Nutrition The food eaten for growth and health.

Reproduction Animals and plants producing new versions of themselves.

Sensitivity Reacting to the surroundings.

Alive A living thing.

Analyse Looking at evidence to find links and patterns.

Classify To sort things into named groups.

Dead Something that was once alive.

Excretion To get rid of waste.

Coastal An area where the land and sea meet.

Habitat Where something lives.

Ocean A large body of saltwater.

Predator An animal that kills and eats other animals.

Rainforest A forest with lots of rainfall.

Woodland A shady forested area.

Carnivore A living thing that only eats animals.

Diet The things a living thing eats.

Herbivore A living thing that only eats plants.

Mammal An animal that feeds its babies on milk from its body.

Omnivore A living thing that eats both plants and animals.

Shelter Where animals find cover and protection.

Camouflage Making something difficult to see in its surroundings.

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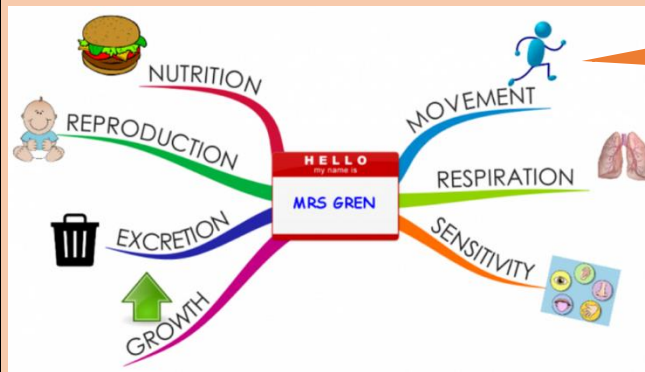
Key Questions

Investigation

Working Scientifically:

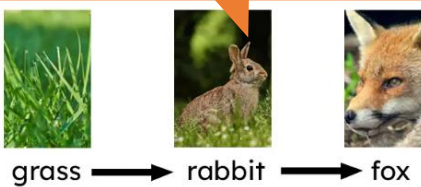
During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.



What are life processes?

What are food chains?



What is scientific enquiry?

What are habitats?




Which microhabitats suit the needs of different minibeasts?



Depend To need the help of something else to survive.
Prey Something that is killed and eaten by other animals.
Producer A living thing that makes its own food.
Energy Used by living things to grow, survive and stay healthy.
Food chain A sequence of living things in which each group eats the group before it.
Characteristics The appearance or behaviour of living things.
Classification key A set of questions to sort living things based on their characteristics.
Criteria Characteristics used to sort things into groups.
Identify To name or select something using knowledge.
Invertebrate An animal without a backbone.
Microhabitat A small area with different conditions to the surrounding habitat.
Minibeast A small creature without a backbone.
Research A way to find answers or new information.
Survey To look closely at an area and record what is there.
Condition What a place or thing is like.
Data The information you collect when you observe.
Method Step-by-step instructions.
Test A way to find the answer to a question.
comparative/fair test A test comparing different things and observing what happens.
Conclusion A summary of what has been found out.
Results Gathering data by observing or measuring.
Tally A mark written down to show how many have been counted.
Botanist Someone who studies plants.
Species A group of plants or animals that share similar characteristics.

Key Learning:

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| 1  | <p>What are life processes? Learning about the common characteristics of living things. Ask questions to find out what living things have in common. Name some of the life processes. Give examples of how life processes apply to plants and animals. Learning: To identify some of the characteristics of living things.</p> |
| 2 | <p>What is the difference between things that are alive, were once alive or have never been alive? Applying knowledge of life processes to classify objects. Recall some of the life processes. Name objects that are living, were once alive or have never been alive. Learning: To recognise the difference between things that are alive, were once alive or have never been alive. Working scientifically: To classify objects into groups.</p> |
| 3 | <p>What are habitats? Learning about the conditions of different habitats and identifying plants and animals that live there. Name four different habitats. Match animals and plants to their habitats. Describe what a habitat is like. Learning: To identify plants and animals in different habitats.</p> |
| 4 | <p>Which plants and animal would you expect to find in a woodland habitat? Researching woodland animals to retrieve information about their diets and how they find shelter from predators. Name woodland plants and animals. Give examples of how animals use the woodland habitat for food and shelter. Learning: To identify how a habitat provides animals and plants with what they need to survive. Working scientifically: To carry out research to find answers to questions.</p> |
| 5 | <p>Which plants and animal would you expect to find in rainforest and ocean habitats? Learning about how living things depend on each other in a rainforest and ocean habitat. Name animals in a rainforest and ocean habitat. Recall that a plant produces its own food. Give examples of how animals and plants depend on each other. Learning: To recognise how animals and plants depend on each other.</p> |
| 6 | <p>What are food chains? Learning about how food chains represent how plants and animals obtain their food. Name a producer and place it at the beginning of a food chain. Name predators that prey on other animals. Use arrows to show the order of a food chain. Learning: To recall how animals get their food from plants and other animals.</p> |
| 7 | <p>How can minibeasts be grouped? Grouping minibeasts based on their characteristics and creating classification keys. Name a variety of minibeasts. Recognise the different characteristics of minibeasts. Sort minibeasts into groups based on my observations Working scientifically: To classify a variety of minibeasts.</p> |
| 8 | <p>What is scientific enquiry? Learning about the different skills scientists use to answer questions. Recognise that scientists choose the most suitable way to answer questions. Ask questions about worms. Use an information text to find answers to questions. Working scientifically: To recognise how scientists answer questions.</p> |

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| 9 | <p>Which microhabitats suit the needs of different minibeasts?</p> <p>Gathering and recording data about minibeasts that live in different microhabitats on the school grounds. Make close observations and use equipment safely. Give examples of how microhabitats suit the needs of minibeasts.</p> <p>Learning: To recognise that living things live in habitats to which they are suited.</p> <p>Working scientifically: To gather and record data to answer a question.</p> |
| 10 | <p>Which conditions do woodlice prefer?</p> <p>Planning an experiment to find out the conditions woodlice prefer, recognising the importance of following the method in the correct order. Ask questions about the conditions minibeasts prefer. Suggest what observations to make. Order the steps of a method.</p> <p>Working scientifically: To ask questions and plan how to carry out an experiment.</p> |
| 11 | <p>Do woodlice prefer damp or dry conditions?</p> <p>Carrying out an experiment, using the data recorded to answer the question, 'Do woodlice prefer damp or dry conditions?'. Use a stopwatch. Use tally marks to record results. Use my results to answer a question.</p> <p>Working scientifically: To carry out an experiment and record data in a table.</p> |
| 12 | <p>What is a botanist?</p> <p>Role-playing as botanists carrying out research outdoors. Recognise similarities and differences. Use an identification chart to name flowering plants.</p> <p>Learning: To identify a variety of flowering plants.</p> <p>Science in action: To understand the role of a botanist.</p> |