



**What should I already know?**

**What will I know by the end of the unit? (Substantive Knowledge)**

How to distinguish between an object and the material from which it is made.

To 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 and group together a variety of everyday materials on the basis of their simple physical properties.

Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

**Common misconceptions**

Some children think that an object and the material it is made from are the same thing.

| Key Vocabulary |             |
|----------------|-------------|
| Material       | Shiny       |
| Appearance     | Dull        |
| Texture        | stretch     |
| Property       | Rigid       |
| Wood           | Waterproof  |
| Stone          | Absorbent   |
| Fabric         | Transparent |
| Plastic        | Opaque      |
| Clay           | Translucent |
| Rubber         | Transparent |
| Metal          | Elastic     |
| Glass          | Malleable   |
| Paper          | Force       |
| Cardboard      | Permanent   |
| Rough          | Fair test   |
| Smooth         | Measurement |
| Hard           | Observation |
| Soft           | Flexible    |

**Working Scientifically  
(Disciplinary Knowledge)**

Ask simple questions and recognise that they can be answered in different ways.

Perform simple tests

Identify and classify

Use observations and ideas and to suggest answers to questions.

Gather and record data.



**What should I already know?**

Pupils are likely to have carried out observations of the weather in EYFS and to have learned some basic vocabulary about the weather. They are likely to have discussed the four seasons.

**What will I know by the end of the unit? (Substantive Knowledge)**

Make and use simple instruments for observing the weather, setting up a simple weather station

Use their own experience and simple data to describe the changes in the weather with the seasons

Provide a simple fictional weather forecast for a month of the year  
learn how to stay safe in the sun.

know where the hottest parts of the World are

make any measurements from the weather station and observe the weather outside

know that rain comes from clouds

know that not all clouds produce rain and that there are different kinds of clouds

know that mist and fog is due to water in the air

Make any measurements from the weather station and observe the weather outside

Look at different types of storm around the World - hurricanes, tornados, monsoons

Know that some storms in the UK are accompanied by thunder and lightning

Make any measurements from the weather station and observe the weather outside

know that snow forms in clouds in cold weather

know that some parts of the world and some seasons are more likely to have snow

**Common misconceptions**

Children often have their own theories about the weather. They may believe any of the following:

The same weather is experienced in different parts of the World as it spins, just as the Sun shines on different parts of the World as it spins.

Clouds come from somewhere above the sky.

Rain comes from holes in clouds. Rain is made when clouds sweat, are shaken or melt. Rain falls from funnels in the clouds.

God or the angels make the weather.

Water does not dry up; it just disappears of its own accord.

**Key Vocabulary**

|                  |              |
|------------------|--------------|
| weather          | sunburn      |
| season           | sunstroke    |
| spring           | Sunglasses   |
| summer           | sun cream    |
| autumn           | sun hat      |
| winter           | ultra-violet |
| Typical          | season       |
|                  | dry          |
| climate          | drought      |
| measure          | Desert       |
| predict          | equator      |
| weather forecast | jungle       |
| sun              | climate      |
| temperature      | season       |
| wind             | mist         |
| rain             | fog          |
| rainfall         | Raincloud    |
| clouds           | Rainbow      |
| Precipitation    | breeze       |
| frost            | storm        |
| mist             | gale         |
| snow             | hurricane    |
| Thunder          | tornado      |
| symbol           | blizzard     |
|                  | thunderstorm |

**Working Scientifically (Disciplinary Knowledge)**

Beaufort scale  
asking simple questions and recognizing that they can be answered in different ways

observing closely, using simple equipment

performing simple tests

using their observations and ideas to suggest answers to questions

gathering and recording data to help in answering questions



**What should I already know?**

Some animal names

The main parts of the human body

**What will I know by the end of the unit? (Substantive Knowledge)**

Identify and name a variety of common British animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.

Identify and name a variety of common animals that are carnivores, herbivores and omnivores.

Describe and compare the structure of a variety of common animals.

Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

**Common misconceptions**

Humans aren't animals

Only large animals (dogs, cows) are animals

**Key Vocabulary**

|           |              |
|-----------|--------------|
| Knuckles  | Carnivore    |
| Palm      | Herbivore    |
| Gums      | Omnivore     |
| Ear lobes | Research     |
| Limbs     | Habitat      |
| Diet      | Appearance   |
| Exercise  | Mammal       |
| Hygiene   | Fish         |
| Germ      | Amphibian    |
| Animal    | Reptile      |
| Bird      | Invertebrate |
| Fin       | Cold blooded |
| Eggs      | Warm blooded |
| Scales    |              |

**Working Scientifically (Disciplinary Knowledge)**

Ask simple questions about animals

Observing closely and using observations to suggest answers to questions

Identifying and classifying into type of animals and diets



Year group: 1 Topic: Plants

**What should I already know?**

Plants can grow.

**What will I know by the end of the unit? (Substantive Knowledge)**

Identify and name a variety of common wild and garden plants, including deciduous and ever-green trees.

Identify and describe the basic structure of a variety of common flowering plants, including trees.

Observe the growth of bulbs and/or seeds.

**Key Vocabulary**

|           |               |
|-----------|---------------|
| Seed      | Germinate     |
| Bulb      | Petal         |
| Compost   | Fruit         |
| Grow      | Shoot         |
| Water     | Tree          |
| Plant     | Trunk         |
| Sprout    | Branch        |
| Roots     | Twig          |
| Stem      | Evergreen     |
| Leaf      | Deciduous     |
| Flower    | Nut           |
| Weed      | Conker        |
| Garden    | Acorn         |
| Flowerbed | Pip           |
| Park      | Sycamore seed |
| Soil      | Wild          |
| Growth    | Meadow        |
| Height    | Cultivated    |
| Chart     | Results       |
| Table     | conclusion    |

**Common misconceptions**

Plants are not alive

Trees, grass, vegetables are not plants

Sunlight helps plants grow by keeping them warm.

**Working Scientifically (Disciplinary Knowledge)**

use observations notes and charts to describe the growth of seeds/bulb

make observations of a range of seeds including the seeds of trees

monitor the growth of seeds and bulbs planted