

# Living in Environments : Science : Year 4



|                 | Learning Objective                                                                                 | Overview                                                                                                                                                                                                                                    | Assessment Questions                                                                                                                                                                                                                                                                                                                                                                                             | Resources                                                                                                                                                                                                             |
|-----------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lesson 1</b> | To be able to identify a variety of habitats and explore why organisms live in different habitats. | Children will identify habitats, and consider why their conditions are important for the animals living in them. They will then either describe habitats in their own words, or explore a local habitat.                                    | <ul style="list-style-type: none"> <li>Do children know what a habitat is?</li> <li>Can children identify a variety of habitats?</li> <li>Do children know that animals live in habitats that are suited to their needs?</li> </ul>                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Slides</li> <li>Habitat Cards</li> <li>Riddle Cards</li> <li>Animal Cards</li> <li>Worksheet 1A/1B (FSD? activity only)</li> </ul>                                             |
| <b>Lesson 2</b> | To be able to group organisms according to their characteristics.                                  | Children will organise animals into groups according to some of their characteristics. They may then either continue to sort animals according to some of their own criteria, or examine some animals and group them based on observations. | <ul style="list-style-type: none"> <li>Can children identify similarities and differences between similar organisms?</li> <li>Can children group animals and explain the criteria that has been used to sort them?</li> <li>Can children make careful observations to identify the characteristics of different organisms?</li> </ul>                                                                            | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B/2C/2D</li> <li>Animal Cards</li> <li>Pots, trowels, etc. (FSD? activity only)</li> <li>Microscopes/hand lenses (FSD? activity only)</li> </ul> |
| <b>Lesson 3</b> | To be able to classify animals into specific groups according to their characteristics.            | Children will use classification keys to identify and sort animals into groups. They may also study a range of sources to find out about a particular group of animals.                                                                     | <ul style="list-style-type: none"> <li>Do children know that animals can be categorised into broad groups according to their characteristics?</li> <li>Can children use a classification key to help them identify which group an animal belongs to?</li> <li>Can children identify a variety of animals that are vertebrates, invertebrates, mammals, amphibians, insects, reptiles, fish and birds?</li> </ul> | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A</li> <li>Animal Cards A/B/C</li> <li>Animal Classification Key</li> <li>Challenge Cards (FSD? activity only)</li> </ul>                           |
| <b>Lesson 4</b> | To be able to use a classification key to identify animals.                                        | Children will identify a range of animals from different environments using classification keys. Optionally, they may create and test their own classification keys.                                                                        | <ul style="list-style-type: none"> <li>Can children use a classification key to identify unfamiliar animals?</li> <li>Can children use close observations to identify an animal's characteristics?</li> <li>Can children create their own classification keys to help identify an animal?</li> </ul>                                                                                                             | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A/4B/4C</li> <li>British Animals Classification Key A/B</li> <li>Animal Cards (FSD? activity only)</li> </ul>                                       |
| <b>Lesson 5</b> | To be able to identify and classify a variety of British plants.                                   | Children will use Venn Diagrams and Carroll diagrams to sort plants according to some of their characteristics. Some children may choose their own ways of sorting and classifying plants, too.                                             | <ul style="list-style-type: none"> <li>Can children group a variety of plants according to their characteristics?</li> <li>Can children use a classification key to identify plants?</li> <li>Can children use other sources to help them identify a variety of local plants?</li> </ul>                                                                                                                         | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 5A/5B</li> <li>Plant Cards</li> <li>Digital cameras (FSD? activity only)</li> <li>Books, access to internet, etc. (FSD? activity only)</li> </ul>    |
| <b>Lesson 6</b> | To explore the human impact on habitats and environments.                                          | Children will consider ways in which animals living in environments are affected by human behaviour, then suggest ways in which we can help protect and sustain habitats.                                                                   | <ul style="list-style-type: none"> <li>Do children know how one change in a habitat can affect all the organisms within that environment?</li> <li>Can children list positive ways in which humans can impact the environment?</li> <li>Can children list negative ways in which humans can impact the environment?</li> </ul>                                                                                   | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 6A/6B/6C</li> <li>Scenario Cards</li> </ul>                                                                                                          |

# Eating and Digestion : Science : Year 4



|                 | Learning Objective                                                               | Overview                                                                                                                                                                                                                          | Assessment Questions                                                                                                                                                                                                                                                                            | Resources                                                                                                                                                                                                                                               |
|-----------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lesson 1</b> | To be able to identify and classify carnivores, herbivores and omnivores.        | Children will identify similarities and differences between the diets of different organisms, then sort and describe them using technical vocabulary such as herbivore, carnivore, and omnivore.                                  | <ul style="list-style-type: none"> <li>Can children explain why all animals, including humans, need to eat?</li> <li>Can children identify animals that are carnivores, herbivores and omnivores?</li> <li>Can children classify animals according to their diet?</li> </ul>                    | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 1A/1B/1C</li> <li>Animal Cards A/B</li> <li>Books, access to internet, etc.</li> <li>Challenge Cards (FSD? activity only)</li> </ul>                                                   |
| <b>Lesson 2</b> | To be able to construct and interpret a variety of food chains.                  | Children will learn about food chains, then organise a variety of organisms using food chains.                                                                                                                                    | <ul style="list-style-type: none"> <li>Do children know what the terms 'producer' and 'consumer' mean in relation to food chains?</li> <li>Can children interpret food chains?</li> <li>Can children construct food chains?</li> </ul>                                                          | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B/2C/2D/2E</li> <li>Organisms Sheet</li> <li>Name Tags (FSD? activity only)</li> </ul>                                                                                             |
| <b>Lesson 3</b> | To identify the different types of teeth in humans and identify their functions. | Children will identify different types of human teeth and their functions. They will then sort, draw, label or describe teeth.                                                                                                    | <ul style="list-style-type: none"> <li>Can children identify the different types of human teeth?</li> <li>Do children know that the shape of teeth make them useful for different purposes?</li> <li>Can children suggest reasons why animals might have different types of teeth?</li> </ul>   | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A/3B/3C/3D</li> <li>Mirrors (FSD? activity only)</li> </ul>                                                                                                                           |
| <b>Lesson 4</b> | To explore different ways of keeping teeth healthy.                              | Children will learn about what happens to teeth during the lifetime of humans, and consider ways in which we can ensure our teeth stay healthy.                                                                                   | <ul style="list-style-type: none"> <li>Do children know that humans have two sets of teeth during their lifetime?</li> <li>Can children explain why it is important to look after teeth?</li> <li>Can children describe ways in which people can make sure their teeth stay healthy?</li> </ul> | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A</li> <li>Poster Template</li> <li>Information Sheet</li> </ul>                                                                                                                      |
| <b>Lesson 5</b> | To investigate how the digestive system works.                                   | Children will start to learn about the digestive system: its organs and their functions. They will then use a variety of sources to learn more and answer questions.                                                              | <ul style="list-style-type: none"> <li>Can children ask relevant questions?</li> <li>Can children use different sources of information to find the answers to questions they have asked?</li> <li>Can children name some of the organs associated with the digestive system?</li> </ul>         | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 5A/5B/5C</li> <li>Fact Cards</li> <li>Additional information sources, e.g. books/posters</li> <li>Question Cards (FSD? activity only)</li> </ul>                                       |
| <b>Lesson 6</b> | To be able to describe the functions of the basic parts of the digestive system. | Children will continue to learn, in greater depth, about the organs of the digestive system and their functions. They will then either draw and label diagrams to show what they have learned, or conduct a digestion experiment. | <ul style="list-style-type: none"> <li>Can children name the organs associated with the digestive system?</li> <li>Can children describe the basic functions of the organs associated with the digestive system?</li> <li>Can children describe the process of digesting food?</li> </ul>       | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 6A/6B/6C/6D</li> <li>Label Cards</li> <li>Help Sheet (FSD? activity only)</li> <li>Equipment for experiment - see Help Sheet (FSD? activity only)</li> <li>End of Unit Quiz</li> </ul> |

# States of Matter : Science : Year 4



|                 | Learning Objective                                                                                                                     | Overview                                                                                                                                                                                                                                     | Assessment Questions                                                                                                                                                                                                                                                                                                                         | Resources                                                                                                                                                                                                                                                                                                          |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lesson 1</b> | To compare and group materials together according to whether they are solids or liquids.                                               | Children will identify, describe, sort and compare a variety of solids and liquids, using technical vocabulary and giving reasons for their thinking.                                                                                        | <ul style="list-style-type: none"> <li>Can children identify solids and liquids?</li> <li>Can children recognise similarities and differences between solids and liquids?</li> <li>Do children know that some powders flow like liquids because they have fine particles?</li> </ul>                                                         | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 1A/1B/1C</li> <li>A variety of solids and liquids (FSD? activity only)</li> <li>Sticky Labels (FSD? activity only)</li> </ul>                                                                                                                    |
| <b>Lesson 2</b> | To identify and explore the properties of gases.                                                                                       | Children will think about what a gas is, how they behave, and how they can be observed. They will then undertake practical activities where the presence of gases can be observed.                                                           | <ul style="list-style-type: none"> <li>Do children know that air has weight and is all around us?</li> <li>Do children know that gases are different from solids and liquids in the way they do not maintain their shape or volume?</li> </ul>                                                                                               | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 2A/2B/2C</li> <li>Large sheets of card, kites, parachutes, etc. (plenary)</li> </ul>                                                                                                                                                             |
| <b>Lesson 3</b> | To observe that materials change state when they are heated or cooled.                                                                 | Children will consider what happens when to variety of materials when they are heated or cooled. They will then either sort groups of materials according to their properties, or conduct a melting investigation.                           | <ul style="list-style-type: none"> <li>Do children know that some materials can exist as both a solid and a liquid?</li> <li>Do children know that different materials will melt at different temperatures?</li> <li>Can children identify some materials that will not melt?</li> </ul>                                                     | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A</li> <li>Picture Cards</li> <li>Books, CD ROMs, access to the internet etc.</li> <li>Worksheet 3B (FSD? activity only)</li> <li>Variety of objects e.g. butter, chocolate, ice cubes, ice cream, candles, etc. (FSD? activity only)</li> </ul> |
| <b>Lesson 4</b> | To research the temperature in degrees Celsius (°C) at which materials change state.                                                   | Children will learn in greater depth about melting, and find out about the melting points of a range of materials. They may then either sort a given set of materials according to their properties, or conduct a melting investigation.     | <ul style="list-style-type: none"> <li>Why do some materials change state?</li> <li>How does temperature affect the rate at which materials change?</li> </ul>                                                                                                                                                                               | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 4A/4B/4C</li> <li>Materials Fact Cards</li> <li>'Ice balloons', bowls/troughs, water, thermometers/temperature sensors, food colouring etc. (FSD? activity only)</li> </ul>                                                                      |
| <b>Lesson 5</b> | To understand the process of evaporation.                                                                                              | Children will begin to learn about evaporation, discussing everyday situations where it can be observed. They will then either use technical vocabulary to describe evaporation in their own words, or conduct an evaporation investigation. | <ul style="list-style-type: none"> <li>Do children know that gases are formed when liquids evaporate?</li> <li>Can children identify the 'disappearance' of water in a range of situations as evaporation?</li> <li>Can children make observations, report on findings from research and use straightforward scientific language?</li> </ul> | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 5A/5B/5C</li> <li>Books, CD ROMs, internet etc.</li> <li>Measuring cylinders, beakers, water (FSD? activity only)</li> </ul>                                                                                                                     |
| <b>Lesson 6</b> | To understand the process of condensation.                                                                                             | Children will learn about condensation, then undertake practical investigations where they can observe and describe condensation, using technical vocabulary and drawing diagrams.                                                           | <ul style="list-style-type: none"> <li>Do children know that condensation is when a gas turns into a liquid?</li> <li>Do children know that condensation is the reverse of evaporation?</li> <li>Can children record findings using simple scientific language, drawings and diagrams?</li> </ul>                                            | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 6A/6B/6C/6D</li> <li>Cans of drink</li> <li>Beakers/jugs/jars, clingfilm, ice cubes, very warm water (FSD? activity only)</li> </ul>                                                                                                             |
| <b>Lesson 7</b> | To identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. | Children will apply prior knowledge of evaporation and condensation while learning about the water cycle, then describing it in their own words.                                                                                             | <ul style="list-style-type: none"> <li>Do children know what the water cycle is?</li> <li>Can children accurately name the processes of the water cycle?</li> <li>Do children know that evaporation and condensation are processes that can be reversed?</li> </ul>                                                                          | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 7A/7B</li> <li>Water Cycle Steps sheet (FSD? activity only)</li> <li>Challenge Cards (FSD? activity only)</li> <li>End of Unit Quiz</li> </ul>                                                                                                    |

# Changing Sound : Science : Year 4



|                 | Learning Objective                                                                                                  | Overview                                                                                                                                                                                      | Assessment Questions                                                                                                                                                                                                                                                                                                                                                             | Resources                                                                                                                                                                                                                                                                                                  |
|-----------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lesson 1</b> | To find out that sounds are made when objects and materials vibrate.                                                | Children will learn about how sounds are created, then explore the way sounds are produced by a variety of instruments or resonant objects.                                                   | <ul style="list-style-type: none"> <li>Do children know that sounds are made when objects or materials vibrate?</li> <li>Can children make careful observations?</li> <li>Can children draw conclusions about sounds from their observations?</li> </ul>                                                                                                                         | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 1A/1B/1C</li> <li>Variety of musical instruments if available</li> <li>Rice and drum; elastic bands; tuning fork and beaker of water; rulers; stereo speakers (if available)</li> <li>Question Cards (FSD? activity only)</li> </ul>      |
| <b>Lesson 2</b> | To investigate whether sounds can travel through different materials.                                               | Children will learn about how sounds travel through different materials. They will give reasons why they think some materials will transmit sound better/worse than others, then investigate. | <ul style="list-style-type: none"> <li>Do children know that vibrations from sound sources travel through different materials to the ear?</li> <li>Do children know sound can travel through solids, liquids and gases?</li> <li>Do children know that some materials allow sound to pass through them more easily than others?</li> </ul>                                       | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B/2C</li> <li>Drum/cymbal/something else loud!</li> <li>Waterproof buzzer or ticking clock</li> <li>Boxes with lid, water and sand with suitable containers (FSD? activity only)</li> <li>Pre-prepared 'string telephones'</li> </ul> |
| <b>Lesson 3</b> | To explore the relationship between distance and volume.                                                            | Children will explore ways in which sounds change as you move further away from its source. They will suggest reasons for their findings.                                                     | <ul style="list-style-type: none"> <li>Do children know that sounds get fainter as the distance from the sound source increases?</li> <li>Can children carry out an investigation to explore what happens to sound as it gets further away?</li> <li>Can children draw conclusions and describe what they have found out?</li> </ul>                                             | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A/3B</li> <li>Objects to make sounds</li> <li>Metre sticks, tape measures, etc.</li> </ul>                                                                                                                                               |
| <b>Lesson 4</b> | To find out that some materials are effective in preventing vibrations from sound sources reaching the ear.         | Children will learn about why it is sometimes necessary to prevent sounds from travelling, then investigate the soundproofing effectiveness of a range of materials.                          | <ul style="list-style-type: none"> <li>Can children name some of the reasons why preventing sound to travel is sometimes important?</li> <li>Can children plan a test to measure how well different materials muffle sound?</li> <li>Can children draw conclusions about which materials muffle sound the best?</li> </ul>                                                       | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A/4B</li> <li>Buzzers/rattles/ticking docks</li> <li>Materials to test (e.g. foam sheets, fabric, newspaper, bubble wrap, tin foil, kitchen roll, clingfilm, paper towels, cotton wool, etc.)</li> </ul>                                 |
| <b>Lesson 5</b> | To investigate how sounds can be different pitches and volumes.                                                     | Children will learn about pitch and volume, then investigate ways in which they may be altered by a variety of instruments or resonant objects.                                               | <ul style="list-style-type: none"> <li>Do children know that the term 'pitch' describes how high or low a sound is?</li> <li>Can children recognise changes in pitch and identify high and low notes?</li> <li>Can children investigate different instruments and make generalisations about pitch?</li> </ul>                                                                   | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 5A/5B/5C</li> <li>Xylophones/glockenspiels</li> <li>Books, CD ROMs, access to internet, etc.</li> <li>Variety of drums (FSD? activity only)</li> </ul>                                                                                    |
| <b>Lesson 6</b> | To find out how the length, thickness and tightness of a string affects its pitch.                                  | Children will consider how the pitch of notes produced by stringed instruments is altered, then investigate further by experimenting with instruments or by making instruments.               | <ul style="list-style-type: none"> <li>Do children know that the pitch of a stringed instrument depends on the length, thickness and tightness of the string?</li> <li>Can children suggest ways of testing what happens to the pitch of a string when you alter the length, tightness and thickness?</li> <li>Can children draw conclusions from their observations?</li> </ul> | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 6A/6B/6C</li> <li>Variety of stringed instruments</li> <li>Elastic bands, boxes, tubes, etc. (FSD? activity only)</li> </ul>                                                                                                              |
| <b>Lesson 7</b> | To find out how sounds can be made by air vibrating and how to change the pitch of notes produced by vibrating air. | Children will learn how sounds can be made by air vibrating, then explore ways in which the pitch of these sounds can be altered.                                                             | <ul style="list-style-type: none"> <li>Do children know that sounds can be made by air vibrating?</li> <li>Can children suggest ways to change the pitch of a sound made by air?</li> <li>Can children describe how to change the length of the air column vibrating to change pitch?</li> </ul>                                                                                 | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 7A/7B/7C</li> <li>Empty bottles</li> <li>Water</li> <li>Xylophones/glockenspiels</li> <li>Recorders (FSD? activity only)</li> </ul>                                                                                                       |

# Circuits and Conductors : Science : Year 4



|                 | Learning Objective                                                                                   | Overview                                                                                                                                                                                                                    | Assessment Questions                                                                                                                                                                                                                                                                                                                                                        | Resources                                                                                                                                                                                                                                                                                                                                          |
|-----------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lesson 1</b> | To investigate circuits and their different components.                                              | Children will recap prior knowledge regarding circuits, then learn about their main components and explore ways in which simple circuits are constructed.                                                                   | <ul style="list-style-type: none"> <li>Can children identify the purpose of different components in a circuit?</li> <li>Do children know that a complete circuit is needed for a device to work?</li> <li>Can children explain why some circuits will work and others will not depending on how the components have been put together?</li> </ul>                           | <ul style="list-style-type: none"> <li>Slides</li> <li>Balloons</li> <li>Worksheet 1A/1B/1C</li> <li>Circuit Cards (FSD? activity only)</li> <li>Batteries, bulbs/buzzers, wires (FSD? activity only)</li> </ul>                                                                                                                                   |
| <b>Lesson 2</b> | To investigate the differences between mains and battery-powered circuits.                           | Children will learn about electrical safety, and why some appliances are mains powered rather than battery powered. They will then either identify a variety of electrical appliances, or create electrical safety posters. | <ul style="list-style-type: none"> <li>Do children understand that working with electricity can be dangerous?</li> <li>Can children identify devices that are powered by mains electricity and devices that are powered by batteries?</li> <li>Do children know that it is safe to carry out experiments with batteries but not with mains electricity?</li> </ul>          | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B</li> <li>Picture Cards</li> <li>Poster Template sheet (FSD? activity only)</li> </ul>                                                                                                                                                                                       |
| <b>Lesson 3</b> | To recognise some common conductors and insulators, and associate metals with being good conductors. | Children will learn about insulators and conductors, then either investigate the conductivity of a range of materials, or create models to show how circuits work (or not, if they have insulators in them).                | <ul style="list-style-type: none"> <li>Can children construct a circuit to test which materials allow electricity to pass through?</li> <li>Can children explain that with some materials the bulb did not light because the circuit was not complete?</li> <li>Can children make generalisations about which materials are conductors and which are insulators?</li> </ul> | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A/3B/3C</li> <li>Variety of materials to test (e.g. a rubber, paperclips, pencil, teaspoon, coin, paper, teabag, pen, etc.)</li> <li>Batteries, bulbs, wires, crocodile clips</li> <li>Circuit Labels (FSD? activity only)</li> <li>Answer Cards (FSD? activity only)</li> </ul> |
| <b>Lesson 4</b> | To investigate the purposes of conducting and insulating materials.                                  | Children will consider reasons why conductors and insulators are used in different ways inside and outside electrical appliances.                                                                                           | <ul style="list-style-type: none"> <li>Can children name some conductors and insulators?</li> <li>Can children explain how appliances and devices use plastic as an insulator?</li> <li>Do children know that insulators are used as a safety measure?</li> </ul>                                                                                                           | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A/4B/4C</li> <li>Books, CD ROMs, internet, etc. (FSD? activity only)</li> </ul>                                                                                                                                                                                                  |
| <b>Lesson 5</b> | To be able to use knowledge of conductors and insulators to create switches to complete a circuit.   | Children will learn about, design and test a variety of switch designs.                                                                                                                                                     | <ul style="list-style-type: none"> <li>Do children know that a switch can be used to make or break a circuit to turn a device on or off?</li> <li>Can children use their knowledge of conductors to create a working switch?</li> <li>Can children explain how their switches work?</li> </ul>                                                                              | <ul style="list-style-type: none"> <li>Slides</li> <li>Batteries, wires, crocodile clips, bulbs, buzzers</li> <li>Variety of materials to construct switches (e.g. pins, paper clips, butterfly clips, card, sticky tape, etc.)</li> <li>General Knowledge Quiz (FSD? activity only)</li> </ul>                                                    |
| <b>Lesson 6</b> | To be able to plan and carry out an experiment to see how to change the brightness of a bulb.        | Children will suggest ways in which a bulb in a circuit could be made to glow brighter or dimmer, then plan experiments where they may explore their ideas.                                                                 | <ul style="list-style-type: none"> <li>Can children make predictions about how to alter the brightness of a bulb?</li> <li>Can children plan and carry out an experiment, changing one factor at a time?</li> <li>Can children draw conclusions from their investigations?</li> </ul>                                                                                       | <ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 6A/6B/6C/6D</li> <li>Batteries, wire, bulbs</li> <li>Motors (FSD? activity only)</li> <li>End of Unit Quiz</li> </ul>                                                                                                                                                             |