Year 5 Science Curriculum

Changes and Reproduction

1	Defining and ordering the main stages in the life cycle of humans.
2	Learning about sexual reproduction, fertilisation and pregnancy in humans, comparing gestation periods to other animals.
3	Exploring the rapid growth and development of children during infancy.
4	Learning about the roles of hormones in the body and considering some of the changes that occur inside and outside the body at the start of puberty.
5	Learning about sperm production in boys and menstruation in girls, and considering how teenagers can stay healthy during puberty and adolescence.
6	Exploring the changes humans experience in adulthood and old age.

Forces in Action

1	Learning about the effects of gravity and the ways in which falling objects of different sizes are affected by the force of gravity.
2	Exploring what friction is and considering instances of high and low friction.
3	Exploring the effects of air resistance to falling objects.
4	Learning what water resistance is and considering the differences between moving on land and in water.
5	Exploring what levers and pulleys are, and why they are so useful.
6	Finding out how gears work together in a variety of different transmissions, considering the effect of speed, direction and torque.

Properties and Changes of Materials

1	Defining 'soluble' and 'insoluble', and carrying out an investigation to find out what happens to different substances when they are mixed with water.
2	Exploring ways in which the original materials in some mixtures and solutions may be recovered, by the process of evaporation, or by sieving or filtering.
3	Exploring the difference between reversible and irreversible changes.
4	Investigating reversible and irreversible changes caused by heating and cooling.
5	Considering what happens when materials are burned, including what new materials are produced.
6	Sorting and grouping a variety of materials based on their properties.
7	Using knowledge of the properties of materials to explain why certain materials are chosen for everyday objects.

Earth and Space

1	Exploring the movement of Earth, the Sun and Moon and their size in relation to one another.
2	Identifying how day and night are created, and how different parts of the planet can experience day and night simultaneously.
3	Exploring seasons in the hemispheres caused by the tilt of Earth's axis.
4	Identifying and naming the eight different phases of the Moon.
5	Considering the main differences between geocentric and heliocentric models of the universe.
6	Exploring the planets of the solar system, as well as dwarf planets, asteroids, comets and satellites (both natural and man-made).

Life Cycle

1	Identifying the functions of the parts of a flower, and how reproduction occurs through pollination and germination.
2	Exploring the ways in which plants 'clone' themselves and reproduce asexually.
3	Learning about the ways in which different types of animals reproduce, including how and why internal and external fertilisation occurs.
4	Exploring the life cycles of animals living in a woodland environment and comparing this to other animals around the world.
5	Comparing the life cycles of different animals, focusing on gestation periods and growth.
6	Finding out all about the work of naturalists and animal behaviourists.

Notes:

Year 5 Science Curriculum

	Year 5 | Overview Objectives
Changes and Reproduction	• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests • reporting and presenting 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 • identifying scientific evidence that has been used to support or refute ideas or arguments • describe the changes as humans develop to old age
Properties and Changes of Materials	• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • reporting and presenting 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 • know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution • use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating • give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic • demonstrate that dissolving, mixing and changes of state are reversible changes • explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda
Earth and Space	• recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • describe the movement of the Earth, and other planets, relative to the Sun in the solar system • describe the movement of the Moon relative to the Earth • describe the Sun, Earth and Moon as approximately spherical bodies • use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky

Year 5 Science Curriculum

Year 5 | Overview Objectives	
Forces in Action	• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • reporting and presenting 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 • explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • identify the effects of air resistance, water resistance and friction, that act between moving surfaces • recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect
Life Cycles	• taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • reporting and presenting 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 • identifying scientific evidence that has been used to support or refute ideas or arguments • describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • describe the life process of reproduction in some plants and animals

Year 5 Science Curriculum

PlanBee

Year 5 Objectives	Changes and Reproduction	Properties and Changes of Materials	Earth and Space	Forces in Action	Life Cycles
planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary					
taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate					
recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs					
using test results to make predictions to set up further comparative and fair tests					
reporting and presenting 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					
identifying scientific evidence that has been used to support or refute ideas or arguments					
describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird					
describe the life process of reproduction in some plants and animals					
describe the changes as humans develop to old age					
compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets					
know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution					
use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating					
give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic					
demonstrate that dissolving, mixing and changes of state are reversible changes					
explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda					
describe the movement of the Earth, and other planets, relative to the Sun in the solar system					
describe the movement of the Moon relative to the Earth					
describe the Sun, Earth and Moon as approximately spherical bodies					
use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky					
explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object					
identify the effects of air resistance, water resistance and friction, that act between moving surfaces					
recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect					

Changes and Reproduction : Science : Year 5

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To recognise the stages of growth and development in humans.	Children will learn about, then order, the main stages in the life cycle of humans. They will then consider and describe factors which may affect the rate of growth in humans.	• Can children name the main stages in the life cycle of humans? • Can children correctly order the main stages? • Can children broadly define the age ranges for each of the main stages? • Can children explain some of the physical changes that occur at different stages in the life cycle of humans?	• Slides • Worksheets 1A/1B/1C • Newborn Baby worksheet (FSD? activity only) • Books, websites etc. about babies (FSD? activity only)
Lesson 2	To know the stages in the gestation period of humans and compare them to other animals.	Children will learn about sexual reproduction, fertilisation and pregnancy for humans. They may then compare the gestation periods of humans with other animals.	• Can children describe the main stages of gestation in humans? • Can children explain how embryos and fetuses grow and develop in the womb? • Can children define and use key vocabulary to describe gestation in humans?	• Slides • Worksheets 2A/2B/2C • Gestation Periods cards (FSD? activity only) • Sticky notes and digital cameras (FSD? activity only)
Lesson 3	To recognise the stages of development during childhood and understand the needs of children at those stages.	Children will learn about changes during infancy and childhood, then consider the needs of children, and how these change over time as they develop.	• Can children describe the needs of a newborn baby? • Can they compare the needs of a human baby to those of other mammals? • Can they describe the stages of development that occur during childhood? • Can they describe how the needs of humans change at different points in their life cycle?	• Slides • Worksheets 3A/3B/3C • Childhood Fact Sheet (FSD? activity only) • Typical Day Agenda worksheet (FSD? activity only)
Lesson 4	To understand the initial changes inside and outside of the body during puberty.	Children will learn about the roles of some hormones in the body, and how they affect changes in boys and girls at the start of puberty. They will also identify and describe or label changes that occur inside and outside the body.	• Can children explain the initial changes that occur inside and outside the body at the start of puberty? • Can children correctly identify the parts of the body that change during puberty? • Can children explain in simple terms the role played by hormones in the growth of humans and other animals?	• Slides • Worksheets 4A/4B/4C • Puberty: Initial Changes • Comic Strip (FSD? activity only)
Lesson 5	To know the changes that occur during puberty and how they differ for boys and girls.	Children will learn about later changes during puberty and adolescence, including sperm production and menstruation. They will then consider and describe ways in which children can stay fit and healthy during puberty.	• Can children remember some of the initial changes during puberty? • Can children explain some of the ways in which boys' and girls' bodies start to differ during puberty? • Can children suggest some ways in which teenagers can look after themselves and stay fit and healthy during puberty?	• Slides • Worksheets 5A/5B/5C • Keeping Fit • Puberty Problems (FSD? activity only)
Lesson 6	To understand how the body changes during adulthood and old age.	Children will learn about some changes in the body that occur during adulthood and old age. They may then either describe ways in which they may change as they get older, or discuss some problems associated with stereotypical views regarding the elderly.	• Can children explain some ways in which the body changes during old age? • Can children describe some ways in which older people can stay fit and healthy?	• Slides • Worksheets 6A/6B/6C • Photographs of children in your class (optional) • Old-age Stereotypes (FSD? activity only)

NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different...?' activity within the lesson plan

Earth and Space: Science : Year 5

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To describe the movements of the Sun, Earth and Moon.	Children will learn about the celestial bodies of the Sun, Moon and Earth and how they are related to one another. They will learn that each of them are a roughly spherical shape and investigate and define the word 'orbit'. They will use these scientific words in a brief description of the Sun, Earth and Moon's movements around each other.	• Can children describe the Sun, Earth and Moon's shape as roughly spherical? • Are children able to clearly define the word orbit? • Can children describe the Sun, Earth and Moon's movements in relation to one another?	• Slides • Teacher Notes 1A • Worksheet 1A/1B/1C • Fact Cards 1A • Worksheet 1D/1E (FSD? Activity only) • Template 1A (FSD? activity only) • Split pins (FSD? Activity only)
Lesson 2	To explore how the rotation of Earth creates day and night.	Children will learn that the rotation of Earth on its axis is what creates day and night. They will conduct an investigation using sundials and make observations on what they record throughout the experiment. Alternatively, they will explore time zones using the internet and how, and why, locations have different time zones.	• Can children explain how the rotation of Earth on its axis creates day and night? • Can children explain the apparent movement of the sun across the sky? • Can children identify how long it takes Earth to make a full rotation?	• Slides • Worksheet 2A/2B/2C • Pencils • Sticky-tac • Time Zone Cards 2A (FSD? activity only) • Access to the internet (FSD? activity only) • Question Cards 2A (FSD? activity only) • City Cards 2A (FSD? activity only)
Lesson 3	To learn about how Earth's tilt creates seasons.	Children will learn about how the seasons are created because of the tilt of Earth's axis. They will learn how Earth is split into its Northern and Southern Hemispheres and how the seasons are different for the two halves of the planet. They will identify the seasons for the Northern Hemisphere based on the location of Earth in its orbit. Alternatively the children will investigate day length and how it changes seasonally using data and graphs.	• Can children describe the different changes that happen between seasons? • Can children use Earth's tilted axis to explain how seasons are created? • Can children describe the differences in seasons between two locations in opposite hemispheres?	• Slides • Worksheet 3A/3B • Season Labels 3A/3B • Statistics Cards 3A/3B (FSD? Activity only) • Graph Paper 3A (FSD? Activity only) • Worksheet 3C (FSD? Activity only) • Question Cards 3A/3B (FSD? Activity only)
Lesson 4	To learn about the phases of the Moon.	Children will be guided through the lunar month and the eight phases of the Moon that can be seen as the Moon orbits Earth. They will learn to identify the shapes of each phase and the names of these shapes, including if the phase is waxing or waning. They will create their own spinning diagram of each of these phases.	• Can children name the different phases of the moon? • Are children able to order the phases of the moon? • Can children describe how the phases of the moon are created?	• Slides • Teacher Notes • Worksheet 4A/4B • Split pins • Template 4A • Moon Cards 4A • Moon Cards 4B (FSD? activity only)
Lesson 5	To discover how theories about our solar system have changed.	Children will learn about and discuss how the ideas about the solar system developed and changed over the years until we arrived at the model we have today. The children will compare the similarities and differences between a geocentric and heliocentric model of the solar system.	• Are children able to define what a solar system is? • Can children explain what the differences between geo- and heliocentric models of the solar system are? • Can children compare the ideas of the solar system we know now, with those held by Ptolemy and Copernicus?	• Slides • Solar System Fact Cards 5A/5B • Worksheet 5A/5B/5C • Access to the internet (FSD? activity only) • Worksheet 5D (FSD? activity only)
Lesson 6	To investigate the planets in the solar system.	Children will conduct their own research into the planets within our solar system. They will discuss the objects in our solar system as a class, including natural satellites, comets, asteroids (and the asteroid belt), planets and dwarf planets. They will work to create their own fact book or model of the solar system.	• Can children name the eight planets in our solar system? • Are children able to name the eight planets in order from nearest to farthest from the Sun? • Can children use researching skills to find relevant information on a topic?	• Slides • Mnemonic Strip 6A • Templates 6A/6B/6C • End of of Unit Quiz • Flag Template 6A (FSD? activity only) • Polystyrene balls (FSD? activity only) • Skewer sticks (FSD? activity only)

NB: 'FSD? activity only' refers to the alternative 'Fancy Something Different...?' activity within the lesson plan

Forces in Action : Science : Year 5

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	Children will consider what weight is, and how the impact caused by falling objects can vary, depending on their size, shape, mass, and the height they fall from.	• Can children explain why objects fall towards the centre of the Earth? • Can children explain what weight is? • Can children make and record simple observations in an investigation?	• Slides • Worksheets 1A/1B/1C • Challenge Card 1A/1B • Pairs of water bottles of the same size/balloons, water • (Optional) Slow motion cameras • Challenge Cards 1C (FSD? activity only) • Books, internet etc. (FSD? activity only)
Lesson 2	To identify the effects of friction acting between moving surfaces.	Children will learn about what friction is and some ways in which it can be measured. They will also identify instances of high and low friction and conduct friction investigations.	• Can children define friction? • Do children know that friction can be useful and give some examples? • Can children carry out an investigation, making sure that it is a fair test?	• Slides • Worksheets 2A/2B/2C/2D • Forcemeters • Variety of surfaces to test • Rubbers (FSD? activity only) • Challenge Sheet (FSD? activity only)
Lesson 3	To identify and explain the effects of air resistance.	Children will learn about ways in which air resistance affects moving objects, then plan and conduct investigations where they will determine how air resistance affects falling objects.	• Do children know that air resistance is a force that slows objects moving through the air? • Can children plan, carry out and assess experiments to investigate air resistance? • Can children draws conclusions from their investigations?	• Slides • Worksheets 3A/3B/3C/3D • Plastic Bag Parachute sheet • Plastic bags, string/wool, paper clips, rubber bands • Spinner Template (FSD? activity only)
Lesson 4	To identify and explain the effects of water resistance.	Children will learn about water resistance and how it affects objects moving through water. They will then conduct water resistance investigations.	• Do children know that water resistance slows an object moving through water? • Can children plan and carry out an experiment, making sure it is a fair test? • Can children identify trends in results and draw conclusions?	• Slides • Worksheets 4A/4B/4C/4D • Measuring cylinders or equivalent • Water • Plasticine • Stopwatches • Results Sheet (FSD? activity only)
Lesson 5	To recognise that levers and pulleys allow a smaller force to have a greater effect.	Children will learn how simple machines can make it easier to move objects. They will then make and test models which have pulleys or levers.	• Do children recognise that that levers and pulleys allow a small force to have a greater effect? • Can children make and improve models that use pulleys or levers? • Can children explore the effects of changing parts of their model?	• Slides • Worksheets 5A/5B/5C • Lollipop sticks, rubber bands (FSD? activity only) • Lolly Stick Catapult sheet (FSD? activity only) • Marshmallows or play dough (FSD? activity only) • Milk/water bottles with handles • String, cord or thin rope • Broomsticks or thick dowel rods
Lesson 6	To recognise that gears allow a smaller force to have a greater effect.	Children will learn about how gears work together in transmissions and look at a variety of transmission. They will then make models to explore in greater depth how gears work.	• Do children recognise that the speed or amount of force transmitted is affected by changing the size of the gears in a transmission? • Can children make transmissions where two or more gears work together?	• Slides • Worksheets 6A/6B/6C • Cut-out Gears • Types of Transmission sheet (FSD? activity only)

NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different...?' activity within the lesson plan

Life Cycles : Science : Year 5

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To describe the process of sexual reproduction in flowering plants.	Children will recap the names of parts of a flower and learn about how flowering plants reproduce sexually. They will then either label diagrams of flowering plants or dissect flowers.	• Can children name and describe the functions of the main parts of flowers? • Can children describe the life process of sexual reproduction in flowering plants? • Can children identify and label the parts of flowers?	• Slides • Worksheets 1A/1B/1C • Dissecting Flowers (FSD? activity only) • Double-sided sticky tape, tweezers, flowers (FSD? activity only)
Lesson 2	To describe the process of asexual reproduction in plants.	Children will learn about some ways in which non-flowering plants reproduce asexually, then either describe one of these processes in their own words or grow plants from cuttings.	• Do children understand what asexual reproduction is? • Can children explain some ways in which plants reproduce asexually? • Can children describe the life cycles of some asexually reproducing plants?	• Slides • Worksheets 2A/2B/2C • Growing Cuttings (FSD? activity only) • Plant Picture Cards • Word Bank
Lesson 3	To describe the process of sexual reproduction in animals.	Children will learn about sexual reproduction in animals, including some ways in which some reptiles and fish reproduce. They will then either sort and classify animals, or compare their life expectancies and gestation periods.	• Can children define some of the ways in which sexual reproduction in animals occurs? • Can children compare species that reproduce in different ways and consider reasons why? • Can children record data using scientific graphs and/or diagrams?	• Slides • Worksheets 3A/3B/3C • Animal Fact Cards • Animal Offspring (FSD? activity only)
Lesson 4	To observe and compare the life cycles of animals in our local environment with other animals around the world.	Children will study and compare the life cycles of animals living in a variety of environments. They will then either research animals living in different environments, or compare the life cycles of two animals living in different environments.	• Can children describe the conditions in a local environment as well as other environments around the world? • Can children establish causal links between the life cycle of animals and their environment? • Can children compare the life cycles of animals living in different environments?	• Slides • Challenge Card • Books, atlases, CD ROMs, internet etc. • Comparing Life Cycles (FSD? activity only)
Lesson 5	To compare how different animals reproduce and grow.	Children will learn more about the life cycles of animals, focussing on gestation periods and growth. They will then explain the life cycles of animals in their own words, using technical vocabulary.	• Using scientific vocabulary, can children explain some of the ways in which different animals reproduce? • Can children compare the life cycles and methods of reproduction of different animals? • Are children able to give reasons for the differences between life cycles of different animals?	• Slides • Picture Book 5A/5B/5C • Animal Fact Cards • Write A Class Book! (FSD? activity only)
Lesson 6	To find out about the work of naturalists.	Children will learn about the work of naturalists and animal behaviourists, then research and write in-depth about a well-known naturalist.	• Do children understand what naturalists do? • Can they explain why the work of naturalists is important? • Can children give reasons why secondary sources of scientific evidence cannot always be trusted?	• Slides • Worksheets 6A/6B/6C • Famous Naturalists (FSD? activity only)

NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different...?' activity within the lesson plan

Properties and Changes of Materials : Science : Year 5

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To know that some materials will dissolve in liquid to form a solution	Children will explore what happens to substances when they are mixed with water. In their independent activities, they will conduct a fair test to find out which substances are soluble, and which are insoluble. In the FSD? activity, children will explore what factors other than temperature can help jelly cubes to dissolve more quickly.	• Do children understand the terms 'dissolve', 'soluble', 'insoluble' and 'solution'? • Can children make and explain their predictions about soluble and insoluble materials? • Can children conduct a fair test involving soluble and insoluble materials?	• Slides • Beakers, teaspoons, stopwatch, water • Sugar, pepper, cooking oil, flour, wax flakes, food colouring • Worksheet 1A/1B/1C • Challenge Card A/B/C/D (FSD? activity only) • Beakers, thermometers, stopwatch, water (warm), jelly cubes, knives, spoons (FSD? activity only) • Worksheet 1D (FSD? activity only)
Lesson 2	To use knowledge of solids, liquids and gases to decide how mixtures and solutions might be separated	Children will explore ways in which the original materials in some mixtures and solutions may be recovered, by the process of evaporation, or by sieving or filtering. In their independent activities they will use their knowledge and understanding of soluble and insoluble substances to explain how mixtures could be separated.	• Do children know what the terms soluble and insoluble mean? • Do children know that evaporation can be used to separate soluble materials from water? • Do children know that filtering can be used to separate insoluble materials from water?	• Slides • Worksheets 2A/2B/2C • Investigation Cards (FSD? activity only) • Worksheet 2D (FSD? activity only) • Beakers, water, filter paper, different sizes of sieve, teaspoons, pepper, rice, glitter, marbles, sand, salt, sugar, paperclips (FSD? activity only)
Lesson 3	Explain that some changes form new materials, and that these changes are not usually reversible	Children will identify solutions which are the product of irreversible reactions between the substances that were dissolved. They will then carry out practical investigations involving irreversible reactions.	• Do children know that when some materials are mixed together they cannot be separated again? • Do children know that when an irreversible change takes place a new substance is produced? • Do children know how to tell if the new substance produced is a gas?	• Slides • Worksheets 3A/3B/3C • Water, lemon juice, sugar, baking soda, plaster of Paris • Worksheet 3D • Diet Coke, Mentos (FSD? activity only) • Film canister, water, effervescent tablets
Lesson 4	To identify when a change caused by heating or cooling is reversible or irreversible	Children will learn about reversible and irreversible changes caused by heating or cooling materials. They will then either predict and sort materials according to what may happen when they are heated or cooled, or explore irreversible reactions by cooking.	• Do children know that heating and cooling materials can cause them to change? • Can children recognise reversible and irreversible changes caused by heating and cooling? • Can children explain how to reverse a change caused by heating or cooling?	• Slides • Worksheets 4A/4B/4C • Recipe Sheet (FSD? activity only) • Cooking Safely Poster (FSD? activity only) • Ingredients and equipments as listed on Recipe Sheet (FSD? activity only)
Lesson 5	To investigate the materials needed for something to burn and the new materials formed by burning	Children will consider what happens when materials are burned, including what new materials are produced. They will carry out investigations involving burning a candle and explain what is happening.	• Do children know that new materials are formed when materials are burned? • Can children describe what happens when a candle burns? • Can children identify and assess hazards associated with burning materials?	• Slides • Worksheets 5A/5B/5C • Candle Video • Candle, glasses, safety matches, stopwatch, heat safety mats • Teacher Notes (FSD? activity only) • Observation Sheet 5A (FSD? activity only) • Water, shallow bowl or dish, glasses x3, candle, tea light, tile, safety matches (FSD? activity only)
Lesson 6	To compare and group together everyday materials on the basis of their properties	Children will identify and discuss several different properties of a range of materials (conductive, magnetic, soluble, flexible, transparent etc.), then either sort and group given sets of materials, or use their scientific enquiry skills to explore the properties of some materials.	• Can children describe everyday materials according to their properties? • Can children compare and group everyday materials according to their properties? • Can children explain why some everyday materials are useful due to their properties?	• Slides • Worksheets 6A/6B/6C • Materials Cards • Activity Cards (FSD? activity only) • Batteries, bulbs and wires; magnets; torches; weights; water and a variety of materials to be tested according to their properties (FSD? activity only)
Lesson 7	To give reasons for the particular uses of everyday materials in relation to their properties	Children will first recap on the vocabulary used to describe the properties of different materials, before taking a closer look at some of them, and why materials with these properties are used for certain purposes. In their independent activities, children will use their knowledge and reasoning skills to explain how the properties of a material make it useful for a specific purpose.	• Can children list and explain some of the different properties that materials can have? • Do children understand that the properties materials have can affect how they are used/what they are used for? • Can children explain why a certain material has been chosen for a specific purpose, based on its properties?	• Slides • Worksheet 7A/7B/7C • Challenge Cards (FSD? activity only) • This vs That Cards (FSD? activity only) • Picnic Items Cards (FSD? activity only) • Picnic Priorities Sheet (FSD? activity only)

NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different...?' activity within the lesson plan