

Year B Science LTP 2024 - 2025

Year B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
KS1 2024 - 2025	Materials: Uses of everyday materials Knowledge: Name objects with the same use that are made from different materials. Name materials that are used to make objects with different uses. Recognise that stretching, twisting, bending and squashing can cause some solid objects to change shape. Name properties that make materials suitable for their use. Working Scientifically: Measure using non-standard units. Recording results in a table. Use data to answer a simple question. Record results in a block graph.	Living things and their habitats: Habitats Knowledge: Recall some life processes, giving examples of how they apply to plants and animals. Match different plants and animals to their habitats. Give examples of how animals use their habitat for food and shelter. Recall that plants produce their own food for energy. Name living things that are producers and place a producer at the beginning of a food chain. Use arrows to show the order in a food chain. Working Scientifically: Classify objects into alive, never been alive and was once alive, giving reasons for their choices. Carry out research to find answers to questions.	Animals, including humans: Lifecycles and health Knowledge: Identify stages in the life cycles of different animals, including humans. Describe the basic survival needs of animals. Explain how to take care of personal hygiene. Describe some positive effects of exercise. Identify foods in different food groups. Working Scientifically: Measure using simple equipment. Record results in a table. Use data to answer a simple question. Research using secondary sources.	Living things and their habitats: Microhabitats Knowledge: Identify and name a variety of plants and animals. Recall that minibeasts live in microhabitats. Describe microhabitats and their conditions. Describe how microhabitats provide for the basic needs of animals and plants. Describe the job role of a botanist. Working Scientifically: Group minibeasts and create simple classification keys. Ask questions and recognise that they can be answered in different ways. Gather and record data and use it to answer questions. Plan what observations to make in an experiment. Order the steps of a method.	Plants: Plant growth Knowledge: Recall that seeds have all the necessary parts inside for plants to grow. Recall that seeds need water and warmth to germinate. Recognise that light is required for healthy plant growth. Sequence the stages of a plant's life cycle. Recognise the importance of healthy plant growth. Describe the influences humans have on plants in the environment. Working Scientifically: Set up comparative tests. Plan observations and measurements. Use rulers to measure and record stem height. Record plant growth data in a table.	Working Scientifically Consolidation Knowledge: Explain the terms reduce, reuse and recycle. Describe how paper is made. Select suitable materials for a plant pot. Describe good growth conditions for seeds. Make a plant pot from eco-friendly materials. Identify non-living materials to decorate a plant pot. Working Scientifically: Use an online source to find answers to questions. Identify and classify different types of material. Classify natural and human-made materials.

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				Describe the appearance of flowering plants. Use an identification chart to name flowering plants.	Compare plant growth in different test conditions. Use a magnifying glass to observe and compare plants. Draw diagrams to represent stages of a plant's life cycle.	Carry out tests to assess the properties of different materials. Use observations to answer questions. Draw conclusions about the suitability of materials.
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	Forces, Earth and space: Unbalanced forces Knowledge: Describe gravity and its effects. Describe the relationship between mass and gravity. Describe air resistance and its effects. Describe friction and its effects. Describe water resistance and its effects. Describe the relationship between surface area and air and water resistance.	Materials: States of matter Knowledge: Identify solids, liquids and gases using their properties. Describe melting, freezing, condensing and evaporating. Describe the different stages of the water cycle. Describe how temperature affects the rate of evaporation and, therefore, the water cycle.	Energy: Sound and vibrations Knowledge: Describe how sounds are made. Describe how sounds are heard through different mediums. Explain the relationship between vibration strength and volume. Describe the relationship between volume and distance. Describe pitch and how to change it.	Energy: Electricity and circuits Knowledge: Recall a range of electrical appliances and classify them as mains or battery-powered. Explain why something is either mains or battery-powered. Explain how to test if a circuit works and identify when simple electric circuits will work. Identify symbols for open and closed switches.	Living things and their habitats: Classification and changing habitats Knowledge: Group animals in various ways, including vertebrates (mammals, birds, reptiles, amphibians, fish) and invertebrates. Group plants in various ways, including flowering and non-flowering plants. Recognise and describe different habitats and their inhabitants.	Working Scientifically Consolidation Knowledge: Compare and group materials together, according to whether they are solids, liquids or gases. The part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

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KS2 202 4 - 202 5	Explain how to make an object aerodynamic or streamlined. Describe the effects of levers, pulleys and simple machines on movement. Working Scientifically: Analyse predictions, data and anomalies to write a conclusion. Plan a fair test to investigate air resistance. Write a method. Evaluate a method and judge the degree of trust. Design a results table. Calculate the mean average from repeat data. Draw and annotate a diagram. To draw an accurate line graph.	Working Scientifically: Ask relevant questions. Use results to draw simple conclusions. Use thermometers to take accurate measurements. Make predictions for new values. Record findings using labelled diagrams. Research using more than one source.	Explain how insulating materials can be used to muffle sound. Working Scientifically: Observe closely how different instruments create a sound. Research how whales and dolphins communicate underwater. Present results using a bar chart. Suggest which variables to measure and for how long. Design simple results tables. Identify when results or observations do not match predictions.	Predict whether a circuit will work based on whether the switch is open or closed and explain that it works by breaking and completing a circuit. Give examples of how switches are useful. Describe that a material is a good electrical conductor when it is added to an electric circuit and the bulb lights. Describe that a material is a good electrical insulator when it is added to an electric circuit and the bulb does not light. Recall that metals, for example, are good electrical conductors and plastics, for example, are good electrical insulators. Describe that the more bulbs added to a series circuit, the dimmer the bulbs will be. Explain that the bulbs will be dimmer when more are added to a circuit, as less energy is transferred to each of them. Describe precautions for working safely with electricity. Explain some precautions using knowledge of circuit diagrams, electrical	Recognise the impact humans can have on habitats. Recognise the impact of natural disasters on habitats. Working Scientifically: Record data in different ways. Apply and create classification keys. Make careful observations. Make and use classification keys. Present information in different ways. Research using an information sheet.	Use classification keys to help group, identify and name a variety of living things in their local and wider environment. Environments can change and that this can sometimes pose dangers to living things. A switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Some common conductors and insulators, and associate metals with being good conductors. How sounds are made, associating some of them with something vibrating. Vibrations from sounds travel through a medium to the ear. To know the simple functions of the basic parts of the digestive system in humans. Working Scientifically: Plan a comparative test. Gather and record data. Conclude and evaluate the investigation. Observe carefully and apply these
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