Spring 1 Science overview

Science	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Unit	Sensitive Bodies	Use of Everyday Materials	Rocks and Soils	States of Matter	Earth and Space	Evolution and Inheritance
Outline	Identifying and naming body parts and conducting practical activities with the senses to spot patterns and answer questions.	Comparing the suitability of materials by carrying out tests and recording data.	Exploring the physical properties of rocks and soils and fossil formation.	Exploring states of matter and changes of state.	Exploring day and night and the movement of the Earth, planets and Moon.	Exploring variation and inheritance in different living things and how observations and fossil evidence have led to the theory of evolution.
Learning objectives	• To name parts of the human body. • To name the body parts used for each sense. • To identify the body parts used for the sense of taste and touch. • To identify the body parts used for the sense of smell and sight. • To identify the body part used for the sense of hearing. • To recognise how the senses are used in everyday life.	• To recognise that objects are made from materials that suit their uses. • To recognise that objects are made from materials that suit their uses. • To recognise that the shape of some solid objects can be changed. • To compare the suitability of materials for particular uses. • To recognise that the strength of some materials can be changed. • To compare the suitability of materials for particular uses.	• To group rocks using their appearance. • To group rocks using their physical properties. • To describe the process of fossil formation. • To identify fossils and group rocks accordingly. • To compare soils and how they were formed. • To describe a soil sample using sedimentation.	• To identify solids using their properties. • To identify liquids and gases using their properties. • To describe melting and freezing. • To describe condensing and evaporating. • To describe the different stages of the water cycle. • To describe how temperature affects evaporation rates and the water cycle.	• To compare the contributions of Ptolemy, Alhazen and Copernicus to models of the Solar system. • To describe the movement and shapes of the celestial bodies in our Solar System. • To describe the movement of the Moon relative to the Earth. • To explain the causes of day and night and the seasons. • To devise a sundial to tell the time. • To describe some uses of satellites and the problems posed by space junk.	• To explain why there are differences within a species. • To recognise the inheritance of characteristics in plants and animals. • To explain why adaptation is necessary. • To model how natural selection affects population size. • To describe the theory of evolution. • To recognise evidence that can be used for evolution.

Spring 1 Science overview

Key Skills	• Recognising there are different types of enquiry (ways to answer a question). • Using their senses to describe, in simple terms, what they notice or what has changed. • Using non-standard units to measure and compare. • Drawing and labelling simple diagrams. • Using a prepared table to record results including numbers and simple observations. • Grouping based on visible characteristics. • Using their results to answer simple questions.	• To recognise that objects can be grouped. • To record data in a table. • To gather data and use it to answer a question. • To record data in a block graph. • To recognise that some materials are harmful to the environment.	• To observe the appearance of rocks closely, using a magnifying glass. • To make predictions, suggest improvements and explain observations over time. • To present research on fossil formation. • To use the fossil record to answer questions about the past. • To record the drainage rate for different soils in a bar chart. • To draw and label a diagram.	• To ask relevant questions about the properties of solids. • To use results to draw simple conclusions about the properties of liquids. • To use thermometers to take accurate measurements before and after melting. • To make predictions for new values about evaporation rates. • To record the stages of the water cycle using a labelled diagram. • To research climate change and the water cycle.	• To pose testable questions about the solar system. • To develop a model to represent the Solar System. • To design and draw a table. • To draw a diagram to explain day and night. • To calibrate and use a sundial to measure time. • To use temperature data to make predictions about climate change.	• To group factors. • To evaluate the degree of trust and pose new questions for further enquiry. • To consider evidence used to inform theories. • To consider the degree of trust in the evidence used.
Key Vocab	compare group hearing pattern sense(s) sight smell	elastic fabric (Y1) flexible glass (Y1) material (Y1) metal (Y1) object (Y1)	bar chart conclusion crystal diagram (Y1) fossil grain group (Y1) hard hardness observe (Y1) predict (Y2) record research (Y2)	boiling conclusion (Y3) condensing diagram (Y1) evaporating evaporation rate freezing gas liquid measure (Y1) melting precipitation predict (Y2)	celestial bodies data day (daytime) degrees Celsius (Y4) discovery Earth evidence gravity Jupiter line graph line of best fit Mars Mercury	adaptation anomaly (Y5) characteristic (Y5) competition control variable (Y4) environment environmental evaluate evidence (Y5) evolution extinct fossil (Y3) gene

Spring 1 Science overview

	taste touch	plastic (Y1) property rock (Y1) suitable wood (Y1)	rock sediment sedimentary rock sedimentation soft soil	rate research (Y2) solid steam stopwatch (Y3) temperature thermometer the water cycle	model moon Neptune night (nighttime) orbit phase planet Pluto Saturn season (Y1) solar system spherical star temperature (Y4) testable Uranus Venus	habitat (Y2) inherit inheritance mean average model (Y5) natural selection offspring (Y5) parent (biological) population reliable reproduce (Y5) scientific theory selective breeding survival of the fittest variable (Y3) variation
Key Questions	What groups can we sort body parts into? What does the data tell us? What are my senses? What is a discovery? How does sound change when you are near or far? What sense helps us with different activities?	How can we group objects? Is it possible to change them once they are grouped? What is the best way to record data? How can I use data to help me answer a question? What is an appropriate way to present data? Which materials can harm the environment?	How do magnifying glasses help geologists? How can I support a prediction? How can I find more information about fossils? How do fossils help us answer questions about the past? What is an appropriate way to present data on drainage? How can I add more information to a diagram?	What are the properties of a solid? What can test results tell me about the properties of a liquid? What are the stages of the water cycle? Are climate change and the water cycle linked?	How can we carry out tests using the solar system? What would be an appropriate material to make a planet from? What is the most appropriate way to present data? How do you explain the difference between day and night? Why do we no longer use sun dials? Is climate change real?	Why are there different species within a species? Why is adaptation important? What is the theory of evolution? How can we prove that animals adapt?