

2019-2020 Science Curriculum (Updated)

Term Autumn 1st		Our Senses	Animals including humans	Nutrition and our bodies	Living things and their habitats	Properties and changes of Materials	Animals including Humans
	Week	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	1	Parts of the body	Animals and their young	Recognise the different types of nutrients foods provide	Recognise that living things can be grouped in a variety of ways	Compare and group together everyday materials	Human circulatory system
	2	Investigating different heights of pupils in the class	Describe the life cycle of an animal- frog/bee	Identify the different types of nutrients foods provide	Explore and use classification keys. Create a classification key. Hwk task- invertebrates classification task	Dissolving- Soluble and insoluble materials	Investigating pulse rate
	3	Senses- sight and hearing	Describe the life cycle of a human	Design a healthy balanced school meal- focus on nutrients (Y2- food groups)	Classification trees in local environment- trees Create a leaf classification tree	Dissolving investigations	Explain functions of heart, blood vessels and blood
	4	Senses- smell and taste	Comparative test- do children get faster as they get older?	Sugar detectives- which food and drinks contain the most sugar?	Recognise positive and negative changes to the local environment	Separating mixtures- sieving, filtering, magnetism and evaporation	To know how water and nutrients are transported in humans and animals/Impact of diet and exercise
	5	Senses- touch	Describe the basic needs of animals for survival Hwk task- how would you survive in the rainforest?	To know the main functions of the skeleton. Identify different types of skeletons Hwk task- research the skeleton of different animals	Research environmental issues- create a persuasive video in groups	Recovering a substance from a solution	Impact of drugs and lifestyle
	6	6-Animal senses 7-Seasonal changes: Autumn	Importance of healthy eating- design a healthy pizza 7- Importance of exercise- how does exercise affect our body? Importance of hygiene	Identify the role of muscles	Research an endangered species- create a detailed fact file	Irreversible change	Informative poster/leaflet explaining impact of diet, exercise, drugs and lifestyle.

Term Autumn 2nd		Projects and Scientists	Projects and Scientists	Forces and Magnets	Projects and Scientists	Properties and changes of Materials	Electricity
	Week	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	1	What are fossils and why are they important?	Oranges investigation- floating and sinking	Forces- What is a force? Sorting pushes and pulls onto venn diagram	To research the Scientist Thomas Edison Hwk task- Thomas Edison focus	Reversible/irreversible change	Circuit challenge- revisiting prior learning
	2	Ammonite fossils	Skittles investigation- what happens when you add water to skittles?	Comparing how things move on different surfaces- predictions, investigation and results	Investigation- can you light a bulb without using a battery?	Give reasons for the uses of everyday materials/thermal insulation- which material is best at keeping tea warm?	To use recognised symbols when representing a simple circuit in a diagram.
	3	Making an ammonite fossil	Rocket mice investigation	Magnetic and non- magnetic materials Hwk task- research the use of magnets in the wider world	What happens when we mix all the colours of the rainbow? (White light investigation)	Give reasons for the uses of everyday materials	To be able to associate the brightness of a lamp with the number and voltage of cells
	4	Investigate the life of Mary Anning	Scientist- Edward Jenner	Investigate if all metals are magnetic	Make your own rainbow light investigation	Best nappy investigation	To be able to associate volume of buzzers with number and voltage of cells
	5	Investigate the life of Mary Anning	Investigation- How many paperclips can fit in a full glass of water?	Investigate magnetic poles Magnetic forces acting at a distance	Make a kaleidoscope	To understand why Spencer Silver is a significant Scientist	Compare and give reasons for variations in how components function Investigative Fair-test – What affects the brightness of a bulb in a circuit?
	6	Seasonal changes: Winter	Making peppermint creams	Investigation- Does the size of a magnet affect how strong it is?	Balloon blow up investigation	Mistake inventions	Problem solving- making a burglar alarm

Term Spring 1st		Materials	Materials	Projects and Scientists	Digestion and teeth	Life Cycles	Light and Shadows
	Week	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	1	Identify different materials Describe the properties of materials	Identify materials and describe their properties (recap on Y1 prior learning)	Scientist- Isaac Newton	Identify the parts of the digestive system	Changes in human development	Light and shadows challenge (Revisiting prior learning)
	2	Compare and group materials	Identify and compare the suitability of a variety of materials	Egg drop challenge- design and make.	Practical digestive system- Identify and describe the functions of the parts of the digestive system Hwk task- research parts of the digestive system	Research gestational periods of different animals	To understand that light appears to travel in straight lines
	3	Describe physical properties of materials- Three Little Pigs Focus	Investigate how materials can be changed by squashing, bending, twisting and stretching	Egg drop challenge- predict which systems will protect the egg and carry out fair test. Writing a conclusion.	Identify different types of teeth in humans and their functions	Life cycles and differences- mammals and amphibians	To be able to explain how objects are seen -Shoe box challenge Ext task/hwk task- informative leaflet/letter about how we can see different light sources
	4	Three Little Pigs building challenge- which materials are best to build a house with?	Investigate how materials can be changed by squashing, bending, twisting and stretching	What happens when you mix oil and water?	Plan a scientific enquiry to investigate tooth decay	Life cycles and differences- insects and birds	Investigating how shadow size can be changed- revisiting prior learning with working scientifically focus
	5	Investigate which material would be best for an umbrella for Ted	Explore properties of materials for a particular use- which material is best for a pair of tights for the giant? (Smartest giant in town)	Dancing raisins investigation	Tooth decay conclusion Construct and interpret food chains Hwk task-research different animals and what they eat and classify them according to the different types of teeth they have	Reproduction in plants	To be able to use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye- Making a periscope
	6	Writing a letter to Ted explaining results of investigation Hwk task- Research Scientist- Charles Macintosh	Writing a letter to the giant to explain the results of the investigation	Lemon volcano	Construct and interpret food chains	Reproduction in animals	To be able to use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye- Making a periscope

Term Spring 2nd		Grouping Animals	Materials	Rocks, Fossils and Soils	Sound	Earth and Space	Living things and their habitats
	Week	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	1	To identify and sort animals into groups	Investigate which material will make the best tea bag.	Observe and compare different types of rocks	To identify how sounds are made (vibrations)	Movement of the earth and other planets relative to the sun	Describe how living things are classified into broad groups
	2	To name, describe and compare mammals	Investigate which material will make the best tea bag	Identify and sort different type of rocks Describe physical properties of rocks	To recognise that vibrations from sounds travel through a medium to the ear- ear gongs activity	Movement of the earth and other planets relative to the sun	To be able to give reasons to classify plants/To identify differences between groups in the plant kingdom
	3	To name, describe and compare British birds Hwk task- British birds hunt/ garden birds comprehension task	Investigate what happens to cotton wool balls in water.	Investigate properties of rocks-porous/density- which rock is most suitable for a statue in Cassiobury Park? Hwk task- exploring rocks in the environment	To explore pitch- find patterns between the pitch of a sound and the object that produced it.	Identify the sun, earth and moon as spherical bodies	To research the main characteristics of a vertebrate group
	4	To name, describe and compare reptiles	Investigate which ball is the bounciest	Rock cycle investigation	To explore pitch- find patterns between the pitch of a sound and the object that produced it. How does the amount of water in a bottle/jar affect the pitch of a sound?	To describe the movement of the moon relative to the Earth Investigation- Making craters	To research the main characteristics of an invertebrate group/classify an imaginary animal
	5	To name, describe and compare fish and amphibians	Investigate which ball is the bounciest	Fossil formation	String telephone investigation- investigating how sounds change as distance from sound source increases	Investigate phases of the moon	To research microorganisms
	6	To group animals according to what they eat To know how to take care of a pet dog (Dog's Trust visit)	Investigate the Scientist John Dunlop	To recognise that soils are made from rocks and organic matter.	Research the Scientist Alexander Graham Bell	Earth's rotation to explain night and day Scientist study if time or hwk task-eg Ptolemy, Alhazen, Copernicus	To investigate microorganisms- mouldy bread investigation.

Term Summer 1st		Seasonal Changes	Living things and their habitats	Plants	Electricity	Projects and Scientists	Evolution and Inheritance
	Week	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	1	To observe and describe changes in the seasons- Spring	To explore and compare the differences between things that are living, dead and have never been alive.	Functions of parts of the plant	To identify common appliances which run on electricity Hwk task- what would life be like without electricity? How has electricity changed the way we live?	Explore water resistance by making and testing paper boats/ Magical waterlilies investigation	To identify that offspring produced by living things vary and are not identical to their parents.
	2	To create a Spring weather forecast	To identify a variety of plants and animals in their habitats	Requirements of plants for life and growth (recap on prior learning- year 2) Investigate if a plant can survive without leaves Investigate how amount of air/space affects plant growth	Predict, construct and test electrical circuits	Air resistance investigation- parachutes/ paper aeroplanes and straw gliders	To research the characteristics that make an animal suited to its environment Home learning task- Charles Darwin research
	3	How can we measure rainfall? To record the rainfall over a period of time	To explore and compare two different microhabitats.	Explore different soils- do different types of soils affect a plants growth? (<i>Link to prior learning- rocks and soils</i>)	To recognise how a switch works in a circuit	Create a sun dial (links to prior learning in previous topic- Earth and Space)	To identify how animals are adapted to suit their environment in different ways Pattern seeking activity about birds beaks
	4	To record the rainfall over a period of time To observe and describe weather associated with the seasons- comparing weather data collected in Winter and Spring	To explore and compare two different microhabitats.	Explore the requirements of plants for life and growth- observing changes and making measurements Writing a conclusion- can plants survive without leaves?	To identify conductors and insulators- predict and test different materials	Project Scientist- Jane Goodall/Eva Crane	To identify how animals are adapted to suit their environment in different ways- which animal would survive/peppered moth research
	5	To explain the results of rainfall investigation	To research and compare two contrasting habitats. Hwk task- research another world habitat	Researching requirements of plants for life and growth and how they vary from plant to plant (could be possible hwk task) Investigate transportation of water in plants- carnations and food colouring	To make a switch (Applying knowledge of conductors and insulators)	Scientist study- Ruth Benerito (Links to prior learning in Properties and changes of Materials topic)	To be able to identify how plants are adapted to suit their environment in different ways
	6	To observe and describe changes in the seasons- Summer To collect data- what is our favourite weather in Year 1 L/P?	To use food chain to describe how animals get their food	Role of flower in pollination and life cycle of a flowering plant 7- seed dispersal Writing conclusion for investigations of requirements of plants for life and growth	Investigate alternative materials for wires (Applying knowledge of conductors and insulators)	Scientist Study- Investigate the scientist Galileo (recall Isaac Newton)	To recognise that living things have changed over time – fossils provide information about living things To look at evidence for evolution

Term Summer 2nd		Plants	Plants	Light and Shadows	Materials and The Water Cycle	Gravity and Resistance	Projects and Scientists
	Week	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	1	Identify the parts of a plant	Investigating seeds and bulbs	Identify light sources- we need light to see things	Compare and group solids, liquids and gases	The force of gravity	Investigation- Fossil making
	2	Identify the parts of a plant that we eat	Do bigger seeds grow into bigger plants?	Reflection- testing best material for a reflective strip for a book bag Hwk task- research the Scientist Percy Shaw and his famous invention	Compare and group solids, liquids and gases Hwk task- particle properties of solids, liquids and gases	The force of gravity/air resistance investigations	Paperclip investigation- Surface tension
	3	To describe how to plant a bean	Investigating healthy plant growth- light- planting bulbs- amaryllis	To know that light from the sun can be dangerous and that there are ways to protect our eyes- designing a sun safety poster	Identify changes in materials when they are heated Hwk task- research melting points of different materials	Friction	Investigating body proportions (Leonardo Da Vinci) and choosing own further question to investigate.
	4	To identify and name common wild plants	Observe and describe how seeds and bulbs grow into plants	Identifying and sorting transparent, translucent and opaque objects Recognise how shadows are formed- making shadow puppets	Identify changes in materials when they are cooled	Water resistance	Scientist study-Choose a Scientist to research

	5	To identify and name garden plants	Investigating how plants need water, light and a suitable temperature to grow and stay healthy- cress	Finding patterns in the way that the size of shadows change- using shadow puppets	To explore evaporation	Mechanisms, pulleys, levers	Scientist- Choose a Scientist to research
	6	To identify and name trees- deciduous and evergreen Hwk task- deciduous and evergreen trees Investigation- are taller trees older?	Writing conclusions about investigations.	Writing instructions for making a shadow puppet Investigating shadows on the playground	To explore condensation To identify and describe the different stages of the water cycle Cross curricular writing task- diary entry from the perspective of a water droplet	Mechanisms, pulleys, levers	Scientist- Choose a Scientist to research

Year 3-Cross- curricular focus on Mae Jemison as a significant person in English