THE MULBERRY HOUSE SCHOOL

# Project Cycle Aims

## Year 1:

### Autumn Term

#### Ancient Egypt

- To place the Ancient Egyptians on a timeline of other ancient civilisations & British history.
- To establish what society was like in Britain during the Ancient Egyptian civilisation and be able to describe the end of the Ancient Egyptian civilisation.
- To write labels for a world history timeline and write a description of society in Britain in 3000 BCE.
- Label a map of Ancient Egypt and its surroundings.
- To use maps to locate the origin of various peoples who invaded Egypt in the last few hundred years of the Ancient Egyptian civilisation.
- To write a biography of Alexander the Great or Cleopatra, the last Ancient Egyptian Pharaoh.
- To find out about the history of the Aswan Dam.

#### Hot and Cold

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
- To find out that some materials are better thermal insulators than others.
- To find out that heating or cooling some materials can cause them to change and some changes are/are not reversible.
- To learn that temperature is a measure of how hot or cold something is.
- To understand the water cycle and the part played by evaporation and condensation.
- To recognise when a test or comparison is unfair.
- To make a careful record of observations and measurements.
- To explain what they have found out, drawing on the knowledge gained and understanding.

### Spring Term

#### Journeys and Maps

- Use world maps, atlases and globes to identify the United Kingdom and its counties, as well as the countries, continents and oceans studied at this key stage.

- Use simple compass directions (North, South, East and West) and locational and directional language [for example, near and far; left and right], to describe the location of features and routes on a map.
- Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features; devise a simple map; and use and construct basic symbols in a key.
- Use simple fieldwork and observational skills.
- Locate the world's countries, using maps to focus on Europe and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries and major cities.
- Events beyond living memory that are significant nationally or globally [for example, the first aeroplane flight or events commemorated through festivals or anniversaries].
- To explore, learn and use map symbols and keys.
- To explore, learn and use four and six-figure grid references.
- To use a compass and explore, learn and use directions accurately.
- To use grid references, compass directions and symbols to locate places on a map.
- To sketch maps and plans of the school and surroundings area.
- To gather information about land use within their school and it's surrounding area.
- To learn about significant historic figures such as Christopher Columbus, Sir Frances Drake and Amelia Earhart.

### The Body

- Pupils should have plenty of opportunities to learn the names of the main body parts (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through games, actions, songs and rhymes.
- Pupils might work scientifically by: using their observations to compare and contrast animals at first hand or through videos and photographs, describing how they identify and group them; grouping animals according to what they eat; and using their senses to compare different textures, sounds and smells.
- Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.
- Identify that humans and some other animals have skeletons and muscles for support, protection and movement.
- That humans are similar to each other in some ways and different in others.
- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

## Summer Term

### Toys and Games

- To understand how toys have changed over time by looking at their own toys, their parents' toys and then their grandparents' toys and identifying differences.
- Produce a sketch using close observation, suitable materials and a variety of sketching techniques, which are practised over three sessions.

- Sort toys and games (their own and those of parents and grandparents) into old and new, and create a time line.
- To understand how the materials from which toys are made have changed over time.
- To recognise and identify a range of everyday materials, describing their properties.
- To design and build a wooden spoon puppet.
- Explore and make decisions about the fitness for purpose of various materials used to make toys.

### Electricity and Magnetism

- Identify common appliances that run on electricity.
- Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
- Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.
- Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
- Recognise some common conductors and insulators, and associate metals with being good conductors.
- Static electricity and how it can be created.
- Notice that some forces need contact between two objects, but magnetic forces can act at a distance.
- Observe how magnets attract or repel each other and attract some materials and not others.
- Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.
- Describe magnets as having two poles.
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.
- Collect evidence by making observations and measurements when trying to answer a question.

## Year 2:

## Autumn Term

### Famous People

- The lives of significant individuals in the past who have contributed to national and international achievements. Some should be used to compare aspects of life in different periods.
- From Florence Nightingale to Alexander the Great, the children will discover the stories behind famous faces who changed the world. Such as; Henry VIII, Christopher Columbus, Rosa Parks, Gandhi and Emmeline Pankhust.
- Significant historical events, people and places in their own locality.
- To develop the above highlighted skills through looking at famous people both past and present, drawing comparisons.
- To identify what it means to be famous.

- Know who William Shakespeare is and the impact he made on Literature and theatre.
- To understand the key events of Roald Dahl's life.
- To understand the history of the Olympics.
- To understand the importance of drive and determination to an individual's success.
- Compare Neil Armstrong and Tim Peake's space missions.
- Know who Florence Nightingale was and what made her a significant famous figure.
- To understand the importance influence both of these figures had on shaping modern day air travel. Such as Da Vinci and the Wright Brothers.
- Express their own views about people, places and environments.
- Changes within living memory. Where appropriate, these should be used to reveal aspects of change in national life.
- Events beyond living memory that are significant nationally or globally [for example, the Great Fire of London, the first aeroplane flight or events commemorated through festivals or anniversaries].
- The lives of significant individuals in the past who have contributed to national and international achievements. Some should be used to compare aspects of life in different periods [for example, Elizabeth I and Queen Victoria, Christopher Columbus and Neil Armstrong, William Caxton and Tim Berners-Lee, Pieter Bruegel the Elder and LS Lowry, Rosa Parks and Emily Davison, Mary Seacole and/or Florence Nightingale and Edith Cavell].
- Significant historical events, people and places in their own locality.

### The Weather

- Observe changes across the four seasons.
- Observe and describe weather associated with the seasons and how day length varies.
- Identify seasonal and daily weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.
- Use basic geographical vocabulary to refer to: Key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather.
- Key man-made features, including: city, town, village, factory, farm, house, office, port, harbour and shop.

## Spring Term

### Houses and Homes

- To know that people live in different sorts of homes.
- To talk about homes using appropriate vocabulary.
- To recognise and name different types of homes.
- To identify key external features common to homes, e.g. windows, doors, chimneys.
- To describe and draw details of different features of a home.
- To identify differences between two homes built at different times such as Tudor, Victorian, Edwardian homes.

- Identify key features of homes and recognise how these have changed over time, noticing differences between houses built at different times.
- To make inferences about aspects of home life a long time ago.
- Homes around the world – investigate designs of homes in other parts of the world. Consider what a home might have to be like in a very hot or cold part of the world. What materials is it made from? Why?
- Design a home suitable for a hot or cold climate and think about which materials would be suitable.

## Materials

- Distinguish between an object and the material from which it is made.
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- Describe the simple physical properties of a variety of everyday materials.
- Compare and group together a variety of everyday materials on the basis of their simple physical properties.
- Pupils should explore, name, discuss, raise and answer questions about everyday materials so that they become familiar with the names of materials and properties such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent. Pupils should explore and experiment with a wide variety of materials, not only those listed in the programme of study, but including for example: brick, paper, fabrics, elastic, foil.
- Pupils might work scientifically by: performing simple tests to explore questions, for example: 'What is the best material for an umbrella? ...for lining a dog basket? ...for curtains? ...for a bookshelf? ...for a gymnast's leotard?'
- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
- Pupils should identify and discuss the uses of different everyday materials so that they become familiar with how some materials are used for more than one thing (metal can be used for coins, cans, cars and table legs; wood can be used for matches, floors, and telegraph poles) or different materials are used for the same thing (spoons can be made from plastic, wood, metal, but not normally from glass). They should think about the properties of materials that make them suitable or unsuitable for particular purposes and they should be encouraged to think about unusual and creative uses for everyday materials. Pupils might find out about people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam.
- Pupils might work scientifically by: comparing the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs); observing closely, identifying and classifying the uses of different materials, and recording their observations.

THE MULBERRY HOUSE SCHOOL

## Summer Term

### Ancient Greece

- A study of Greek life and achievements and their influence on the western world.
- To research and understand more about the Minoan and Mycenaean civilization, including some of the mysteries surrounding them and their eventual decline.
- To make a clay pot and decorate using design of the times.
- To include on the pot designs such as simple shapes, upright triangular points and geometric patterns. To include on the pot, or fragment, images such as black stylized figures in positions of movement and with pictures telling a narrative.
- To find out about Alexander the Great and assess different versions of his story.
- Explore the extent of the Greek Empire created by Alexander the Great.
- Label a map of the Greek Empire with the key physical and human characteristics.
- To find out about what was traded between cities in the Archaic and Classical periods.
- To research the lifestyle of the Ancient Greek people and understand what they wore and to design and make a tunic (chiton) in the style of the times.
- To understand the importance of temples and become familiar with some of the architectural features of Greek temples.
- To build a temple like the Parthenon and include a statue of the resident god or goddess.
- To research the Olympic flame, its origins in Olympia and journey to the host's stadium.
- To research the importance the god Zeus played in the Games and why olive leaf wreaths were given to the winners.

### Plants

- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- Identify and describe the basic structure of a variety of common flowering plants, including trees.
- Pupils should use the local environment throughout the year to explore and answer questions about plants growing in their habitat. Where possible, they should observe the growth of flowers and vegetables that they have planted.
- They should become familiar with common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).
- Pupils might work scientifically by: observing closely, perhaps using magnifying glasses, and comparing and contrasting familiar plants; describing how they were able to identify and group them, and drawing diagrams showing the parts of different plants including trees. Pupils might keep records of how plants have changed over time, for example the leaves falling off trees and buds opening; and compare and contrast what they have found out about different plants.

- Observe and describe how seeds and bulbs grow into mature plants
- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
- Pupils should use the local environment throughout the year to observe how different plants grow. Pupils should be introduced to the requirements of plants for germination, growth and survival, as well as to the processes of reproduction and growth in plants.
- Note: Seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them.

## Year 3:

### Autumn Term

### The Victorians

- To put the Victorian period into historical context.
- To use historical sources to find out about the Victorian period.
- To find out about the life of Queen Victoria.
- To think about why Victoria became such a popular monarch.
- To find out about some famous Victorian inventions.
- To explain how new inventions changed people's lives during the Victorian period.
- To find out what the Industrial Revolution was.
- To explain how Victorian Britain was changed by the Industrial Revolution.
- To find out how the introduction of the railways changed travel and trade.
- To explain different viewpoints about the new railways.
- To find out what sort of jobs were taken by Victorian children.
- To explore what life was like for Victorian working children.
- To explore why Lord Shaftesbury was an important figure.
- To find out how Lord Shaftesbury's campaigns improved children's lives during the Victorian period.
- To use historical sources to make observations about Victorian clothing.
- To compare clothes for rich and poor people from Victorian time.
- To find out about typical crimes and punishments in the Victorian period.
- To compare Victorian punishments to the modern-day justice system.

### Forces

- Compare how things move on different surfaces.
- Notice that some forces need contact between two objects, but magnetic forces can act at a distance.
- Observe how magnets attract or repel each other and attract some materials and not others.
- Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.
- Describe magnets as having two poles.
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.
- Pupils should observe that magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary (for example,

opening a door, pushing a swing). They should explore the behaviour and everyday uses of different magnets (for example, bar, ring, button and horseshoe).
- Pupils might work scientifically by: comparing how different things move and grouping them; raising questions and carrying out tests to find out how far things move on different surfaces and gathering and recording data to find answers their questions; exploring the strengths of different magnets and finding a fair way to compare them; sorting materials into those that are magnetic and those that are not; looking for patterns in the way that magnets behave in relation to each other and what might affect this, for example, the strength of the magnet or which pole faces another; identifying how these properties make magnets useful in everyday items and suggesting creative uses for different magnets.

## Spring Term

### Transport

- How transport has evolved over time.
- Look at the History of Bicycles and Scooters.
- Learn about alternative forms of transport for example, cable cars.
- Understand how to stay safe on the road and learn the 'Green Cross Code'.
- To learn how cars have changed over time and to compare, diesel, oil and electric cars and their impact on the environment.
- To carry out a traffic survey.
- Discuss the different ways to travel by air. Look at the pictures of different types of planes and their aerodynamics. Including learning about famous flights and aviators – the Wright Brothers / Amelia Earhart / Howard Hughes etc.
- Look at the pictures of different types of rockets / shuttles / spacecraft. Learn about the 'space race' between the Russians and Americans. Not all missions were manned - what/who was first into space? Who were first to walk on the moon?
- Explore how rockets work and make their own rockets using effervescent tabs. Create a timeline of space travel.
- Discuss the different ways to travel on the oceans. Look at the pictures of different types of boats / ships. Discuss how vessels stay afloat in the water. What are they made of? What makes them go? What makes them stop? What are they used for? (i.e. fishing / expeditions / trade...) Look at how this has developed over time.
- Compare rivers and canals. The children will learn why canals were invented. Compare and contrast between now and then (industrial revolution Discuss how the canal system works and investigate locks.

### The Earth

- Name and locate the world's seven continents and five oceans.
- Name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas.
- Key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather.
- Key man-made features, including: city, town, village, factory, farm, house, office, port, harbour and shop.

- Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night).
- Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.
- To identify the layers of the Earth and how volcanoes are formed.
- To understand and identify the features of the water cycle.
- To recreate the water cycle in a simple experiment.
- To understand some of the effects of the tectonic plates.
- To understand how different types of mountains are formed.

## Summer Term

### Caring for our World

- Recognise that environments can change and that this can sometimes pose dangers to living things.
- Describe and understand key aspects of human geography, including the distribution of natural resources including energy, food, minerals and water.
- To learn what improves and harms their local, natural and built environments and about some of the ways people look after them.
- To learn that there are different kinds of responsibilities, rights and duties at home, at school, in the community and towards the environment.
- To learn that resources can be allocated in different ways and that these economic choices affect individuals, communities and the sustainability of the environment.
- To learn about renewable and non-renewable energy.
- What does sustainable development mean and how can we live more sustainably?
- What environmental issues are facing our planet and what are the solutions? Pollution – water, air and land.
  Over-use of natural resources – overpopulation, deforestation, water shortage and overfishing.
- Climate change and alternative energies.
- Discover how humans have a positive and negative impact on the environment.
- To learn that everyday objects are made from different materials and which resources materials are made from: paper and cardboard from trees; plastic from oil; metal from metal ore; glass from sand.
- To learn that we don't have to throw rubbish in the bin, it can be Recycled, Re-used or Reduced, and what each of these terms means.
- To be able to distinguish which materials can be recycled and which can't.
- To learn that materials can be changed and recycled into new things, such as recycling paper.
- To understand how composting works as a type of recycling and how this compares to what happens in a landfill site.
- To be able to use appropriate materials to make models from 'junk'.

### The Earth in Space

- 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.
- Pupils should be introduced to a model of the Sun and Earth that enables them to explain day and night. Pupils should learn that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). They should understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones).
- Pupils should find out about the way that ideas about the solar system have developed, understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus.
- Pupils might work scientifically by: comparing the time of day at different places on the Earth through internet links and direct communication; creating simple models of the solar system; constructing simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day; finding out why some people think that structures such as Stonehenge might have been used as astronomical clocks.

## Year 4:

### Autumn Term

### London

- To locate London on a world map.
- To be able to identify London Landmarks across the city.
- Identify and locate major physical features of London such as the River Thames, parklands and canals.
- Identify and talk about major man-made features of London such as government and monarchy, buildings, landmarks and other historical sites and tourist attractions.
- Understand London's location in relation to the rest of the country, Europe and the World.
- Understand London's economic, cultural and political importance as England's capital city.
- To know how London developed from its prehistoric foundations to the modern day. To know why London grew-up where it did.
- To understand how London is changing.
- To recognise London as a multi-cultural centre bringing together people, traditions, religions and cultures from all over the world.
- To explore and understand the important features of their own local area within the city.
- To learn about the Great fire of London and its historical significance.

### Light

- Recognise that light is needed in order to see things and that dark is the absence of light.
- Notice that light is reflected from surfaces.

- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- Recognise that shadows are formed when the light from a light source is blocked by an opaque object.
- Find patterns in the way that the size of shadows change.
- Pupils should explore what happens when light reflects off a mirror or other reflective surfaces, including playing mirror games to help them to answer questions about how light behaves. They should think about why it is important to protect their eyes from bright lights. They should look for, and measure, shadows, and find out how they are formed and what might cause the shadows to change.
- Pupils might work scientifically by: looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes.
- Recognise that light appears to travel in straight lines.
- 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.
- Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.
- Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
- Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.

## Spring Term

### The Celts and Romans

- To examine how the Roman Empire changed areas over time and begin to ask why.
- To locate countries arising in historical study of world label them using maps and atlases.
- To understand key terms relating to the Celtic period.
- To gain knowledge of the way of life in an Iron Age settlement.
- To role-play a member of an Iron Age settlement and recognise key aspects of the culture and life.
- To understand how the Roman Empire emerged and expanded in the three centuries before the Common Era.
- To understand the events leading up to the Roman conquest of Britain by Emperor Claudius in 43 CE.
- To develop ideas and designs of moving vehicles (chariots) through discussion and prototypes.
- To join wheels and axles effectively, choosing appropriate materials, and explain how they work.
- To research the Circus Maximus and understand its significance in Roman chariot racing history.
- To investigate Roman mosaics, discovering where they have been found and what they depicted.
- Understand the role of archaeologists in uncovering remains and how the past can be pieced together.
- To explore and discuss mosaics as an art form brought to Britain by the Romans, looking particularly at borders.

- To explore and develop different border patterns to use for a large printed mosaic.
- To begin to understand what it was like to live in Roman occupied Britain in 61 CE before Boudicca's rebellion and what benefits the Romans had brought to Celtic life.
- To understand the way in which Boudicca's rebellion came to an end.
- To understand how the Romans built roads and how many of these have survived over 2000 years.
- To know the location of a number of different towns and cities across Britain that have historical Roman significance.

## Animals

- Encourage greater and more detailed observation of the local environment.
- To treat animals with care.
- To understand the life cycle of a hen.
- To understand the difference between wild and domesticated animals.
- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).
- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
- Identify and name a variety of plants and animals in their habitats, including microhabitats.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.
- Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.
- Identify that humans and some other animals have skeletons and muscles for support, protection and movement.
- Explore and compare the differences between things that are living, dead, and things that have never been alive.
- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
- Identify and name a variety of plants and animals in their habitats, including micro- habitats.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

THE MULBERRY HOUSE SCHOOL

## Summer Term

### The History and Writing and Printing

- To look at the earliest forms of writing such as cave paintings from the Lascaux caves and the Cuneiform.
- To learn about the Rosetta stone and hieroglyphics and how to decipher them.
- To learn about the origins and history of the Beowulf poem, the oldest surviving poem in the English language.
- To learn about and look at other forms of writing such as the Arabic and Hebrew alphabets.
- To learn about the process of how to make paper and to make their own.
- To understand that the Epic of Gilgamesh is the oldest recorded story that has been discovered.
- Explain that the clay tablets recording the story have been fragmented over time, which makes it difficult for translators.
- Retell the story of part of the Epic of Gilgamesh.

### Sounds/Minibeasts

- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound source increases.
- Pupils should explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways.
- Pupils might work scientifically by: finding patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses. They might make earmuffs from a variety of different materials to investigate which provides the best insulation against sound. They could make and play their own instruments by using what they have found out about pitch and volume.