

## Year 5 Curriculum Overview – 2016/2017

### Termly Literacy

**Reading – word reading** – apply their growing knowledge of root words, prefixes and suffixes, both to read aloud and to understand the meaning of new words that they meet.

**Reading – comprehension** – read and discuss an increasingly wide range of texts that are structured in different ways; read for pleasure; make comparisons within and across books; learn a wider range of poetry by heart; prepare poems and plays to read aloud and perform; summarise main ideas and identify key details; discuss and evaluate how authors use language, considering the impact on the reader; distinguish between statements of fact and opinion; explain and discuss their understanding of what they have read through formal presentations and debates.

**Writing – spelling** – use further prefixes and suffixes and understand the guidance for adding them; spell some words with 'silent' letters; continue to distinguish between homophones and other words which are often confused; use dictionaries to check the spelling and meaning of words; use a thesaurus.

**Writing – handwriting** – write legibly, fluently and with increasing speed; choose the writing implement that is best suited for a task.

**Writing – composition** – plan writing; identify the audience for and purpose of the writing; write narratives, considering how authors have developed characters and settings; select appropriate grammar and vocabulary; describe settings, characters and atmosphere; evaluate and edit writing; ensure tenses are correct; use singular and plural forms accurately.

**Writing – vocabulary, grammar and punctuation** – use formal speech and writing when appropriate; use expanded noun phrases; use modal verbs or adverbs; use relative clauses beginning with who, which, where, when, whose; use commas, hyphens, brackets and dashes accurately.

### Termly Mathematics

**Number – number and place value** – read, write, order and compare numbers to at least 1,000,000 and know the value of each digit; interpret negative numbers, including through zero; round any number to the nearest 10, 100, 1000, 10,000 and 100,000; solve number problems and practical problems; read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

**Number – addition and subtraction** – add and subtract whole numbers with more than 4 digits, using written methods; add and subtract numbers mentally; use rounding to check answers to calculations; solve addition and subtraction multi-step problems, deciding which operation and method to use and why.

**Number – multiplication and division** – identify multiples, factors and prime numbers; multiply numbers up to 4 digits by a one or two-digit number, including long multiplication; multiply and divide numbers mentally; divide numbers up to 4 digits by a one-digit number; multiply and divide whole numbers and those involving decimals by 10, 100 and 1000; recognise and use square numbers and cube numbers; understand the meaning of the equals sign; problem solving involving simple fractions.

**Number – fractions, decimals and percentages** – compare and order fractions; write equivalent fractions of a given fraction; recognise mixed number and improper fractions and convert from one form to the other; add and subtract fractions with the same denominator and denominators that are multiples of the same number; multiply proper fractions and mixed numbers by whole numbers; read and write decimal numbers as fractions; recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents; round decimals with two decimal places; read, write, order and compare numbers with up to three decimal places; solve problems involving numbers up to three decimal places; recognise the per cent symbol (%), and write percentages as a fraction and as a decimal.

**Measurement** – convert between different units of metric measures; measure and calculate perimeter; calculate and compare the area of rectangles (including squares), including using standard units and estimate the area of irregular shapes; estimate and measure capacity; solve problems involving converting between units of time.

**Geometry – properties of shape** – identify 2D and 3D shapes; estimate and compare acute, obtuse and reflex angles; draw given angles and measure them in degrees; use the properties of rectangles to deduce related facts and find missing lengths and angles; distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

**Statistics** – solve comparison, sum and difference problems using information presented in a line graph; complete, read and interpret information in tables, including timetables.

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### Autumn Term

#### Theme – Space Invaders – visit to the Planetarium

**Science:** *Earth and 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. *Forces:* explain that unsupported objects fall towards the Earth because of the force of gravity. Find out how scientists, for example Isaac Newton, helped to develop the theory of gravity.

**History:** Learn about Aristotle, his theories and how he proved that the Earth is spherical.

**Geography:** Identify the position and significance of the Greenwich Meridian, understand how it links to night and day as well as time zones.

**Art:** Lino printing – use printing tiles to create a mural.

**Literacy Links:** Non-fiction – non-chronological report. Fiction – adventure story.

**Vocabulary:** day, night, Earth, axis, rotate, solar system, star, sun, planets, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, moon, full moon, gibbous moon, half moon, crescent moon, new moon, waxing, waning, orbit, lunar month, revolve, sphere, spin, sunrise, sunset, north, east, west, south, hemisphere, southern, northern, light source, shadow, galaxy, astronomy, comet, eclipse, satellite, dwarf, planetarium.

#### Theme – Light

**Science:** *Light:* 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 and identify and classify natural and manmade light sources.

**Geography:** Use maps to identify and locate the Northern Lights.

**Eco-Schools:** Energy saving.

**Literacy Links:** Fiction – poetry.

**Vocabulary:** dark, dull, bright, opaque, translucent, transparent, shadow, block, absence of light, reflect, bounce, mirror, reflection, light source, sun, sunset, sunrise, position, beam, straight line, periscope, rainbow, refract, prism, spectrum, colour, fluorescent.

#### Theme – Living Things and their Habitats

**Science:** *Living things and their habitats:* study and raise questions about the local environment, observe life cycles and the changes in a variety of living things, 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 and find out about different types of reproduction.

**Geography:** Locate different plants and animals; research and observe physical and human factors that can affect reproduction and growth. Climate – investigate how weather affects plant growth and development as well as how it effects animal life cycles.

**Eco-Schools:** Animal habitats; school grounds (including the field); life cycles and classifying plants (sensory garden).

**Literacy Links:** Fiction – continuation of adventure story.

**Vocabulary:** environment, animals, amphibians, reptiles, birds, mammals, insects, fish, egg, larva, pupa, nymph, adult, metamorphosis, petal, stamen, anther, filament, carpel, stigma, style, ovary, ovule, seeds, stem, root cuttings, tubers, bulbs, pollination, fertilisation, germination, seed dispersal, life cycle, naturalist, animal behaviourist, organism, predator, prey, adapt, food source, shelter, producer, temperature, nutrition, grow, move, reproduce, excrete, sense.

#### Theme – Ancient Heroes

**Science:** *Forces:* explore the effect of friction on movement and find out how it slows or stops moving objects and recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

**DT:** How fast should your buggy be? Design, plan and make moving vehicles using electrical circuits and cam mechanisms.

**Geography:** Use maps and atlases to locate Greece on a world map; know which continent Greece is located in; know the capital city; identify and describe key aspects of the Greek climate.

**History:** Place Ancient Greece in history; study Greek daily life and its impact on the Western world – including the Olympics.

**Literacy Links:** Fiction – myths. Non-fiction – instructions

**Vocabulary:** Troy, Athens, Acropolis, democracy, citizens, horse, mythology, Sparta, Persian War, Parthenon, city-state, Trojan, Alexander the Greek, Zeus, Apollo, Athena, Poseidon, Pericles, tactics, theatre, temple, stadium, gymnasium, enemies, armour, weapons, empire, Marathon, slaves, Government, mythology, artefact, oracle.

#### Discrete subjects

**Computing:** We are game developers – Developing an interactive game; We are cryptographers – Cracking codes.

**RE:** Judaism (key people, writings and approaches to life); Harvest; Christmas through art.

**PSHE&C:** New Beginnings; Getting on & falling out.

**PE:** Gym – vary level, speed and direction of movement on the floor and apparatus; Street Dance; Basketball; Swimming.

**Spanish:** Introduction to Spanish: the Spanish-speaking world, and Spanish Phonics (sounds). Greetings, numbers 1-31, pencil case items, verbs *to have* and *to be*, songs, 7 days of the week, 4 months of the year. Tongue twisters, Christmas in Spain. Christmas vocabulary. Singing *Feliz Cumpleaños*, (Happy Birthday). All months of the year.

**Music:** Introducing the ocarina instrument. Techniques on how to hold it and make a sound. Learn to read ocarina tablature.

## Year 5 Curriculum Overview - 2016/2017

### Spring Term

#### **Theme - The Vikings are coming! - Viking drama workshop**

**History:** Place Saxons and Vikings in history on a timeline; study Saxon and Viking daily life - compare their culture with modern day culture; study Anglo-Saxon invasions, settlements and kingdoms; look at place names and village life; Anglo-Saxon art and culture; Christian conversion - Canterbury, Iona and Lindisfarne; Viking raids and invasion; resistance by Alfred the Great and Athelstan, first king of England; further Viking invasions and Danegeld; Anglo-Saxon laws and justice; Edward the Confessor and his death in 1066.

**Geography:** Use maps and atlases to locate where the Vikings came from and the invasion routes they took. Compare current land use in Britain to land use during the Vikings.

**DT:** Make a Viking ship.

**Literacy Links:** Fiction - Viking legends. Non-fiction - newspaper report (raid at Lindisfarne).

**Vocabulary:** Anglo-Saxon, Viking, invasion, invaders, raid, settlers, settlement, long ship, kingdom, Christian, rigging, Norseman, warrior, monastery, saga, Danelaw, Odin, Thor, Valhalla, King Alfred the Great, Edward the Confessor, map, atlas, Lindisfarne, Canterbury, Iona, Athelstan, helmet, shield, legend, hoard, descendants, conquest, refugee, prow, pagan, God, religion, spear, after-life.

#### **Theme - Aztec Attack**

**History:** Identify the Aztecs in history and locate on a timeline; study Aztec daily life; look in detail at the Aztec Empire; compare their culture with modern day. Contrast with British History.

**Geography:** Use maps and atlases to locate where the Aztecs originated and settled.

**Art:** Aztec printing using Batik.

**Literacy Links:** Fiction - story with a historical setting. Non-fiction - diary

**Vocabulary:** artefact, empire, declined, sources, religious beliefs, festivals, tradition, Maya, Mayan, Mexico, Gods, mythical creatures, ceremony, civilisation, tribes, temples, worship, sacrifice, ruler, culture, disputes, ritual, influence, symbol writing, solar calendar, glyph, stelae, codices, archaeology, language, folklore, identity, history, kingdom, Benin, trade, chocolate, warrior, Cortes.

#### **Discrete subjects**

**Computing:** We are artists - Fusing geometry and art; We are web developers - Creating a web page about cyber safety.

**RE:** Judaism (places, Purim); Christianity (places); Lent (celebrations around the world).

**PSHE&C:** Going for goals; It's good to be me.

**PE:** Gym - jumping, landing & shape at different levels and in different directions; Dance; Golf; Netball.

**Spanish:** Classroom language, school subjects, animals and colours. The linguistic focus is gender, articles (definite & indefinite), plurals and adjectives. Introduction to 'también' (also/too/as well), 'pero' (but). Songs. Members of the family. Writing a short email about myself.

**Music:** Continue to develop ocarina tablature understanding. Introduce concepts of dynamics, intonation and tone. Practice performance skills.

## Year 5 Curriculum Overview – 2016/2017

### Summer Term

#### Theme – Living Things and their Habitats

Science: Living things and their habitats: study and raise questions about the local environment, observe life cycles and the changes in a variety of living things, 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 and find out about different types of reproduction.

Geography: Locate different plants and animals; research and observe physical and human factors that can affect reproduction and growth. Climate – investigate how weather affects plant growth and development as well as how it effects animal life cycles.

Eco-Schools: Animal habitats; school grounds (including the field); life cycles and classifying plants (sensory garden).

Literacy Links: Fiction – continuation of adventure story.

Vocabulary: environment, animals, amphibians, reptiles, birds, mammals, insects, fish, egg, larva, pupa, nymph, adult, metamorphosis, petal, stamen, anther, filament, carpel, stigma, style, ovary, ovule, seeds, stem, root cuttings, tubers, bulbs, pollination, fertilisation, germination, seed dispersal, life cycle, naturalist, animal behaviourist, organism, predator, prey, adapt, food source, shelter, producer, temperature, nutrition, grow, move, reproduce, excrete, sense.

#### Theme – Rainforest Explorers – trip to London Zoo

Science: Living things and their habitats: study and raise questions about the local environment, observe life cycle changes in a variety of living things, 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 and find out about different types of reproduction.

Geography: Climate around the world; look at how climate affects life cycles of animals and plants, their growth, development and overall distribution.

Eco-Schools: Animals and Plants – observations about growth in local surroundings (field, sensory garden), plant vegetables.

Literacy Links: Non-fiction – continuation of newspaper report.

Vocabulary: environment, animals, amphibians, reptiles, birds, mammals, insects, fish, egg, larva, pupa, nymph, adult, metamorphosis, petal, stamen, anther, filament, carpel, stigma, style, ovary, ovule, seeds, stem, root cuttings, tubers, bulbs, pollination, fertilisation, germination, seed dispersal, life cycle, naturalist, animal behaviourist, organism, predator, prey, adapt, food source, shelter, producer, temperature, nutrition, grow, move, reproduce, excrete, sense.

#### Theme – Materials

Science: Properties of materials: compare and group together everyday materials on the basis of their properties, know that some materials will dissolve in liquid to form a solution, use knowledge of solids, liquids and gases to decide how mixtures might be separated, give reasons for the particular uses of everyday materials, explore reversible and irreversible changes, explain that some changes result in the formation of new materials and find out about how chemists create new materials.

History: research famous chemists and how they made new materials.

Literacy Links: Non-fiction – discussion text (Different materials for different purposes).

Vocabulary: thermal conductor, thermal insulator, electrical conductor, electrical insulator, dissolve, mix, solvent, solution, solute, soluble, insoluble, solid, state, liquid, gas, particles, suspensions, materials, separate, sieve, filter, melt, evaporate, condense, properties, hardness, solubility, transparency, conductivity, magnets, reversible changes, irreversible changes, flexible, absorbent, property, transparent.

#### Theme – Around the World

Science: Animals, including humans: describe the changes as humans develop to old age, draw a timeline to indicate stages of growth and development of humans, learn about the changes experienced in puberty.

Art: Research the Chinese New Year; create Chinese style drawings using ink.

DT: Making bread, celebrating different cultures and tasting breads from different countries.

Geography: Identify position and significance of latitude and longitude; locate the world's continents, countries and capital cities; concentrate on Europe, North & South America and Oceania; use maps to compare the change in physicality over time; human geography – understand the effects of tourism, including economically.

Eco-Schools: Global Citizenship.

Literacy Links: Fiction – Aboriginal stories; Non-Fiction – Persuasive Writing (Leaflet)

Vocabulary: country, county, continent, World, Europe, South America, North America, Asia, Oceania, Africa, ocean, culture, Antarctica, poles, north, south, east, west, hemisphere, equator, longitude, latitude, meridian line, diverse, city, town, village, climate, key, similarities, differences, population, currency, Government, capital, United Kingdom.

#### Discrete subjects

**Computing:** We are bloggers – Sharing experiences and opinions; We are architects – Creating a virtual space.

**RE:** Islam (approaches to life); Christianity (approaches to life).

**PSHE&C:** Relationships; Changes.

**PE:** Gym – push, pull and swing using apparatus; Athletics; Volleyball; Tennis.

**Spanish:** To learn food nouns from the Hungry Caterpillar story (basic items of food, fruit and drinks). Ordering food from a café in Spain and learning about Spanish foods. Individual projects on a Spanish-speaking country. Writing a holiday postcard.

**Music:** Introduce the ukulele – techniques on positioning, basic strumming and rhythm work as well as basic chords of F and C.

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