# Mulberry Park Educate Together

# Curriculum overview Year 5

### Equality and Justice

### **Exploring Human Rights**

- Understand developmental rights, participation rights and protection rights
- Explore in depth human rights and responsibilities in a local and

### **Promoting Equality**

- Critically evaluate media coverage of equality and justice issues
- Begin to understand legislation and conventions that prohibit
- Examine an equality issue in relation to a minority e.g. refugees
- Explore an issue in depth e.g. homelessness

### **Explore Democratic Process**

- Understand how democracy works within the school and a wider
- Engage in local issues
- Participate in the democratic process

### Activating Equality through positive action

- participate in a human rights climate in class
- express views by writing letters to elected representatives
- develop an anti-racist charter
- learn about people who have made a difference through campaigning and protesting
- actively support fair trade

### Maths

### Number - number and place value/addition and subtraction/multiplication and division

- read, write, order and compare numbers to at least 1,000,000
- count forwards or backwards in steps of powers of 10 for any given number
- round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000
- read Roman numerals to 1,000 (M) and recognise years written in Roman numerals
- add and subtract whole numbers with more than 4 digits
- use rounding to check answers to calculations
- identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers
- know and use the vocabulary of prime numbers, prime factors and composite numbers
- establish whether a number up to 100 is prime and recall prime numbers up to 19
- multiply and divide numbers up to 4 digits by a one- or two-digit number using a formal
- multiply and divide numbers mentally, drawing upon known facts
- multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000
- recognise and use square numbers and cube numbers
- solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign

### Number - fractions (including decimals and percentages)

- compare and order fractions whose denominators are all multiples of the same number
- identify, name and write equivalent fractions of a given fraction
- recognise mixed numbers 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 number
- read and write decimal numbers as fractions
- recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- round decimals with 2 decimal places to the nearest whole number and to 1 decimal
- read, write, order and compare numbers with up to 3 decimal places
- solve problems involving number up to 3 decimal places
- recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a
- solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25

### **Belief Systems**

- Key figures Explore concept of authority as exercised by religious leaders
  - Find out how leaders are chosen
  - Identify common features which may exist between religious leaders

### Rites and Ceremonies

- Learn about rites of passage across societies
- Discuss similarities and difference across major belief systems in respect of rituals and ceremonies
- Identify common links across belief systems with regard to pilgrimages

Reading - word reading/comprehension

### Celebrations

- Listen to and experience music by religions to celebrate their faith
- Look at and respond to art forms associated with festivals

### Beliefs and Values

- Explore common links in religious codes of conduct
- attempt to locate common values across traditions
- explore how values can benefit society
- visit places of worship

### Moral and Spiritual

- Exploring Moral Development examine benefits of values in the wider community and globally
  - explore interpretations and shades of right and wrong through controversial issues
  - explore values and develop a personal values charter
  - critically question and make informed decisions
  - Explore the concept of collective responsibility

### Cultivating Spiritual Growth

- identify own personal views and insights and apply to own life
- understand the tradition of meditation as a key aspect of spiritual
- identify places associated with meditative tradition e.g. monastery grow in self-development through opportunities for meditation and

### Knowledge and awareness of environmental issues

Be aware of the impact of air, water, waste and pollution on the environment

Ethics and the Environment

- Be aware of the power of natural disasters
- Develop an understanding of conservation
- Develop an understanding of interdependence

### Responsibility and stewardship

- Participate in environmental project and audit
- Become involved in local community environmental action e.g. litter clearance
- Create wildlife areas
- Engage in planting and seed collection
- Debate environmental issues
- Be aware of controversial nature of some issues
- Research and present work on this through IT, displays etc.

### Science

### Working scientifically

- plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- take measurements, using a range of scientific equipment, with increasing accuracy and precision
- record data and results of increasing complexity using scientific diagrams, tables and graphs
- use test results to make predictions to set up further comparative and fair tests report and present findings from enquiries, including conclusions and explanations
- identify scientific evidence that has been used to support or refute ideas or arguments

### Living things and their habitats

- 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

### Animals, including humans

• describe the changes as humans develop to old age

### Properties and changes 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, and describe how to recover a
- substance from a solution
- use knowledge of solids, liquids and gases to decide how mixtures might be separated
- give reasons, based on evidence for the particular uses of everyday materials demonstrate that dissolving, mixing and changes of state are reversible changes
- explain that some changes result in the formation of new materials

### 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

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- identify the effects of air resistance, water resistance and friction, that act between moving
- recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect

### English

apply their growing knowledge of root words, prefixes and suffixes

Term:

- maintain positive attitudes to reading and an understanding of what they read
- read and discuss an increasingly wide range of genres
- recommend books that they have read to their peers, giving reasons for their choices identify and discuss themes and conventions in and across a wide range of writing
- make comparisons within and across books learn a wider range of poetry by heart and prepare poems and plays to read aloud and perform
- draw inferences and justify inferences with evidence
- predict what might happen from details stated and implied identifying how language, structure and presentation contribute to meaning
- distinguish between statements of fact and opinion
- retrieve, record and present information from non-fiction
- explain and discuss their understanding of what they have read, giving justifications for their views

continue to distinguish between homophones and other words which are often confused

- use further prefixes and suffixes and understand the guidance for adding them
- spell some words with 'silent' letters [for example, knight, psalm, solemn]
- use knowledge of morphology and etymology in spelling use dictionaries to check the spelling and meaning of words
- use a thesaurus

### Writing - handwriting

- write legibly, fluently and with increasing speed
- decide whether or not to join specific letters
- Writing composition
  - plan their writing, identify the audience and purpose of the writing, selecting the appropriate form
  - select appropriate grammar and vocabulary use a wide range of devices to build cohesion within and across paragraphs

assess the effectiveness of their own and others' writing

- use organisational and presentational devices to structure a text and to guide the reader
- propose changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning
- ensure the consistent and correct use of tense throughout a piece of writing ensure correct subject and verb agreement when using singular and plural
- proof read for spelling and punctuation errors
- perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear

# EG Active learning

## Playing and Exploring

# Creating and Thinking Critically



# Curriculum overview Year 5

### Measurement

- convert between different units of metric measure
- understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- measure and calculate the perimeter of shapes in centimetres and metres
- calculate and compare the area of rectangles (including squares), using standard units, square centimetres (cm2) and square metres (m2), and estimate the area of irregular
- estimate volume and capacity
- solve problems involving converting between units of time
- use all four operations to solve problems involving measure using decimal notation

### Geometry - properties of shapes/position and direction

- identify 3-D shapes from 2-D representations
- know angles are measured in degrees: estimate and compare angles
- draw given angles, and measure them in degrees (°)
- identify angles at a point, 1 whole turn (total 360°), on a straight line and half a turn (total 180°) and other multiples of 90°
- use the properties of rectangles to deduce related facts and find missing lengths and anales
- distinguish between regular and irregular polygons
- identify, describe and represent the position of a shape following a reflection or

### Statistics

- solve comparison, sum and difference problems using information in a line graph
- complete, read and interpret information in tables, including timetables

### Humanities

- History changes in Britain from the Stone Age to the Iron Age
  - the Roman Empire and its impact on Britain Britain's settlement by Anglo-Saxons and Scots
  - the Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward
  - a local history study
  - a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066
  - the achievements of the earliest civilizations
  - Ancient Greece a study of Greek life and achievements and their influence on the
  - a non-European society that provides contrasts with British history

### Geography

### Locational knowledge

- use maps to locate countries; concentrating on their environmental regions, key physical and human characteristics, countries, and major cities
- name and locate counties and cities of the United Kingdom, identifying key geographical features and how these have changed over time

### Place knowledge

understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region in North or South America

### Human and physical geography

describe and understand key aspects of physical and human geography

### Geographical skills and fieldwork

- use maps, atlases, globes and digital/computer mapping to locate countries and describe
- use the 8 points of a compass, grid references, symbols and key to build their knowledge of the United Kingdom and the wider world
- use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods

### Writing - vocabulary, grammar and punctuation

- recognise vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms
- use passive verbs to affect the presentation of information in a sentence
- use the perfect form of verbs to mark relationships of time and cause
- use expanded noun phrases to convey complicated information concisely
- use modal verbs or adverbs to indicate degrees of possibility

Term:

- use relative clauses beginning with who, which, where, when, whose, that or with an implied relative pronoun
- learn the grammar for year 5
- use commas to clarify meaning or avoid ambiguity in writing
- use hyphens to avoid ambiguity
- use brackets, dashes or commas to indicate parenthesis
- use semicolons, colons or dashes to mark boundaries between independent clauses
- use a colon to introduce a list
- punctuate bullet points consistently

### Creative Arts

- play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
- improvise and compose music for a range of purposes
- listen with attention to detail and recall sounds with increasing aural memory
- use and understand staff and other musical notations
- appreciate and understand a wide range of high-quality live and recorded music
- develop an understanding of the history of music

### Art and Design

Music

- develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design
- create sketch books to record their observations and use them to review and revisit ideas
- improve their art and design techniques
- learn about great artists, architects and designers in history

### Design Technology (DT)

- use research and develop design criteria to inform the design products
- generate, develop, model and communicate own ideas
- select from and use a wider range of tools and equipment to perform practical tasks
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients
- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria
- understand how key events and individuals in design and technology have helped shape the world
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical and electrical systems in their products
- apply their understanding of computing to program, monitor and control their products

### Computing

- design, write and debug programs that accomplish specific goals
- use sequence, selection, and repetition in programs
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks, including the internet, the services and opportunities they offer for communication and collaboration
- use search technologies effectively
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs
- use technology safely, respectfully and responsibly

- use running, jumping, throwing and catching in isolation and in combination
- play competitive games, modified where appropriate and apply basic principles suitable for attacking and defending develop flexibility, strength, technique, control and balance
- perform dances using a range of movement patterns
- take part in outdoor and adventurous activity challenges both individually and within a team
- compare their performances with previous ones and demonstrate improvement to achieve their

### Swimming and water safety

- swim competently, confidently and proficiently over a distance of at least 25 metres
- use a range of strokes effectively
- perform safe self-rescue in different water-based situations

### Foreign Language

- listen attentively to spoken language and show understanding by joining in and responding explore the patterns and sounds of language
- engage in conversations
- speak in sentences, using familiar vocabulary, phrases and basic language structures
- develop accurate pronunciation and intonation
- present ideas and information orally to a range of audiences
- read carefully and show understanding of words, phrases and simple writing
- appreciate stories, songs, poems and rhymes in the language
- broaden their vocabulary and develop their ability to understand new words
- write phrases from memory, and adapt these to create new sentences, to express ideas clearly
- describe people, places, things and actions orally and in writing
- understand basic grammar appropriate to the language being studied