



# Summer Term 2018 Year 5 da Vinci class

## Mathematicians will be able to:

### Number

Maintain knowledge of the four number operations using problem solving.

Compare and order fractions whose denominators are all multiples of the same number.

Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.

Recognise mixed numbers and improper fractions and convert from one to the other; write mathematical statements  $> 1$  as a mixed number:  $2/5 + 4/5 = 6/5 = 11/5$ .

Add and subtract fractions with the same denominator and multiples of the same number.

Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.

Read and write decimal numbers as fractions (for example,  $0.71 = 71/100$ ).

Recognise and use thousandths and relate them to tenths, hundredths and decimals equivalents.

Round decimals with two decimal places to the nearest whole numbers and to one decimal place.

Read, write, order and compare numbers with up to three decimal places.

Solve problems involving number up to three decimal places.

Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator hundred, and as a decimal fraction.

Solve problems which require knowing percentage and decimal equivalents of  $1/2$ ,  $1/4$ ,  $1/5$ ,  $4/5$  and those with a denominator of a multiple of 10 or 25.

## Mathematicians will be able to:

### Shape, space and measure

Convert between different units of measure (for example, kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre).

Understand and use equivalences between metric units and common imperial units such as inches, pounds and pints.

Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes.

Estimate volume (e.g. using 1 cm<sup>3</sup> blocks to build cubes and cuboids) and capacity (e.g. using water).

Solve problems involving converting between units of time.

Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.

Describe positions on a 2D grid as coordinates in the first quadrant.

Describe movements between positions as translations of a given unit to the left/right and up/down.

Plot specified points and draw sides to complete a given polygon.

Identify 3D shapes including cubes and cuboids from 2D representations.

Know angles are measured in degrees; Estimate and compare acute, obtuse and reflex angles.

Draw given angles, and measure them in degrees (°).

Identify:

Angles at a point and one whole turn (total 360°)

Angles at a point on a straight line and  $1/2$  a turn (total 180°); Other multiples of 90°.

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.

## Scientists will use scientific enquiry to be able to:

### Chemistry

Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.

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, including through filtering, sieving and evaporating. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

### Biology

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. Describe the changes as humans develop to old age.

## Speakers and listeners will be able to:

Engage their listener(s) by varying expression and vocabulary. Develop their ideas and opinions providing relevant detail.

Adapt spoken language depending on the audience, the purpose or the context.

Understand and use Standard English in formal situations.

Begin to use hypothetical language to consider more than one possible outcome or solution.

## Readers will be able to:

Apply knowledge of root words, prefixes and suffixes to read aloud and to understand the meaning of unfamiliar words. Read further exception words, noting the unusual correspondences between spelling and sound.

Attempt pronunciation of unfamiliar words, drawing on prior knowledge of similar looking words. Re-read and read ahead to check for meaning.

Be familiar with and talk about a wide range of books and text types, including myths, legends and traditional stories and books from other cultures and traditions. Discuss the features of each. Read non-fiction texts and identify the purpose, structure and grammatical features, evaluating how effective they are. Identify significant ideas, key points, events and characters in a text; and discuss their significance.

## Writers will be able to:

Write for a range of purposes and audiences and:

Use paragraphs to organise ideas.

Describe settings and characters.

Use some cohesive devices within and across sentences and paragraphs

Use different verb forms mostly accurately.

Use co-ordinating and subordinating conjunctions.

Use capital letters, full stops, question marks, exclamation marks, commas for lists and apostrophes for contraction mostly correctly.

Spell most words correctly (years 3 and 4).

Spell some words correctly (years 5 and 6).

Produce legible joined handwriting.

**Historians will use historical enquiry to study life at Wyton, World War One and Queen Victoria and be able to:**

Draw a timeline with different time periods outlined, showing different information (e.g. periods of history, when famous people lived, etc.).

Make comparisons between historical periods; explaining things that have changed and things that have stayed the same.

Explain how the locality has changed over time since 1900.

Say how an aspect in British history has changed over the years.

Test out an hypothesis in order to answer a question.

Use a range of evidence from different sources to help to describe a key event from Britain's past that has been represented and interpreted differently.

**Geographers will use geographical enquiry to study mountains, rivers and journeys and be able to:**

Plan a journey to another part of the UK/world, taking account of distance and time.

Use compass points and grid references to describe where a place is in the UK and the wider world.

Explain how a location fits into its wider geographical location with reference to physical features (e.g. why many cities of the world are situated by rivers).

Suggest what a place might be like in the future, taking account of issues impacting on human features.

Name and locate the major rivers and mountain ranges in North and South America.

**Computer Literate children will be able to:**

**Programming**

Set and store variables

Use conditional statements based on stored variables to make decisions in real-time.

Refine and improve a procedure using repeat commands to make it more effective and efficient.

Evaluate the effectiveness of others' programming.

Programme a light, temperature or movement sensor to detect changes to trigger action within a program.

Use logical reasoning to detect and debug errors in algorithms within a program.

**Digital Literacy**

Use age appropriate text, photographs, sound and video editing tools and skills to refine work and present for scrutiny.

Select, use and combine the appropriate technology tools to create effects that will have an impact on others.

Organise data collected over time from different sources, and program functions to make calculations on that data.

Search a database using different operators to refine search results.

Search a database using Boolean operators to refine search results.

**In French, children will learn from a visiting French teacher and be able to:**

Use knowledge of grammar to adapt and substitute single words and phrases.

Use a dictionary or glossary to check words learnt.

Hold a simple conversation with at least 3 or 4 exchanges.

**As part of their Personal Development children will be able to:**

Identify achievements and understand mistakes and how to make amends for them.

Explain the consequences of anti-social behaviour (e.g. bullying, racism and discrimination).

Say what makes a healthy lifestyle and recognise different risks in familiar situations.

Show care for other people's feelings and try to see things from their points of view.

In addition, in the second half of the term, Y5 children will be learning about Sex and Relationships Education (SRE) - a separate letter will be sent nearer the time.

**Artists will study World War I artists and be able to:**

Use notes in their sketch books to help develop their work further and discuss ideas with others.

Explain how they have used visual and tactile qualities of materials for a particular intention.

**In PE, children will take part in individual and team challenges including swimming and Cricket (indoor with the Hunts Schools Sports Partnership) as well as CREATE DEVELOPMENT (agility, balance and co-ordination) and be able to:**

Use running, jumping, throwing and catching in isolation and in combination.

Develop flexibility, strength, technique, control and balance.

Play competitive games, modified where appropriate and apply basic principles suitable for attacking and defending.

Compare performances with previous ones and demonstrate improvement in order to achieve a personal best.

**Musicians will study music from WW1, classical composers, recorder, drums and singing and be able to:**

Sing 'by ear' and from simple notations, maintaining a part whilst others are performing their part.

Improvise using repeated phrases or melodic and rhythmic phrases.

Compose music, changing sounds or organising them differently to change the effect and choosing the most appropriate tempo for the piece.

Use notations to record groups of pitches (chords)

Describe, compare and evaluate music using musical vocabulary.

Contrast the work of famous composers and state preferences with reasons.

**In R.E. children will think about the question: 'Is religion what you say or what you do and be able to:**

Begin to make connections between different beliefs and practices of all religions.

Begin to compare stories, beliefs and practices from different religions including differences and similarities.

Understand and begin to evaluate the diversity of belief in different religions, nationally and globally.

Articulate and begin to apply the different responses to ethical questions from a range of different religions.

Begin to respond thoughtfully to a range of sacred writings and stories. Provide good reasons for what they mean to different faith communities.

Begin to reflect and respond thoughtfully to the significance of meaning behind different beliefs and practices.

Begin to respond thoughtfully to a range of sacred writings/ stories and provide good reason for what they mean to different faith communities.

Creatively begin to express their own views about why belonging to a faith community may be valuable. Relate this to their own lives.

Begin to recognise those with no faith also have a belief system.

Discuss and begin to apply their own and others' ideas about ethical questions and to express their own ideas clearly in response.

**Designers will make a moving toy and be able to:**

Come up with a range of ideas, select one based on evidence, then produce a detailed step-by-step plan with precise measurements.

Use a range of tools and equipment and explain what they need to do for Health & Safety reasons.

Evaluate appearance and function of their product against the original criteria.

Explain why they have chosen to use a particular mechanical system (e.g. gears, pulleys, cams, levers and linkages) or electrical system (e.g. series circuits incorporating switches, bulbs, buzzers and motors) in their products (using computing to programme, monitor or control the product if appropriate).