



Spring Term 2018 Year 5 da Vinci class

Mathematicians will be able to:

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.

Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.

Establish whether a number up to 100 is prime and recall prime numbers up to 19.

Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.

Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).

Solve problems involving multiplication and division where larger numbers are used by decomposing them into factors.

Multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.

Divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context.

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.

Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.

Mathematicians will be able to:

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.

Scientists will use scientific enquiry to be able to:

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 surfaces.

Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.
Observe that moving objects that are not driven tend to slow down.

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.

Speakers and listeners will be able to:

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

Express a point of view. Listen carefully in discussions and make contributions and ask questions that are responsive to others' ideas and views.

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

Show understanding of the main points, including implied meanings in a discussion.

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.

Identify significant ideas, key points, events and characters in a text; and discuss their significance.

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.

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 the Vikings and World War One 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 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 in North and South America.

Computer Literate children will be able to:

Use technology to improve performance (such as in sport or music).
Evaluate the effectiveness of advertising and factual information presented through digital media.

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.

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:

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

Artists will study Edvard Munch and be able to:

Use shading to create mood and feeling.

Use line, tone, shape and colour to represent movement.

Experiment with different styles used by artists after researching their work.

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

Use photographic images, then alter and adapt them to re-create pieces of digital art.

In PE, children will take part in individual and team challenges including sports leadership and FUTSAL (indoor football with the F.A.); 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.

Describe, compare and evaluate music using musical vocabulary.

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

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

In R.E. children will study Christianity and be able to:

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

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.

Designers will study healthy, savoury cooking using local produce 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

Cook a variety of healthy savoury dishes, using only locally sourced ingredients.