



Autumn Term 2017 Year 5 da Vinci class

Mathematicians will be able to:

Read, write, order & compare numbers to at least 1 000 000 and determine the value of each digit.

Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.

Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

Solve number problems and practical problems that involve all of the above.

Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).

Add and subtract numbers mentally with increasingly large numbers. Use rounding to check answers to calculations and levels of accuracy.

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

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

Mathematicians will be able to:

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.

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 (cm²) and square metres (m²) and estimate the area of irregular shapes.

Solve comparison, sum and difference problems using information presented in a line graph.

Complete, read and interpret information in tables, including timetables.

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.

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.

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.

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.

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 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.

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 use geographical enquiry to study rivers 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:

Change presentational characteristics and manipulate imagery and test using technology.

Use technology to improve performance (such as in sport or music).

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.

Create a database for a specific function, and record data in it.

Use a data logger over time to record multiple data; share findings with others, and show patterns over time.

State some reasons why it is important to be careful about what is shared on-line and give some examples of the risks involved.

Explain some ways of ensuring an online profile is as safe as possible.

Know how to create and maintain a safe password.

Explain the difference between personal and private information and know that private information should not be shared.

Suggest strategies that can be used if something is seen or heard online which can make someone feel uncomfortable.

In French, children will 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.

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

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

Artists will study architectural art, looking initially at the work of a range of architect including the plans for our new school and be able to:

Explore/experiment with different styles used by artists after researching their work.

Explain how visual qualities of media have been used for a particular intention.

Use shading to create mood and feeling. Use line, tone, shape and colour to represent movement.

Use notes in a sketchbook to develop work further and discuss ideas with peers.

In PE, children will take part in gymnastics and games and be able to:

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

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

In addition, children will develop sports leadership skills and orienteering skills led by outdoor specialists.

Musicians will study The Planets suite by Gustav Holst and Peer Gynt by Edvard Greig, recorder, drums/glockenspiel 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.

In R.E. children will study Hinduism 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.

Designers will study bridge building 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

Strengthen, stiffen or reinforce a more complex structure based on the information known.