Year 6 — Curriculum

Our key curriculum drivers: COMMUNICATION, HEALTH & Well-Being & OUR SCHOOL VALUES

DESIGN TECHNOLOGY

National curriculum:

DEVELOPING, PLANNING & COMMUNICATING IDEAS

-Communicate their ideas through detailed labelled drawings
-Develop a design specification
-Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways
-Plan the order of their work, choosing appropriate materials, tools and techniques

WORKING WITH TOOLS, EQUIPMENT, MATERIALS & COMPONENTS TO MAKE QUALITY PRODUCTS

-Select appropriate tools, materials, components and techniques
-Assemble components make working models
-Use tools safely and accurately
-Construct products using permanent joining techniques
-Make modifications as they go along
-Pin, sew and stitch materials together create a product
-Achieve a quality product

EVALUATING PROCESSES & PRODUCTS

-Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests
-Record their evaluations using drawings with labels
-Evaluate against their original criteria and suggest ways that their product could be improved

MUSIC

National curriculum:

SINGING SONGS WITH CONTROL AND SINGING EXPRESSIVELY

-Sing songs with increasing control of breathing, posture and sound projection.
-Sing songs in tune and with an awareness of other parts.
-Identify phrases through breathing in appropriate places.
-Sing with expression and rehearse with others.
-Sing a round in two parts and identify the melodic phrases and how they fit together.
-Sing confidently as a class, in small groups and alone, and begin to have an awareness of improvisation with the voice.

LISTENING. MEMORY & MOVEMENT

-Internalise short melodies and play these on pitched percussion (play by ear).
-Create dances that reflect musical features.
-Identify different moods and textures.
-Identify how a mood is created by music and lyrics.
-Listen to longer pieces of music and identify features.

CONTROLLING PULSE & RHYTHM

-Identify different speeds of pulse (tempo) by clapping and moving.
-Improvise rhythm patterns.
-Perform an independent part keeping to a steady beat.
-Identify the metre of different songs through recognising the pattern of strong and weak beats.
-Subdivide the pulse while keeping to a steady beat.

EXPLORING SOUNDS, MELODY & ACCOMPANIMENT

-Skills development for this element are to be found within '—Control of instruments' and 'Composition'.

CONTROL OF INSTRUMENTS

-Identify and control different ways percussion instruments make sounds.
-Play accompaniments with control and accuracy.
-Create different effects using combinations of pitched sounds.
-Use ICT to change and manipulate sounds.

COMPOSITION

-Identify different starting points or composing music.
-Explore, select combine and exploit a range of different sounds to compose a soundscape.
-Write lyrics to a known song.
-Compose a short song to own lyrics based on everyday phrases.
-Compose music individually or in pairs using a range of stimuli and developing their musical ideas into a completed composition.

READING & WRITING NOTATION

-Perform using notation as a support.
-Sing songs with staff notation as support

PERFORMANCE SKILLS

-Present performances effectively with awareness of audience, venue and occasion.

EVALUATING & APPRAISING

-Improve their work through analysis, evaluation

PSHE

Autumn 1: Relationships & sex education (& Courting sleep)

Autumn 2: Citizenship: Rights, rules & responsibilities (anti bullying) & Facts4life

Spring 1: Mental health

Spring 2: Healthy and safer lifestyles: Healthy lifestyles

Summer 1: Myself and my relationships : Family and friends or teacher's

Summer 2: Myself and my relationships : Managing change

RE

THINKING ABOUT RELIGION & BELIEF

-Use religious and philosophical terminology and concepts to explain religions, beliefs and value systems.
-Explain some of the challenges offered by the variety of religions and beliefs in the contemporary world.
-Explain the reasons for, and effects of, diversity within and between religions, beliefs and cultures.

ENQUIRING, INVESTIGATING & INTERPRETING

-Identify the influences on, and distinguish between, different viewpoints within religions and beliefs.
-Interpret religions and beliefs from different perspectives.
-Interpret the significance and impact of different forms of religious and spiritual expression. .

BELIEFS & TEACHINGS

-Make comparisons between the key beliefs, teachings and practices of the Christian faith and other faiths studied, using a wide range of appropriate language and vocabulary.

PRACTICES & LIFESTYLE

-Explain in detail the significance of Christian practices, and those of other faiths studied, to the lives of individuals and communities.

EXPRESSION & LANGUAGE

-Compare the different ways in which people of faith communities express their faith.

IDENTIFY & EXPERIENCE

-Discuss and express their views on some fundamental questions of identity, meaning, purpose and morality related to Christianity and other faiths.

MEANING & PURPOSE

-Express their views on some fundamental questions of identity, meaning, purpose and morality related

VALUES & COMMITMENTS

-Make informed responses to people's values and commitments (including religious ones) in the light of their learning They will use different techniques to reflect deeply

ART

National curriculum:

EXPLORING & DEVELOPING IDEAS

-Select and record from first hand observation, experience and imagination, and explore ideas for different purposes.
-Question and make thoughtful observations about starting points and select ideas and processes to use in their work.
-Explore the roles and purposes of artists, craftspeople and designers working in different times and cultures.

EVALUATING & DEVELOPING WORK

-Compare ideas, methods and approaches in their own and others' work and say what they think and feel about them.
-Adapt their work according to their views and describe how they might develop it further.

DRAWING

-Demonstrate a wide variety of ways to make different marks with dry and wet media.
-Identify artists who have worked in a similar way to their own work.
-Develop ideas using different or mixed media, using a sketchbook.
-Manipulate and experiment with the elements of art: line, tone, pattern, texture, form, space, colour and shape.

PAINTING

-Create shades and tints using black and white.
-Choose appropriate paint, paper and implements to adapt and extend their work.
-Carry out preliminary studies, test media and materials and mix appropriate colours.
-Work from a variety of sources, inc. those researched independently.
-Show an awareness of how paintings are created (composition).

PRINTING

-Describe varied techniques.
-Be familiar with layering prints.
-Be confident with printing on paper and fabric.
-Alter and modify work.
-Work relatively independently

TEXTILES / COLLAGE

-Awareness of the potential of the uses of material.
-Use different techniques, colours and textures etc when designing and making pieces of work.
-To be expressive and analytical to adapt, extend and justify their work.

3-D FORM

-Develop skills in using clay inc. slabs, coils, slips, etc.
-Make a mould and use plaster safely.
-Create sculpture and constructions with increasing independence

BREADTH OF STUDY

-Work on their own, and collaboratively with others, on projects in 2 and 3 dimensions and on different scales.
-Use ICT.
-Investigate art, craft and design in the locality and in a variety of genres, styles and traditions.

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GEOGRAPHY

National curriculum

GEOGRAPHICAL ENQUIRY
-Begin to suggest questions for investigating
-Begin to use primary and secondary sources of evidence in their investigations.
-Investigate places with more emphasis on the larger scale; contrasting and distant places
-Collect and record evidence unaided
-Analyse evidence and draw conclusions e.g. compare historical maps of varying scales
e.g. temperature of various locations - influence on people/ everyday life

DIRECTION / LOCATION
-Use 8 compass points;
-Begin to use 4 figure co- ordinates to locate features on a map.

DRAWING MAPS
-Begin to draw a variety of thematic maps based on their own data

REPRESENTATION
-Use/recognise OS map symbols;
-Use atlas symbols.

USING MAPS
-Follow a short route on an OS map. Describe features shown on OS map.
-Locate places on a world map.
-Use atlases to find out about other features of places. (e.g. mountain regions, weather patterns)

SCALE / DISTANCE
-Use a scale to measure distances.
-Draw/use maps and plans at a range of scales.

PERSPECTIVE
-Draw a plan view map accurately. .

MAP KNOWLEDGE
-Confidently identify significant places and environments

STYLE OF MAP
Use OS maps.
Confidently use an atlas.
Recognise world map as a flattened globe.

HISTORY

National curriculum:

CHRONOLOGICAL UNDERSTANDING
-Place current study on time line in relation to other studies
-Use relevant dates and terms
-Sequence up to 10 events on a time line

RANGE & DEPTH OF HISTORICAL KNOWLEDGE
-Find out about beliefs, behaviour and characteristics of people, recognising that not everyone shares the same views and feelings
-Compare beliefs and behaviour with another time studied
-Write another explanation of a past event in terms of cause and effect using evidence to support and illustrate their explanation
-Know key dates, characters and events of time studied

INTERPRETATIONS OF HISTORY
-Link sources and work out how conclusions were arrived at
-Consider ways of checking the accuracy of interpretations – fact or fiction and opinion
-Be aware that different evidence will lead to different conclusions
-Confidently use the library and internet for research

HISTORICAL ENQUIRY
-Recognise primary and secondary sources
-Use a range of sources to find out about an aspect of time past
-Suggest omissions and the means of finding out
-Bring knowledge gathered from several sources together in a fluent account

ORGANISATION & COMMUNICATION
-Select and organise information to produce structured work, making appropriate use of dates and terms.

SCIENCE

WS1 planning different types of scientific enquiries to answer

WS2 taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate

WS3 recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

WS4 using test results to make predictions to set up further comparative and fair tests

WS5 reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations

WS6 identifying scientific evidence that has been used to support or refute ideas or arguments.

WS7 explore and talk about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.

WS8 recognise that scientific ideas change and develop over time.

WS9 draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings

WS10 Pupils should read, spell and pronounce scientific vocabulary correctly.

LIVING THINGS AND THEIR HABITATS
LTH1 describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals
LTH2 give reasons for classifying plants and animals based on specific characteristics
LTH3 know that broad groupings, such as micro-organisms, plants and animals can be subdivided.
LTH4 should classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals).
LTH5 find out about significance of the work of scientists such as Carl Linnaeus, a pioneer of classification.

ANIMALS, INCLUDING HUMANS
AIH1 identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
AIH2 recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
AIH3 describe the ways in which nutrients and water are transported within animals, including humans.
AIH4 explore questions to understand how the circulatory system enables the body to function.
AIH5 learn how to keep their bodies healthy and how their bodies might be damaged – including how some drugs and other substances can be harmful to the human body.
AIH6 explore the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.

EVOLUTION & INHERITANCE
EI1 recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
EI2 recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
EI3 identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
EI4 be introduced to the idea that characteristics are passed from parents to their offspring, i.e. different breeds of dogs, and what happens when, for example, Labradors are crossed with poodles.
EI5 appreciate that variation in offspring over time can make animals more or less able to survive in particular environments, for example, by exploring how giraffes' necks got longer.
EI6 find out about the work of palaeontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution.

LIGHT
L1 recognise that light appears to travel in straight lines
L2 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
L3 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
L4 use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
L5 work scientifically by: deciding where to place rear-view mirrors on cars; designing and making a periscope and using the idea that light appears to travel in straight lines to explain how it works
L6 look at a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters (they do not need to explain why these phenomena occur).

ELECTRICITY
E1 associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
E2 compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches
E3 use recognised symbols when representing a simple circuit in a diagram.
E4 construct simple series circuits, to help them to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors.
E5 learn how to represent a simple circuit in a diagram using recognised symbols.

COMPUTING

National curriculum

TEXT & MULTIMEDIA
-Use advanced tools in word processing / DTP software such as tabs, appropriate text formatting, line spacing etc appropriately to create quality presentations appropriate for a known audience.

DIGITAL IMAGES
-Make a short film / animation from images (still and / or moving) that they have sourced, captured or created.

SOUND & MUSIC
-Create multiple track compositions that contain a variety of sounds.

ELECTRONIC COMMUNICATION
-Share ICT work they have done electronically by email, VLE, or uploading to authorised sites.
-Where possible seek and respond to feedback.

RESEARCH & E-SAFETY
-Make use of copy and paste, beginning to understand the purpose of copyright regulations and the need to repurpose information for a particular audience.
-They show an understanding that not all information on the internet is accurate.
-Develop a growing awareness of how to stay safe when using the internet (in school and at home) and that they abide by the school's internet safety policy.

CONTROL (ALGORITHMS)
-Engage in Logo based problem solving activities that require children to write procedures etc. and to predict, test and modify.
-Use control software to control devices (using output commands) or to simulate this on screen. Predict, test and refine their programming.

HANDLING INFORMATION
-Children work as a class or group to create a data collection sheet and use it to setup a straight forward database to answer questions.
-Enter information and interrogate it (by searching, sorting, graphing etc).
-Begin to reflect on how useful the collected data and their interrogation was and whether or not their questions were answered.

MODELLING & SIMULATIONS
-Set up and use a spreadsheet model to explore patterns and relationships. Make predictions.
Know how to enter simple formulae to assist this process.

DATA LOGGING (SCIENCE & MATHS)
-Use a data logger confidently, connected to the computer or remotely, to capture continuous or intermittent data readings.
-Interpret the results and use these in their investigations.
-Realise the advantages of using ICT to collect data that might otherwise be problematic

UNDERSTANDING TECHNOLOGIES
-Make choices about the devices and tools they use for specific purposes and explain them in relation to the context.
-Begin to show an awareness of specific tools used in working life.

UNDERSTANDING NETWORKS
-Show an understanding of the school network and how it links computers to resources in school and beyond.
-Compare this with other networks they may encounter at home or in the wider world (e.g. banks)

UNDERSTANDING INTERNET
Perform a search using different search engines and check the results against each other, explaining why they might be different.
Show an awareness of the need for accuracy in spelling and syntax to search effectively.

Year 6 — Curriculum

MATHS

COUNTING
-Use negative numbers in context, and calculate intervals across zero

PLACE VALUE
-Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
-Round any whole number to a required degree of accuracy

MENTAL (+/-)
-Perform mental calculations, including with mixed operations and large numbers

NUMBER FACTS (x/÷)
-Identify common factors, common multiples and prime numbers

MENTAL (x/÷)
-Perform mental calculations, including with mixed operations and large numbers

WRITTEN (x/÷)
-Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
-Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
-Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to context

PROBLEMS (x/÷)
-Use their knowledge of the order of operations to carry out calculations involving the four operations
-Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
-Solve problems involving addition, subtraction, multiplication and division
-Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

COMPARING FRACTIONS
-Use common factors to simplify fractions
-Use common multiples to express fractions in the same denomination
-Compare and order fractions, including fractions > 1

FRACTION CALCULATIONS
-Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
-Multiply simple pairs of proper fractions, writing the answer in its simplest form
-Divide proper fractions by whole numbers

DECIMALS AS FRACTION AMOUNTS
-Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction
-Identify the value of each digit in numbers given to three decimal places

CALCULATING WITH DECIMALS
-Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
-Multiply one-digit number with up to two decimal places by whole numbers
-Use written division methods in cases where the answer has up to two decimal places

PERCENTAGES
-Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison

FRACTION PROBLEMS
-Solve problems which require answers to be rounded to specified degrees of accuracy
-Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

RATIO & PROPORTION
-Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
-Solve problems involving similar shapes where the scale factor is known or can be found
-Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

ALGEBRA
-Use simple formulae
-Generate and describe linear number sequences
-Express missing number problems algebraically
-Find pairs of numbers that satisfy an equation with two unknowns
0Enumerate possibilities of combinations of two variables.

MEASURES
-Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
-Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
-Convert between miles and kilometres
-Recognise that shapes with the same areas can have different perimeters and vice versa
-Recognise when it is possible to use formulae for area and volume of shapes
-Calculate the area of parallelograms and triangles
-Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units.

SHAPE VOCABULARY
-Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

PROPERTIES OF 2-D SHAPE
-Draw 2-D shapes using given dimensions and angles
-Compare and classify geometric shapes based on their properties and sizes

PROPERTIES OF 3-D SHAPE
-Recognise, describe and build simple 3-D shapes, including making nets
•find unknown angles in any triangles, quadrilaterals, and regular polygons

ANGLES
-Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

POSITION & DIRECTION
-Describe positions on the full coordinate grid (all four quadrants)
-Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

INTERPRETING DATA
-interpret and construct pie charts and line graphs calculate and interpret the mean as an average

EXTRACT INFO FROM DATA
-Use pie charts and line graphs to solve problems

ENGLISH WRITING

PHONIC & WHOLE WORD SPELLING
-Spell some words with 'silent' letters
-Continue to distinguish between homophones and other words which are often confused
-Use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in Appendix 1

OTHER WORD BUILDING SPELLING
-Use further prefixes and suffixes and understand the guidance for adding them
-Use dictionaries to check the spelling and meaning of words
-Use the first 3 or 4 letters of a word to check spelling, meaning or both of these in a dictionary

HANDWRITING
-Choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters
-Choosing the writing implement that is best suited for a task

CONTEXTS FOR WRITING
-Identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
-In writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed

PLANNING WRITING
-Noting and developing initial ideas, drawing on reading and research where necessary

DRAFTING WRITING
-Selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
-In narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action
-Précising longer passages
-Using a wide range of devices to build cohesion within and across paragraphs
-Using further organisational and presentational devices to structure text and to guide the reader

EDITING
-Assessing the effectiveness of their own and others' writing
-Proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning
-Ensuring the consistent and correct use of tense throughout a piece of writing
-Ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register
-Proofread for spelling and punctuation errors

PERFORMING WRITING
-Perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear

VOCABULARY
-Use a thesaurus
-Using expanded noun phrases to convey complicated information concisely
-Using modal verbs or adverbs to indicate degrees of possibility

GRAMMAR
-Recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms
-Using passive verbs to affect the presentation of information in a sentence
-Using the perfect form of verbs to mark relationships of time and cause
differences in informal and formal language
-Synonyms & Antonyms
-Further cohesive devices such as grammatical connections and adverbials
-use of ellipsis

PUNCTUATION
-Using hyphens to avoid ambiguity
-Using semicolons, colons or dashes to mark boundaries between independent clauses
-Using a colon to introduce a list
-Punctuating bullet points consistently

GRAMMATICAL TERMINOLOGY
subject, object, active, passive, synonym, antonym, ellipsis, hyphen, colon, semi-colon, bullet points

ENGLISH READING

DECODING / FLUENCY
-Apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), both to read aloud and to understand the meaning of new words that they meet

RANGE OF READING
-Continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
-Reading books that are structured in different ways and reading for a range of purposes
-Making comparisons within and across books

FAMILIARITY WITH TEXTS
-Increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions
-Identifying and discussing themes and conventions in and across a wide range of writing

POETRY & PERFORMANCE
-Learning a wider range of poetry by heart
preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience

UNDERSTANDING
-Checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context
-Asking questions to improve their understanding
-Summarising the main ideas drawn from more than one paragraph, identifying key details to support the main ideas

INFERENCE
—Drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence

PREDICTION
-Predicting what might happen from details stated and implied

AUTHORIAL INTENT
-Identifying how language, structure and presentation contribute to meaning
-Discuss and evaluate how authors use language, including figurative language, considering the impact on the reader

NON-FICTION
-Distinguish between statements of fact and opinion
-Retrieve, record and present information from non-fiction

DISCUSSING READING
—Recommending books that they have read to their peers, giving reasons for their choices
-Participate in discussions about books, building on their own and others' ideas and challenging views courteously
-Explain and discuss their understanding of what they have read, including through formal presentations and debates,
-Provide reasoned justifications for their views

SPOKEN LANGUAGE

-Use questions to build knowledge
-Articulate arguments and opinions
-Use spoken language to speculate, hypothesise and explore
-Use appropriate register and language