Curriculum 2019-20 Year 5 Overview

MATHS

Number/Place value

- Secure place value to 1,000,000
- Use negative w hole numbers in context
- Use Roman numerals to 1000 (M)
- Use standard w ritten methods for all four operations
- Confidently add & subtract mentally
- Use vocabulary of prime, factor & multiple
- Multiply & divide by pow ers of ten
- Use square and cube numbers

Addition & Subtraction

- 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 determine, in the context of a problem, levels of accuracy
- solve addition and subtraction multi-step problems in contexts, deciding w hich operations and methods to use and w hy.

Multiplication & Division

- 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 w hether a number up to 100 is prime and recall prime numbers up to 19
- multiply numbers up to 4 digits by a one- or two-digit number using a formal w ritten method, including long multiplication for two-digit numbers
- multiply and divide numbers mentally drawing upon known facts
- divide numbers up to 4 digits by a one-digit number using the formal w ritten method of short division and interpret remainders appropriately for the context
- multiply and divide w hole numbers and those involving decimals by 10, 100 and 1,000
- recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
- solve problems involving multiplication and division, including using their know ledge of factors and multiples, squares and cubes
- solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
- solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates..

Fractions (decimals & percentages)

- 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 form to the other and write mathematical statements > 1 as a mixed number
- 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 numbers, supported by materials and diagrams
- read and w rite 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 place
- read, w rite, order and compare numbers w ith 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 w rite percentages as a fraction w ith denominator 100, and as a decimal fraction
- solve problems w hich require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25.

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 composite rectilinear shapes in centimetres and metres
- calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes
- estimate volume and capacity
- If solve problems involving converting between units of time
- use all four operations to solve problems involving measure using decimal notation including scaling.

Ravenbank

Properties of Shape

- identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- draw given angles, and measure them in degrees (°)
- identify:
 - o angles at a point and 1 w hole turn (total 360°)
 - o angles at a point on a straight line and half a turn (total 180°)
 - o 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

Position & Direction

 identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

Statistics

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

COMPUTING

- Discuss e-safety and show awareness of personal safety
- 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, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- Design, w rite and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

PSHE

- Make informed choices and to begin to understand the concept of a 'balanced lifestyle'.
- Reflect on how to celebrate achievements, identify strengths, areas for improvement, set high aspirations and goals.
- Recognise that they may experience conflicting emotions and when they might need to listen to their emotions or overcome them.
- Recognise their increased independence brings increased responsibility to keep themselves and others safe
- Strategies for keeping physically and emotionally safe including road safety.
- Relationships and differences, Preparing for puberty, Myself and others, Body aw areness, Community and the local environment, Healthy lifestyles, Bullying and E-Safety

WOW- Fire Brigade/smoke tent WOW- Robinw ood residential

PHYSICAL EDUCATION

- Use running, jumping, catching and throw ing in isolation and in combination
- Play competitive games, applying basic principles
- Develop strength, technique, balance, flexibility & control in gym, dance & athletics
- Take part in Outdoor & Adventurous activities
- Compare performances to achieve personal bests and demonstrate improvement

WOW –Robinw ood residential WOW-Bikeability

SCIENCE

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 from birth to old age.

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 and the apparent movement of the Sun across the sky

Forces:

- Explain that unsupported objects fall tow ards 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.

Properties and Changes of Material:

- 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
- Understand that some materials will dissolve in liquid to forma solution, and describe how to recover a substance from a solution
- Use know ledge 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.

Scientists and Inventors

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

MODERN FOREIGN LANGUAGES

- Listening and engaging
- Asking and answering questions
- Speaking in sentences using familiar words
- Show understanding for words and phrases
- Appreciate songs, stories, poems and rhymes
- Broaden vocabulary
- Topics: Where I live; Weather; Numbers;
 Conversational phrases; Clothes; Holiday activities;
 Conjunctions; Opinions.

WOW- Specialist teacher during summer term lessons

RELIGIOUS STUDIES

Christianity, Judaism, Islam and Sikhism

- Where can people find guidance on how to live their lives?
- What different kind of writings and story are important to Christianity? (The story of Jesus' birth)
- What guidance to follow? (Where Christians get their guidance)
- What do religious texts and teachings sayabout God and human lives?
- Should religious teachings affect our laws today?
- What can we learn from the way Jews treat their scriptures?
- Why do people follow sacred books?

WOW – Church Carol Service WOW- Harvest assembly

ENGLISH

Reading

- Apply know ledge of morphology & etymology w hen reading new w ords
- Reading & discuss a broad range of genres & texts
- Identifying & discussing themes
- Make recommendations to others
- Learn poetry by heart
- Draw inference & make predictions
- Discuss authors' use of language
- Retrieve & present information from non-fiction texts.
- Formal presentations & debates

Writing

- Secure spelling, inc. homophones, prefixes, silent letters, etc.
- Use a thesaurus
- Legible, fluent handw riting
- Plan w riting to suit audience & purpose
- Develop character, setting and atmosphere in narrative
- Use organisational & presentational features
- Use consistent appropriate tense
- Proof-reading
- Perform ow n compositions

Gram mar

- Use expanded noun phrases
- Use modal & passive verbs
- Use relative clauses
- Use commas for clauses
- Use brackets, dashes & commas for parenthesis

Speaking & Listening

- Give w ell-structured explanations
- Command of Standard English
- Consider & evaluate different viewpoints
- Use appropriate register

MUSIC

- Sing songs with increasing control of breathing and projection/aw areness of other parts
- Listen to short melodies and play on pitched instruments, solo or in ensembles
- Identify different rhythms and speeds of pulse
- Play accompaniments with control and accuracy
- Write lyrics to songs (e-safety) /perform using notation
- Listen to and identify musical characteristics from different times/eras – live and recorded

WOW - Specialist guitar tuition with performance

ART AND DESIGN

- Use sketchbooks to collect and develop ideas. Review and adapt w ork. Annotate work in sketchbook. Explore the roles and purposes of artists, craftspeople and designers.
- Drawing: Work in a sustained and independent way to create a detailed drawing. Use view finders. Use dry and wet media.
 Begin to use simple perspective and develop an awareness of composition, scale and proportion.
- Painting: Develop a painting from a drawing. Use different media and materials and mixing appropriate colours. Mix and match colours to create atmosphere and light effects. Work with primary, secondary, complementary and contrasting colours.
- 3D: Plan a sculpture and use a range of materials to create sculptures. Develop skills in using clay and produce intricate patterns and textures in a malleable media.

WOW - Make a clay Greek vase

WOW - Create a canvas to exhibit

WOW- Da Vinci exhibition

DESIGN AND TECHNOLOGY

- Use research and criteria to develop products w hich are fit for purpose and aimed at specific groups.
- Use annotated sketches and cross-section diagrams when planning a structure.
- Analyse & evaluate existing products and improve own work.
- Cook savoury dishes for a healthy & varied diet.

WOW - Make a Greek Salad

WOW- Make a structure of a w aterfall

WOW- Cross-stitching

HISTORY

British History (Anglo-Saxons)

- Investigate invasions and settlements from Anglo-Saxon times
- Compare life in Anglo-Saxon times to more modern eras
- Find how religious beliefs changed in Anglo-Saxon times
- Use a range of sources to better understand Anglo-Saxons
- Address, devise and answer historically valid questions

British History (Vikings)

- Invasions and Settlements
- Compare life in early and late times
- Record and communicate know ledge in different forms
- Compare accounts of events from different sources and offer reasons for different versions

Broader History Study (Ancient Greece)

- Study of Greek life and their achievements
- Study different aspects of lives of different people
- Find out beliefs and behaviour
- Look at evidence and conclusions
- Identify primary and secondary sources

WOW-End of topic Ancient Greeks day

GEOGRAPHY

Locational Knowledge

- Understand latitude, longitude, Equator, hemisphere, tropics and time zones on a world map
- Name and locate countries on the world map

Place Knowledge

- Group and research countries from differing time and climate zones
- Draw comparisons between different countries

Human and Physical Geography

- Locate Iceland on a map
- Recognise physical features on a map
- Investigate w eather and climate
- Explore vegetation and wildlife
- Understand land use, economic activity and distribution of resources
- Understand global trade through discussion and investigation (e.g. Fairtrade)
- Learn about the movement of the Earth's tectonic plates and investigate volcanoes, earthquakes and tsunamis.

Geographical Skills and Field work

- Use maps, atlases, globes and digital mapping to locate places and features and describe the identified features.
- Use the 8 points of a compass in field work
- Use field w ork to observe, measure and record the human and physical features of an area using a range of methods