Aintree Davenhill Medium Term Planning

Year Group: 5 Term: Autumn 1

Maths

Number and Place Value (Mental Maths)

- Read and write any integer and use decimal notation for tenth and hundredths and know what each digit represents
- Count forwards and backwards in steps of 0.01, 0.1, 1, 10, 100, 1000 from any positive integer or decimal
- Count forwards and backwards in equal steps and describe any patterns in the sequence
- Order and compare whole numbers up to 1 000 000, negative numbers and decimals with up to two decimal places
- Know by heart facts for all multiplication tables up to 12 x 12
- Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers)
- Find pairs of numbers with a sum of 100
- Derive related facts from those already known (e.g. 4 x 0.8 linked to 4 x 8 or3 + 7 = 10 linked to 0.3 + 0.7 = 1)
- Find doubles and halves of decimals each with units and tenths
- Multiply and divide whole numbers and decimals with up to two decimal places mentally by 10 or 100, and integers by 1000 and use this to convert between units of measurement, e.g. cm to m, g to kg, etc.
- Round whole numbers to the nearest 10, 100, 1000 or a number with up to two decimal places to the nearest integer or number of decimal places

Place Value

- Exchange 10 thousands for 1 ten thousand and vice versa using place value counters
- Exchange 10 ten thousands for 1 hundred thousand and vice versa using place value counters
- Identify represent and estimate numbers using place value counters and a place value chart
- Partition a five-digit number into ten thousands, thousands, hundreds, tens and ones
- Exchange 10 ten thousands for 1 hundred thousand and vice versa using place value counters
- Exchange 10 hundred thousands for 1 million and vice versa using place value counters
- Identify represent and estimate numbers using place value counters and a place value chart
- Partition a six-digit number into hundred thousands, ten thousands, thousands, hundreds, tens and ones
- Exchange 1 tenth for 10 hundredths and vice versa using place value counters
- Exchange 1 hundredth for 10 thousandths and vice versa using place value counters
- Identify and represent numbers up to three decimal places using place value counters
- Partition a number with up to three decimal places into tens, ones, tenths, hundredths and thousandths
- Use a place value chart or place value counters to support with identifying the value of each digit to three decimal places
- Compare numbers to 1,000,000
- Compare numbers up to three decimal places where 0 is not used as a place holder
- Order numbers to 1,000,000
- Order numbers up to three decimal places where 0 is not used as a placeholder
- Identify, represent and estimate numbers on a number line from 0 to 100,000 where the number line has ten demarcations
- Identify, represent and estimate numbers on a number line from0 to 1,000,000 where the number line has ten demarcations
- Round any number up to 100,000 (Year 5 number) to the nearest 10, 100 or 1,000 (Year 4 rounding)
- Round any number up to 1,000,000 (Year 5 number) to the nearest 10, 100 or 1,000 (Year 4 rounding)
- Round any number up to 100,000 to the nearest 10,000
- Find 0.01, 0.1, 1, 10, 100, 1000 more or less than a given number up to1,000,000 including crossing boundaries
- Find 10,000 more or less than a given number up to 1,000,000including crossing100,000 boundaries
- Find 100,000 more or less than a given number up to 1,000,000
- Count forwards and backwards in steps of 10, 100 or 1,000 (Year 4 steps) for any given number up to 100,000 (Year 5number)
- Count forwards and backwards in steps of 10, 100 or 1,000 (Year 4 steps) for any given number up to 1,000,000 (Year 5number)
- Count forwards and backwards in steps of 10,000 for any given number up to 1,000,000
- Describe and extend number sequences where the step size is in multiples of tenths, e.g. 1.4, 1.7, 2.0, 2.3 (step size 0.3)
- Describe and extend number sequences where the step size is in multiples of hundredths less than a tenth, e.g. 2.31, 2.37,2.43, 2.49 (step size 0.06)
- Describe and extend number sequences where the step size is in multiples of hundredths greater than a tenth, e.g. 2.42, 2.57,2.72, 2.87 (step size 0.15)

Addition and Subtraction

- Recognise calculations that require mental partitioning e.g.4,300 + 1,400 or 424–250 or 6.32–3.5 and use this strategy where appropriate
- Recognise calculations that require counting on or back mentally, bridging through a multiple of 10 efficiently e.g. 1995+ 278 becomes1995 + 5 + 273 or 703–128 becomes703–3–125 and use this strategy where appropriate
- Recognise calculations that require counting on mentally to find the difference e.g. 5003–1960 (counting efficiently between the two numbers) and use this strategy where appropriate
- Recognise calculations that require a mental compensation method e.g. 325 + 298 becomes 325 + 300–2 and use this strategy where appropriate
- Choose an appropriate mental strategy to solve a calculation based upon the numbers involved
- Add whole numbers with more than 4 digits including combinations of numbers with different amounts of digits using a column method e.g. 4,689 + 67,302 + 78Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
- Add decimals with two decimal places using a column method, e.g. 53.67 + 26.54 =
- Subtract whole numbers with more than 4 digits including pairs of numbers with different amounts of digits, e.g. 54,368–9,279
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
- Subtract decimals with two decimal places, e.g. 206.04–72.36

Science

Earth and Space

Programme of Study

- 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 Sun/Earth/Moon as approximately spherical bodies
- Use the idea of the Earth's rotation to explain day and night
- The Earth spins once around its own axis in 24 hours, giving day and night
- The Earth orbits the Sun in one year
- We can see the Moon because the Sun's light reflects off it
- The Moon orbits the Earth in approximately 28 days and changes to the appearance of the moon are evidence of this
- The Sun appears to move across the sky from East to West and this causes shadows to change during the day
- Changes to shadow length over a day or changes to sunrise and sunset times over a year are evidence supporting the movement of the Earth

Working Scientifically

- Compare the time of day at different places on the Earth through internet links and direct communication
- Creating simple models of the solar system

English

Reading

Word Reading

- Use knowledge of root words to understand meanings of words
- Apply knowledge of prefixes to understand meaning of new words
- Use suffixes to understand meanings e.g. *-ant, -ance, -ancy,*
- *-ent, -ence, -ency, -ible, -able, -ibly, -ably*
- Read and understand meaning of words on Y5/6 word list – see bottom
- Use punctuation to determine intonation and expression when reading aloud to a range of audiences

Reading Comprehension

Maintain positive attitudes to reading and understanding what they read by:

- Listening to and discussing a range of fiction/poetry/non-fiction which they might not choose to read themselves
- Regularly listening to whole novels read aloud by the teacher from an increasing range of authors
- Exploring themes within and across texts e.g. loss, heroism, friendship
- Making comparisons within a text e.g. characters' viewpoints of same events
- Analysing the conventions of different types of writing e.g. *use of first person in autobiographies and diaries*
- Recommending books to their peers with reasons for choices
- Reading books and texts that are structured in different ways for a range of purposes
- Expressing preferences about a wider range of books including modern fiction/traditional stories/myths/legends
- Learning a wider range of poems by heart
- Preparing poems and playscripts to read aloud and perform, showing understanding through intonation, tone, volume and action so the meaning is clear to an audience

Understand what they read by:

- Checking that the book makes sense to them and demonstrating understanding e.g. *through discussion, use of reading journals*
- Exploring meaning of words in context
- Demonstrating active reading strategies e.g. *generating questions to refine thinking, noting thoughts in a reading journal*
- Inferring characters' feelings, thoughts and motives from their actions and justifying inferences with evidence
- Predicting what might happen from information stated and implied
- Re-read and reads ahead to locate clues to support understanding
- Scanning for key words and text marking to locate key information
- Summarising main ideas drawn from more than one paragraph and identifying key details which support this
- Identifying how language, structure and presentation contribute to meaning e.g. *formal letter, informal diary, persuasive speech*

Discuss and evaluate how authors use language including figurative language, considering the impact on the reader

- Exploring, recognising and using the terms metaphor, simile, imagery
- Explaining the effect on the reader of the authors' choice of language
- Distinguish between statements of fact or opinion within a text

Participate in discussions about books that are read to them and those they can read for themselves, 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, maintaining a focus on the topic and using notes where necessary by:

- Preparing formal presentations individually or in groups
- Using notes to support presentation of information
- Responding to questions generated by a presentation
- Participating in debates on an issue related to reading (fiction or non-fiction)

Provide reasoned justifications for their views by:

Justifying opinions and elaborating by referring to the text (Point + Evidence + Explanation)

Writing

Vocabulary, Spelling and Punctuation

- Create complex sentences by using relative clauses with pronouns who, which, where, whose, when, that, e.g. Sam, who had remembered his wellies, was first to jump in the river The robberies, which had taken place over the past month, remained unsolved
- Create and punctuate complex sentences using ed openers
- Create and punctuate complex sentences using ing openers
- Create and punctuate complex sentences using simile starters
- Demarcate complex sentences using commas and explore ambiguity of meaning
- Explore, collect and use modal verbs to indicate degrees of possibility, e.g. might, could, shall, will, must
- Use devices to build cohesion within a paragraph, e.g. firstly, then, presently, subsequently
- Link ideas across paragraphs using adverbials for time, place and numbers, e.g. later, nearby, secondly
- Identify and use brackets and dashes
- Use suffixes -ate, -ise, -ify to convert nouns and adjectives into verbs
- Investigate verb prefixes e.g. dis-, re-, pre-, mis-, over-

Composition

- Plan their writing by:
- Identifying the audience and purpose
- Selecting the appropriate language and structures
- Using similar writing models
- Noting and developing ideas
- Drawing on reading and research
- Thinking how authors develop characters and settings (in books, films and performances)

- Choose an appropriate strategy to solve a calculation based upon the numbers involved(recall a known fact, calculate mentally, use a jotting, written method)

Statistics
- Discrete data
- Answer questions which ask 'How many/much more...?' or 'How many fewer/much less...?' when comparing two categories in a data set
- Answer questions which ask 'How many in total...?' for different data readings
- Solve question where the answer has to be inferred from a given data set e.g. few ice creams were sold on Tuesday because it was raining
- Understand the purpose of different types of graph and identify which is best suited for a particular data set
- Continuous data
- Answer questions which ask 'How many/much more...?' or 'How many fewer/much less...?' when comparing two categories in a data set
- Answer questions which ask 'How many in total...?' for different data readings
- Solve question where the answer has to be inferred from a given data set e.g. few ice creams were sold on Tuesday because it was raining
- Understand the purpose of different types of graph and identify which is best suited for a particular data set (Misconception to address in teaching. E.g. rainfall on different days with a day's data missing. It can't be inferred from previous and subsequent data)

Geometry (Angles)
- Know that angles are measured in degrees °
- Identify reflex angles as those greater than 180° where two lines meet
- Compare all types of angles including reflex angles
- Measure acute angles to the nearest degree
- Measure obtuse angles to the nearest degree
- Draw acute angles to the nearest degree
- Draw obtuse angles to the nearest degree

Geometry (Angles)
- Measure and draw lines to the nearest mm
- Draw shapes with some given side dimensions, for example draw a triangle with side lengths of 67mm and 4.3cm. What is the length of the other side? Is there more than one possibility? lengths and angles be?
- Identify the perimeter of composite rectilinear shapes through accurate measuring to the nearest mm
- Calculate/identify the length of missing sides of composite rectilinear shapes (lengths in mm and decimal cm)
- Calculate the perimeter of a composite rectilinear shape where the lengths of some sides are not given (lengths in mm and decimal cm)

Draft and write by:
- Selecting appropriate grammar and vocabulary
- Blending action, dialogue and description within and across paragraphs
- Using devices to build cohesion (see VGP column)
- Using organisation and presentational devices e.g. headings, subheadings, bullet points, diagrams, text boxes

Evaluate and edit by:
- Assessing the effectiveness of own and others' writing in relation to audience and purpose
- Suggesting changes to grammar, vocabulary and punctuation to enhance effects and clarify meaning
- Ensuring consistent and correct use of tense throughout a piece of writing
- Ensuring consistent subject and verb agreement
- Proofreading for spelling and punctuation errors
- Perform own compositions for different audiences:
- Using appropriate intonation and volume
- Adding movement
- Ensuring meaning is clear

Spelling
- Spell words that they have not yet been taught by using what they have learnt about how spelling works in English
- Use further prefixes and suffixes and understand the guidelines for adding them
- Spell some words with 'silent' letters, e.g. knight, psalm, solemn
- 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
- Use dictionaries to check the spelling and meaning of words
- Use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary
- Use a thesaurus
- Use suffixes -ate, -ise, -ify to convert nouns and adjectives into verbs
- Investigate verb prefixes e.g. dis-, re-, pre-, mis-, over-

Handwriting
- Write fluently
- Choose when it is appropriate to print or join writing, e.g. printing for labelling a scientific diagram

History

Geography

Climate Change and Farming

Locational Knowledge
- Name and locate counties and cities of the United Kingdom
- Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)

Place Knowledge
- A region of the United Kingdom

Human and Physical Geography
- Describe and understand key aspects of:
  physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, and the water cycle
  human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water

Mapping
- Use a wide range of maps, atlases, globes and digital maps to locate countries and features studied
- Relate different maps to each other and to aerial photos
- Begin to understand the differences between maps e.g. Google maps vs. Google Earth, and OS maps
- Choose the most appropriate map/globe for a specific purpose
- Interpret and use thematic maps
- Understand that purpose, scale, symbols and style are related
- Recognise different map projections
- Identify, describe and interpret relief features on OS maps
- Use latitude/longitude in a globe or atlas
- Create sketch maps using symbols and a key
- Use a wider range of OS symbols including 1:50K symbols
- Know that different scale OS maps use some different symbols
- Use models and maps to discuss land shape i.e. contours and slopes
- Use the scale bar on maps
- Read and compare map scales

Enquiry and Investigation
- Ask and answer questions that are more causal e.g. Why is that happening in that place? Could it happen here? What happened in the past to cause that? How is it likely change in the future?
- Make predictions and test simple hypotheses about people and places

Computing

Lost in Space (CS)
(CS) To decompose a problem and sequence the steps required to solve it.
(CS) To write a flowchart algorithm to create a program.
(CS) To use the internet to research and develop a set of questions and answers.
(DL) To create a strong password and safe username for an online application.
(CS) To independently sign in to an online account. (CS) To choose sprites from the Scratch graphic library.
(CS) To use an output program block.
(CS) To set up a variable.
(DL) To sign into an online account.
(CS) To understand how a conditional statement can be used in a program. (CS) To change the value of a variable.
(DL) To sign into an online account.
(CS) To debug a broken program.
(CS) To independently add conditional statements and change a variable.
(CS) To independently add improvements to a program.
(CS) To program a programable robot.

D.T

Art

Music

Electrical systems - Doodlers
Identify simple circuit components (battery, bulb and switch) with a basic explanation of their function.
Explain that a series circuit is assembled in a loop to allow the electricity to flow along one path.
Describe a motor as a circuit component that changes electrical energy into movement.
Provide examples of motorised products that use movement to rotate or spin different parts.
Remove and replace different parts of a Doodler, as part of a team.
Suggest ways to switch the configuration to amend the form or function of the Doodler.
Explain, in an investigation report, each of the changes they made and the effect this had on the Doodler's ability to draw scribbles (function) and appearance (form).
Develop design criteria with consideration for the target user, the purpose of their Doodler, a key function and the Doodler's form and final appearance (e.g. fun, bright, soft).
Explain simply why their Doodler has a certain configuration based on the findings of their investigation (e.g. I used four pens because the Doodler would fall over with two).
Create a functional Doodler that creates scribbles on paper with or without a switch.
Identify and list each of the required materials, tools and circuit components required to build a Doodler.
Explain simply the steps to assemble a Doodler as part of a set of instructions (or storyboard).
Write instructions to build a functional circuit, explaining how to identify if it is functional or not.
Provide suggestions to improve a peer's set of instructions after testing how effective they are at guiding someone.

Trombones provided by Sefton music service

Composition Notation: Ancient Egypt
Here come the Egyptians
To sing with accuracy, fluency, control, and expression
To sing in time with other people and a backing track
To follow or remember the lyrics
To follow the tune

Hieroglyphic score
To explore and use different forms of notation
To show the structure of a piece of music using non-standard notation
To improvise music
To use hieroglyphs to notate own composition

Play like an Egyptian
To understand note length
To play a melody by ear
To recognise note names and note length
To make own part balance with the other music around one

Pitch Pyramids
To read simple pitch notation
To play a melody by reading pitch notation
To know that notes can go either on or between the lines
To use pitch notation to write down my own melody

Egyptian Farwell
To use hieroglyphs and stave notation to write a piece of music
To work as part of a group to compose a piece of music in a particular style
To notate own piece using hieroglyphs and stave notation
To perform as part of a group

Spanish

Listening
- Follow a short familiar text listening and reading at the same time
- Listen attentively and understand more complex phrases and sentences; join in to show understanding
- Listen for gist
- Understand longer and more complex phrases / sentences
- Pick out main details from a story, poem, song, conversation or passage

Speaking
- Speak with increasing fluency
- Prepare and practise a simple conversation using familiar vocabulary and structures in new contexts
- Prepare a short presentation on a familiar topic
- Understand and express simple opinions
- Initiate and sustain conversations and tell stories
- Speak in sentences using familiar vocabulary, phrases and basic language structures
- Perform to an audience speaking clearly and audibly with accurate pronunciation and intonation
- Speak with increasing spontaneity
- Use repair strategies to keep a conversation going

Reading
- Read carefully and show understanding of words, phrases and simple writing
- Re-read frequently a variety of short texts
- Read and understand the main points and some detail from a short written passage
- Identify different text types and read short, authentic texts for enjoyment or information
- Match sound to sentences and paragraphs
- Broaden vocabulary
- Develop strategies for understanding new words in familiar material including using a dictionary
- Apply phonic knowledge of the foreign language in order to decode text

Writing
- Write phrases from memory and adapt these to make new sentences
- Express ideas clearly
- to write words, short phrases and short sentences, using a reference
- Be able to write at varying length, for different purposes and audiences
- Write sentences on a range of topics using a model
- Write in sentences using familiar vocabulary, phrases and basic language structures with increasing accuracy

Grammar
- Nouns
- Gender
- Singular and plural forms
- Definite and indefinite article
- Develop an awareness of sound spelling link to be able to write with increasing accuracy
- Recognise different word classes e.g. nouns, verbs, adjectives
- Recognise and use high frequency verbs
- Question words
- Develop an awareness of the place of the adjective in the sentence
- Develop an awareness of adjectival agreements
- Simple adverbs of time (time phrases including o'clock)
- Develop an awareness of word order
- Apply knowledge of language rules and conventions when building short sentences
- Personal pronouns I, you, he, she, it, we, they

		• Develop an awareness of verb patterns • Conjugate regular high frequency verbs • Conjugate some basic high frequency irregular verbs • Begin to use adjectival agreements with accuracy • Use of prepositions • À + definite article • De + definite article • Prepositions • Use a range of adverbs to make messages more interesting
P.E	**P.S.H.E**	**R.E**
Hockey To perform a block tackle to dispossess an attacker. To use fast, accurate passes into the D to create scoring opportunities. To mark an attacker closely to stop them from receiving the ball. To perform a sweep hit to send the ball 'first time'. To move the ball quickly from left to right to outwit a defender. To use a variety of techniques to keep possession in a game. Badminton To make it difficult for our opponent to score points. To apply basic court positions in singles play. To accurately hit both long and short sleeves. Close control, including net shots. To use footwork to recover after lunging and moving after shots. To apply a range of movements and shots in competition.	Health and Well-Being • To set a goal • To explain what makes a healthy meal (Link to Eat Like A Champ) • To explain the importance of nutrients and fibre (Link to Eat Like A Champ) • To explain the importance of hydration (Link to Eat Like A Champ) • To understand the importance of portion control (Link to Eat Like A Champ) • To interpret and understand information on feed labels (Link to Eat Like A Champ) • To explain what makes a situation fair or unfair (Link to Student Council Elections)	U2.1 Why do some people think God exists? This investigation enables pupils to learn in depth from different religious and non-religious groups about the nature of belief in God. Pupils enquire into the key question- raising questions about the nature and existence of God focussing on Christian ideas about God. Pupils will consider why people do or don't believe in God and the impact that might have on the way they live their everyday life. This investigation provides an opportunity to meet Christians, agnostics and atheists and ask questions about why they do or don't believe in God. It enables a clear sequence of learning and the development of a rich knowledge of different worldviews. Pupils use some if the main disciplines with which religion and worldviews are studied. Pupils will: • Define the terms theist, atheist and agnostic and give examples of statements that reflect these beliefs (B1). • Give two reasons why a Christian believes in God and one why an atheist does not (A3). • Outline clearly a Christian understanding of what God is like, using examples and evidence (A2). • Give examples of ways in which believing in God is valuable in the lives of Christians, and ways in which it can be challenging (B2). • Express thoughtful ideas about the impact of believing or not believing in God on someone's life (B1). • Present different views on why people believe in God or not, including their own ideas (C1). • Explain how Christians sometimes disagree about what God is like, giving examples of how they interpret texts differently (B3). • Enquire into what some atheists, agnostics and theists say about God, expressing their own ideas and arguments, using evidence and examples (C1).