YEAR 6 LEARNING EXPECTATIONS

Updated Sept '21

Unit 1 – How We Organise Ourselves Unit 2 – How the World Works Unit 3 – Where We are in Place and Time

| Term 1 | **MATHS**
Number
-The base 10 place value system extends infinitely in two directions
- Mental strategies can be used with the operations of addition and subtraction, division and multiplication.
-The operation of addition, subtraction, multiplication and division are related to each other and are used to process
-Information to solve complex problems.

★ Model numbers to millions or beyond using the base 10 place value system
★ Consolidate rounding whole numbers to the nearest 10, 100, 1000 etc
★ Use strategies to evaluate the reasonableness of answers (Estimation and Rounding)
★ Read, write, compare and order whole numbers up to millions or beyond (in both directions – include decimals)
★ Model decimal fractions to thousandths or beyond
★ Read, write, compare and order decimal fractions to thousandths or beyond
★ Use whole numbers up to millions or beyond in real-life situations
★ Round decimals to the nearest whole number, tenth or hundredth.
★ Model negative numbers in appropriate contexts
★ Fluently add and subtract numbers to 10,000's with and without regrouping using a variety of strategies
★ Fluently add and subtract numbers to 10,000's to two decimal places
★ Model and use addition and subtraction of decimals in real-life situations
★ Mental strategies used with the operations of addition & subtraction (split/partition, jumping on or back)
★ Select an efficient method for solving a problem: mental estimation, mental computation, written algorithms, by using a calculator
★ Confidently use all times tables and division facts up to 12
★ Model 4 digit by 1 digit and 4 digit by 2 digit multiplication problems
★ Model 3 by 1 digit and 4 by 2 digit division problems (with remainders)
★ Select and use appropriate sequence of operations to solve multi step problems
★ Order of operations (BODMAS or PEMDAS)

Pattern and Function
-Patterns can often be generalized using algebraic expressions, equations or functions |

(Exponential notation is a powerful way to express repeated products of the same number. ???)

★ Understand that patterns can be generalized by a rule- pattern and function
★ Represent the rule of a pattern by using a function
★ Use functions to solve problems- pattern and function
★ Create function machines with 2 or more steps
★ Recognize and extend number sequences such as the sequence of square numbers or the sequence of triangular numbers 1, 3, 6, 15 ..
★ Select appropriate methods to analyze patterns and identify rules

Shape and Space
-Manipulation of shape and space takes place for a particular purpose.
- Consolidating what we know of geometric concepts allows us to make sense of and interact with our world

★ Understand systems for describing position and direction
★ Identify and use the language and notation of bearing to describe direction and position
★ Apply the language and notation of bearing to describe direction and position
★ Identify and use scale (ratios) to enlarge and reduce shapes
★ Use 2D representations of 3D objects to visualize and solve problems (i.e. using drawings or models)
★ Coordinate geometry

Measurement
-Conversion of units & measurements allows us to make sense of the world we live in

★ Use timetables and schedules (12-hour and 24-hour clocks) in real-life situations
★ Determine times worldwide

Social Studies
Strands: Human Systems and Economic Activities

★ The study of how and why people construct organizations and systems
★ The ways in which people connect locally and globally
★ The distribution of power and authority
★ Identify roles-rights and responsibilities in society

	★ Formulate and ask questions about the past the future places and society Strands: Continuity and Change Through Time ★ The study of the relationships between people and events through time ★ The past, its influences on the present and its implications for the future Strands: Human and Natural Environments ★ How people adapt to and alter their environment; how people experience and represent place
	Science Strands: Earth and Space ★ The study of planet Earth and its position in the universe, particularly its relationship with the sun ★ The natural phenomena and systems that shape the planet and the distinctive features that identify it ★ Use scientific vocabulary to explain their observations and experiences ★ Identify or generate a question or problem to be explored ★ Interpret and evaluate data gathered in order to draw conclusions
	PSPE Strand: Interactions ★ Behaviours, rights and responsibilities of individuals and their relationships with others, communities, society and the world around them
Unit 4 – The Exhibition Unit 5 – How We Express Ourselves Unit 6 – Who We Are	
Term 2/3	MATHS Number Fractions, decimal fractions and percentages are ways of representing whole-part relationships. ★ Simplify fractions e.g. 12/36 =1/3 ★ Compare fractions with same and different denominators

- ★ Show fractional amounts as proper, improper and mixed fractions
- ★ Add and subtract fractions with no common denominator
- ★ Find fractions and percentages of a quantity, using mental, written and calculator methods.
- ★ Represent hundredths using decimal/fraction notation
- ★ Convert common fractions as decimals and percentages
- ★ Convert decimals to fractions and vice versa
- ★ Apply decimals and fractions in real-life situations
- ★ Find greatest common factor (GCF)
- ★ Find simple common multiples and the lowest common multiple (LCM).
- ★ Understand the relationship between fractions, decimals and percentages

Shape and Space
Manipulation of shape and space takes place for a particular purpose.
Consolidating what we know of geometric concepts allows us to make sense of and interact with our world
Geometric tools and methods can be used to solve problems relating to shape and space

- ★ Understand the properties of circles
- ★ Create and model how a 2D net converts into a 3D shape and vice versa
- ★ Explore the use of geometric ideas and relationships to solve problems in other areas of mathematics

Measurement
-Accuracy of measurements depends on the situation and the precision of the tool
-A range of procedures exists to measure different attributes of objects and events
-Conversion of units and measurements allows us to make sense of the world we live in

- ★ Understand procedures for finding area, perimeter and volume
- ★ Develop and describe formulas for finding perimeter, area and volume
- ★ Understand the relationship between area and perimeter, between area and volume, and between volume and capacity
- ★ Understand and carry out unit conversions within measurement systems (metric)
- ★ Use decimal and fraction notation in measurement (i.e. 3.2cm, 1.47kg, 1 ½ km)
- ★ Read and interpret scales on a range of measuring instruments
- ★ Record estimates and readings from scales to a suitable degree of accuracy.

- ★ Select appropriate units of measurement and tools to solve problems in real-life situations
- ★ Determine and justify the level of accuracy required to solve real-life problems involving measurement
- ★ Describe lines and angles using geometric vocabulary
- ★ Measure and construct angles in degrees using a protractor

Data Handling
- Data can be presented effectively for valid interpretation and communication
- Range, mode, median and mean can be used to analyse statistical data.
- Probability can be represented on a scale between 0-1 or 0% 0 100%
- The probability of an event can be predicted theoretically.

- ★ Understand that the mode, median, mean and range can summarize a set of data
- ★ Understand that different types of graphs have special purposes
- ★ Collect, display and interpret data in circle graphs (pie charts) and line graphs
- ★ Design a survey and systematically collect, record, organize and display the data in a bar graph, circle graph, line graph
- ★ Experiment with scale to determine the most suitable for a particular graph.
- ★ Understand that the mode, median, mean and range can summarize a set of data
- ★ Identify, describe and explain the range, mode, median and mean in a set of data
- ★ Use ICT as a tool to create data charts, identify, describe and explain the mode and range of a set of data.
- ★ Understand that probability can be expressed in scale (0-1) or percent (0%-100%)
- ★ Express probabilities using scale (0-1) or percent (0%-100%)
- ★ Understand the difference between experimental and theoretical probability
- ★ Use language associated with probability to discuss events including those with equally likely outcomes.

LANGUAGE
Reading
- Effective stories have a structure, purpose and sequence of events (plot) that help make the author's intention clear.
- Synthesizing ideas and information from texts leads to new ideas and understanding.
- Authors structure stories around significant themes.
- Reading opens our minds to multiple perspectives and helps us to understand how people think, feel and act.

- ★ Read a wide range of texts confidently (using appropriate strategies), independently and with understanding
- ★ Read with increasing fluency and accuracy at year appropriate level
- ★ Make inferences and be able to justify them
- ★ Read with increasing fluency and accuracy at year appropriate level

- ★ Participate in class, group or individual author studies, gaining an in-depth understanding of the work and style of a particular author and appreciating what it means to be an author
- ★ Appreciate the author's use of language and interpret meaning beyond the literal
- ★ Understand that authors use words and literary devices to evoke mental images
- ★ Recognize and understand figurative language, for example, similes, metaphors
- ★ Distinguish between fact and opinion, and reach their own conclusions about what represents valid information
- ★ Participate in collaborative learning, considering multiple perspectives and working with peers to co-construct new understanding
- ★ Work in cooperative groups to locate and select texts appropriate to purpose and audience
- ★ Use the internet responsibly and knowledgeably, appreciating its uses and limitations
- ★ Locate, organize and synthesize information from a variety of sources including the library/media centre, the internet, people in the school, family, the immediate community or the global community.

Writing
- Stories that people want to read are built around themes, to which they can make connections.
- Effective stories have a purpose and structure that help to make the author's intention clear.
- Synthesizing ideas enables us to build on what we know, reflect on different perspectives, and express new ideas.
- Knowing what we aim to achieve helps us to plan and develop different forms of writing.
- Through the process of planning, drafting, editing and revising, our writing improves over time.

- ★ Write independently and with confidence, showing the development of their own voice and style
- ★ Adapt writing according to the audience and demonstrate the ability to engage and sustain the interest of the reader
- ★ Use appropriate paragraphing to organize ideas
- ★ Vary sentence structure and length
- ★ Use a range of vocabulary and relevant supporting details to convey meaning and create atmosphere and mood
- ★ Use a dictionary, thesaurus, spell check confidently and effectively to check accuracy, broaden vocabulary and enrich their writing
- ★ Write using a range of text types in order to communicate effectively, for example, narrative, instructional, persuasive
- ★ Recognize and use figurative language to enhance writing, for example, similes, metaphors, idioms, alliteration
- ★ Choose to publish written work in handwritten form or in digital format independently
- ★ Use written language as a means of reflecting on their own learning
- ★ Locate, organize, synthesize and present written information obtained from a variety of valid sources
- ★ Use a range of tools and techniques to produce written work that is attractively and effectively presented.
- ★ Use planning, drafting, editing and reviewing processes independently and with increasing competence
- ★ Demonstrate an increasing understanding of how grammar works

<u>Speaking and Listening</u>
-Listeners identify key ideas in spoken language and synthesize them to create their own understanding.
-People draw on what they already know in order to infer new meaning from what they hear
- Spoken language can be used to persuade and influence people.
- Metaphorical language creates strong visual images in our imagination.

★ Infer meanings, draw conclusions and make judgements about oral presentations
★ Generate, develop and modify ideas and opinions through discussion
★ Understand and use figurative language such as simile, personification and metaphor
★ Appreciate that people speak and respond according to personal and cultural perspectives
★ Use standard grammatical structures competently in appropriate situations
★ Participate appropriately as listener and speaker, in discussions, conversations, debates and group presentations
★ Listen and respond appropriately to instructions, questions and explanations
★ Paraphrase and summarize when communicating orally
★ Use oral language to formulate and communicate possibilities and theories
★ Use register, tone, voice level and intonation to enhance meaning
★ Use speech responsibly to inform, entertain and influence others
★ Reflect on communication to monitor and assess their own learning.

<u>Viewing and Presenting</u>
-Knowing about the techniques used in visual texts helps us to interpret presentations and create our own visual effects.
-Synthesizing information from visual texts is dependent upon personal interpretation and leads to new
-The aim of commercial media is to influence and persuade viewers
- Individuals respond differently to visual texts, according to their previous experiences, preferences and perspectives.

★ Apply knowledge of presentation techniques in original and innovative ways; explain their own ideas for achieving desired effects
★ Show how body language, for example, facial expression, gesture and movement, posture and orientation, eye contact and touch, can be used to achieve effects and influence meaning
★ Navigate the internet in response to verbal and visual prompts with confidence and familiarity; use ICT to prepare their own presentations

Social Studies
<u>Strands: Human & Natural Environments, Resources & the Environment</u>
★ Use and analyse evidence from a variety of historical-geographical and societal sources
★ Assess the accuracy-validity and possible bias of sources

	Science **Strand: Living Things** ★ The study of the characteristics, systems and behaviors of humans ★ The interactions and relationships between and among them, and with their environment ★ Use scientific vocabulary to explain their observations and experiences
	PSPE Strand: Identity ★ The recognition of strengths, limitations and challenges as well as the ability to cope successfully with situations of changes and adversity ★ How learner's concept of self and feelings of worth affect his or her approach to learning and how he or she interacts with others