



**Primary literacy &
numeracy guide.**

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About this booklet.

- This booklet provides an overview of the literacy and numeracy expectations for students at each grade level. However, it is important to note that students may be at different stages in their learning and at different points on the learning continuum. To fully understand this booklet, please read it in conjunction with the Primary Years Programme (PYP) guide. If you have any questions, we encourage you to reach out to your child's teacher or principal.
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Pre-Kindergarten

LITERACY

By the end of Pre-K, students will explore the following areas in English literacy:

- Enjoy listening to longer stories and can remember much of what happens
- Pay attention to more than one thing at a time, which can be difficult
- Use a wider range of vocabulary
- Understand a question or instruction that has two parts, such as “Get your coat and wait at the door”
- Understand ‘why’ questions, like: “Why do you think the caterpillar got so large?”
- Sing a large repertoire of songs
- Know many rhymes, be able to talk about familiar books, and be able to tell a long story
- Develop their communication, but may continue to have problems with irregular tenses and plurals, such as ‘runned’ for ‘ran’, ‘swimmed’ for ‘swam’
- Develop their pronunciation of more complex/multisyllable words
- Can say sounds: r, j, th, ch, and sh
- Can say multisyllabic words such as ‘pterodactyl’, ‘planetarium’ or ‘hippopotamus’
- Use longer sentences of four to six words
- Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions
- Start a conversation with an adult or a friend and continue it for many turns.
- Use talk to organise themselves and their play: “Let’s go on a bus... you sit there... I’ll be the driver”
- Understand the concept about print:
 - print has meaning
 - print can have different purposes
 - we read English text from left to right and from top to bottom
 - the names of the different parts of a book
 - page sequencing
- Develop their phonological awareness, so that they can:
 - spot and suggest rhymes
 - count or clap syllables in a word
 - recognise words with the same initial sound, such as money and mother
- Engage in extended conversations about stories, learning new vocabulary
- Use some of their print and letter knowledge in their early writing. For example: writing a pretend shopping list that starts at the top of the page; writing ‘m’ for mummy
- Write some or all of their names
- Write some letters accurately



Pre-Kindergarten

NUMERACY

During Pre-K, the students explore the following ideas in Numeracy:

NUMBER:

- Counting (saying the number string to 5 and beyond, counting objects)
- Subitising (quick recognition of groups of objects)
- The cardinal principle
- Recognise some numerals and experiment with writing numerals
- Link numerals to groups of objects
- Solve simple, real-world number problems with numbers to 5

SPATIAL SENSE:

- Work with puzzles of increasing difficulty
- Compare sizes and weights of everyday objects
- Begin to draw closed shapes
- Build using a range of resources
- Describe ways to get to a familiar place
- Develop use of positional language
- Learn names of familiar 2D shapes (square, circle, triangle, rectangle etc.)

DATA:

- Explore ways that they can collect information about themselves and the world around them
- Creating living and concrete graphs
- Explore ways to sort and categorise objects

PATTERNS:

- Notice patterns and arrange things in patterns
- Identify what repeats in a pattern
- Extend and create simple patterns (ABC, ABB etc)



Junior Kindergarten

LITERACY

By the end of JK, students will explore the following areas in English literacy:

- Understand how to listen carefully and why listening is important
- Learn new vocabulary
- Use new vocabulary through the day
- Ask questions to find out more and to check they understand what has been said to them
- Articulate their ideas and thoughts in well-formed sentences
- Connect one idea or action to another using a range of connectives
- Describe events in some detail
- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen
- Develop social phrases
- Engage in story times
- Listen to and talk about stories to build familiarity and understanding
- Retell the story, once they have developed a deep familiarity with the text, some as exact repetition and some in their own words
- Use new vocabulary in different contexts
- Listen carefully to rhymes and songs, paying attention to how they sound.
- Learn rhymes, poems and songs
- Engage in nonfiction books
- Listen to and talk about selected nonfiction to develop a deep familiarity with new knowledge and vocabulary
- Read individual letters by saying the sounds with adults
- Experiment blending sounds into words
- Investigate the sounds that letters or groups of letters make
- Re-read books to build up their confidence in word reading, fluency and understanding and enjoyment
- Explore print



Junior Kindergarten

NUMERACY

During JK, the students explore the following ideas in Numeracy:

NUMBER:

- Counting (small quantities, saying the number string)
- Subitising small quantities
- Understand the cardinal counting principle
- Counting rhymes and songs
- Recognising the numbers 1-10
- Writing the numbers 1-10

SPATIAL SENSE:

- Select, rotate and manipulate shapes to develop spatial reasoning
- Solve puzzles
- Build/construct following a pattern/plan
- Compare weight and capacity in informal ways
- Use appropriate language to discuss measurement attributes (longer/shorter, heavier/lighter)
- Compose and decompose shapes
- Identify that sometimes a shape can have shapes within it
- Discuss location using appropriate vocabulary (behind, in front of, beneath etc)

DATA:

- Sort sets of objects by different attributes
- Gather information from people and surroundings by observing and asking questions
- Find ways to record information

PATTERNS:

- Continue, copy and create repeating patterns
- See patterns in everyday surroundings (actions, sounds, shapes, images etc)
- Name simple pattern rules (e.g., AB, ABA etc)
- Identify errors in a pattern and correct



Senior Kindergarten

LITERACY

By the end of SK, students will explore the following areas in English literacy:

READING

- Recognise and name all upper and lowercase letters of the alphabet
- With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts)
- With prompting and support, identify the main topic and retell key details of a text
- Read emergent-reader texts with purpose and understanding
- Engage with poetry, non-fiction, picture books, and other fiction texts throughout the year

WRITING

- Print many uppercase and lowercase letters
- Produce a variety of writing pieces throughout the year, including picture books, opinion pieces, informational pieces, and poetry
- Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about events in the order in which they occurred, and provide a reaction to what happened
- Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic
- Participate in shared research and writing projects (e.g., explore a number of books by a favourite author and express opinions about them)

SPEAKING AND LISTENING

- Express thoughts, feelings, and ideas audibly
- Ask and answer questions in order to seek help, get information, or clarify something that is not understood



Senior Kindergarten

NUMERACY

During SK, the students learn the following mathematical ideas:

NUMBER:

- Counting (saying the number string, counting objects)
- Subitising (fast recognitions of quantities to 5 and beyond)
- Representing numbers (five frames, ten frames, cubes, base ten etc)
- Composing and decomposing quantities (e.g. 12 is six and six; or ten and two etc)
- Comparing numbers (Which is greater? How much greater?)
- Estimating quantities (About how many are there? Is it closer to 5 or closer to 10?)
- Adding and subtracting

DATA HANDLING:

- Sorting (sorting groups by attributes)
- Collecting data from simple questions
- 1:1 graphing, concrete graphing

PATTERNS:

- Investigating patterns (shapes, colours, sounds, actions, direction, size etc)

SPATIAL SENSE:

- Comparing measurements directly (placing objects side by side to measure)
- Using non-standard units to measure (e.g. using cubes to measure length)
- Simple shapes and simple objects
- Composing and decomposing 2D shapes
- Location and movement



Grade 1

LITERACY

Grade 1 students will investigate a selection of the following genres: personal narratives, procedural/how-to texts, information/all-about texts, realistic fiction, and opinion texts. By the end of grade 1, through reading and writing workshop, students will explore the following concepts in English reading, writing, speaking and listening:

- Authors use craft moves, such as careful and precise word choice, to make a greater impact on the reader
- Writers follow specific routines to maximise the use of time during writing workshop
- Writers will zoom in on small moments and times when they did something in order to write engaging stories
- We use procedural writing to communicate the steps of a process clearly so others can follow them
- Both illustrations and words can be used to explain the steps of the process
- Writing conventions help us to communicate clearly
- We read and write informational texts to learn and teach about the world
- We write stories which are believable about realistic characters, happening in realistic settings so we can connect with them easily
- We listen actively, and ask and answer questions in order to participate in discussions and learn



Grade 1

NUMERACY

During grade 1, the students learn the following mathematical ideas:

NUMBER:

- Counting (skip counting, saying the number string to 50 and beyond)
- Representing whole numbers (tens, ones)
- Estimating and comparing whole numbers
- Adding and subtracting (part-whole relationships, joining, comparing, taking away)
- Fractions (halves and forth, fair shares)
- Multiplication and division (equal groups, equal sharing)
- Problem Solving (solving one and two step problems)

ALGEBRA:

- Pattern (shape patterns, repeating patterns, translating patterns)
- Algebra (exploring equivalence)
- Coding (using robots, Scratch Jnr, coding vocabulary)

DATA:

- Collecting and organising data (tally charts; asking questions to gather data)
- Displaying and interpreting data (concrete graphs, picture graphs, answering questions about data)
- Probability (likely and unlikely, certain and impossible)

SPATIAL SENSE:

- 3D Objects (sorting, classifying, naming)
- Symmetry and sorting shapes (2D and 3D symmetry, sorting and classifying shapes)
- Length and Time (time to the hour and half hour, calendars, non-standard units of measurement)
- Area, Mass, capacity
- Location and movement (simple maps, positional language)

FINANCIAL LITERACY:

- Making money amounts
- Identifying coins and notes



Grade 2

LITERACY

Grade 2 students will investigate a selection of the following genres: open-verse poetry, personal narratives, informational books, group research projects, opinion letters, and folktales. By the end of grade 2, through reading and writing workshop, students will explore the following concepts in English reading, writing, speaking and listening:

- We learn facts about the world around us from nonfiction books
- We use writing workshop as a structure to help us organise our work
- We can express our thinking about the world in free-verse, short poetry
- Word choice, punctuation, and spacing can be used to increase the impact on the reader
- We write about small moments in our lives, focusing on telling the story bit by bit
- We create informational books to teach others
- We use text features to organise our writing and make it clearer
- When we conduct experiments or demonstrations, we document our thinking to keep track of what has happened and to allow others to follow the same process and get the same results
- We can use writing to express our opinions. Our opinions are more convincing when we give reasons to support what we are saying
- Sometimes we write about realistic characters, events, and settings to tell a story, teach a lesson, or connect better with others



Grade 2

NUMERACY

During grade 2, the students learn the following mathematical ideas:

NUMBER:

- Skip counting
- Representing whole numbers (two and three digit numbers, even and odd, place value)
- Estimating and comparing whole numbers (using number lines, ordering numbers to 200 and beyond)
- Addition and subtraction (recognising addition and subtraction situations)
- Adding and subtracting (making doubles, making ten, subtraction as adding, using number lines)
- Problem solving
- Multiplication and division
- Fractions (regrouping fractions into wholes, comparing fractions)

ALGEBRA:

- Patterns (number patterns, increasing patterns)
- Algebra (equations as a balance, using number properties)

DATA:

- Collecting and organising data (asking questions to gather information)
- Interpreting data (asking questions based on data displays, venn diagrams, carroll diagrams)

SPATIAL SENSE:

- Describing and sorting shapes (congruence, sorting 2D shapes)
- Composing and decomposing shapes and figures
- Location and movement (creating and reading simple maps, birds eye view, describing movement)
- Coding (creating and executing simple code)
- Length (introducing centimetres and metres)
- Time (measuring time in seconds and minutes, using an analogue clock)

FINANCIAL LITERACY:

- Money (making money amounts)
- Counting with money



Grade 3

LITERACY

Grade 3 students will investigate a selection of the following genres: realistic fiction, opinion reviews, procedural texts, and feature articles. By the end of grade 3, through reading and writing workshop, students will explore the following concepts in English reading, writing, speaking and listening:

- We use specific routines and procedures in order to keep ourselves organised and be effective
- When we are aware of the strengths of effective writing, we can identify our own strengths and set goals to improve further
- We use realistic fiction to describe real experiences and tell a story
- Authors use reasons and facts to communicate an opinion
- We write procedures step-by-step and clearly so others are able to follow along
- Authors use different craft moves to make texts more engaging for the readers
- When we communicate information and facts in engaging ways with different craft techniques, we appeal to a wider audience and we capture their attention



Grade 3

NUMERACY

During grade 3, the students learn the following mathematical ideas:

NUMBER:

- Skip counting (2s, 5s, 10s, 20s, 25s, 50s)
- Representing, estimating and comparing whole numbers to 1000
- Addition and subtraction strategies
- Multiplication and division (multiplying in parts, dividing in parts, multiplication patterns)
- Fractions (fractions of an area, fractions of a set, fair shares)

ALGEBRA:

- Patterns (using rules, patterns on the hundred chart, relating number and shape patterns)
- Algebra (equations as a balance, solving equations)
- Coding (creating and executing code)

DATA:

- Collecting and organising data (mean, median, mode, sorting based on two attributes)
- Displaying and interpreting data (bar graphs with scale)
- Probability (describing and determining fairness)

SPATIAL SENSE:

- Mass and capacity (using grams/kilograms and litres/millilitres, comparing)
- Location and movement (using grids, describing turns)
- Length and time (kilometres and metres, telling time with seconds)
- Area (using non-standard units, using standard units)
- Perimeter (comparing area and perimeter)
- 3D Objects (composing and decomposing, nets, skeleton models, attributes)

FINANCIAL LITERACY:

- Using money
- Making change



Grade 4

LITERACY

Grade 4 students will investigate a selection of the following genres: opinion essays, literary nonfiction, historical fiction, informational news articles, and poetry. By the end of grade 4, through reading and writing workshop, students will explore the following concepts in English reading, writing, speaking and listening:

- We revise our writing to make it clearer and more engaging for the reader
- Writers follow the writing workshop routines to maximise the use of time and be more effective
- We gain information from nonfiction texts to better inform and express our opinions
- We can present facts and information in engaging ways with the addition of literary elements and techniques. This allows us to appeal to a wider audience and bring the facts to life
- Students will understand a story in depth by focusing on key ideas and details. Students will capture important time periods using story-telling
- We examine and present events and ideas to gain deeper perspectives of how our world is organised
- We can express ourselves creatively in different ways, including through free-verse poetry
- Word choice is important in conveying our ideas precisely and creatively

Monarchy

jūn zhǔ zhì
君主制

Oligarchy

guǎ tóu zhèng zhì
寡头政治

Dictatorship

dú cǎi
独裁



Grade 4

NUMERACY

During grade 4, the students learn the following mathematical ideas:

NUMBER:

- Representing, estimating and comparing whole numbers (place value, rounding, benchmark numbers)
- Adding and subtracting whole numbers
- Multiplying and dividing whole numbers (number fact recall, strategies for working with larger numbers)
- Problem solving with addition, subtraction, multiplication and division
- Representing, ordering and comparing fractions
- Representing, estimating and comparing decimal numbers
- Introduction to adding, subtraction, multiplying and dividing with decimals

ALGEBRA:

- Patterns (repeating patterns, growing patterns, pattern rules)
- Algebra (using equations to represent situations, solving equations, solving inequalities)
- Coding (creating nested events)

DATA:

- Displaying and interpreting data (stem and leaf plots, infographics, multiple bar graphs)
- Describing and summarising data (mean, median)
- Probability (describing events using numerical probabilities)

SPATIAL SENSE:

- Location and transformation (coordinate grids, translation, reflections)
- Time (relating units of time, elapsed time)
- Length, capacity, mass, area
- Angles (properties of rectangles, right angles)

FINANCIAL LITERACY:

- Calculating with money amounts
- Earning, spending and saving



Grade 5

LITERACY

Grade 5 students will investigate a selection of the following genres: procedural texts, fantasy, persuasive texts, informational text structures, and how to use figurative language. By the end of grade 5, through reading and writing workshop, students will explore the following concepts in English reading, writing, speaking and listening:

- We document scientific thinking and findings in a consistent way in order to communicate clearly and allow others to follow the same steps we have taken and arrive at the same conclusions
- We read to find out about the world. We share our reading with our peers
- Writers start and develop writing projects independently
- We sometimes read and write narratives to describe imaginary experiences
- Nonfiction text represents a perspective. Information is not necessarily the truth
- We use different text structures to organise informational texts and make our writing clear and concise
- We use figurative language as a tool to enhance meaning and the beauty of the text. Figurative language engages the reader and provides more information about the context



Grade 5

NUMERACY

During grade 5, the students learn the following Mathematical ideas:

NUMBER:

- Represent, estimate and compare whole numbers (to one million, place value, benchmark numbers)
- Operations with whole numbers
- Representing, estimating and comparing decimal numbers (counting by decimals, relating decimals to fractions)
- Operations with decimals
- Fractions (comparing, relating numerators and denominators, equivalent fractions, mixed numbers)
- Operations with fractions
- Rates, ratios and percentages

ALGEBRA:

- Patterns (value tables, shrinking patterns, graphing patterns, creating and using pattern rules)
- Algebra (representing situations with algebra, solving equations and inequalities)
- Coding (conditional statements, creating and altering code)

DATA:

- Collecting, organising and describing data (sampling and surveying, mean, median, mode)
- Displaying and interpreting data (stacked bar graphs, infographics, drawing conclusions)
- Probability (using fractions to represent probability, theoretical probability, solving problems with probability)

SPATIAL SENSE:

- Area and area relationships (estimating and measuring area, area of triangles, parallelogram and other shapes)
- Location and transformation (translations, reflections, rotations, coordinates)
- Angles (estimating and measuring angles, using protractors, constructing angles)
- Constructing and representing shapes and objects (constructing triangles and congruent shapes, 3D views)
- Classifying triangles
- Length, mass, capacity (selecting units, converting units)

FINANCIAL LITERACY:

- Calculating costs that include tax
- Determining the “best buy”
- Credit and debt
- Budgeting



Grade 6

LITERACY

Grade 6 students will investigate a selection of the following genres: argumentative essays, science fiction, informational text features in a digital text, writing process/revision strategies, as well as independent research projects surrounding the Primary Years Programme exhibition. By the end of grade 6, through reading and writing workshop, students will explore the following concepts in English reading, writing, speaking and listening:

- We make meaning from texts by drawing on what the text says explicitly and by drawing inferences from the text
- We need to revise our writing to improve sentence and text structure. We can do so by combining and splitting sentences and adding and deleting words
- We use visuals and text features to organise informational texts to add clarity and have a stronger impact on the reader
- Digital texts work differently because the readers' attention span is shorter
- We write in different types of genres which should suit our purpose, intended audience, and most importantly message
- Our message is shaped by our personal and social identities
- We use argumentative writing to express our opinions which are based on research findings and their analysis
- The power of the argument increases when we use credible sources of information and we connect the different information logically
- We use literacy skills as a tool to help us frame our investigations and communicate our findings during the exhibition and in life
- Stories have a particular structure and character development to engage the reader



Grade 6

NUMERACY

During grade 6, the students learn the following Mathematical ideas:

NUMBER:

- Representing, estimating, comparing whole numbers (beyond one million, place value, rounding, benchmark numbers)
- Whole number operations (mental strategies, formal strategies, order of operations)
- Integers (zero property, operations with integers, order of operations)
- Representing, estimating and comparing decimal numbers (place value, comparing, rounding)
- Decimal operations
- Percentages, rates, ratios
- Classifying whole numbers (prime and composite, powers and roots, divisibility rules)
- Representing, ordering and comparing fractions
- Operations with fractions

ALGEBRA:

- Patterns (pattern rules, graphing patterns)
- Algebra (evaluating expressions, solving equations and inequalities)
- Coding with Swift playground (rewriting code, efficient code, other control structures)

DATA:

- Displaying and interpreting data (intervals, histograms, line graphs, infographics)
- Probability (theoretical and experimental probability, determining probabilities of independent events)

SPATIAL SENSE:

- Area and surface area (relating units, area of a trapezoid, decomposing solids to determine area, nets)
- Transformations on the cartesian plane
- 2D and 3D shapes (rotational symmetry, comparing quadrilaterals, constructing 3D objects from view drawings)

FINANCIAL LITERACY:

- Setting financial goals
- Budgeting, saving and spending
- Ways to pay
- Calculating expenses with tax



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