

Kindergarten Numeracy Descriptors

NUMERACY AWARENESS			
NA1 IMPORTANCE OF NUMERACY	NA2 LEARNER AWARENESS	NA 3 TASK AWARENESS	
<p>Purpose Children recognize that quantitative and spatial information is all around them.</p>	<p>Personal Insight Children participate in guided activities that model how to think about their numeracy strengths and the strategies they can use to regulate* their learning.</p>	<p>Task Analysis Children participate in guided activities that model how to complete a task that involves numeracy.</p>	
NUMERACY KNOWLEDGE AND UNDERSTANDING			
NKU1 QUANTITATIVE INFORMATION	NKU2 SPATIAL INFORMATION	NKU3 INTERPRET, REPRESENT, COMMUNICATE	NKU4 STRATEGIES, METHODS OR TOOLS
<p>Magnitude Children describe the quantity of objects within a group(s) as being more, less, enough, too many or too few for a variety of purposes (e.g., to share cookies, make teams).</p>	<p>Spatial Visualization "Children participate in activities that develop spatial thinking (e.g., puzzles, building with blocks, drawing)."</p>	<p>Interpretation and Representation of Quantitative Information Children recognize and create basic representations of quantitative information (e.g., numbers, drawings).</p>	<p>Strategies Children use a non-symbolic strategy in a task involving numeracy (e.g., act it out, draw it).</p>
<p>Using Numbers Children use numbers to count and label in their environment (e.g., board games, phone number, counting rhymes).</p>	<p>Management of Space "Children judge the space between themselves and others or objects in their environment."</p>	<p>Interpretation and Representation of Spatial Information Children interpret simple diagrams that represent spatial information (e.g., identify the real object a drawing represents).</p>	<p>Estimation Children estimate the quantities of small sets of objects in familiar situations.</p>
<p>Calculations Children solve basic counting problems informally in familiar situations.</p>	<p>Measurement Children compare two familiar objects according to measurement attributes to complete a task (e.g., taller, shorter, heavier, smaller).</p>	<p>Communication Children use basic vocabulary, gestures, objects or symbols when communicating about quantitative or spatial information.</p>	<p>Methods or Tools Children participate in activities that use non-digital basic methods or tools in a task involving numeracy (e.g., pencil and paper, counting with objects).</p>
<p>Patterns and Relationships Children recognize non-numerical patterns in their environment and daily routines (e.g., days of the week, rhythms).</p>	<p>Time Children describe and sequence familiar activities using relative time vocabulary (e.g., before, after, first, then, next, a long time ago).</p>		
<p>Organization of Data Children organize familiar items by sorting according to shared characteristics.</p>	<p>Location and Direction Children follow and give directions using gestures and basic positional language (e.g., in front, beside).</p>		
<p>Collection of Data Children participate in data collection and recording for a specified purpose.</p>			
<p>Interpretation of Data Children extract specific data from a basic graph or chart.</p>			
<p>Probability Children use simple probability language to describe familiar events (e.g., will happen, will not happen, might happen, always, never, impossible).</p>			

Div 1 Numeracy Descriptors

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NUMERACY AWARENESS			
NA1 IMPORTANCE OF NUMERACY	NA2 LEARNER AWARENESS	NA 3 TASK AWARENESS	
<p>Purpose Students recognize everyday situations where numeracy is used to make decisions.</p>	<p>Personal Insight With guidance, students recognize their numeracy strengths and the strategies they can use to regulate* their learning.</p>	<p>Task Analysis Students identify tasks that involve numeracy and determine which information may be used to complete a task.</p>	
NUMERACY KNOWLEDGE AND UNDERSTANDING			
NKU1 QUANTITATIVE INFORMATION	NKU2 SPATIAL INFORMATION	NKU3 INTERPRET, REPRESENT, COMMUNICATE	NKU4 STRATEGIES, METHODS OR TOOLS
<p>Magnitude Students interpret and compare quantities expressed as whole numbers in their environment.</p>	<p>Spatial Visualization Students physically manipulate objects to describe and sketch** them in a variety of orientations and sizes.</p>	<p>Interpretation and Representation of Quantitative Information Students create and interpret basic representations of quantitative information (e.g., numbers, drawings, equations, words, basic tables, musical notation).</p>	<p>Strategies Students identify different strategies that may be used to complete a task involving numeracy.</p>
<p>Using Numbers Students use numbers to indicate position or value in their environment (e.g., first, second, third, currency, music notes).</p>	<p>Management of Space Students judge and use the space around or between bodies, objects or shapes in their environment.</p>	<p>Interpretation and Representation of Spatial Information Students interpret and create simple models and labelled diagrams* to represent spatial information (e.g., number line, diagrams of life cycles).</p>	<p>Estimation Students use estimation to check the reasonableness of results in familiar situations.</p>
<p>Calculations Students use basic addition and subtraction in familiar situations.</p>	<p>Measurement Students select and use basic measuring instruments to complete a task (e.g., ruler, calendar, stopwatch, thermometer).</p>	<p>Communication Students use basic vocabulary, gestures, objects, symbols and analogies when communicating ideas in situations involving numeracy (e.g., 'round like a wheel').</p>	<p>Methods or Tools Students use non-digital methods or tools in a task involving numeracy (e.g., pencil and paper, mental calculations, visualization, calendars, agendas).</p>
<p>Patterns and Relationships Students recognize patterns in their environment and daily routines (e.g., calendar, seasons).</p>	<p>Units of Measurement Students identify basic units of measure and familiar referents*** for a given task (e.g., "A metre is used to measure length and a metre is about the height of a door knob from the floor").</p>		
<p>Organization of Data Students organize objects, ideas or information using a classification system.</p>	<p>Time Students describe the duration of familiar events and the intervals between them using units of time (e.g., seconds, minutes, hours, days, weeks, months, year).</p>		
<p>Collection of Data Students formulate questions for a specific investigation and collect, record and discuss the data using charts and graphs.</p>	<p>Location and Direction Students navigate and create directions and geographic representations using basic techniques (e.g., oral directions, gestures, basic maps, story maps).</p>		
<p>Interpretation of Data Students extract specific data from a graph or chart to make comparisons or inferences.</p>			
<p>Probability Students describe the likelihood of an event occurring using probability vocabulary (e.g., possible, impossible, probable, likely, unlikely).</p>			

Div II Numeracy Descriptors

NUMERACY AWARENESS			
NA1 IMPORTANCE OF NUMERACY	NA2 LEARNER AWARENESS	NA 3 TASK AWARENESS	
<p>Purpose Students recognize that numeracy helps people make informed decisions.</p>	<p>Personal Insight Students recognize and describe their numeracy strengths and challenges. With some guidance, they choose appropriate strategies to regulate their learning.</p>	<p>Task Analysis Students analyze situations that involve numeracy to identify relevant and irrelevant information.</p>	
NUMERACY KNOWLEDGE AND UNDERSTANDING			
NKU1 QUANTITATIVE INFORMATION	NKU2 SPATIAL INFORMATION	NKU3 INTERPRET, REPRESENT, COMMUNICATE	NKU4 STRATEGIES, METHODS OR TOOLS
<p>Magnitude Students interpret, compare and use quantities expressed as whole numbers, and as percentages, fractions and decimals that are commonly used in real-life situations.</p>	<p>Spatial Visualization Students visualize and sketch familiar objects in their environment from different viewpoints.</p>	<p>Interpretation and Representation of Quantitative Information Students create and interpret different representations of quantitative information.</p>	<p>Strategies Students assess alternate strategies and recognize that the choice of strategy impacts the end result.</p>
<p>Using Numbers Students use negative numbers in real-life situations (e.g., temperature, golf scores, hockey statistics).</p>	<p>Management of Space Students judge and refine the use of the space around or between bodies, objects or shapes with fluency. (e.g., positive/negative space)</p>	<p>Interpretation and Representation of Spatial Information Students interpret and create models and labelled diagrams* to represent spatial concepts (e.g., mind maps, topographical maps, timelines).</p>	<p>Estimation Students apply overestimating or underestimating when a precise answer is not required in real-life situations.</p>
<p>Calculations Students calculate using whole numbers and decimals in real-life situations.</p>	<p>Measurement Students identify and use appropriate measuring instruments and read simple meters, dials and weigh scales in their environment.</p>	<p>Communication Students identify and use meaningful terminology, gestures, symbols, objects and analogies to explain quantitative and spatial concepts encountered in real-life situations.</p>	<p>Methods or Tools Students use effective non-digital methods or tools in a task involving numeracy (e.g., pencil and paper, mental calculations, visualization, schedules, timetables).</p>
<p>Patterns and Relationships Students analyze and use patterns, including increasing or decreasing patterns, to make simple predictions in real-life situations.</p>	<p>Units of Measurement Students determine and use the type and unit of measurement, and familiar referent most useful for a task (e.g., "I need 200 mL of vinegar. The amount I measure out will be less than the amount in a small water bottle.")</p>		
<p>Organization of Data Students organize objects, ideas or information using a variety of classification systems</p>	<p>Conversions Students convert units of measurement within the same system in real-life situations (e.g., hours to minutes, centimetres to metres).</p>		
<p>Collection of Data Students use an effective method to collect, organize, analyze and represent data.</p>	<p>Time Students determine the chronology and duration of events encountered in real-life situations using time and elapsed time.</p>		
<p>Interpretation of Data Students interpret data from a graph or chart to make inferences and draw conclusions.</p>	<p>Location and Direction Students navigate, create and generate navigational aids using a variety of traditional, non-digital and digital techniques in familiar contexts (e.g., Inuksuit, position of sun or stars, maps with legends, basic map features, mental maps).</p>		
<p>Probability Students describe the possible outcomes of events along a continuum from impossible to certain.</p>			

Div III Numeracy Descriptors

NUMERACY AWARENESS			
NA1 IMPORTANCE OF NUMERACY	NA2 LEARNER AWARENESS	NA 3 TASK AWARENESS	
<p>Purpose Students recognize how numeracy helps people to achieve personal and community goals, and make informed decisions.</p>	<p>Personal Insight Students recognize, reflect on and describe their numeracy strengths and challenges. They choose appropriate strategies to regulate* their learning.</p>	<p>Task Analysis Students analyze situations that involve numeracy to identify relevant, irrelevant and unknown information and make appropriate assumptions when required.</p>	
NUMERACY KNOWLEDGE AND UNDERSTANDING			
NKU1 QUANTITATIVE INFORMATION	NKU2 SPATIAL INFORMATION	NKU3 INTERPRET, REPRESENT, COMMUNICATE	NKU4 STRATEGIES, METHODS OR TOOLS
<p>Magnitude Students interpret, compare and use quantities expressed as small and large numbers, fractions, decimals, rates, percentages, scales and ratios in real-life situations.</p>	<p>Spatial Visualization Students visualize familiar and unfamiliar objects from different viewpoints by mentally manipulating them in space. They represent the objects through sketching** or other methods.</p>	<p>Interpretation and Representation of Quantitative Information Students interpret, create and integrate different representations of quantitative information.</p>	<p>Strategies Students determine how the variables within a context may influence the choice of strategy and impact the end result (e.g., considering options when selecting a cellphone plan).</p>
<p>Using Numbers Students interpret and use negative numbers in real-life situations (e.g., account balances, sports statistics economic indicators).</p>	<p>Management of Space Students intentionally judge and manage the space around or between bodies, objects or shapes with fluency (e.g., sports' play strategies)</p>	<p>Interpretation and Representation of Spatial Information Students interpret and create labelled diagrams* and physical or digital models to represent movement, concepts or processes (e.g., atomic models, sport's play diagrams).</p>	<p>Estimation Students apply approximations, overestimating or underestimating when a precise answer is not required in real-life situations.</p>
<p>Calculations Students calculate using whole numbers, decimals, fractions and percentages in real-life situations.</p>	<p>Measurement Students identify, select and use suitable instruments to take measurements at an appropriate level of precision.</p>	<p>Communication Students identify and use precise terminology, gestures, symbols, objects and analogies to support decisions in real-life situations involving numeracy (e.g., 'the structure of an atom is like a solar system').</p>	<p>Methods or Tools Students use effective non-digital and digital methods or tools based on the demands of a task involving numeracy (e.g., pencil and paper, mental calculations, visualization, calculators, schedules, timetables, digital 3D modeling software).</p>
<p>Patterns and Relationships Students take multiple factors into consideration when identifying and describing relationships and trends encountered in real-life situations.</p>	<p>Units of Measurement Students calculate measures using familiar referents*** and simple prescribed procedures, as appropriate for the task (e.g., Determine the amount of carpet needed by pacing out a room and calculating the area).</p>		
<p>Organization of Data Students devise and interpret classification systems.</p>	<p>Conversions Students apply common and practical conversions between different systems of measurement in real-life situations (e.g., 250 mL is approximately 1 cup).</p>		
<p>Collection of Data Students design a plan to collect, display and analyze data in an effective manner to test a hypothesis or explore a question.</p>	<p>Time Students measure, represent and examine concepts of time used in different contexts (e.g., generations, decades, nanoseconds).</p>		
<p>Interpretation of Data Students identify how information from a chart or graph could be misinterpreted or misleading (e.g., bias and sample size, misleading claims).</p>	<p>Location and Direction Students navigate, create and generate navigational aids using a variety of traditional, non-digital and digital techniques in familiar and unfamiliar contexts (e.g., landmarks, maps with legends, map features, GPS, mental maps).</p>		
<p>Probability Students use and interpret probability to make informed decisions in real-life situations.</p>			

Div IV Numeracy Descriptors

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NUMERACY AWARENESS			
NA1 IMPORTANCE OF NUMERACY	NA2 LEARNER AWARENESS	NA 3 TASK AWARENESS	
<p>Purpose Students recognize how numeracy enables people to be effective in everyday life and in society.</p>	<p>Personal Insight Students recognize, reflect on, analyze and describe their numeracy strengths and challenges. They choose appropriate strategies to regulate* their learning.</p>	<p>Task Analysis Students examine situations that involve numeracy and transfer their understanding from other contexts to assist them.</p>	
NUMERACY KNOWLEDGE AND UNDERSTANDING			
NKU1 QUANTITATIVE INFORMATION	NKU2 SPATIAL INFORMATION	NKU3 INTERPRET, REPRESENT, COMMUNICATE	NKU4 STRATEGIES, METHODS OR TOOLS
<p>Magnitude Students interpret, compare and use the magnitude of small and large numbers, fractions, decimals, rates, percentages, scales and ratios in real-life situations.</p>	<p>Spatial Visualization Students visualize, analyze and represent the relationship between two or more objects.</p>	<p>Interpretation and Representation of Quantitative Information Students shift with ease and flexibility when working with different representations of quantitative information.</p>	<p>Strategies Students analyze variables within a context to select strategies that result in an informed decision.</p>
<p>Using Numbers Students recognize how numbers can be used to inform or shape attitudes and beliefs in real-life situations (e.g., interpreting percentages).</p>	<p>Management of Space Students intuitively judge and manage the space around or between bodies, objects or shapes with fluency and precision (e.g., choreography).</p>	<p>Interpretation and Representation of Spatial Information Students interpret and create labelled diagrams* and physical or digital models to represent complex phenomena (e.g., cellular respiration processes, influence of geography on political events).</p>	<p>Estimation Students apply approximations, overestimating or underestimating when a precise answer is not required in real-life situations.</p>
<p>Calculations Students calculate using whole numbers, fractions, decimals, rates, percentages, scales and ratios in real-life situations.</p>	<p>Measurement Students identify, select and use precise instruments or methods to take accurate measurements.</p>	<p>Communication Students construct arguments supported by a variety of appropriate formats to justify assumptions, techniques, results and decisions in real-life situations involving numeracy.</p>	<p>Methods or Tools Students select and refine their use of efficient and effective non-digital and digital methods or tools based on the demands of a task involving numeracy (e.g., pencil and paper, mental calculations, visualization, calculators, schedules, timetables, spreadsheets, digital 3D modeling software).</p>
<p>Patterns and Relationships Students make predictions based on relationships and trends in real-life situations.</p>	<p>Units of Measurement Students calculate measures using multi-step procedures to the degree of precision required for the task and compare results to familiar referents***.</p>		
<p>Organization of Data Students devise and interpret multi-tiered classification systems.</p>	<p>Conversions Students apply practical conversions to determine implications for personal decision making (e.g., currency, time zones, distance)</p>		
<p>Collection of Data Students select effective data collection and display methods to make informed decisions.</p>	<p>Time Students determine how time is measured, represented and perceived using different perspectives and in different contexts (e.g., cultural, geographical, historical, literary, scientific).</p>		
<p>Interpretation of Data Students critically assess claims or arguments based on data or statistics to make an informed decision.</p>	<p>Location and Direction Students select, use, create and generate navigational aids using a variety of traditional, non-digital and digital techniques in novel contexts (e.g., landmarks, maps with legends, map features, GPS, mental maps).</p>		
<p>Probability Students use their knowledge of probability to evaluate claims and predictions to make informed decisions in real-life situations (e.g., health benefits or risks).</p>			