CIPS Math scope and sequence March 2014

Reception (4-5s)					
	Number	**Pattern & Function**	**Measurement**	**Data Handling**	**Space and Shape**
Overall expectations	Learners will understand that numbers are used for many different purposes in the real world. They will develop an understanding of one-to-one correspondence and conservation of number, and be able to count and use number words and numerals to represent quantities'	Learners will understand that patterns and sequences occur in everyday situations. They will be able to identify, describe, extend and create patterns in various ways.	Learners will develop an understanding of how measurement involves the comparison of objects and the ordering and sequencing of events. They will be able to identify, compare and describe attributes of real objects as well as describe and sequence familiar events in their daily routine	Learners will develop an understanding of how the collection and organization of information helps to make sense of the world. They will sort, describe and label objects by attributes and represent information in graphs including pictographs and tally marks. The learners will discuss chance in daily events.	Learners will understand that shapes have characteristics that can be described and compared. They will understand and use common language to describe paths, regions and boundaries of their immediate environment.
Conceptual understandings	Numbers are a naming system. Numbers can be used in many ways for different purposes in the real world. Numbers are connected to each other through a variety of relationships. Making connections between our experiences with number can help us to develop number sense.	Patterns and sequences occur in everyday situations. Patterns repeat and grow.	Measurement involves comparing objects and events. Objects have attributes that can be measured using non-standard units. Events can be ordered and sequenced.	We collect information to make sense of the world around us. Organizing objects and events helps us to solve problems. Events in daily life involve chance.	Shapes can be described and organized according to their properties. Objects in our immediate environment have a position in space that can be described according to a point of reference
Learner Outcomes	When **constructing meaning** learners: understand one-to-one correspondence • understand that, for a set of objects, the number name of the last object counted describes the quantity of the whole set • understand that numbers can be constructed in multiple ways, for example, by combining and partitioning • understand conservation of number* • understand the relative magnitude of whole numbers • recognize groups of zero to five	When **constructing meaning** learners: understand t that patterns can be found in everyday situations, for example, sounds, actions, objects, nature.	When **constructing meaning** learners: understand that attributes of real objects can be compared and described, for example, longer, shorter, heavier, empty, full, hotter, colder • understand that events in daily routines can be described and sequenced, for example, before, after, bedtime, story time, today, tomorrow.	When **constructing meaning** learners: understand that sets can be organized by different attributes • understand that information about themselves and their surroundings can be obtained in different ways • discuss chance in daily events (impossible, maybe, certain).	When **constructing meaning** learners: understand that 2D and 3D shapes have characteristics that can be described and compared • understand that common language can be used to describe position and direction, for example, inside, outside, above, below, next to, behind, in front of, up, down.

Expectations in red are for the current year group

Expectations in black are the rest of the expectations in the phase. They are included so teachers can see what 'next steps' will be

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	objects without counting (subitizing) understand whole-• part relationships • use the language of mathematics to compare quantities, for example, more, less, first, second.				
	When **transferring meaning into symbols** learners: • connect number names and numerals to the quantities they represent.	When **transferring meaning into symbols** learners: • describe patterns in various ways, for example, using words, drawings, symbols, materials, actions, numbers.	When **transferring meaning into symbols** learners: • identify, compare and describe attributes of real objects, for example, longer, shorter, heavier, empty, full, hotter, colder • compare the length, mass and capacity of objects using nonstandard units • identify, describe and sequence events in their daily routine, for example, before, after, bedtime, story time, today, tomorrow.	When **transferring meaning into symbols** learners: • represent information through pictographs and tally marks • sort and label real objects by attributes.	When **transferring meaning into symbols** learners: • sort, describe and compare 3D shapes • describe position and direction, for example, inside, outside, above, below, next to, behind, in front of, up, down.
	When **applying with understanding** learners: • count to determine the number of objects in a set • use number words and numerals to represent quantities in real-life situations, for example, more, less, first, second • subitize in real-life situations • use simple fraction names in real-lif situations.	When **applying with understanding** learners: • extend and create patterns	When **applying with understanding** learners: • describe observations about events and objects in real-life situations • use non-standard units of measurement to solve problems in real-life situations involving length,mass and capacity.	When **applying with understanding** learners: • create pictographs and tally marks • create living graphs using real objects and people* • describe real objects and events by attributes.	When **applying with understanding** learners: • explore and describe the paths, regions and boundaries of their immediate environment (inside, outside, above, below) and their position (next to, behind, in front of, up, down).

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