Number

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
	Consistently uses precise mathematical language	Routinely uses correct mathematical language	Sometimes uses correct mathematical language	Rarely uses correct mathematical language
in all 4 strands	Consistently and independently makes appropriate connections among concrete, pictorial and symbolic representations	Routinely makes effective connections among concrete, pictorial and symbolic representations	Sometimes makes connections among concrete, pictorial and symbolic representations with support	Rarely makes connections among concrete, pictorial and symbolic representations
Expectations included in all 4 strands	Consistently and independently selects and applies appropriate strategies to solve a range of complex problems	Routinely selects and applies appropriate strategies to solve problems	Sometimes selects and applies appropriate strategies to solve problems	Rarely selects or applies appropriate strategies to solve problems
Expect	Consistently and independently makes insightful connections between and within the different strands of mathematics	Routinely makes effective connections between and within the different strands of mathematics	Sometimes makes connections between and within the different strands of mathematics	Rarely makes connections between and within the different strands of mathematics
	Consistently counts, represents, compares, and orders a wide range of whole numbers and fractions accurately	Routinely and accurately counts, represents, compares and orders whole numbers	Sometimes counts, represents, compares and orders whole numbers and fractions accurately; may require pictorial or other models	Has difficulty counting (including skip counting), representing, comparing and ordering whole numbers, even with concrete or pictorial representations
	Consistently makes connections between a wide range of whole numbers and fractions	Routinely makes connections between whole numbers and fractions	Sometimes makes connections between whole numbers and fractions	Rarely makes connections between whole numbers and fractions
	Consistently uses benchmarks and patterns effectively and efficiently	Routinely and effectively uses benchmarks and patterns	Sometimes uses benchmarks and patterns	Rarely uses benchmarks and patterns
	Consistently uses referents and estimation strategies effectively and efficiently	Routinely and effectively uses referents and estimation strategies	Sometimes uses referents and estimation strategies	Rarely uses referents and estimation strategies
	Makes efficient, logical estimates to predict outcomes and check for reasonableness	Routinely makes effective and logical estimates to predict outcomes and check for reasonableness	Sometimes makes effective and logical estimates to predict outcomes and check for reasonableness	Rarely makes logical estimates to predict outcomes or check for reasonableness
	Uses strategies (including mental math) effectively and efficiently	Routinely uses effective strategies (including mental math)	Sometimes uses effective strategies (including mental math)	Rarely uses effective strategies (including mental math)
	Consistently explains strategies and reasoning with clarity, precision and thoroughness	Routinely and clearly explains strategies and reasoning	Sometimes explains strategies and reasoning; explanations may be incomplete	Has difficulty explaining strategies and reasoning
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors
	Evidence: (following Statistics and Pr			

Glossary of key words: (following Evidence section at end of document)

Patterns and Relations

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
	Consistently uses precise mathematical language	Routinely uses correct mathematical language	Sometimes uses correct mathematical language	Rarely uses correct mathematical language
Expectations included in all 4 strands	Consistently and independently makes connections among concrete, pictorial and symbolic representations appropriately	Routinely makes effective connections among concrete, pictorial and symbolic representations	Sometimes makes connections among concrete, pictorial and symbolic representations with support	Rarely makes connections among concrete, pictorial and symbolic representations
	Consistently and independently selects and applies appropriate strategies to solve a range of complex problems	Routinely selects and applies appropriate strategies to solve problems	Sometimes selects and applies appropriate strategies to solve problems	Rarely selects or applies appropriate strategies to solve problems
	Consistently and independently makes insightful connections between and within the different strands of mathematics	Routinely makes effective connections between and within the different strands of mathematics	Sometimes makes connections between and within the different strands of mathematics	Rarely makes connections between and within the different strands of mathematics
	Consistently and independently identifies, describes, extends, compares and creates a wide range of patterns	Routinely and accurately identifies, describes, extends, compares and creates patterns	Sometimes identifies, describes, extends, compares and creates patterns	Rarely identifies, describes, extends, compares and creates patterns
	Consistently and independently makes connections among a wide range of representations of patterns (concrete, pictorial, written/oral)	Routinely makes connections among various representations of patterns (concrete, pictorial, written/oral)	Sometimes makes connections among various representations of patterns (written/oral, pictorial, concrete)	Rarely makes connections among various representations of patterns (concrete, pictorial, written/oral)
	Consistently and independently uses patterns to solve a wide range of problems	Routinely uses patterns to solve problems	Sometimes uses patterns to solve problems	Rarely uses patterns to solve problems
	Consistently and independently explains patterns and reasoning with clarity, precision, and thoroughness	Routinely and clearly explains patterns and reasoning	Sometimes explains patterns and reasoning	Has difficulty explaining patterns and reasoning
	Consistently represents (concretely, pictorially, symbolically) and explains more complex examples of equality and inequality	Routinely represents (concretely, pictorially, symbolically) and explains equality and inequality	Sometimes represents (concretely, pictorially, symbolically) and explains equality and inequality	Rarely represents (concretely, pictorially, symbolically) and explains equality and inequality
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors
	Evidence: (following Statistics and Pro			

Glossary of key words: (following Evidence section at end of document)

Shape and Space

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
	Consistently uses precise	Routinely uses correct	Sometimes uses correct	Rarely uses correct mathematical
s	mathematical language	mathematical language	mathematical language	language
ran	Consistently and independently	Routinely makes effective	Sometimes makes connections	Rarely makes connections among
4 st	makes connections among concrete,	connections among concrete,	among concrete, pictorial and	concrete, pictorial and symbolic
la l	pictorial and symbolic representations	pictorial and symbolic	symbolic representations with	representations
ļ i⊒	appropriately	representations	support	
lud i	Consistently and independently	Routinely selects and applies	Sometimes selects and applies	Rarely selects or applies
Expectations included in all 4 strands	selects and applies appropriate	appropriate strategies to solve	appropriate strategies to solve	appropriate strategies to solve
ioi	strategies to solve a range of	problems	problems	problems
ctat	complex problems	D. C. I	0	Desil and a second second
Exp	Consistently and independently	Routinely makes effective connections between and within	Sometimes makes connections between and within the different	Rarely makes connections between and within the different strands of
	makes insightful connections between and within the different	the different strands of	strands of mathematics	mathematics
	strands of mathematics	mathematics	Strainus of mathematics	maniemanos
ш	Consistently and independently	Routinely and appropriately	Sometimes estimates, uses	Has difficulty estimating, using
	measures estimates, uses referents,	estimates, uses referents and	referents, and measures time,	referents, and measuring time,
	and measures time, length, height	measures time, length, height	length, height and mass	length, height and mass
	and mass appropriately with non-	and mass with non-standard units	appropriately with non-standard	appropriately with non-standard
	standard units		units	units
•	Consistently uses referents and	Routinely and effectively uses	Sometimes uses referents and	Has difficulty using referents and
	estimation strategies effectively and	referents and estimation	estimation strategies	estimation strategies effectively
	efficiently	strategies		
	Consistently explains strategies and	Routinely and clearly explains	Sometimes explains strategies and	Has difficulty explaining strategies
	reasoning with clarity, precision, and	strategies and reasoning	reasoning, or explanations may be	and reasoning
	thoroughness		incomplete	
	Consistently identifies, describes,	Routinely identifies, describes,	Sometimes identifies, describes,	Has difficulty identifying, describing,
	constructs and sorts a wide range of	constructs, compares and sorts	constructs, compares and sorts 3-D	constructing, comparing and sorting
	3-D objects using attributes	3-D objects and 2-D shapes	objects and 2-D shapes using	3-D objects and 2-D shapes using
	Canadatanthy identifies describes	using attributes	attributes	attributes
	Consistently identifies, describes,	Routinely identifies, describes,	Sometimes identifies, describes,	Has difficulty identifying, describing,
	creates and sorts a wide range of	creates and sorts polygons using	creates and sorts polygons using	creating and sorting polygons using
ŀ	polygons using attributes Consistently uses precise labels	attributes Routinely uses appropriate labels	attributes Sometimes uses appropriate labels	attributes Rarely uses appropriate labels in
	(including units) in diagrams	in diagrams	in diagrams	diagrams
ŀ	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors
ŀ	•		Como major orroro	Many major oriors
	Evidence: (following Statistics and Probability section) Glossary of key words: (following Evidence section at end of document)			

Glossary of key words: (following Evidence section at end of document)

Statistics (Statistics and Probability)

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
Expectations included in all 4 strands	Consistently uses precise	Routinely uses correct	Sometimes uses correct	Rarely uses correct mathematical
	mathematical language	mathematical language	mathematical language	language
	Consistently and independently	Routinely makes effective	Sometimes makes connections	Rarely makes connections among
stra	makes connections among	connections among concrete,	among concrete, pictorial and	concrete, pictorial and symbolic
1 4	concrete, pictorial and symbolic	pictorial and symbolic	symbolic representations with	representations
in	representations appropriately	representations	support	
ded	Consistently and independently	Routinely selects and applies	Sometimes selects and applies	Rarely selects or applies
Jclu	selects and applies appropriate	appropriate strategies to solve	appropriate strategies to solve	appropriate strategies to solve
ns ir	strategies to solve a range of	problems	problems	problems
atio	complex problems			
pect	Consistently and independently	Routinely makes effective	Sometimes makes connections	Rarely makes connections between
Ex	makes insightful connections	connections between and within	between and within the different	and within the different strands of
	between and within the different	the different strands of	strands of mathematics	mathematics
	strands of mathematics	mathematics	Competing on colored and required	Developed and any very viete
	Consistently and independently	Routinely selects appropriate	Sometimes selects appropriate	Rarely selects appropriate
	selects appropriate strategies for collecting data to solve a wide	strategies for collecting data to solve problems	strategies for collecting data to solve problems	strategies for collecting data to solve problems
	range of problems	Solve problems	Solve problems	Solve problems
	Consistently and independently	Routinely organizes data in a	Sometimes organizes data in a way	Rarely organizes data in a way
	organizes data in a way appropriate	format appropriate to purpose, and	appropriate to purpose, and to solve	appropriate to purpose, and to solve
	to purpose, and to solve a wide	to solve problems (tally marks,	problems (tally marks, concrete	problems (tally marks, concrete
	range of problems (tally marks,	concrete graph, pictograph)	graph, pictograph)	graph, pictograph)
	concrete graph, pictograph)	5	9, 1	9.54, 1.55.59.54)
	Consistently and independently	Routinely includes appropriate	Sometimes includes appropriate	Rarely includes labels and headings
	includes precise labels and	labels and headings in tables and	labels and headings in tables and	in tables and graphs
	headings in tables and graphs	graphs	graphs	
	Consistently and independently	Routinely interprets data	Sometimes interprets data	Has difficulty interpreting data
	interprets a wide range of data	appropriately to answer questions	appropriately to answer questions	appropriately to answer questions
	appropriately to answer questions	and solve problems	and solve problems	and solve problems
	and solve problems			
	Consistently and independently	Routinely and clearly explains	Sometimes explains strategies and	Has difficulty explaining strategies
	explains strategies and reasoning	strategies and reasoning	reasoning, or explanations may be	and reasoning
	with clarity, precision, and		incomplete	
	thoroughness	<u> </u>		
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors
	Evidence: (following Statistics and Pr	robability section)		

Evidence: (following Statistics and Probability section) **Glossary of key words**: (following Evidence section at end of document)

Evidence of Learning: Suggested Sources

Observations:

- Observe students using models (materials and manipulatives) and diagrams
- Observe students playing games.
- · Observe students completing tasks
- Observe student presentations and demonstrations
- Use listening checklist of mathematical language
- Notes from guided math sessions
- "Gallery" walks

Conversations (oral/written):

- Conferences
- Interviews
- Whole class and group discussions
- Guided tasks
- Math talks
- Math journal entry
- Exit slips (written responses)
- Self- and peer assessment and reflection

Products:

- Quizzes (oral/written)
- Projects
- Tests
- Graphs
- Song, poem, art
- Work samples
- Exit slips or other responses to questions
- Math journal entry
- Photos of student use of models
- Group problem solving records
- Portfolios

Glossary

<u>Appropriate</u>: is aligned with the expectations of the curriculum document (e.g., *Routinely selects and applies appropriate strategies to solve problems*).

Benchmarks: numbers used to compare and order other numbers (e.g., 5, 10, 25, 50, 100).

Concrete representation: using materials/manipulatives (e.g., counters, pattern blocks) to show a mathematical concept or solve a problem

Consistently: always acting or behaving in the same way and of the same quality

Effective: approach used consistently provides an accurate solution

Efficient: approach used has minimal number of steps (based on the expectations of the curriculum) and consistently provides an accurate solution

<u>Pictorial representation</u>: using drawings/diagrams (e.g., drawings of the model, number lines) to show a mathematical concept or solve a problem

Rarely: not often; even with support

Referent: a concrete representation of a quantity or a unit of measurement (it is helpful if the representation is personally meaningful)

Routinely: done very often with no support

Sometimes: occasionally and/or with support

Subitizing: using familiar arrangements of objects to determine how many there are without counting (e.g., dice)

Symbolic representation: using numbers and mathematical symbols (e.g., 9, +, ÷) to show a mathematical concept or solve a problem