Number

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
ds	Consistently uses precise	Routinely uses correct mathematical	Sometimes uses correct	Rarely uses correct mathematical
	mathematical language	language	mathematical language	language
Expectations included in all 4 strands	Consistently and independently makes	Routinely makes effective	Sometimes makes connections	Rarely makes connections among
4 st	appropriate connections among	connections among concrete,	among concrete, pictorial and	concrete, pictorial and symbolic
all	concrete, pictorial and symbolic	pictorial and symbolic	symbolic representations with	representations
d in	representations	representations	support	
nde	Consistently and independently selects	Routinely selects and applies	Sometimes selects and applies	Rarely selects or applies
incl	and applies appropriate strategies to	appropriate strategies to solve	appropriate strategies to solve	appropriate strategies to solve
ons	solve a range of complex problems	problems	problems	problems
ctati	Consistently and independently makes	Routinely makes effective	Sometimes makes connections	Rarely makes connections
xpe	insightful connections between and	connections between and within the	between and within the different	between and within the different
•	within the different strands of	different strands of mathematics	strands of mathematics	strands of mathematics
	mathematics			
	Consistently counts (forwards and	Routinely counts (forwards and	Sometimes counts (forwards and	Rarely counts with accuracy
	backwards), counting is meaningful	backwards), counting is meaningful	backwards), counting may not be	(forwards and backwards) (see
	(see counting principles)	(see counting principles)	meaningful (see counting	counting principles)
	Consistantly represents and compares	Poutingly represents, and compares	principles) Sometimes represents, and	Rarely represents, and compares
	Consistently represents, and compares a wide range of whole numbers	Routinely represents, and compares whole numbers accurately; may use	compares whole numbers	whole numbers correctly, even with
	accurately	pictorial or other representations	accurately; may require pictorial	concrete or pictorial
	accurately	pictorial of other representations	or other representations	representations
	Consistently uses number relationships	Routinely and effectively uses	Sometimes uses number	Rarely uses number relationships
	(including benchmarking to 5 and 10)	number relationships (including	relationships (including	(including benchmarking to 5 and
	and patterns effectively and efficiently	benchmarking to 5 and 10) and	benchmarking to 5 and 10) and	10) and patterns
	and patterns encourony and emercinary	patterns	patterns	To and patients
	Consistently uses subitizing strategies	Routinely uses subitizing effectively	Sometimes uses subitizing	Rarely uses subitizing
	effectively	3 3	effectively	January 1971
	Consistently explains strategies and	Routinely and clearly explains	Sometimes explains strategies	Has difficulty explaining strategies
	reasoning with clarity	strategies and reasoning	and reasoning, explanations may	and reasoning
	,		be incomplete	Ŭ.
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors
	-		,	
	Evidence : (following Shape and Space	section)		
	Classory of key words: /following Evid			

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

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Patterns and Relations

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
tions included in all 4 strands	Consistently uses precise mathematical language	Routinely uses correct mathematical language	Sometimes uses correct mathematical language	Rarely uses correct mathematical language
	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
Expectatio	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 identifies, describes, copies, extends, compares and creates a wide range of patterns	Routinely identifies, describes, copies, extends, compares and creates patterns	Sometimes identifies, describes, copies, extends, compares and creates patterns	Rarely identifies, describes, copies, extends, compares and creates patterns
	Consistently makes connections among a wide range of representations of patterns (written/oral, pictorial, objects, sounds, actions)	Routinely makes connections among various representations of patterns (written/oral, pictorial, objects, sounds, actions)	Sometimes makes connections among various representations of patterns (written/oral, pictorial, objects, sounds, actions)	Rarely makes connections among various representations of patterns (written/oral, pictorial, objects, sounds, actions)
	Consistently uses patterns to solve a wide range of problems	Routinely uses patterns to solve problems	Sometimes uses patterns to solve problems	Rarely able to use patterns to solve problems
	Consistently 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
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors
	Evidence: (following Shape and Spa			

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 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 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
Expectations included in	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
Expec	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 describes and directly compares a wide range of objects using attributes (including length/height, mass/weight and volume/capacity)	Routinely describes and directly compares objects using attributes (including length/height, mass/weight and volume/capacity)	Sometimes describes and directly compares objects using attributes (including length/height, mass/weight and volume/capacity)	Rarely describes and directly compares objects using attributes (including length/height, mass/weight and volume/capacity)
	Consistently describes, builds and sorts a wide range of 3-D objects using attributes	Routinely describes, builds and sorts 3-D objects using attributes	Sometimes describes, builds and sorts 3-D objects using attributes	Rarely describes, builds and sorts 3-D objects using attributes
	Consistently makes predictions and explains reasoning clearly, with precision, and thoroughness	Routinely makes predictions and clearly explains reasoning	Sometimes makes predictions and clearly explains reasoning, or explanations may be incomplete	Rarely makes predictions and explaining reasoning
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors
	Evidence: (following Shape and Space of how words: (following Evidence)			

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

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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

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