# 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
Expectations included 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
tions included	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 represents, compares and orders a wide range of whole numbers, decimals and fractions accurately	Routinely represents, compares and orders whole numbers, decimals and fractions accurately	Sometimes represents, compares and orders whole numbers, decimals and fractions accurately; may require pictorial or other representations	Rarely represents, compares and orders whole numbers, decimals and fractions, even with concrete or pictorial representations
	Consistently makes connections between a wide range of whole numbers, decimals, and fractions	Routinely makes connections between whole numbers, decimals, and fractions	Sometimes makes connections between whole numbers, decimals, and fractions	Rarely makes connections between whole numbers, decimals, 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
	Makes efficient, logical estimates to predict outcomes and check for reasonableness	Routinely makes effective, logical estimates to predict outcomes and check for reasonableness	Sometimes makes effective, 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 strategies (including mental math) effectively	Sometimes uses strategies (including mental math) effectively	Rarely uses strategies effectively (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, or 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 Prob	pability section)		

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

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# Math - Grade 5

# **Patterns and Relations**

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below	
	Consistently uses precise	Routinely uses correct	Sometimes uses correct	Rarely uses correct mathematical	
	mathematical language	mathematical language	mathematical language	language	
nds	Consistently and independently	Routinely makes effective	Sometimes makes connections	Rarely makes connections among	
stra	makes appropriate connections	connections among concrete,	among concrete, pictorial and	concrete, pictorial and symbolic	
4	among concrete, pictorial and	pictorial and symbolic	symbolic representations with	representations	
in a	symbolic representations	representations	support		
Expectations included in all 4 strands-	Consistently and independently	Routinely selects and applies	Sometimes selects and applies	Rarely selects or applies	
ıclu	selects and applies appropriate	appropriate strategies to solve	appropriate strategies to solve	appropriate strategies to solve	
ıs ir	strategies to solve a range of	problems	problems	problems	
tio	complex problems				
ects	Consistently and independently	Routinely makes effective	Sometimes makes connections	Rarely makes connections between	
Exp	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		5 1 1 27 1 2	
	Consistently identifies, describes,	Routinely and accurately	Sometimes identifies, describes,	Rarely identifies, describes,	
	represents and extends a wide range	identifies, describes, represents	represents and extends patterns	represents and extends patterns	
	of patterns	and extends patterns	Constitute a include a communicate	Danah ingkada a lahada anad haradia na	
	Consistently and independently	Routinely includes appropriate	Sometimes includes appropriate	Rarely includes labels and headings	
	includes precise labels and headings in tables and other representations	labels and headings in tables and other representations	labels and headings in tables and other representations	in tables and other representations	
	Consistently and independently	Routinely makes connections	Sometimes makes connections	Rarely makes connections among	
	makes connections among a wide	among various representations of	among various representations of	various representations of patterns	
	range of representations of patterns	patterns (symbolic, tables, charts,	patterns (symbolic, tables, charts,	(symbolic, tables, charts, pictorial,	
	(symbolic, tables, charts, pictorial,	pictorial, concrete)	pictorial, concrete	concrete)	
	concrete)	piotoriai, obriorete)	piotoniai, obnoroto	Contrology	
	Consistently and independently uses	Routinely uses patterns and	Sometimes uses patterns and	Rarely uses patterns and	
	patterns and relationships to solve a	relationships to solve problems	relationships to solve problems	relationships to solve problems	
	wide range of problems	' '	·	· ·	
	Consistently and independently	Routinely and clearly explains	Sometimes explains patterns and	Has difficulty explaining patterns	
	explains patterns and reasoning with	patterns and reasoning	reasoning	and reasoning	
	clarity, precision, and thoroughness				
	Consistently and independently	Routinely represents and solves	Sometimes represents and solves	Rarely represents, describes, and	
	represents and solves a wide range	equations	equations	solves equations	
	of equations				
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors	
	Evidence: (following Statistics and Prob				
Clossary of key words: (following Evidence section at end of decument)					

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

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# **Shape and Space**

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below	
	Consistently uses precise	Routinely uses correct mathematical	Sometimes uses correct	Rarely uses correct mathematical	
Expectations included in all 4 strands-	mathematical language	language	mathematical language	language	
	Consistently and independently	Routinely makes effective connections	Sometimes makes connections	Rarely makes connections among	
stra	makes appropriate connections	among concrete, pictorial and	among concrete, pictorial and	concrete, pictorial and symbolic	
all 4	among concrete, pictorial and	symbolic representations	symbolic representations with	representations	
in	symbolic representations		support		
ded	Consistently and independently	Routinely selects and applies	Sometimes selects and applies	Rarely selects or applies	
nclu	selects and applies appropriate	appropriate strategies to solve	appropriate strategies to solve	appropriate strategies to solve	
ns i	strategies to solve a range of	problems	problems	problems	
atio	complex problems				
oect	Consistently and independently	Routinely makes effective connections	Sometimes makes connections	Rarely makes connections between	
E	makes insightful connections	between and within the different	between and within the different	and within the different strands of	
	between and within the different	strands of mathematics	strands of mathematics	mathematics	
	strands of mathematics	Doutingh, and accomptally palice	Compting a polyton problems	Lie difficulty only in a problems	
	Consistently and independently solves a wide range of problems	Routinely and accurately solves problems involving area and perimeter	Sometimes solves problems	Has difficulty solving problems involving area and perimeter of	
	involving area and perimeter of	of rectangles	involving area and perimeter of rectangles	rectangles	
	rectangles	or rectangles	lectarigles	rectarigles	
	Consistently and independently	Routinely and appropriately estimates,	Sometimes estimates	Has difficulty estimating, using	
	estimates, using referents	using referents	appropriately, using referents	referents	
	Consistently and independently	Routinely and accurately measures	Sometimes measures length,	Has difficulty measuring length,	
	measures length, volume and	length, volume and capacity with	volume and capacity with correct	volume and capacity appropriately	
	capacity with correct units	correct units	units	with correct units	
	Consistently explains strategies and	Routinely and clearly explains	Sometimes explains strategies	Has difficulty explaining strategies	
	reasoning with clarity, precision, and	strategies and reasoning	and reasoning or explanations	and reasoning	
	thoroughness		may be incomplete		
	Consistently and independently uses	Routinely and accurately uses	Sometimes uses attributes to	Has difficulty using attributes to	
	attributes to correctly describe and	attributes to correctly describe and	correctly describe and compare	correctly describe and compare 2-D	
	compare a wide range of 2-D shapes	compare 2-D shapes (especially	2-D shapes (especially	shapes and 3-D objects	
	and 3-D objects	quadrilaterals) and 3-D objects	quadrilaterals) and 3-D objects		
	Consistently identifies, describes,	Routinely and accurately identifies,	Sometimes identifies, describes,	Has difficulty identifying, describing,	
	predicts and draws single	describes, predicts and draws single	predicts and draws single	predicting and drawing single	
	transformations of complex shapes	transformations of simple shapes	transformations	transformations	
	Consistently uses precise labels	Routinely and accurately uses	Sometimes uses appropriate	Rarely uses appropriate labels	
	(including units) in diagrams,	appropriate labels (including units) in	labels (including units) in	(including units) in diagrams	
	drawings are proportional	diagrams; drawings are proportional	diagrams; drawings may not be proportional		
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors	
	•		Come major entris	Marry major errors	
	Evidence: (following Statistics and Probability section)				

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

# **Statistics and Probability**

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
	Consistently uses precise	Routinely uses correct	Sometimes uses correct mathematical	Rarely uses correct
ایا	mathematical language	mathematical language	language	mathematical language
spue	Consistently and independently	Routinely makes effective	Sometimes makes connections among	Rarely makes connections
stra	makes appropriate connections	connections among concrete,	concrete, pictorial and symbolic	among concrete, pictorial and
all 4	among concrete, pictorial and	pictorial and symbolic	representations with support	symbolic representations
<u>=</u>	symbolic representations	representations		D 1 1 1
Japr	Consistently and independently	Routinely selects and applies	Sometimes selects and applies	Rarely selects or applies
inclt	selects and applies appropriate	appropriate strategies to solve problems	appropriate strategies to solve problems	appropriate strategies to solve problems
ous	strategies to solve a range of complex problems	problems	problems	problems
Expectations included in all 4 strands-	Consistently and independently	Routinely makes effective	Sometimes makes connections	Rarely makes connections
bec	makes insightful connections	connections between and within the	between and within the different	between and within the different
l 🗓	between and within the different	different strands of mathematics	strands of mathematics	strands of mathematics
	strands of mathematics			
	Consistently selects appropriate	Routinely selects appropriate	Sometimes selects appropriate	Rarely selects appropriate
	strategies for collecting (first-hand) or	strategies for collecting (first-hand)	strategies for collecting (first-hand) or	strategies for collecting (first-
	finding (second-hand) data to solve a	or finding (second-hand) data to	finding (second-hand) data to solve	hand) or finding (second-hand)
	wide range of problems	solve problems	problems	data to solve problems
	Consistently organizes data in a	Routinely organizes data in a	Sometimes organizes data in a format	Rarely organizes data in a
	format appropriate to a wide range of	format appropriate to purpose, and	appropriate to purpose, and to solve	format appropriate to purpose,
	purposes and problems  Consistently includes precise labels	to solve problems  Routinely includes appropriate	problems Sometimes includes appropriate labels	and to solve problems  Rarely includes labels in tables
	in tables and graphs	labels in tables and graphs	in tables and graphs	and graphs
	Consistently interprets data in a wide	Routinely interprets data in graphs	Sometimes interprets data in graphs	Has difficulty interpreting data in
	range of graphs appropriately	appropriately to answer questions	appropriately	graphs appropriately
	range of graphic appropriatory	and solve problems	арргорпасогу	graphic appropriatory
	Consistently describes, makes	Routinely describes, makes	Sometimes describes, makes	Has difficulty describing, making
	predictions and compares possible	predictions and compares possible	predictions and compares possible	predictions and comparing
	outcomes in a wide range of contexts	outcomes	outcomes	possible outcomes
	Consistently designs and conducts a	Routinely designs and conducts	Sometimes designs and conducts	Has difficulty designing and
	wide range of probability experiments	probability experiments for given	probability experiments for given	conducting probability
	for given likelihood	likelihood	likelihood	experiments for given likelihood
	Consistently explains strategies and	Routinely and clearly explains	Sometimes explains strategies and	Has difficulty explaining
	reasoning with clarity, precision, and	strategies and reasoning	reasoning, or explanations may be	strategies and reasoning
	thoroughness Rarely makes minor errors	Few minor errors	incomplete Some major errors	Many major errors
			Some major entris	iviariy major emors
Evidence: (following Statistics and Probability section)  Glossary of key words: (following Evidence section at end of document)				
	Glossary of key words. (Iollowing Evi	dence 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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