

Math – Grade 4

Number

		4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
Expectations 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 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	
	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 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 fractions, decimals and whole numbers	Sometimes makes connections between fractions, decimals and whole numbers	Rarely makes connections between fractions, decimals and whole numbers	
	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	
	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		
<p>Evidence: (following Statistics and Probability section)</p> <p>Glossary of key words: (following Evidence section at end of document)</p>					

Math – Grade 4

Patterns and Relations

		4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
Expectations 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 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	
	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 identifies and describes a wide range of patterns	Routinely and accurately identifies, describes, represents, and extends patterns	Sometimes identifies, describes, represents, and extends patterns	Rarely identifies and describes patterns	
	Consistently and independently Includes precise labels and headings in tables, graphs and other representations	Routinely includes appropriate labels and headings in tables, graphs and other representations	Sometimes includes appropriate labels and headings in tables, graphs and other representations	Rarely includes labels and headings in tables, graphs and other representations	
	Consistently and independently makes connections among a wide range of representations of patterns (written/oral, tables, charts, pictorial, concrete)	Routinely makes connections among various representations of patterns (written/oral, tables, charts, pictorial, concrete)	Sometimes makes connections among various representations of patterns (written/oral, tables, charts, pictorial, concrete)	Rarely makes connections among various representations of patterns (written/oral, tables, charts, pictorial, concrete)	
	Consistently and independently uses patterns and relationships to solve a wide range of problems	Routinely uses patterns and relationships to solve problems	Sometimes uses patterns and relationships to solve problems	Rarely uses patterns and relationships 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 and independently represents, describes, and solves a wide range of equations	Routinely represents, describes, and solves equations	Sometimes represents, describes, and solves equations	Rarely represents, describes, and solves equations	
Rarely makes minor errors	Few minor errors	Some major errors	Many major errors		
<p>Evidence: (following Statistics and Probability section)</p> <p>Glossary of key words: (following Evidence section at end of document)</p>					

Math – Grade 4

Shape and Space

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
Expectations 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 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
	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
	Independently and with ease measures time (clocks, calendars) appropriately with correct units or formats	Routinely measures time (clocks, calendars) appropriately with correct units or formats	Sometimes measures time (clocks, calendars) appropriately with correct units or formats	Has difficulty measuring time (clocks, calendars) appropriately with correct units or formats
	Consistently describes and determines area of a wide variety of shapes, indicating units	Routinely describes and determines area, indicating units	Sometimes describes and determines area, indicating units	Has difficulty describing and determining area
	Consistently uses referents and estimation strategies effectively and efficiently	Effectively uses referents and estimation strategies	Sometimes uses referents and estimation strategies	Has difficulty using referents and estimation strategies effectively
	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
	Consistently identifies, describes, constructs and compares prisms using attributes	Routinely identifies, describes and constructs prisms using attributes	Sometimes identifies, describes and constructs prisms using attributes	Has difficulty identifying, describing and constructing prisms
	Consistently identifies, describes, creates and compares symmetrical and congruent shapes	Routinely identifies, describes and creates symmetrical and congruent shapes	Sometimes identifies, describes and creates symmetrical and congruent shapes	Has difficulty identifying, describing and creating symmetrical and congruent shapes
	Consistently uses precise labels (including units) in diagrams	Routinely uses appropriate labels (including units) in diagrams	Sometimes uses appropriate labels (including units) in diagrams	Rarely uses appropriate labels (including units) in diagrams
	Rarely makes minor errors	Few minor errors	Some major errors	Many major errors
<p>Evidence: (following Statistics and Probability section)</p> <p>Glossary of key words: (following Evidence section at end of document)</p>				

Statistics (Statistics and Probability)

	4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
Expectations 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 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
	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 chooses graph type and scales appropriate for a wide range of data and purpose, and constructs graph	Routinely chooses graph type and scales appropriate for data and purpose, and accurately constructs graph	Sometimes chooses graph type and scales appropriate for data and purpose, and constructs graph	Has difficulty choosing graph type and scales appropriate for data and purpose, and has difficulty constructing graph
	Consistently and independently includes precise labels in tables and graphs	Routinely includes appropriate labels in tables and graphs	Sometimes includes appropriate labels in tables and graphs	Rarely includes labels in tables and graphs
	Consistently interprets a wide range of data appropriately to answer questions and solve problems	Routinely interprets data appropriately to answer questions and solve problems	Sometimes interprets data in graphs appropriately	Has difficulty interpreting data appropriately to answer questions and solve problems
	Consistently and independently 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
<p>Evidence: (following Statistics and Probability section) Glossary of key words: (following Evidence section at end of document)</p>				

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

Appropriate: 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

Pictorial representation: 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