

# Nigeria Primary School (1-6)

## Mathematics Taxonomy

<b>100</b>	<b>Number and Numeration</b>
<b>200</b>	<b>Basic Operations</b>
<b>300</b>	<b>Everyday Arithmetic</b>
<b>400</b>	<b>Measurement</b>
<b>500</b>	<b>Algebraic Processes</b>
<b>600</b>	<b>Trigonometry and Geometry</b>
<b>700</b>	<b>Everyday Statistics</b>

### Other Coding Conventions Topics:

<b>0</b>	<b>All</b>
<b>999</b>	<b>Out of Subject Area</b>

### Cognitive Demands:

<b>B</b>	<b>Memorize</b>
<b>C</b>	<b>Perform Procedures</b>
<b>D</b>	<b>Demonstrate Understanding</b>
<b>E</b>	<b>Conjecture/Analyze</b>
<b>F</b>	<b>Solve Non-Routine Problems</b>
<b>Z</b>	<b>Non-Specific Cognitive Demand</b>

<b>100</b>	<b>Number and Numeration</b>
101	Whole numbers
102	Place Value
103	Abacus
104	Operations (addition, subtraction, multiplication, division)
105	Fractions
106	Decimals
107	Percentages
108	Ratio and proportion (direct and inverse proportion)
109	Ordering of whole numbers (with inequality symbols)
110	Roman Numerals
111	Ordering of numbers (Fractions)
112	Real and/or Rational numbers
113	Exponents and scientific notation
114	Factors and Multiples
115	LCM
116	HCF
117	Odd/even/prime/composite/square numbers
118	Estimation
119	Number Comparisons (order, magnitude, relative size, inverse, opposites, equivalent forms, scale or number line)
120	Order of operations
121	Number Theory (e.g. base-ten and non-base-ten systems)
122	Word problems
190	Other
<b>200</b>	<b>Basic Operations</b>
201	Addition of whole numbers and integers
202	Subtraction of whole numbers and integers
203	Multiplication of whole numbers and integers
204	Division of whole numbers and integers
205	Combinations of operations on whole numbers or integers (Application of BODMAS)
206	Derived Operations (indices, ratio and percentage)
207	Derived Function (estimate, squares, square roots, one digit, two digits)

208	Addition of Fractions
209	Subtraction of fractions
210	Multiplication of fractions
211	Division of fractions
212	Ordering of Fractions
213	Equivalent and non-equivalent fractions
214	Combinations of operations on fraction (Application of BODMAS)
215	Representations of fractions (words problems)
216	Equivalence of decimals, fractions, and percentages
217	Addition of decimals
218	Subtraction of decimals
219	Multiplication of decimals
220	Division of decimals
221	Combinations of operations on decimals (Application of BODMAS)
222	Computing with percentage
223	Word problems
290	Other
<b>300</b>	<b>Everyday Arithmetic</b>
301	Money
302	Profit and Loss
303	Simple Interest
304	Compound interest
305	Rates (discounts and commission)
306	Taxes
307	Rents
308	Shares and dividends
309	Word problems
390	Other
<b>400</b>	<b>Mensuration</b>
401	Identification of measuring instruments
402	Use of measuring instruments
403	Theory (arbitrary, standard units and unit size)
404	Conversions
405	Metric (SI) system
406	Shapes
407	Length and perimeter
408	Area and volume
409	Surface Area

410	Capacity
411	Mass (weight)
412	Direction, Location, Navigation
413	Right-angle triangle
414	Circles (e.g., pi, radius, area)
415	Time and temperature
416	Derived measures (e.g., rate and speed)
417	Calendar
418	Accuracy and Precision
419	Word problems
490	Other
<b>500</b>	<b>Algebraic Processes</b>
501	Open sentence
502	Use of variables
503	Evaluation of formulas, expressions, and equations
504	word problems on simple equations
505	Operation on Algebraic terms
506	Use of brackets
590	Other

<b>619</b>	<b>Word problems</b>
690	Other
<b>700</b>	<b>Everyday Statistics</b>
701	Data Collection
702	Population
703	Frequency
704	Measure of central tendency (Mean)
705	Measure of central tendency (Median)
706	Measure of central tendency (Mode)
707	Bar chart
708	Histogram
709	Line graph
710	Sets
711	Venn diagram
712	Variability and range
713	Chance and Events (Simple probability)
714	Pictogram
790	Other

<b>600</b>	<b>Trigonometry and Geometry</b>
601	Three-dimensional shape
602	Two-dimensional shape
603	Lines of symmetry
604	Basic terminology
605	Points, lines, rays, segments, and vectors
606	Scale drawing
607	Patterns
608	Congruence
609	Similarity
610	Parallels
611	Triangles
612	Quadrilaterals
613	Circles
614	Angles
615	Polygons
616	Polyhedral
617	Models
618	Pythagorean Theorem



### Cognitive Demand Categories for Mathematics

B	C	D	E	F
Memorize Facts, Definitions, Formulas	Perform Procedures	Demonstrate Understanding of Mathematical Ideas	Conjecture, Analyze, Generalize, Prove	Solve Non-Routine Problems / Make Connections
<u>Recite basic mathematical facts</u>  <u>Recall mathematics terms and definitions</u>  <u>Recall formulas and computational procedures</u>	<u>Use numbers to count, order, denote</u>	<u>Communicate mathematical ideas</u>	<u>Determine the truth of a mathematical pattern or proposition</u>	<u>Apply and adapt a variety of appropriate strategies to solve non-routine problems</u>
	<u>Do computational procedures or algorithms</u>	<u>Use representations to model mathematical ideas</u>	<u>Write formal or informal proofs</u>	<u>Apply mathematics in contexts outside of mathematics</u>
	<u>Follow procedures / instructions</u>	<u>Explain findings and results from data analysis</u>	<u>Recognize, generate or create patterns</u>	<u>Apply to real world situations</u>
	<u>Solve equations/formulas/routine word problems</u>  <u>Organize or display data</u>  <u>Read or produce graphs and tables</u>  <u>Execute geometric constructions</u>	<u>strategies</u> <u>Develop/explain relationships between concepts</u>  <u>Show or explain relationships between models, diagrams, and/or other representations</u>	<u>Find a mathematical rule to generate a pattern or number sequence</u>  <u>Make and investigate mathematical conjectures</u>  <u>Identify faulty arguments or misrepresentations of data</u>  <u>Reason inductively or deductively</u>	<u>Synthesize content and ideas from several sources</u>