

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
1.0 NUMBERS	1.1 Whole numbers (20 Lessons)	By the end of the Sub Strand, the learner should be able to; a) Use place value and total value of digits up to millions in real life, b) Use numbers up to millions in symbols in real life, c) Read, write and relate numbers up to 100,000 in words in real life, d) Order numbers up to 100,000 in real life situations, e) round off numbers up to 100,000 to the nearest thousand in different situations, f) Apply squares of whole numbers up to 100 in different situations,	<ul style="list-style-type: none"> • Learners in pairs/groups or as individuals to identify place value of digits up to millions using place value apparatus. • Learners in pairs/groups or as individuals to identify total value of digits up to millions using place value apparatus. • Learners in pairs/groups or as individuals to read numbers up to hundreds of thousands millions in symbols from number charts/ cards. • Learners in pairs/groups or as individuals to form different numbers by rearranging digits of a given number. 	<ol style="list-style-type: none"> 1. How can you work out squares of numbers? 2. How can you work out square roots of numbers? 3. Where are squares and square roots used in real life?

		<p>g) Apply square roots of perfect squares up to 10,000 in different situations,</p> <p>h) Use it devices for learning more on whole numbers and for enjoyment,</p> <p>i) appreciate use of whole numbers in real life situations.</p>	<ul style="list-style-type: none"> • Learners in pairs/groups thousand from number cards and share with other groups. • Learners in pairs/groups or as individuals to multiply a given number by itself and identify the answer as the square of the number. • Learners in pairs/groups or as individuals to identify the square root of a given number as a value which when multiplied by itself results in the given number. • Learners in pairs/groups or as individuals to play digital games involving whole numbers. 	
<p>Core competencies to be developed: Critical thinking and problem solving as learners identify place value, order and round off numbers. Learning to learn as learners read and write numbers, compute squares and square roots. Digital literacy as learners use IT devices to learn and play games.</p>				

PCIs: Environmental education as learners establish the number of seedlings in seedbeds. Career guidance in banking, sales and purchasing.	Values: Respect for self and others as learners work in pairs/groups. Unity as learners work towards achieving set goals. Social cohesion as learners work in groups irrespective of backgrounds.
Links to other subjects: Language as they read and write numbers in words.	Suggested Community Service Learning Activities: Learners to assist in counting money and animals in the community.

Assessment Rubric

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Using place value and total value of digits up to millions	Uses place value and total value of digits up to millions correctly and with ease	Uses place value and total value of digits up to millions correctly	Inconsistently uses place value and total value of digits up to millions	Little evidence in using place value and total value of digits up to millions
Using numbers up to millions in symbols	Uses numbers up to millions in symbols correctly and with ease	Uses numbers up to millions in symbols correctly	Inconsistently uses numbers up to millions in symbols	Little evidence in using numbers up to millions in symbols

Reading, writing and relating numbers up to 100,000 in words	Reads, writes and relates numbers greater than 100,000 in words correctly and with ease	Reads, writes and relates numbers up to 100,000 in words correctly	Inconsistently reads, writes and relates numbers up to 100,000 in words	Little evidence in reading, writing and relating numbers up to 100,000 in words
Ordering numbers up to 100,000	Orders numbers more than 100,000 correctly and with ease	Orders numbers up to 100,000 correctly	Inconsistently orders numbers up to 100,000	Little evidence in ordering numbers up to 100,000
Rounding off numbers up to 100,000 to the nearest thousand	Rounds off numbers up to 100,000 to the nearest thousand correctly and with ease	Rounds off numbers up to 100,000 to the nearest thousand correctly	Inconsistently rounds off numbers up to 100,000 to the nearest thousand	Little evidence in rounding off numbers up to 100,000 to the nearest thousand
Applying squares of whole numbers up to 100	Applies squares of whole numbers up to 100 correctly and with ease	Applies squares of whole numbers up to 100 correctly	Inconsistently applies squares of whole numbers up to 100	Little evidence in applying squares of whole numbers up to 100
Applying square roots of perfect squares up to 10,000	Applies square roots of perfect squares up to 10,000 correctly and with ease	Applies square roots of perfect squares up to 10,000 correctly	Inconsistently applies square roots of perfect squares up to 10,000	Little evidence in applying square roots of perfect squares up to 10,000

Using IT devices for learning more on whole numbers	Uses IT devices for learning more on whole numbers efficiently and with ease	Uses IT devices for learning more on whole numbers efficiently	Inconsistently uses IT devices for learning more on whole numbers	Little evidence in using IT devices for learning more on whole numbers
---	--	--	---	--