

NUMERATION AND OPERATIONS

Identify and create equal representations for whole numbers, fractions, and decimals.

- Illustrate the concepts of “greater than,” “less than,” and “equal to.”
- Count forward and backward beginning with different numbers.
- Count by ones, twos, fives, tens, and twenties.
- Read, count, and write whole numbers.
- Write whole numbers in order and out of order.
- Sequence numbers 0–50.
- Understand the concept of number quantities.
- Compare two whole numbers.
- Order a sample set of whole numbers from smallest to largest and from largest to smallest.
- Apply expanded notation in order to model place value.
- Write numbers using expanded notation.
- State place values for whole numbers.
- Identify numbers to specific place values.
- Begin to understand decimal place values.
- Round whole numbers.
- Make models that represent mixed numbers.
- Identify symbols, words, or models that represent mixed numbers.
- Use mixed numbers in contextual situations.
- Identify operation signs (e.g., addition, subtraction, multiplication, division, and equal signs).
- Use math terms such as “equal,” “unequal,” “more than,” and “less than.”
- Apply the concept of “less than” to a real-life situation (e.g., to identify a sports team that lost a game).
- Count objects within the context of daily living.
- Begin to select numbers within the context of daily living.
- Identify the set that contains more objects than another set.

Understand numerical operations and their relationship to one another.

- Add and subtract whole numbers using objects, pictures, and/or symbols.
- Solve addition and subtraction problems with regrouping using a calculator.
- Add numbers abstractly.
- Write number sentences for addition and subtraction with and without manipulatives.
- Write number sentences for multiplication and division with and without manipulatives.

MATH CONTENT AREA SKILLS

Horizontal and Vertical Curriculum Progression

Operations

PRIMARY	INTERMEDIATE	MIDDLE SCHOOL	HIGH SCHOOL/TRANSITION
Add and subtract using pictures and objects.			
Combine sets of objects to find the total amount.			
Solve single-digit addition and subtraction problems.	Solve addition and subtraction problems with regrouping using a calculator.	Add numbers abstractly.	Add and subtract with no regrouping without using a calculator.
	Understand the concepts of multiplication and division.	Apply simple multiplication and division concepts to solve real-life problems using a calculator.	Multiply and divide without using a calculator.
	Identify the symbols on a calculator.		Use fractions, decimals, or percentages within the context of daily living activities.
	Compute using a calculator.	Compute with basic operations using a calculator.	Use a calculator to compute operations related to daily living skills.
Understand the concept of patterning.	Follow a pattern or template to complete a task.	Identify and/or extend a pattern with a specific purpose (e.g., collating papers or setting a table).	Assemble an object by following a pattern or a set of directions.
Select pictures or symbols for a chart that represents information.	Create a chart of information using pictures or symbols.	Discuss the outcome of data collection using illustrated graphs.	Make predictions about daily events and observe and discuss outcomes.
Create simple graphs to display information.	Solve a problem or answer a question using the data from a chart or graph.	Solve word problems using number lines, number sentences, and charts.	Use a graph.
Answer questions using a chart.	Use tables, charts, and/or graphs to locate information within the context of daily living activities.	Answer questions based on data found in graphs and charts.	Ask survey questions and record responses.