

Math Grade 5

UNIT 2

Operations and Algebraic Thinking

UNIT SUMMARY

Students will learn a variety of strategies incorporating number sense for the four main operations. These will be used to create an informed understanding of standard algorithms. Students will also focus on basic facts knowledge eg times tables, number bonds and use of place value and how they can be incorporated within the use of operations to solve problems. A second aspect to the unit is to develop an understanding of order of operations as a pre-algebra knowledge component. The final part of the unit involves pattern and function in order to create numerical expressions and patterns on the coordinate plane that form the basis of early algebraic thinking. Opportunities for more elaborate equations incorporating more sophisticated exponential elements should be provided for children at a more advanced level.

ENDURING UNDERSTANDINGS (EU) / ESSENTIAL QUESTIONS (EQ)

EU:

- We can use different strategies to solve real world problems and to describe them in maths.
- There is a basic order of operations that can be applied when solving complex problems.
- Numerical expressions can be used to generate patterns and can also be used to describe patterns.
- Numerical expressions incorporating a sequence of values can be graphed on the coordinate plane.

EQ:

- What are the different strategies that we can use for performing the four major operations?
- What is the order of operations and why does one exist?
- How can we describe and create patterns in math using numerical expressions?
- How can we show numerical expressions on the coordinate plane using graphing techniques?

I CAN STATEMENTS

- Students will be able to solve problems using a range of strategies for the four operations.
- Students will be able to recall times tables and number bonds to 100 and beyond.
- Students will be able to use the PEMDAS order of operations including knowing that there is no order when multiplication and division are adjacent other than to work from left to right as is the case with addition and subtraction.
- Students will be able to produce and continue numerical expressions of number relationships eg $s=t-6$ and extend a sequence.
- Students will be able to graph numerical expressions on the coordinate plane.

Elementary
SCHOOL