**MCC. 3.NBT.1 (Place Value)**

Use place value understanding to round whole numbers to the nearest 10 or 100.

**ENDURING UNDERSTANDINGS**

*Place Value and Rounding…*

• Place value is crucial when operating with numbers.

• Estimation helps us see whether or not our answers are reasonable.

• Using rounding is an appropriate estimation strategy for solving problems and estimating.

• Rounded numbers are approximate and not exact.

**ESSENTIAL QUESTIONS**

How does place value connect with regrouping in addition and subtraction?

How are digits in a number related?

How can we determine the value of a digit in relation to its place in a number?

• How can we effectively estimate numbers?

What is an effective way to estimate numbers?

• What is an effective way to round numbers to the nearest hundred?

• What strategies are helpful when estimating sums in the hundreds?

When would I use estimation strategies in the real world?

**CONCEPTS/SKILLS TO MAINTAIN**

It is expected that students will have prior knowledge/experience related to the concepts and skills identified below. It may be necessary to pre-assess in order to determine if time needs to be spent on conceptual activities that help students develop a deeper understanding of these ideas.

• place value

• standard and expanded forms of numbers

• addition

• subtraction

• addition and subtraction properties

• conceptual understanding of multiplication

• interpreting pictographs and bar graphs

• organizing and recording data using objects, pictures, pictographs, bar graphs, and simple charts/tables

• data analysis

• graphing

**STRATEGIES FOR TEACHING AND LEARNING**

Prior to implementing rules for rounding, students need to have opportunities to investigate place value. A strong understanding of place value is essential for the developed number sense and the subsequent work that involves rounding numbers.

Building on previous understandings of the place value of digits in multi-digit numbers, place value is used to round whole numbers. Dependence on learning rules can be eliminated with strategies such as the use of a number line to determine which multiple of 10 or of100, a number is nearest (5 or more rounds up, less than 5 rounds down). As students’ understanding of place value increases, the strategies for rounding are valuable for estimating, justifying and predicting the reasonableness of solutions in problem-solving.

Strategies used to add and subtract two-digit numbers are now applied to fluently add and subtract whole numbers within 1000. These strategies should be discussed so that students can make comparisons and move toward efficient methods.

**EVIDENCE OF LEARNING**

By the conclusion of this unit, students should be able to demonstrate the following competencies:

*Place Value and Rounding…*

• Use mental math to add and subtract.

• Demonstrate place value understanding beyond algorithms or procedure for rounding.

• Round numbers to the nearest 10s and 100s

• Estimate sum and/or difference of numbers

• Apply estimation to solve problems, and determine when it is necessary or appropriate to apply estimation strategies

• Demonstrate a deep understanding of place value and number sense

• Explain and reason about the answers which are the result of rounding.

• Utilize a number line and a hundreds chart as tools to support their work with rounding.

**LEARNZILLION:**

<https://learnzillion.com/lessonsets/370-round-whole-numbers-to-the-nearest-10-or-100>