Unit 4d-Multiply By Multiples of 10

Content Area: **Mathematics**
Course(s): **Math 3**
Time Period: **Marking Period 4**
Length: **MP4 Topic 10 10-1 to 10-4**
Status: **Published**

Essential Questions

- What strategies can be used for multiplying by multiples of 10?

Big Ideas

- **Place Value Concepts-** The strategies used to multiply by multiples of 10 are based on the place-value understandings.
- **Properties of Operations-** Students use the Associative and Distributive Properties to solve multiplication problems.

Cross-Curricular Integration

Integration Area: Social Studies

6.1.5.EconEM.2: Identify examples of the variety of resources that are used to produce goods and services (i.e., human capital, physical capital, natural resources).

Activity:

Topic 10- Pick a Project-

You are opening a store! It sells anything you would like—

clothes, food, books—as long as you can pack a number of

each item in a box.Pick 5 different items you want to sell. Each box that comes to your store will have only one type of item.

You will unpack the box and place the items for sale on your shelves.In each box, the items come to you in a multiple of 10. Make a table for each item you are selling. Show how much of each item is in 1 box. Use a different multiple of ten for each of the 5 different items you chose. Then show how much of that item would come in 2, 3, 4, and 5 boxes. Check your work and clearly label the table

CSDT Technology Connection

8.1.5.AP.5: Modify, remix, or incorporate pieces of existing programs into one's own work to add additional features or create a new program.

Enduring Understandings

Number and Operations in Base Ten

3.NBT.A [M] Use place value understanding and properties of operations to perform multi-digit arithmetic

3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations

Operations and Algebraic Thinking

3.OA.D.8 Solve two -step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding

3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

3.OA.B.5 Apply properties of operations as strategies to multiply and divide.

Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5+ 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)

Mathematical Practices Focus

7. Look for and make use of structure.