Unit 2c-Use Operations With Whole Numbers To Solve Problems

Content Area: **Math**
Course(s): **Math 4**
Time Period: **Marking Period 2**
Length: **MP2 Topic 6 6-1 to 6-6**
Status: **Published**

Essential Questions

- How is comparing with multiplication different from comparing with addition?
- How can you use equations to solve multi-step problems?

Big Ideas

- **Comparison:** Students will learn how to solve problems involving multiplicative comparison and additive comparison. They learn the difference between multiplicative comparison and additive comparison.
- **Multi-Step Word Problems:** Students solve multi-step word problems, some of which involve the concepts of multiplicative comparison and additive comparison.
- **Algebra:** Students will work with equations that contain an unknown quantity.

Diversity Integration

Objective: Students will be able to answer word problems based on sports in different countries.

Description of Activity: Students will be given word problems that include information about sports in other countries. They will solve the problems and share their answers. Students will also have time to create their own problems using information that they researched online.

CSDT Technology Integration

8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Activity:

Students will create their own multi-step word problem. They will type the problem in Google Classroom and choose an image related to the problem. Once completed, students will solve their classmates' problems.

Enduring Understandings

Operations and Algebraic Thinking

4.OA.A.1 [M] Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

4.OA.A.2 [M] Multiply or divide to solve word problems involving multiplicative comparison, e.g., by

using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

4.OA.A.3 [M] Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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. Students may obtain data and information to describe that energy and fuels are derived from natural resources and their uses affect the climate and solve multistep word problems based on the data collected.

Number and Operations in Base Ten

4.NBT.B.4 With accuracy and efficiency add and subtract multi-digit whole numbers using the standard algorithm.

4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, (and multiply two two-digit numbers), using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

4.NBT.B.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Mathematical Practices Focus

1. Make sense of problems and persevere in solving them.