Unit 6: Bonus: Step Up to Sixth Grade

Content Area: **Mathematics**
Course(s): **Mathematics**
Time Period: **Marking Period 4**
Length: **3 Weeks**
Status: **Published**

Unit Overview

This final unit of the 5th grade curriculum provides a preview of topics that students will cover in-depth in sixth grade.

Standards

MA.6.RP.A.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
MA.6.RP.A.2	Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship.
MA.6.RP.A.3a	Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
MA.6.RP.A.3b	Solve unit rate problems including those involving unit pricing and constant speed.
MA.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
MA.6.NS.B.4	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.
MA.6.EE.A.2	Write, read, and evaluate expressions in which letters stand for numbers.
MA.6.EE.A.3	Apply the properties of operations to generate equivalent expressions.
MA.6.G.A.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

Application of Knowledge and Skills...

Students will know that...

- Ratios are proportional if the terms of one ratio can be multiplied or divided by the same number to create the second ratio
- To find the quotient of the term, divide the first term by the second term

Students will be skilled at...

- calculating the surface area of rectangular prisms
- comparing rates
- finding common factors that are shared by two or more numbers
- finding equal ratios and determine if two ratios form a proportion
- finding the unit rate for a given rate
- identifying and extending patterns in an input/output table and writing the pattern as an algebraic expression
- inserting zeros as necessary in the product of two decimals or a decimal and a whole number
- using properties of operations to rewrite expressions
- using ratio tables and common factors to write and solve proportions
- using ratios to express comparisons between two quantities

Assessments

- Benchmark Tests
- End of the Year Test
- Other visual assessments During the guided practice part of the lesson, students record responses to problems on individual whiteboards. Teacher will monitor for errors, and assist where needed
- Placement Test: used to test prior knowledge
- Task Cards: used as a reinforcement of a topic
- Topic Math Projects
- Topic Quick Checks: can be given after each section in the topic to check for understanding
- Topic Tests: given after each topic

Activities

Problem of the Day-Present a daily problem that serves as a review from the previous day's lesson.

Station activities- Each section has center activities to reinforce skill (leveled)

- Toss and Talk - Toss a die and complete the problem to that number. Explain and discuss with your partner.
- Display the Digit- Choose a table. Explain how each number in the bottom row is related to the one about it. Find the missing numbers. Display each 0-9 tiles exactly once. Take turns with partner.
- Teamwork - As a team (2-4 students) pick a tile (1-4) and chose from the list of jobs (A-F) to complete. Check each others work.
- Tic Tac Toe - Toss the cubes. The numbers toss are the length and width in inches of a rectangular prism that has a height of 8 inches. Cover the answer and three in the row in the section wins.
- Think Together - Put a tile (1-4) and choose (A-D) box. Complete the problem together, discuss process and if the answer is correct.

STEM - Certain sections have Going Digital integrating technology and the use of calculators

- Mixed Problem Solving: Art - page 293

Projects - There is a math project for each topic (Topic 12-14) - (See Cross-Disciplinary Instruction for projects and page numbers)

Practice work - Communicator practice can be done using Independent work and problem- solving practice problems in each section.

Volume of Playdough Activity - Students will create rectangular and triangular prisms with a given volume of play- dough, discovering the properties and attributes of these solids (number of edges, faces, and vertices as well as the types of faces), reviewing - (See Link)

Box It Up - In this activity students will be finding the volume of rectangular prisms. (See Link)

Fill 'Em Up - This activity will help students to learn the concept of volume through hands-on activities.

(See Link)

- Volume of Play
- Box It Up
- Fill 'Em Up

Activities to Differentiate Instruction

General strategies for modification of this curriculum for students with special needs, ELL, and gifted learners:

- **General strategies:**
  - preferential seating
  - manipulatives
  - modified workbook pages
  - practice or enrich homework pages
- **Center activities** - There are leveled center activities for each section. There is a separate activity for "Intervention", and then "On-Level" and "Advanced" are in spiral book.
- **Leveled practice pages** - There are three leveled (Reteaching, Practice, and Enrichment) sheets that can be used for practice or homework.
- **Math Concept Readers:** These readers allow the student to read the story at different levels- above level, on level, and below level. (also available on line with audio) Complete the Think and Respond and Write Math questions at the conclusion of each book.
- **Assessment**- Using Quick Check Review can determine differentiated instruction levels using sample

answers and using the rubric at the Close/ Assess and Differentiate section in the teacher edition.

Resources

On line Resources available at www.pearsonrealize.com

- Teacher Edition (TE) Textbook
- Student Edition (SE) Textbook
- Tests on line
- Concepts videos
- Math Tools

21st Century Skills

CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
CRP.K-12.CRP4.1	Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.
CRP.K-12.CRP8.1	Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.