South Park School District	Lesson Plan	2017-2018
Dates This unit consists of approximately 8 days of instruction, review, and assessment.	**Course/Grade**	7th Grade Math
Unit Ratios and Proportional Relationships (Applications of Percentages) Unit 2 Part 2	**Teacher**	**Mrs. Radomski**

<u>**Essential Questions (Maximum 2):**</u>

How do you use proportional relationships to solve multi-step ratio and percent problems?
Ex. Simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease

<u>**Pennsylvania State Common Core Standards:**</u> **(Mathematics)**

2.2 Algebraic Concepts

CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.

2.4 Measurement, Data, and Probability

CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models.

<u>**Pennsylvania State Common Core Standards:**</u> **(English Language Arts)**

1.2 Reading Informational Text
Students read, understand, and respond to informational text—with an emphasis on comprehension, vocabulary acquisition, and making connections among ideas and between texts with focus on textual evidence.

CC.1.2.7.A
Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.

CC.1.2.7.B
Cite several pieces of textual evidence to support analysis of what the text says explicitly, as well as inferences, conclusions, and/or generalizations drawn from the text.

CC.1.2.7.F
Determine the meaning of words and phrases as they are used in grade-level reading and content, including interpretation of figurative, connotative, and technical meanings.

CC.1.2.7.J
Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

CC.1.2.7.K
Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade-level reading and content, choosing flexibly from a range of strategies and tools.

CC.1.2.7.L
Read and comprehend literary nonfiction and informational text on grade level, reading independently and proficiently.

1.3 Reading Literature
Students read and respond to works of literature—with an emphasis on comprehension, vocabulary acquisition, and making connections among ideas and between texts with a focus on textual evidence.

CC.1.3.7.B
Cite several pieces of textual evidence to support analysis of what the text says explicitly, as well as inferences, conclusions, and/or generalizations drawn from the text.

CC.1.3.7.F
Determine the meaning of words and phrases as they are used in grade-level reading and content, including interpretation of figurative, connotative meanings.

CC.1.3.7.I
Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade-level reading and content, choosing flexibly from a range of strategies and tools.

1.4 Writing
Students write for different purposes and audiences. Students write clear and focused text to convey a well-defined perspective and appropriate content.

CC.1.4.7.A
Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information clearly.

CC.1.4.7.C
Develop and analyze the topic with relevant facts, definitions, concrete details, quotations, or other information and examples; include graphics and multimedia when useful to aiding comprehension.

CC.1.4.7.D
Organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect; use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts; provide a concluding statement or section; include formatting when useful to aiding comprehension.

CC.1.4.7.F
Demonstrate a grade appropriate command of the conventions of Standard English grammar, usage, capitalization, punctuation, and spelling.

CC.1.4.7G
Write arguments to support claims.

CC.1.4.7.I
Acknowledge alternate or opposing claims and support claim with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic.

CC.1.4.7.J
Organize the claim(s) with clear reasons and evidence clearly; clarify relationships among claim(s) and reasons by using words, phrases, and clauses to create cohesion; provide a concluding statement or section that follows from and supports the argument presented.

CC.1.4.7.L
Demonstrate a grade appropriate command of the conventions of Standard English grammar, usage, capitalization, punctuation, and spelling.

1.5 Speaking and Listening
Students present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions.

CC.1.5.7.A
Engage effectively in a range of collaborative discussions, on grade-level topics, texts, and issues, building on others' ideas and expressing their own clearly.

CC.1.5.7.D
Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

CC.1.5.7.G
Demonstrate command of the conventions of Standard English when speaking based on Grade 7 level and content.

Skills:	Resources
• Find simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease	☒ Textbook **Go Math Accelerated Grade 7 Workbook** **Scholastic Math Magazine** ☒ Supplementary Materials Materials listed on Unit Lesson Plans ☒ Workbook/Worksheets ☒ Teacher-prepared materials ☒ Individual Title ☒ Technology **Go Math Online Textbook** **Chromebooks** **Google Classroom** **Khan Academy**

Assessments

☒ Tests	☐ Peer Evaluation
☒ Quizzes	☐ Rubric Scoring
☒ Worksheets	☒ Group Grade
☒ Homework	☐ Other
☒ Teacher Observation	
☒ Student Writing	
☒ Student Presentations	
☐ Student Projects	
☒ Student Written Response (reflection)	

☒ Other
Modified homework and assessments
Intervention and Enrichment worksheets to help reinforce difficult concepts presented or to engage in higher-level applications of concepts.

Special Education Adaptations/Modifications:
• Adapted/modified assignments and/or assessments for gifted / enriched students
• Follow IEP / 504 / GIEP / SDI accommodations as documented

Differentiated Instruction / SGI Activities:
• Critical Thinking – Open-ended class discussion
• Cooperative learning
• Peer lead grouping
• Problem-solving activities

Reading & Writing:
• Non-fiction reading excerpts that include writing prompts and multiple choice questions – monthly Scholastic Math Magazines and unit related articles

Math 7
Mrs. Radomski
Unit 2 Part 2– Ratios and Proportional Relationships (8 days)

Unit Order Date	Lessons and *Objectives* Bell Ringer	Activities / Materials / Assessments / <u>Homework</u>
1 of 8 *10/11/17*	Proportions Review *Students will be able to review concepts related to proportions.* Relating Decimals, Fractions, & Percents *Students relate and convert among decimals, fractions, and percents.* **Warm-up Question:** What is a proportion? {A proportion is a name given when there are two equal ratios}	▪ Go over the What is a Proportion? Notes ▪ Have the students get into groups of 6-7. We are going to switch up the Proportions Scavenger Hunt Activity. The students will be given the 10 cards and they have to place them in order. First team to get the correct order, wins a prize. ▪ After that, the students should work on the What is a Proportion? WS and we will go over it once everyone finishes. ▪ Go over the Fractions, Decimals, and Percents Notes ▪ The students should work on the 9-7 Study Guide and Practice WS **HW: Complete the 9-7 Study Guide and Practice**
2 of 8 *10/12/17*	Finding Percents (Proportional Relationships by Equations) *Students find percents of numbers.* Finding a Number When the Percent is Known *Students find a number when the percent is known.* **Warm-up Question:** How are fractions, decimals, and percents like water? {three forms: solid, liquid, gas}	▪ Check and go over the homework (9-7 Study Guide and Practice) ▪ Go over the How Do You Use Percents? Notes ▪ Go over the Practice B WS together ▪ Have the students work with their partner on the Percent Proportions Cut and Paste Activity ▪ When they are finished, they should hand it in and work on the How Do You Use Percents? WS **HW: Complete the How Do You Use Percents? WS**
3 of 8 *10/16/17*	Proportions and Percents Check Point *Students will be able to discuss and demonstrate an understanding of previous lessons by working on a graded assessment.* Applications of Percents *Students will be able to find markups and markdowns, gratuities, commission, tax, and fees.* **Warm-up Question:** Are there any questions before the quiz? {Answers will vary}	▪ Check and go over the homework (How Do You Use Percents? WS) ▪ Have the students complete the Proportions and Percents Quiz ▪ After they finish the quiz, they should work on their Khan Academy ▪ Once everyone is finished, we will go over the How Do You Use Percents in Real Life? Notes ▪ Have the students work with their partner on the How Do You Use Percents in Real Life? WS ▪ **HW: Complete the How Do You Use Percents in Real Life? WS**

4 of 8 *10/17/17*	Applications of Percents *Students will be able to find markups and markdowns, gratuities, commission, tax, and fees.* **Warm-up Question:** Where do you see percents outside of school? {Answers will vary}	▪ Check and go over the homework (How Do You Use Percents in Real Life? WS) ▪ The class will work on the Applications of Percents WS ▪ During the second block, we will play the Applications of Percents Game using the Markup and Discounts Task Cards ▪ After the game, the students will complete their monthly Reading/Writing Assignment using the Scholastic Math Magazine **HW: None**

5 of 8
 	
10/18/17
	Percent Increase and Decrease
	Students find percent increase and decrease.
	
	Warm-up Question: Write 80% as a fraction and a decimal. {0.80 and 4/5}
		▪ Go over the What is Percent Change? Notes
		▪ Small Group Instruction
		  o SGI Group 1: Kuta Software- Percent Change WS to reinforce the concepts taught in this lesson (Partners)
		  o SGI Group 2: What is Percent Change? WS to reinforce the concepts taught in this lesson (Teacher will work with this group)
		  o SGI Group 3: Percent of Change-Class Demonstration Activity (Partners)
		
		HW: None

6 of 8 *10/19/17*	Simple Interest *Students compute simple interest.* **Warm-up Question:** Give some real-world examples where someone would have to pay interest? {loan, credit card, etc…}	▪ Go over the How Do You Calculate Simple Interest? Notes ▪ Have the students work on the Kuta Software- Simple and Compound Interest WS and go over it when they finish ▪ As a class, we will complete the Simple Interest: Spinner Activity ▪ Once we are done, the students should work on the How Do You Calculate Simple Interest? WS **HW: Complete the How Do You Calculate Simple Interest? WS**
7 of 8 *10/20/17*	Percents Quiz *Students discuss and demonstrate understanding of previous lessons by working on a graded assessment.* Cumulative review of Unit 2 Part 2 objectives. *Students will complete a study guide and engage in discussion of assessment content with the teacher.* **Warm-up Question:** Are there any questions before the quiz? {Answers will vary}	▪ Check and go over the homework (How Do You Calculate Simple Interest? WS) ▪ Have the students take the Percents Quiz (Ready to Go On Quiz pg. 159-160) ▪ After they finish the quiz, the students will log on to their online textbook and complete the Review Assignment ▪ During the second period, we will go over the Unit 2 Part 2 Review Sheet WS **HW: Study for the Unit 2 Part 2 Test tomorrow**

8 of 8 *10/23/17*	Unit 2 Part 2 Test *Students are individually evaluated on their understanding of the objectives in Unit 2 Part 2.* **Warm-up Question:** Are there any questions before the test? {Answers will vary}	▪ Give the students a final chance to ask any questions they have about the material that will be covered on the test ▪ Have the students complete the Unit 2 Part 2 Test ▪ When the students finish the test, they should work on Khan Academy on their Chrome Books **HW: None**