South Park School District	**Unit Plan**	**2016-2017**

Dates	This unit consists of approximately 8 days of instruction, review, and assessment.	**Course/Grade**	7th Grade Math
Unit	Inequalities Unit 3 Part 2	**Teacher**	**Mrs. Radomski**

Essential Questions (Maximum 2):

How can we use inequalities to represent real-world situations?

Pennsylvania State Standards: (Mathematics)

M07.B-E.2.1.1 Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate.

M07.B-E.2.2.2 Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers, and graph the solution set of the inequality.

M07.B-E.2.3.1 Determine the reasonableness of an answer(s), or interpret the solution(s) in the context of the problem.

Pennsylvania State Common Core Standards: (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.

CC.2.2.HS.D.10 Represent, solve, and interpret equations/inequalities and systems of equations/ inequalities algebraically and graphically.

Pennsylvania State Common Core Standards: (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

Skills

- Translate Words in Numbers, Variables, & Operations
- Determine Whether a Number is a Solution of an Inequality
- Solve One-Step Inequalities by Using +, -, x, or ÷.
- Solve Two-Step Inequalities
- Solve Real World Problems Using Inequalites

Assessments

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

Resources

☒ 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

☒ 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 3 Part 2– Inequalities (8 days)

Unit Order *Date*	**Lessons and *Objectives*** **Bell Ringer**	**Activities / Materials / Assessments / Homework**
1 of 8 *11/29/16*	Review of Inequalities *Students will be able to use their previous knowledge of inequalities to solve problems.* **Warm-up Question:** What is an inequality? {a statement that shows that both sides are not equal}	▪ Pass back and go over the Unit 3 Part 1 Test ▪ Go over Is Everything Equal? Notes ▪ Have the students complete the Identifying and Graphing Inequalities WS and go over it as a class. ▪ Have the students get into a group and complete the Graphing Inequalities Puzzle Activity ▪ When they are finished, they should work on the Is Everything Equal? WS **HW: Complete the Is Everything Equal? WS**
2 of 8 *11/30/16*	Solving One-Step Inequalities Using All Four Operations *Students will be able to evaluate one-step inequalities using the four operations.* **Warm-up Question**: Fill in the blank. In order to solve an equation (isolate the variable), we must use _____ operations. {inverse}	▪ Check and go over the homework (Is Everything Equal? WS) ▪ Go over the How Do You Solve An Inequality? Notes ▪ Have the students work on the One Step Inequalities WS with their partners and go over it when they finish ▪ Have the students complete the How Do You Solve An Inequality WS and turn it in when they are done **HW: None**
3 of 8 *12/1/16*	Solving Two-Step Inequalities Using All Four Operations *Students will be able to evaluate two-step inequalities using the four operations.* **Warm-up Question**: Fill in the blank. When you multiply or divide by a negative number, the inequality sign is _____? {flipped}	▪ Go over the How Do You Solve A Two-Step Inequality? Notes ▪ ==Have the students work with their groups on the Two-Step Inequalities Solve and Color Activity== ▪ When they are finished, they should work on the How Do You Solve A Two-Step Inequality? WS **HW: Complete the How Do You Solve A Two-Step Inequality? WS**

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12/2/16 | Inequalities Quiz
Students discuss and demonstrate understanding of previous lessons by working on a graded assessment.

Translating Inequalities
Students will be able to translate statements into inequalities.

Warm-up Question: Are there any questions before the quiz? {Answers will vary} | ▪ Check and go over the homework (How Do You Solve A Two-Step Inequality? WS)
▪ Have the students take the Inequalities Quiz
▪ When the students finish the quiz, they should work on Khan Academy on their Chrome Books
▪ Go over the How Do You Translate An Inequality? Notes
▪ The students should work on the How Do You Translate An Inequality? WS and we will go over it when they finish

HW: None |
|---|---|---|
| 5 of 8

12/5/16 | Solving Real World Problems Using Inequalities
Students will be able to solve real-world problems using inequalities.

Warm-up Question: Translate the following into an algebraic inequality. The sum of a number and four is less than ten {x +4 < 10} | ▪ Check and go over the homework (How Do You Solve A Two-Step Inequality? WS)
▪ Go over the How Do You Inequalities To Solve Problems? Notes
▪ Have the students work on pg. 215 #7-14 with their partners and go over it when they finish
▪ Have the students work on the How Do You Inequalities To Solve Problems? WS

HW: Complete the How Do You Inequalities To Solve Problems? WS |
| 6 of 8

12/6/16 | Applications of Inequalities
Students discuss and demonstrate understanding of previous lessons by working on small group activities.

Warm-up Question: Write an inequality to represent "three times a number is greater than fifteen". {3x >15} | ▪ Check and go over the homework (How Do You Inequalities To Solve Problems? WS)
  ○ SGI Group 1: One and Two Step Inequalities in Real Life Scavenger Hunt to reinforce the concepts taught in this unit (Groups of 3-4)
  ○ SGI Group 2: Two Step Inequalities in Real Life Cut and Paste Activity to reinforce the concepts taught in this unit (Groups of 3-4)

HW: None |
| 7 of 8

12/7/16 | Cumulative review of Unit 3 Part 2 objectives.
Students will be able to review the material covered in Unit 3 Part 2.

Warm-up Question: Jessica solved the inequality 48>-6x and got the answer -8 < x. Is she correct? {yes} | ▪ The students should work with their groups on the Inequalities Stations Review Activity
▪ When they are finished, they should work on the Inequalities Unit Study Guide
▪ If we get a chance, we will go over it. If not, we will go over it tomorrow.

HW: Study for the Unit 3 Part 2 Test tomorrow |
| 8 of 8

12/8/16 | Unit 3 Part 2 Test
Students are individually evaluated on their understanding of the objectives in Unit 3 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 and go over the study guide if we didn't do so in class yesterday
▪ Have the students complete the Unit 3 Part 2Test
▪ When they are finished, the students will complete their monthly Reading/Writing Assignment using the Scholastic Math Magazine
▪ When the students finish the assignment, they should work on Khan Academy on their Chrome Books

HW: None |