Richmond Public Schools
Department of Curriculum and Instruction
Curriculum Pacing And Resource Guide – Unit Plan

Course Title/ Course #: Pre-Algebra Math 8

Unit Title/ Marking Period # (MP): The Real Number System MP1

Start day: 5

Meetings (Length of Unit): 5 days

Desired Results ~ What will students be learning?
Standards of Learning/ Standards
8.2 The student will describe orally and in writing the relationships between the subsets of the real number system.
Essential Understandings/ Big Ideas
How are the real numbers related? Some numbers can appear in more than one subset, e.g., 4 is an integer, a whole number, a counting or natural number and a rational number. The attributes of one subset can be contained in whole or in part in another subset
Key Essential Skills and Knowledge
•Describe orally and in writing the relationships among the sets of natural or counting numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers. •Illustrate the relationships among the subsets of the real number system by using graphic organizers such as Venn diagrams. Subsets include rational numbers, irrational numbers, integers, whole numbers, and natural or counting numbers. •Identify the subsets of the real number system to which a given number belongs. •Determine whether a given number is a member of a particular subset of the real number system, and explain why. •Describe each subset of the set of real numbers and include examples and nonexamples.

•Recognize that the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

Vocabulary

set
subset
real number system
real number
whole number
integer
natural number
irrational number
counting number

Assessment Evidence ~ *What is evidence of mastery? What did the students master & what are they missing?*

Assessment/ Evidence

Mulligan Math check points 8.2
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Interactive Achievement
HCPS mini-quizzes
Create a Real Number System-Project

Learning Plan ~ *What are the strategies and activities you plan to use?*

Learning Experiences/ Best Practice

Create a five flap foldable for vocabulary to include each of the five subsets of the real number system.

Type up each of the subsets on a colored sheet of paper and post around the room. Give each student a sticky note with a number. Make sure to give numbers that can go in more than one subset and some students the same number. Have students put their post-its around the room. Discuss as a group or have students do a gallery walk to determine if they are correct. If there are numbers that are in more than one subset, discuss why.

Give students a blank venn-diagram to label with the subsets of the real number system. As a group, place numbers in the correct subset and discuss why they go in particular subsets. Have them explain why they do not go in other subsets.

Using the VDOE ESS Lesson Plan for 8.2, have students cut out the cards and glue or tape them on the venn-diagram.

Technology Integrations
Compass Learning
Brain Pop
Allen Teachers
Quia Games

Resources

Text

Glencoe Pre-Algebra pages 130-135 (Rational Numbers) and 565-560 (The Real Number System)
Mulligan Math in Minutes 8.2
SOL Coach Book Va Edition: pages 28-32

Technology

Compass Learning-https://www.thelearningodyssey.com - 76237
You Tube - Rational Numbers Song - online instructional resource
Brain Pop - Rational and Irrational Numbers - interactive skill practice
Allen Teachers-Real Numbers-TEI Questions
Allen Teachers-Rational Numbers-TEI Questions
Allen Teachers-Integer-TEI Questions

Virginia Department of Education

VDOE **-** Organizing Numbers - lesson plan

Other Sites

HCPS - Real Number System - Instructional materials, practice page, assessments
Quia - Rags to Riches -Real Numbers - educational review games

Cross Curricular Connection

Music- Have students create a song or skit about the real number system.
English- Have students write a summary to explain how the food chain is similar to the real number system.
Science-The food Chain
Art-have students create a 3-D model of the real number system using objects such as bags, boxes, etc.. (things that nest)