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| **Names:** Ms. Clayborne, Mrs. Cobarruvias, Ms. Harty, Ms. Phillips & Mrs. Prestero |
| **Lesson Date:** 03/03/2016 |
| **School/Grade:** Kostoryz Elementary/5th **Subject:** Math |
| **TEKS:*** 5.1C: The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.
* 5.3H: The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations.
* 5.6A: The student applies mathematical process standards to understand, recognize, and quantify volume. The student is expected to recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (*n* cubic units) needed to fill it with no gaps or overlaps if possible.
* 5.7: The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement. The student is expected to solve problems by calculating conversions within a measurement system, customary or metric.
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| **Materials:*** Connecting Blocks
* 3 sets of laminated Fraction Strips
* Computer paper or Construction paper (62 pieces)
* Rulers (6)
* Station Worksheets (62)
* 3 nine-sided dice
* 3 laminated game sheets
* 3 laminated gridables
* Dry erase markers
* Pencils
* Scratch paper if needed
* Pre-made crossword puzzle
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| **Engage:** Students will be presented with various graphs depicting their recent test scores and how they compare to the state’s mandatory passing requirements on the STAAR test. This will not call students out individually, rather to make an impression on how much the students need to improve as a whole. This will also give students an opportunity to use their graph analysis skills they are developing in the regular math classroom. |
| **Explore:**There will be five stations for students to visit. Each station will focus on a mathematical concept that students have difficulty with. Station 1: Estimation--the students will play a dice game in which they will have to round numbers. The highest number students will round to is the nearest 10-thousand.Station 2: Conversion--the students will review equivalent measures with a crossword puzzle. Station 3: Adding and Subtracting Fractions1. Students will work with fraction strips to answer various fraction problems using addition and subtraction.
2. After working for about 8 minutes on as many problems as possible, the students will spend 2 minutes answering STAAR formatted questions on their station worksheet.

Station 4: Area and Perimeter1. Students will measure the perimeter of a piece of paper with a ruler (cm).
2. Using the same paper, students will fold the paper into fourths.
3. After making the creases, the students will measure the perimeter of one-fourth of the paper.
4. The students can also find the area of the same part of the paper.
5. Students need to be reminded about the perimeter and area formulas they will be given at the beginning of their STAAR exam, where to find them, and how to use them.
6. Student will answer 2 STAAR formatted questions.
7. Have students write out their final perimeter measurement of the 1/4th portion of the paper by recording their answer on a gridable to practice placement.

Station 5: Volume1. Students will use connecting blocks to find the volume of a 3-D geometric figure according to the figure shown to them by the teacher.
2. Students will answer STAAR formatted questions on their station worksheet.
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| **Explain:**After all students have visited every station, the teachers will review the mathematical processes and questions with the whole group.1. Do you always have to have a common denominator when adding and subtracting fractions? (Yes) Why? (Fractions with different denominators are not the same size. You have to make them similar sizes so you can add or subtract their parts.) In the question with the model, how did you know what operation to use? (Asked for the total shaded amount, needed to add each shaded part to get a total).
2. How do you determine the volume of a three dimensional figure?
3. What is the difference between perimeter and area? What formulas can you use to help you determine the perimeter and area of a two dimensional shape?
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| **Elaborate:**The teacher will lead the students in a Jeopardy review game using information learned during station time. Each Jeopardy question will be in STAAR question format. Students will stay in the groups they used for stations to participate. |
| **Evaluate:** At each station will be 2-3 STAAR questions for students to practice after completion of the station activity. Teachers will go over the answers to the Station questions to see if the students improved. |