

Sixth Grade

Marking Period 1

Unit Name: Rational Numbers

Objective: Students will be able to convert US currency to other countries

Description of Activity:

Students will be able to pick 2 of the countries available and convert between their currency and US dollars

Marking Period 2

Unit Name: Represent and Solve Equations and Inequalities.

Objective: Students will be able to determine the amount of vehicles that can be on a bridge at one time using an inequality to solve.

Description of Activity: Students will research a bridge from one of the countries their family is from. In class they will go over the different types of bridges. They will research about the type of bridge, the amount of weight this bridge can close and if the bridge has been closed before due to mother nature. The students will then determine how they can make the bridge safer. Using equations and inequalities the students will determine if the type of bridge they chose is the best, but looking up information on two other types of bridges.

Marking Period 3

Unit Name: Understand and Use Percent

Objective: Students will be able to successfully plan a trip to one of three destinations using a budget.

Description of Activity: Students will pick one of three destinations in groups and organize and plan the trip. They will need to buy all items needed either on sale and include sales tax for themselves and a person with a disability. The students will need to research about the disability and find the needs of the person to travel to this destination. They will need to make sure they have money to eat and pay tip on the meals.

Marking Period 4

Unit Name: Statistics

Objective: Students will show statistical data about their heritage on a number line, dot plot, histogram and box plot.

Description of Activity:

Students will complete a survey about their heritage in Math class to compare their heritage with their classmates. The class will then compare the class answers to the whole 6th grade class.

Seventh Grade

Marking Period 1

Unit Name: Analyze and Use Proportional Relationships

Objective: Students will be able to find the constant of proportionality, and equivalent ratios from a given situation

Description of Activity: Students will research a topic of global importance to find if there is a constant of proportionality and equivalent ratios.

(Example: Students will research the amount of water in the world and what amount is fresh. They will then determine the relationship between the amount of water people consume in different countries and the amount of fresh water is available in the world.)

Marking Period 2

Unit Name: Analyze and Solve Percent Problems

Objectives: Draw conclusions based on analysis of a primary source.

- **Analyze and cite recurring themes using text evidence.**
- **Calculate the percentage of a given data set.**
- **Apply mathematical processes to represent and solve problems involving proportional relationships.**
- **Identify the importance of the decennial census and how it benefits their community.**
- **Understand how the census has reflected the diversity of the United States.**

Description of Activity: Students will analyze historical data on race and ethnicity in the United States over time. Students will note trends around race and ethnicity by looking at data from 2000 and 2010, highlighting the broad diversity of people who live in the United States today. Students will learn why it is important that the U.S. Census Bureau collect this data.

Marking Period 3

Unit Name: Samples and Populations

Objective: Students will take the data from 6th grade on heritage and discuss if it is a good representation of the school.

Students will be able to talk about random sampling and come up with a new survey to complete using random sampling.

Description of Activity: Students will use the data found from the 6th grade data to discuss random sampling and how they could fix the method to be able to generalize the results.

Students will then come up with their own survey to complete a random sample within the school and complete.

Students will then discuss their results from their random sampling.

Marking Period 4

Unit Name: Area

Objective: Students will be able to find area of the shapes they created in their geometric picture.

Description of Activity: Class will discuss how different cultures use pictures to tell stories. Students will create a story of their own using Geometric shapes. Students will find the area of the shapes they created. They must have at least 2 circles, trapezoids, parallelograms, and triangles.

Eighth Grade

Marking Period 1

Unit Name: Analyze and Solve Linear Equations

Objective: Students will be able to use equations to figure out the factors that affect population growth.

Description of Activity: Students will explore the science of demography. They will explore how birth rate, death rate, emigration, and immigration affect population growth with a country of their heritage. Students will analyze how changes in these indicators affect resource sustainability and how resource availability affects population growth.

Marking Period 2

Unit Name: Bivariate Data

Objective: Students will be able to describe patterns associated between two quantities

Description of Activity: Students will work in groups to come up with an association between two quantities from scatter plots they have researched. Students will describe the patterns that they see. Teacher will model how to describe the data based on the gender wage gap.

<https://studentwork.prattsi.org/infovis/visualization/gender-wage-gap-exist-providing-statistical-graphs-showing-positive-results-2/>

Marking Period 3

Unit Name: Congruence and Similarity

Objective: Students will be able to find similarities between the science of forestry with the United States and one of the countries of their heritage.

Description of Activity: Students will explore the science of forestry. They will explore plant, animal, human, and other indicators of forest

health in the US and a country of their heritage. Students will analyze how changes in these indicators affect the health of the forest and how forest health affects population growth of various forest species.

Marking Period 4

Unit Name: Pythagorean Theorem and Area

Objective: Students will be able to apply the Pythagorean Theorem to find the determine missing side lengths of a geometric picture they created using triangles. Students will be able to find the area of the triangles after they find the missing lengths.

Description of Activity: Discuss how other cultures use geometric shapes to tell stories. Students will create their own Geometric picture using a certain number of triangles. The students will use the Pythagorean Theorem to find the area of the triangles and the other formulas to find the area of all of the shapes they created.