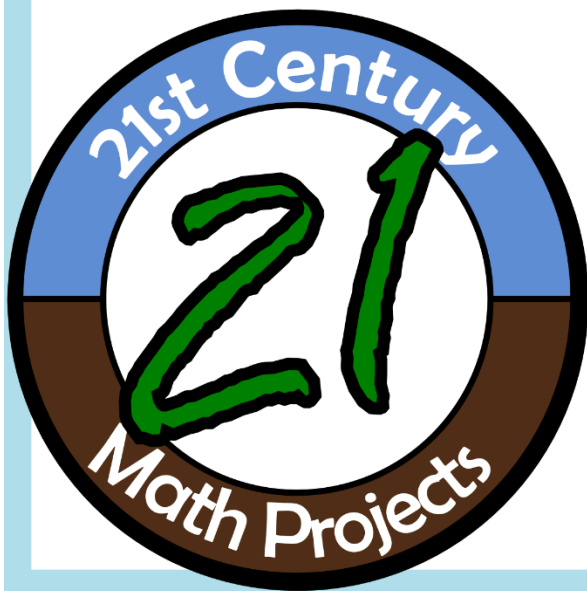
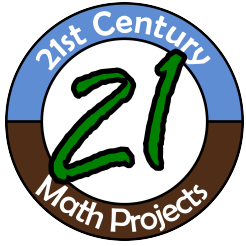


DISNEY POPULATION





DISNEY POPULATION

Ideal Unit: Decimals	Time Range: 2-4 Days	Supplies: Pencil & Paper
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Topics of Focus:

- Division & Multiplication with Decimals
- Population Density

Driving Question

"How does the population density of Disney World compare to the largest cities in the world?"

Culminating Experience Planning a Disney World vacation that avoids crowds

Common Core Alignment:

5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
6.NS.2	Fluently divide multi-digit numbers using the standard algorithm.
6.NS.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
7.NS.2c	Apply properties of operations as strategies to multiply and divide rational numbers.
7.NS.2d	Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

Procedures:

A.) In "Population Density", students will compare the 6 cities in the US that have the highest populations and calculate their population densities. To best hit the standards, I would have students use the standard algorithm.

B.) In "If Disney World were a City", students will calculate the population density of the Disney Parks given average attendance and square miles. This looks at the average attendance of the four main theme parks in Disney World. Not only will they be dividing decimals, but they will also have to multiply because areas are given in acres (a conversion to square miles is provided). Once they have calculated their population densities, students will answer follow-ups. Some of the follow-ups relate to the first "Population Density" assignment, so it may work best to have them do the assignments together or refer to them later.

C.) In "My Disney Vacation", students will build on the skills from the first two assignments and analyze the month-by-month attendance at each of the parks. Students will use this data to determine when they want to take their trip to Disney World. Data for four parks are given, so there could be 4 different groups, 4 different stations or partners could work through all four together. Differentiate as desired.

* Aspects of the project can be completed independently. The entire project does not need to be completed to have a great learning experience, though it is suggested because it will best scaffold the skills and context.



POPULATION DENSITY

Name _____ Date _____

At different times in your life, you've undoubtedly had the feeling that you were in a space that was too crowded. Around the globe, social scientists measure the geographic term *population density*. Population density is a measurement of the population per unit of area (often square miles). As you would expect, cities will have a much higher population density than small towns. However, it's when these cities begin to get compared with each other that you will get the sense of which cities feel the "busiest".

In the table, there are population and square mileage statistics for the six most populated cities in the United States. In order to calculate their population density, you will need to divide the population by the square miles. Use long hand division and round your answers to the nearest whole person.

City	Population (Estimated)	Square Miles (Rounded to the nearest whole)	Population Density
Chicago, IL	2,719,000	228	
Houston, TX	2,196,000	600	
Los Angeles, CA	3,884,000	469	
New York City, NY	8,406,000	305	
Philadelphia, PA	1,553,000	143	
Phoenix, AZ	1,513,000	518	

FOLLOW-UP

1. Rank the cities based on their population density from greatest to least.
2. Are rankings of the cities the same if they were ranked based on population? Why do you think this is the case?
3. What is the difference between the population density of New York and Chicago?
4. If 8,308,000 people live in London, England and it covers an area of 607 square miles, where would it rank on the list?
5. If 13,350,000 people live in Tokyo, Japan and it covers an area of 845 square miles, where would it rank on this list?
6. If 1,652,171 people live in Manila in the Philippines and it covers an area of 14.88 square miles, where would it rank on this list?