



DAY 31 ACTIVITIES - (Complete each subject on a separate sheet of paper)

AMI 31-45
2020 Pandemic Journal

PROJECT OVERVIEW

Directions: The following exploration combines your Social Studies and English classes into one class. Your job is to chronicle the changes you observe as your community, the country, and the world respond to Covid19. Your unique daily observations will serve as primary sources to the people in the future. Be authentic. Be honest. Be reflective. Pay attention to the details. Each day, take note of what you are seeing and hearing on the news, among your friends, within your family, and in your community. Feel free to use video, written language, poetry, sketches, or other means of expression as you document your experience during this global pandemic. The questions below are to guide your thinking, but you are encouraged to ask your own, too. As you reflect on your own experiences, you will also study and reflect on pandemics of the past, and you will analyze how you have developed throughout this experience. When we return to school, you will be asked to turn in your journal of daily observations.

[Inspired by [Bryan Shaw, UCBHSSP Teacher Leader](#)]

DAY 21 INSTRUCTIONS

Reading Requirement:

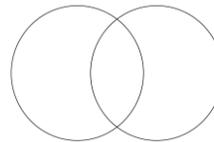
See ELA / Social Studies chunked articles at the bottom of this packet. Read sections 1 and 2 of article 1. [Also, feel free to conduct any additional research of your choosing and incorporate it into your journal]

English
Language
&
Arts
&
Social
Studies

Guiding Questions for Journal:

- Describe how you first learned of coronavirus. **I remember first hearing of coronavirus when _____.** **At first, I felt _____.**
- How have you, your family, and friends responded to the coronavirus and social distancing so far?
As of right now, social distancing has inspired us to _____.
- After reading the chunks of the article, consider the following questions:
 - What kind of primary sources do you think people will examine in the future to learn about the current COVID-19 outbreak?
I believe in the future people will _____.
 - What similarities do you see in the way the plague and COVID-19 both spread? Underline your evidence.
_____ and _____ are similar because they both _____.
- Begin constructing a Venn Diagram to analyze similarities and differences between the Black Death and COVID-19 outbreaks. You will continue to add to this diagram over the next few days.

Black Death and COVID-19



Science

How scientists conduct experiments determines if the outcomes can be used or not. There are variables in experiments that can change in an experiment. Some will change and some will need to be kept the same. The one variable that is purposely changed to test is called the independent variable. It is graphed on the x-axis. This is the variable the scientist has control over. In other classes, this would be called "the cause". Another variable scientists have to keep track of is the dependent variable. When the independent variable is changed by the scientist, the dependent variable will respond by changing. In other classes, this is called "the effect". Scientists graph the dependent variable on the y-axis.



There are variables that need to never change so the experiment can test one thing at a time. Those variables are to be controlled; hence, those are called control variables.

Use the table to answer the following questions. You may use the vocabulary chart to help you.

1. What is the independent variable in the experiment? **The independent variable in the experiment is _____.**
2. What is the dependent variable? **The dependent variable is _____.**
3. Based on this experiment and what you know about exercising, predict how the students' heart rates would change while they are resting after a long run.
I predict the students' heart rates will _____ while they are resting after a long run.
4. What guiding question do you believe this experiment might be testing? **I believe the questions this experiment is testing are _____.**
5. What does the data indicate about the increased physical activity and heart rate? **The data indicates _____.**

Three students conducted a controlled experiment to find out how walking and running affected their heart rates

Effect of Activity on Heart Rate (in beats per minute)			
Student	Heart Rate (at rest)	Heart Rate (walking)	Heart Rate (running)
1	70	90	115
2	72	80	100
3	80	100	120

The graph shows the temperature between noon and midnight in City A on a certain day.

The table shows the temperature, T , in degrees Fahrenheit, for h hours after noon in City B.

h	1	2	3	4	5	6
T	82	78	75	62	58	59

Math

1. Which city was warmer at 4:00 p.m.? **___ was warmer by 4 pm.**
2. Which city had a bigger change in temperature between 1:00 and 5:00 p.m.?
___ had a bigger change in temperature between 1 and 5 pm.
3. How much greater was the highest recorded temperature in City B than the highest recorded temperature in City A during this time? **The temperature was ___ degrees higher in City B than City A.**
4. Compare the outputs of the function when the input is 3. **When the input is 3, the temperature in City A is ___ degrees, while the input in City B is ___ degrees.**





DAY 32 and 33- (Complete each subject on a separate sheet of paper)

English Language Arts & Social Studies

2020 Pandemic Journal Continued...

Reading Requirement: See ELA / Social Studies chunked articles at the bottom of this packet. Read section 3 of article 1.

Guiding Questions for Journal:

- What is open in your neighborhood? What is closed? How are these changes to our daily lives affecting you?
_____ is (open/closed) in my neighborhood. These changes have affected my daily life by _____.
- After reading the chunk of the article, consider the following question: What were “death ships”? Why do you think they were “ordered out of the harbor”? “Death ships” were _____. I believe they were “ordered out of the harbor” because _____.
- Continue your Venn Diagram to analyze similarities and differences between the Black Death and COVID-19 outbreaks. Use evidence from the article and your journal to support your work.

The teacher has you do an experiment. You are told to plan a way to record what happens during the experiment and to make a graph. How do you know what to do? Science uses lots of charts and graphs and each type is used to show different types of information.

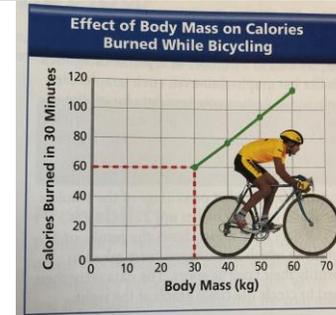
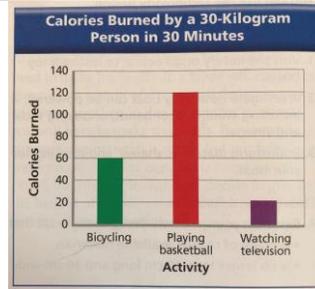
A data table is a way to record your observations and measurements in an organized way.

A bar graph is used to display data in a number of separate, or distinct, categories (for counted items, how many)

A line graph is used to display data that shows how one variable (the dependent variable) changes in response to another variable (the independent variable). The line is continuous and lets you estimate values for points you did not test. (for rate of change)

Science

Body Mass	Experiment 1: Bicycling	Experiment 2: Playing Basketball	Experiment 3: Watching Television
30 kg	60 Calories	120 Calories	21 Calories
40 kg	77 Calories	164 Calories	27 Calories
50 kg	95 Calories	206 Calories	33 Calories
60 kg	114 Calories	248 Calories	38 Calories



1. Using the line graph as a model, create a line graph for Experiment 2 OR Experiment 3 in the example data table. Be sure to include your scale and titles.
2. You read in the newspaper that a total of 4 cm of rain fell in June, 2.5 cm of rain fell in July, and 1.5 cm of rain fell in August.
 - a. What type of graph would you use to display this data?
 - b. Create your graph.



Math	<p>Noah is depositing money in his account every week to save money. The graph shows the amount he has saved as a function of time since he opened his account.</p> <p>Elena opened an account the same day as Noah. The amount of money E in her accounts is given by the function $E = 8w + 60$, where w is the number of weeks since the account was opened.</p> <ol style="list-style-type: none"> Who started out with more money in their account? Explain how you know. ___ started out with more money in their account. The graph shows ___. Who is saving money at a faster rate? Explain how you know. The graph shows that ___ is saving money at a faster rate by ___. How much will Noah save over the course of a year if he does not make any withdrawals? He will save ___ over a year. How long will it take Elena to save that much? It will take Elena ___ to save the equivalent to Noah. 	<table border="1"> <caption>Data points for Noah's account</caption> <thead> <tr> <th>Weeks since opening account</th> <th>Amount in the account</th> </tr> </thead> <tbody> <tr><td>2</td><td>70</td></tr> <tr><td>4</td><td>80</td></tr> <tr><td>6</td><td>90</td></tr> <tr><td>8</td><td>100</td></tr> <tr><td>10</td><td>110</td></tr> <tr><td>12</td><td>120</td></tr> <tr><td>14</td><td>130</td></tr> </tbody> </table>	Weeks since opening account	Amount in the account	2	70	4	80	6	90	8	100	10	110	12	120	14	130
Weeks since opening account	Amount in the account																	
2	70																	
4	80																	
6	90																	
8	100																	
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12	120																	
14	130																	

DAY 34 ACTIVITIES - (Complete each subject on a separate sheet of paper)

English Language Arts & Social Studies	<p><i>2020 Pandemic Journal Continued...</i></p> <p>Reading Requirement: See ELA / Social Studies chunked articles at the bottom of this packet. Read section 4 of article 1.</p> <p>Guiding Questions for Journal:</p> <ul style="list-style-type: none"> <input type="checkbox"/> What does your neighborhood look like? Are people walking around? How have people's thoughts about travel changed? ___ can be described as ___. People in my neighborhood are ___. People's thoughts about travel (have/ haven't) changed because ___. <input type="checkbox"/> After reading the chunk of the article, consider the following question: Why do you think some people believed at first Christians were immune to the disease? I believe some people believed at first Christians were immune to the disease because ___. <input type="checkbox"/> Continue your Venn Diagram to analyze similarities and differences between the Black Death and COVID-19 outbreaks. Use evidence from the article and your journal to support your work.
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<p>Science</p>	<p>A force is a push or a pull. Forces exist in many systems we use daily. One system is called a hydraulic system. You have probably seen them at a car repair shop lifting a vehicle or have felt a hydraulic system work when the brakes are pressed in the car. A hydraulic (hydro - fluid) uses liquids to transmit pressure in a system. A hydraulic system multiplies force by applying the force to a small surface area. The increase in pressure is then transmitted to another part of the fluid which pushes on a larger surface area.</p> <p>Graph 2.2 Shows a hydraulic lift.</p> <ol style="list-style-type: none">1. Suppose a force of 1,000 N is applied to both lifts. Use the graph to determine the lifting force of each lift. Lift A has a lifting force of __. Lift B has a lifting force of __.2. For Lift A, how much force must be applied to lift a 12,000 N object? To lift a 12,000 N object, __ N must be applied.3. By how much is the applied force multiplied for each lift? (compare applied force to lifting force) The applied force of Lift A is __ compared to the lifting force which is __.4. What does the rate of change (slope) tell us about each lift? The slope of Lift A tells us __. The slope of Lift B shows that __.5. Which lift would you choose if you wanted to produce the greater lifting force? Defend your answer. I would choose Lift __ because __.	<table border="1"><caption>Data points for Hydraulic Lifts graph</caption><thead><tr><th>Applied Force (N)</th><th>Lift A Lifting Force (N)</th><th>Lift B Lifting Force (N)</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>1,000</td><td>4,000</td><td>2,000</td></tr><tr><td>2,000</td><td>8,000</td><td>4,000</td></tr><tr><td>3,000</td><td>12,000</td><td>6,000</td></tr></tbody></table>	Applied Force (N)	Lift A Lifting Force (N)	Lift B Lifting Force (N)	0	0	0	1,000	4,000	2,000	2,000	8,000	4,000	3,000	12,000	6,000
Applied Force (N)	Lift A Lifting Force (N)	Lift B Lifting Force (N)															
0	0	0															
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2,000	8,000	4,000															
3,000	12,000	6,000															
<p>Math</p>	<ol style="list-style-type: none">1. A candle is burning. It starts out 12 inches long. After 1 hour, it is 10 inches long. After 3 hours, it is 5.5 inches long.<ol style="list-style-type: none">a. When do you think the candle will burn out completely? I predict the candle will completely burn out in __hours/days.b. Is the height of the candle a function of time? If yes, is it a linear function? Explain your thinking. The height of the candle is (not) a function of time because __. The height of the candle is (not) a linear function because __.2. We have two stacks of styrofoam cups. (see picture on the right)<ul style="list-style-type: none">• One stack has 6 cups, and its height is 15 cm.• The other stack has 12 cups, and its height is 23 cm.How many cups are needed for a stack with a height of 50 cm? One needs __ cups for a stack with the height of 50 cm.																



DAY 35 and 36 ACTIVITIES - (Complete each subject on a separate sheet of paper)

English Language Arts & Social Studies

2020 Pandemic Journal Continued...

Reading Requirement: See ELA / Social Studies chunked articles at the bottom of this packet. Read section 5 of article 1.

Guiding Questions for Journal:

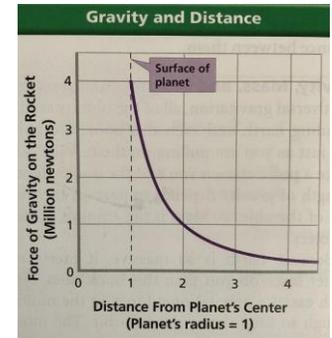
- How is today different from yesterday for you, your family, our nation, the world? What has changed?
Today is different for (me/my family/our nation/our world) because _____.
- After reading the chunk of the article, consider the following question: Most people lived near farm animals during the Middle Ages. How do you think this affected the spread of the disease?
_____ affected _____. OR People living near farm animals affected the spread of the disease by _____.
- Continue your Venn Diagram to analyze similarities and differences between the Black Death and COVID-19 outbreaks. Use evidence from the article and your journal to support your work

Science

Gravity is a non-contact force. This force attracts all objects toward each other. Newton's law of universal gravitation states that every object in the universe attracts every other object. The strength of the force of gravity between two objects depends on two factors: the masses of the objects and the distance between them.

As a rocket leaves a planet's surface, the force of gravity between the rocket and the planet changes. Use the graph to answer the questions.

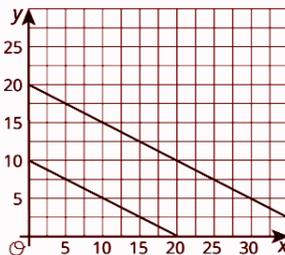
1. What two variables are being graphed? Label the dependent variable. **The two variables being graphed are ___ and ___. ___ is the dependent variable.**
2. What are the units of the independent variable? **The units of the independent variable are ___.**
3. What is the force of gravity on the rocket at the planet's surface? **The force of gravity on the rocket at the planet's surface is ___.**
4. What is the force of gravity on the rocket at a distance of two units (twice the planet's radius from its center)? **The force of gravity on the rocket at a distance of two units is ___.**
5. In general, how does the force of gravity pulling on the rocket change as the distance between it and the planet increases? **The force of gravity pulling on the rocket ___ as the distance between it and the planet increases.**



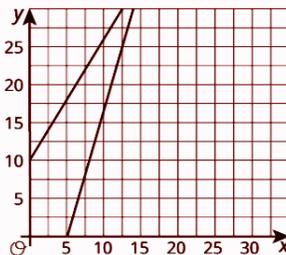
Math

Which one doesn't belong? Give a reason why each one might not belong. **___ doesn't belong because ___.**

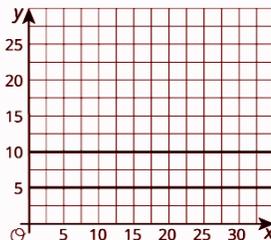
A



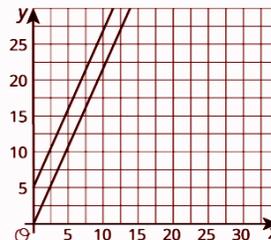
B



C

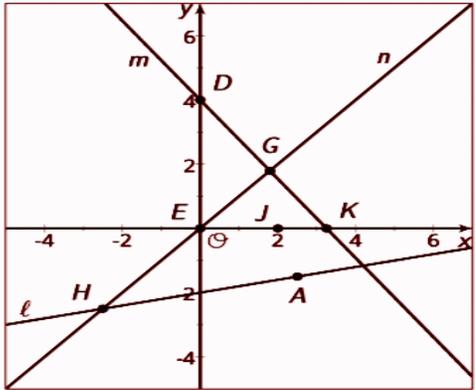


D



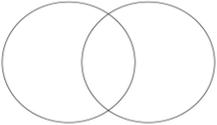
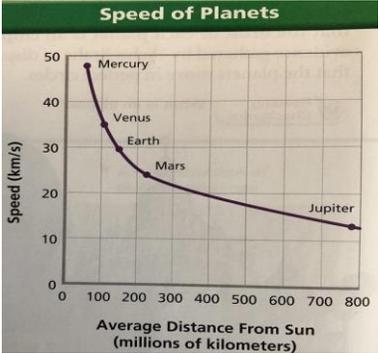
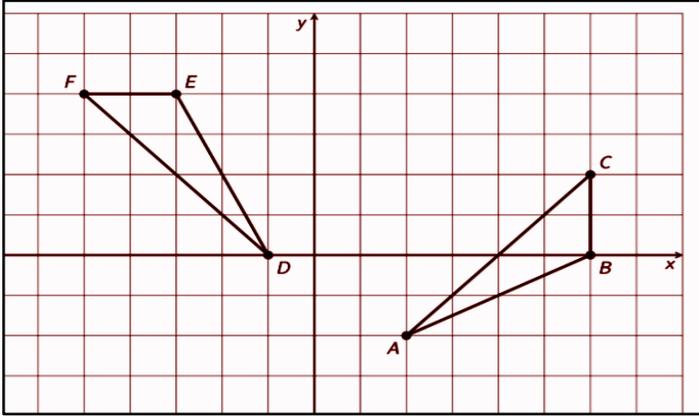


DAY 37 ACTIVITIES - (Complete each subject on a separate sheet of paper)

<p>English Language Arts & Social Studies</p>	<p>2020 Pandemic Journal Continued...</p> <p>Reading Requirement: See ELA / Social Studies chunked articles at the bottom of this packet. Read section 6 of article 1.</p> <p>Guiding Questions for Journal:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Do you see any examples of racism, injustice, or inequality in any of the events that happened today? Alternatively, do you see any examples of equality, fairness, or respect? (Locally, at the state level, nationally, or the world?) An example of _____ is _____. OR One example of (racism/ injustice/ inequality) (locally/ at the state level/ nationally/ in the world) is _____. An example of (equality/ fairness/ respect) (locally/ at the state level/ nationally/ in the world) is _____. <input type="checkbox"/> After reading the chunk of the article, consider the following question: Did the Black Death spread to other countries faster or slower than COVID-19? Underline textual evidence that helped you reach your conclusion. Explain some of the different ways that coronavirus has affected behaviors. I believe the Black Death spread (faster/ slower) than COVID-19 because _____. Some ways the coronavirus has affected behaviors are _____. <input type="checkbox"/> Complete your Venn Diagram to analyze similarities and differences between the Black Death and COVID-19 outbreaks. Use evidence from the article and your journal to support your work.
<p>Science</p>	<p>Like Earth, the moon moves through space in two ways. The moon revolves around Earth and also rotates on its own axis. When you see the moon in the sky, sometimes it appears round. Other times you see only a thin sliver, or crescent. The different shapes of the moon you see from Earth are called phases. Because the sun lights the moon, half the moon is almost always in sunlight. However, since the moon revolves around Earth, you see the moon from different angles, The half of the moon that faces Earth is not always the half that is sunlit.</p> <ol style="list-style-type: none"> During what phases are the moon, Earth and sun aligned in a straight line? They are aligned during the following phases: ____ Why can we not see the moon during a New Moon phase? During the New Moon phase, the moon can not be seen because ____. This model shows the movement of the moon around Earth. Does it clearly show the image of the moon as we see it? Yes/No How could this model be improved to give the reader more information? The model could be improved by ____. 
<p>Math</p>	<p>Here are graphs representing three linear relationships. These relationships could also be represented with equations.</p> <p>For each statement below, decide if it is true or false. Explain your reasoning.</p> <ol style="list-style-type: none"> (4,0) is a solution of the equation for line m. The coordinates of the point G make both the equation for line m and the equation for line n true $\square = O$ is a solution of the equation for line n. (2,0) makes both the equation for line m and the equation for line n true. There is no solution for the equation for line l that has $\square = 0.5$. The coordinates of point H are solutions to the equation for line l. There are exactly two solutions of the equation for line l. There is a point whose coordinates make the equations of all lines true. <p>The statement is true/false because ____.</p> 



DAY 38 and 39 ACTIVITIES - (Complete each subject on a separate sheet of paper)

<p>English Language Arts & Social Studies</p>	<p>2020 Pandemic Journal Continued...</p> <p>Reading Requirement (NEW ARTICLE): See ELA / Social Studies chunked articles at the bottom of this packet. Read section 7 of article 2.</p> <p>Guiding Questions for Journal:</p> <ul style="list-style-type: none"> <input type="checkbox"/> What did you see today that gave you hope? Anxiety? Fear? (In person, in the news, or on social media?) How has coronavirus affected your personality? Throughout this experience, I have noticed that _____, and this has made me think that _____. <input type="checkbox"/> After reading the chunk of the article, consider the following question: What is something surprising or shocking you learned from this section? Explain. The part where _____ happened surprised me because _____. <input type="checkbox"/> Begin constructing a Venn Diagram to analyze similarities and differences between the Spanish Flu and COVID-19 outbreaks. Use evidence from the article and your journal to support your work. <p style="text-align: right;">Spanish Flu and COVID-19</p> 
<p>Science</p>	<p>Can you imagine, studying how planets move without having a telescope? Johannes Kepler was a research astronomer starting in 1594, fourteen years before the telescope existed! The telescope was invented in 1608! Johannes Kepler had a very interesting theory. He believed the planets moved around the sun in elliptical orbits, not in perfect circles. When Kepler finally got to use a telescope, he verified his research was correct. Johannes Kepler discovered a relationship between the speed of a planet and its distance from the sun. Use the graph to answer the following questions:</p> <ol style="list-style-type: none"> 1. According to the graph, what is Earth's average speed? Earth's average speed is ____. 2. Which is closer to the sun, Mercury or Mars? Which moves faster? ____ is closer to the sun. ____ moves faster. 3. What is the relationship between a planet's speed and its average distance from the sun. The closer/farther the planet is from the sun, the speed ____. 4. The planet Uranus is about 2,900 million km from the sun. Predict whether its speed is greater or less than Jupiter's speed. Defend your answer. I predict its speed is greater/less than Jupiter's speed because ____. 
<p>Math</p>	 <p>Decide whether or not $\triangle ABC$ and $\triangle DEF$ are congruent. Explain your reasoning</p> <p>The two triangles are (not) congruent because ____.</p>



DAY 40 ACTIVITIES - (Complete each subject on a separate sheet of paper)

English
Language
Arts
&
Social
Studies

2020 Pandemic Journal Continued...

Reading Requirement: See ELA / Social Studies chunked articles at the bottom of this packet. Read section 8 of article 2.

Guiding Questions for Journal:

- What would you have done differently to prepare for social distancing had you known coronavirus was going to affect our society so drastically? **Had I known about social distancing ahead of time, I would have _____.**
- After reading the chunk of the article, consider the following questions:
 - Why is the flu so contagious? **The flu is so contagious because _____.**
 - What is pneumonia and why does it kill some people? **Pneumonia is _____, and it kills some people because _____.**
- Continue your Venn Diagram to analyze similarities and differences between the Spanish Flu and COVID-19 outbreaks. Use evidence from the article and your journal to support your work.

Science

Annual Sunspot Numbers			
Year	Sunspot Number	Year	Sunspot Number
1972	68.9	1988	100.2
1974	34.5	1990	142.6
1976	12.6	1992	94.3
1978	92.5	1994	29.9
1980	154.6	1996	8.6
1982	115.9	1998	64.3
1984	45.9	2000	119.6
1986	13.4	2002	104.0

Our sun does not have a solid surface. Rather, the sun is a ball of glowing gas all the way through. Early observers noticed dark spots on the sun's surface. These became known as sunspots. Sunspots look small but they can be larger than Earth. Sunspots are areas of gas on the sun's surface that are cooler than the gases around them. Cooler gases don't emit as much light as hotter gases, which is why sunspots look darker than the rest of the surface.. Where the particles hit Earth's atmosphere, powerful electric currents are created that cause the gas molecules in the atmosphere to glow. These are the Northern Lights. When the Solar winds are too great, the particles can cause magnetic storms. Magnetic storms can disrupt radio, telephone, and television signals.

- A. Use the data in the table of Annual Sunspot Numbers to make a graph.
- B. Label the x-axis year (independent variable)
- C. Label the y-axis sunspot number.

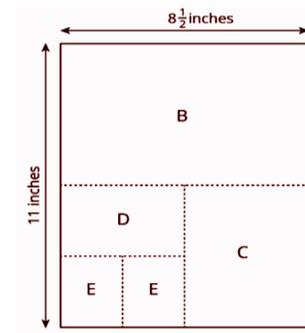
1. Based on your graph, which years had the highest Sunspot number?
2. How often does the cycle of minimum activity repeat? **It repeats every ___ years.**
3. When was the most recent maximum sunspot activity? **The most recent maximum sunspot activity occurred in ___.**

Math

Rectangles were made by cutting an 8 ½-inch by 11-inch piece of paper in half, in half again, and so on, as illustrated in the diagram.

1. Find the lengths of each rectangle and enter them in the table.

Rectangle	Width	Length
A	8 ½	11
B		
C		
D		
E		



2. Which rectangles are similar to each other? Explain how you know.
Rectangles ___ and ___ are similar to each other because ___.



DAY 41 and 42 ACTIVITIES - (Complete each subject on a separate sheet of paper)

<p>English Language Arts & Social Studies</p>	<p>2020 Pandemic Journal Continued...</p> <p>Reading Requirement: See ELA / Social Studies chunked articles at the bottom of this packet. Read sections 9 and 10 of article 2.</p> <p>Guiding Questions for Journal:</p> <ul style="list-style-type: none"> <input type="checkbox"/> How has this event challenged you? Be specific. <i>Some of this experience has been challenging. ____, for instance, has challenged me because __.</i> <input type="checkbox"/> After reading the chunk of the article, consider the following question: How fast did some people die of this flu? <input type="checkbox"/> Why was it called the "Spanish Flu"? <i>It was called the Spanish Flu because _____.</i> <input type="checkbox"/> What was so unusual about the Spanish Flu? <i>One unusual aspect of the Spanish Flu was that it _____.</i> <input type="checkbox"/> Why do you think it was hard back then to figure the exact death toll? <i>Death tolls were hard to configure because _____.</i> <input type="checkbox"/> Continue your Venn Diagram to analyze similarities and differences between the Spanish Flu and COVID-19 outbreaks. Use evidence from the article and your journal to support your work. 																
<p>Science</p>	<p>Use the information from Day 27 and the graph you created on Day 27.</p> <ol style="list-style-type: none"> Compare your sunspot graph with the Magnetic Storms Graph. What relationship can you infer between periods of high sunspot activity and magnetic storms? Respond using CERJ. <i>Claim: One can see that the periods of high sunspot activity and magnetic storms are related by __. Evidence: See the graphs. Reasoning: The graphs shows that __ Justification: The data supports the idea that __.</i> Suppose you are an engineer working for an electric power company. Your community is experiencing occasional blackouts. Write a short public service announcement explaining the relationship between sunspot number and electrical disturbances on Earth. <i>Attention: With the surge of recent blackouts in our area, it may interest you to know that __.</i> <div data-bbox="1650 578 1965 841" data-label="Figure"> <table border="1"> <caption>Magnetic Storm Days</caption> <thead> <tr> <th>Year</th> <th>Days With Magnetic Storms</th> </tr> </thead> <tbody> <tr><td>1970</td><td>10</td></tr> <tr><td>1975</td><td>35</td></tr> <tr><td>1980</td><td>15</td></tr> <tr><td>1985</td><td>45</td></tr> <tr><td>1990</td><td>55</td></tr> <tr><td>1995</td><td>15</td></tr> <tr><td>2000</td><td>25</td></tr> </tbody> </table> </div>	Year	Days With Magnetic Storms	1970	10	1975	35	1980	15	1985	45	1990	55	1995	15	2000	25
Year	Days With Magnetic Storms																
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1975	35																
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1995	15																
2000	25																
<p>Math</p>	<div data-bbox="302 922 562 1130" data-label="Image"> </div> <p>Sails come in many shapes and sizes. The sail on the left is a triangle. Is it a right triangle? Explain your reasoning. (Hint: Pythagorean Theorem)</p> <p><i>The sail is (not) a right triangle because __.</i></p> <div data-bbox="1766 914 1927 1146" data-label="Diagram"> </div>																



DAY 43 ACTIVITIES - (Complete each subject on a separate sheet of paper)

English Language Arts & Social Studies

2020 Pandemic Journal Continued...
Reading Requirement: See ELA / Social Studies chunked articles at the bottom of this packet. Read sections 11 and 12 of article 2.
Guiding Questions for Journal:

- How has this event changed your thoughts and feelings about your future? How has it inspired you to think differently about your life? **Coronavirus and social distancing has made me think about my future because _____.** Now, because of this event, I am thinking _____, which is different from how I used to think, which was _____.
- After reading the chunk of the article, consider the following question: What role did World War I play in making the outbreak worse? **[World War I made the outbreak worse because _____.]**
- What does it mean to quarantine people? What is the strategy for this? **Quarantining is a method of _____ in which _____.**
- Continue your Venn Diagram to analyze similarities and differences between the Spanish Flu and COVID-19 outbreaks. Use evidence from the article and your journal to support your work.

Science

When Christopher Columbus sighted land in 1492, he didn't know what he had found. Instead of a map he had used a compass for navigation. A compass is a device that has a magnetized needle that spins freely. A compass needle usually points north. During the time of Columbus, no one knew why the compass always pointed the same direction. An English physician hypothesized that the Earth was a giant magnet and that is they the compass behaved as it did. The physician was correct. Just like a bar magnet, Earth has a magnetic field surrounding it and two magnetic poles. Earth's magnetic poles do not match its geographic poles. The angle between the geographic north and the north to which a compass needle points is called magnetic declination. This is a natural occurrence in magnets. Earth's magnetic poles move slowly over time.

The data in the table show the position of Earth's magnetic north pole in specific years.

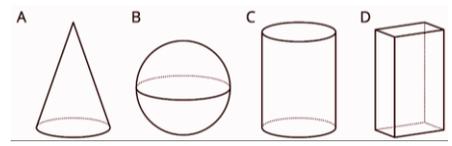
- What is the trend in the speed of the pole's movement? **The trend in the speed of the pole's movement is _____.**
- What is the total distance the pole has traveled over the time shown? **The pole has traveled _____ total kilometers.**
- Using this data, predict the average speed of the pole's movement between 2001 and 2010. Explain how you determined your answer.
I predict the average speed of the pole's movement between 2001 and 2010 to be _____. To solve this problem, I _____.

Magnetic North Pole Movement		
Year of Reading	Distance Moved Since Previous Reading (km)	Average Speed (km/yr)
1948	420	9.5
1962	150	10.7
1973	120	10.9
1984	120	10.9
1994	180	18.0
2001	287	41.0

Math

These are drawings of three-dimensional objects. Which one doesn't belong? Explain a reason why each does not belong.

Object _____ doesn't belong because _____.





DAY 44 and 45 ACTIVITIES - (Complete each subject on a separate sheet of paper)

<p>English Language Arts & Social Studies</p>	<p>2020 Pandemic Journal Continued...</p> <p>Reading Requirement: See ELA / Social Studies chunked articles at the bottom of this packet. Read sections 13 and 14 of article 2.</p> <p>Guiding Questions for Journal:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Read your journal entries. Think of yourself as the main character in a story. Analyze how you and the pandemic have developed and interacted with each other over the course of this journaling experience: Analyze how particular lines of dialogue or incidents in your story propelled action, revealed aspects of yourself as a character, or provoked a decision from someone in your story. <input type="checkbox"/> After reading the chunk of the article, consider the following question: How is COVID-19 affecting our economy similar to the Spanish Flu? COVID-19 is similar to the Spanish Flu, economically, in that it _____. <input type="checkbox"/> No cure was invented for Spanish Flu, yet it eventually came to an end. How was that possible? Despite not having a cure, Spanish Flu still ended because _____. 																														
<p>Science</p>	<p>Technological advances make many jobs easier to perform. They also increase the amount of work that people can accomplish. For example, farmers can plow more land in less time by using a tractor rather than a horse-drawn plow. However, in some cases, the advance of technology can cause people to lose their jobs. If farmers cannot afford expensive equipment, such as tractors and irrigation systems, their farms may not be as productive as farms that can afford the equipment. Eventually, less productive farms may go out of business and the farmers may lose their jobs.</p> <p>The graph shows the percentage of workers who worked on farms between the years 1860 and 2000. Use the graph to answer the questions.</p> <ol style="list-style-type: none"> What factor is plotted on the horizontal axis? ___ is plotted on the horizontal axis. What factor is plotted on the vertical axis? ___ is plotted on the vertical axis. Which <u>axis</u> is the independent variable plotted on? The independent variable is plotted on the ___ axis. Of the years shown on the graph, in which year was the percentage of farm workers highest? The percentage of farm workers was highest in ___. By how much did the percentage of farm workers change between 1860 and 2000? The percentage of farm workers changed by ___ between 1860 and 2000. What trend does the graph show? Base your answer on what you know about technological advances. The graph shows that... <div data-bbox="1640 651 1990 894" data-label="Figure"> <table border="1"> <caption>Farm Workers in the United States</caption> <thead> <tr> <th>Year</th> <th>Percentage of Total Workforce</th> </tr> </thead> <tbody> <tr><td>1860</td><td>45</td></tr> <tr><td>1880</td><td>42</td></tr> <tr><td>1900</td><td>35</td></tr> <tr><td>1920</td><td>25</td></tr> <tr><td>1940</td><td>18</td></tr> <tr><td>1960</td><td>10</td></tr> <tr><td>1980</td><td>5</td></tr> <tr><td>2000</td><td>2</td></tr> </tbody> </table> </div>	Year	Percentage of Total Workforce	1860	45	1880	42	1900	35	1920	25	1940	18	1960	10	1980	5	2000	2												
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1880	42																														
1900	35																														
1920	25																														
1940	18																														
1960	10																														
1980	5																														
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<p>Math</p>	<p>The scatter plot shows the weight and fuel efficiency data used in an earlier lesson along with a linear model represented by the equation $y = -0.0114x + 41.3021$.</p> <ol style="list-style-type: none"> What is the value of the slope and what does it mean in this context? The value of the slope is ___. It means that ___. What does the other number in the equation represent on the graph? What does it mean in context? The other number represents ___. It means that ___. Use the equation to predict the fuel efficiency of a car that weighs 100 kilograms. The fuel efficiency of a car that weighs 100 kg would be ___ mpg. Use the equation to predict the weight of a car that has a fuel efficiency of 22 mpg. The weight of a car that has a fuel efficiency of 22 mpg would be ___ kg. <div data-bbox="1535 1094 1990 1430" data-label="Figure"> <table border="1"> <caption>Scatter Plot Data (Approximate)</caption> <thead> <tr> <th>Weight (kg)</th> <th>Fuel Efficiency (mpg)</th> </tr> </thead> <tbody> <tr><td>1100</td><td>28.5</td></tr> <tr><td>1200</td><td>30.0</td></tr> <tr><td>1300</td><td>25.0</td></tr> <tr><td>1400</td><td>23.0</td></tr> <tr><td>1500</td><td>26.0</td></tr> <tr><td>1600</td><td>20.0</td></tr> <tr><td>1700</td><td>21.0</td></tr> <tr><td>1800</td><td>19.0</td></tr> <tr><td>1900</td><td>18.0</td></tr> <tr><td>2000</td><td>16.0</td></tr> <tr><td>2100</td><td>18.0</td></tr> <tr><td>2200</td><td>18.0</td></tr> <tr><td>2300</td><td>16.0</td></tr> <tr><td>2400</td><td>16.0</td></tr> </tbody> </table> </div>	Weight (kg)	Fuel Efficiency (mpg)	1100	28.5	1200	30.0	1300	25.0	1400	23.0	1500	26.0	1600	20.0	1700	21.0	1800	19.0	1900	18.0	2000	16.0	2100	18.0	2200	18.0	2300	16.0	2400	16.0
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English and Social Studies: Article 1 (Days 31-37)

Primary Source: A Priest Tells about the Black Death, 1348 by Henry Knighton, adapted by Newsela

1	<p>A primary source is a historical document written or created during the event being studied. You are about to read a primary source about the Bubonic Plague or the "Black Death." It was written by Henry Knighton, a historian and priest at St. Mary's of Leicester in England.</p>	<p>What kind of primary sources do you think people will examine in the future to learn about the current COVID-19 outbreak? I believe in the future people will _____.</p>
2	<p>The Black Death was one of the worst plagues that spread death to many countries. From 75 million to 200 million people in Eurasia and Europe died in the years between 1346 and 1353. The Black Death is thought to have come from rats and started in the plains of Central Asia. It moved west along the Silk Road, maybe with Mongol troops, reaching Eastern Europe by 1343. Cargo ships bringing riches from the east also brought rats that had a bacteria, <i>Yersinia Pestis</i>, in their blood. Fleas on the rats bit them and drank the blood filled with <i>Yersinia Pestis</i>. Fleas then jumped onto humans and bit them. The <i>Yersinia Pestis</i> began killing humans by attacking the lungs and turning them to liquid. A cough spread the bacteria to other humans. The bacteria could also stop the blood from clotting, causing victims to bleed to death. Touching the blood or body of a sick person also spread the Black Death, which got its name because many victims were covered with black boils. There were at least two kinds of plague: pneumonic (lung) plague or bubonic (clotting) plague.</p>	<p>What similarities do you see in the way the plague and COVID-19 both spread? Underline your evidence. <u> </u> and <u> </u> are similar because they both <u> </u>.</p>
3	<p>The Black Death arrived in Europe by sea in October 1347, when 12 trading ships docked in Sicily after a long journey through the Black Sea. Most of the sailors were dead and those that were still alive were very sick. The "death ships" were ordered out of the harbor, but it was too late, and thousands in Sicily died. The expelled ships brought the disease to other ports in Italy and France. Over the next five years, the Black Death would kill almost half of the population of Europe, or 25 million people. Here is an excerpt from Henry Knighton's account:</p>	<p>What were "death ships"? Why do you think they were "ordered out of the harbor"? "Death ships" were <u> </u>. I believe they were "ordered out of the harbor" because <u> </u>.</p>
4	<p>"48 Million People Died Suddenly"- In 1348 and 1349, many millions of people died throughout the world. It began first in India and moved west to Tarsus, Turkey, killing Muslims first and then Christians and Jews. The office of the pope believed that 48 million people died suddenly in those distant countries of Asia (mostly non-Christians) in the space of one year, from Easter to Easter. This did not include the death of Christians. When the king of Tarsus, a Muslim, saw this sudden loss of life among his people, he and his nobles set out to travel to the pope at Avignon, France. They wanted to become Christian and be baptized by the pope. The king believed that his people were being punished because they had not accepted Jesus Christ as the son of God. However, when he had completed 20 days of his journey, he heard that the fatal plague had killed many Christians, too. So they turned back to return to Tarsus. But Christians, who had been following the king and his people, attacked. They killed 1,312 people in Avignon the first day and 400 more on the second.</p> <p>Then this most terrible plague came to the coast of England. It went through Southampton and came to Bristol. The cruel death took just two days to spread and almost the whole town was wiped out.</p>	<p>Why do you think some people believed at first Christians were immune to the disease? I believe some people believed at first Christians were immune to the disease because <u> </u>.</p>
5	<p>"The Scots Heard That The Plague Was Killing Their Enemy" -In the same year, a deadly sickness killed sheep throughout the country. In one place more than 5,000 sheep died in a single pasture. Their bodies were so decayed that no animal or bird would touch them. Because there was the fear of death, animals were sold at a low price. Sheep and cattle roamed through the fields eating the corn and no one stopped them. The Scots heard that the plague was killing their enemy, the English. They felt God was punishing England. So they gathered in the forest of Selkirk, near the border, planning to invade England. However, the monstrous plague suddenly came upon them and within a short space of time around 5,000 died. They retreated to Scotland, but the English attacked and killed many of them.</p>	<p>Most people lived near farm animals during the Middle Ages. How do you think this affected the spread of the disease? People living near farm animals affected the spread of the disease by <u> </u>.</p>



<p>6 "All Parties Feared The Spread Of The Plague" -At that time there were not enough priests in churches for masses, services, prayers for dying, or funerals. The plague moved through Dorset seaport, on to Devon, Somerset and up to Bristol. So the people of Gloucester stopped people escaping from Bristol. They feared the breath of those who had lived among the dying would spread the sickness. But in the end Gloucester, and then Oxford and London too, and finally the whole of England were so violently attacked that almost 90 percent of both men and women died. Cases in the courts of the king came to a stop, for all parties feared the spread of the plague. When the churchyards were not large enough to bury the dead, fields were used for the burials of the dead.</p> <p>Hardly anyone dared to have anything to do with the sick. They fled from the things left by the dead, which had once been precious but were now poisonous to health. People who one day had been full of happiness on the next were found dead. Victims had little black boils scattered over their whole body. Of these people very few, indeed hardly any, recovered life and health. The plague, which began in Bristol on the feast of the Assumption of the Virgin [15 August] and in London around Michaelmas [29 September], raged for more than a year in England and completely emptied many villages.</p> <p>In the following year it laid waste to the Welsh and English in Wales, and then it moved to Ireland, where the English residents were cut down in great numbers. But the native Irish living in the mountains and uplands were scarcely touched until 1357, when it took them unawares and killed them, too."</p>	<p>Did the Black Death spread to other countries faster or slower than COVID-19? Underline textual evidence that helped you reach your conclusion.</p> <p>I believe the Black Death spread (faster/slower) than COVID-19 because _____.</p>
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Draw a Venn Diagram to analyze similarities and differences between the Black Death and COVID-19 outbreaks. Use evidence from the text to support your work.

ELA and Social Studies: Chunked Article 2 (Days 39-45)

The 1918 flu pandemic that killed millions

by History.com adapted by Newsela

<p>7 The influenza or flu pandemic of 1918 to 1919, the deadliest in modern history, infected an estimated 500 million people worldwide — about one-third of the planet's population at the time — and killed an estimated 20 million to 50 million victims. More than 25 percent of the U.S. population became sick, and some 675,000 Americans died.</p> <p>The 1918 flu was first observed in Europe, the United States, and parts of Asia, before swiftly spreading around the world. Surprisingly, many victims were young, otherwise healthy adults. At the time, there were no effective drugs or vaccines to treat this killer flu strain or prevent its spread. In the U.S., citizens were ordered to wear masks, and schools, theaters and other public places were closed. Researchers later discovered what made the 1918 pandemic so deadly: The influenza virus invaded victims' lungs and caused pneumonia.</p>	<p>What is something surprising or shocking you learned from this section? Explain</p> <p>I learned/was surprised by _____.</p>
<p>8 Flu facts- Influenza, also called the flu, is a virus that attacks the respiratory system. The virus is highly contagious. When an infected person coughs, sneezes, or talks, respiratory droplets are generated and transmitted into the air and can then be inhaled by anyone nearby. Additionally, a person who touches something with the virus on it and then touches his or her mouth, eyes, or nose can become infected.</p> <p>During the last three decades, between 3,000 and 49,000 people have died annually because of the flu, according to the Centers for Disease Control and Prevention (CDC). Some people such as young children, people over age 65, and pregnant women face a higher risk of getting sick. Also vulnerable are people with certain medical conditions, such as asthma, diabetes, or heart disease. A flu pandemic, such as the one in 1918, occurs when an especially intense new influenza strain for which there's little or no immunity appears and spreads quickly from person-to-person around the globe.</p>	<p>Why is the flu so contagious? The flu is so contagious because _____.</p> <p>What is pneumonia and why does it kill some people? Pneumonia is _____ and it kills some people because _____.</p>



9	<p>The flu strikes far and wide- The first wave of the 1918 pandemic occurred in the spring and was generally mild. The sick, who experienced such typical flu symptoms as chills, fever and fatigue, usually recovered after several days, and the number of reported deaths was low. However, a second, highly contagious wave of influenza appeared in the fall of that same year. Victims died within hours or days. Their skin turned blue and their lungs filled with fluid, causing them to suffocate.</p> <p>It's unknown exactly where the particular strain of influenza that caused the pandemic came from. It became known around the world as the "Spanish Flu" because Spain was one of the earliest countries to be hit hard by the disease.</p>	<p>How fast did some people die of this flu? Some people died ____.</p> <p>Why was it called the "Spanish Flu"? It is known as the Spanish Flu because ____.</p>
10	<p>One unusual aspect of the 1918 flu was that it struck down many previously healthy younger men and women – a group normally resistant to this type of illness. In fact, according to journalist Gina Kolata, more U.S. soldiers died from the 1918 flu than died in battle during World War I (1914-1918).</p> <p>Although the death toll of the 1918 flu is often estimated at 20 million to 50 million victims worldwide, other estimates run as high as 100 million. The exact numbers are impossible to know due to a lack of medical record-keeping in many places. What is known, however, is that few locations were immune. In the U.S., victims ranged from residents of major cities to those of remote Alaskan communities.</p>	<p>What was so unusual about the Spanish Flu? This flu was unusual because ____.</p> <p>Why do you think it was hard back then to figure the exact death toll? It was difficult because ____.</p>
11	<p>Fighting the flu -When the 1918 flu hit, doctors and scientists were unsure what caused it or how to treat it. Unlike today, they had no effective vaccines or antivirals, drugs that treat the flu.</p> <p>Complicating matters was the fact that World War I had left parts of America with a shortage of physicians and health workers. Moreover, many of these medical personnel then came down with the flu themselves. In some areas, hospitals were so overloaded with flu patients that schools and private homes had to be converted into makeshift hospitals, some of which were staffed by medical students.</p>	<p>What role did World War I play in making the outbreak worse? WWI caused ____.</p>
12	<p>Officials in some communities quarantined the sick. They ordered citizens to wear masks and shut down public places, including schools, churches and theaters. People were advised to avoid shaking hands and to stay indoors. Libraries put a halt on lending books, and laws were even passed to make spitting illegal.</p>	<p>What does it mean to quarantine people? What's the strategy for this? To quarantine people means ____. A strategy for this is ____.</p>
13	<p>The flu takes a heavy toll on society - The flu took a heavy human toll, wiping out entire families and leaving countless widows and orphans in its wake.</p> <p>The outbreak was also detrimental to the U.S. economy. Many businesses were forced to shut down because so many employees were sick. Basic services such as mail delivery and garbage collection were affected, and in some places there weren't enough farm workers to harvest crops.</p>	<p>How is COVID-19 affecting our economy similar to the Spanish Flu? COVID-19 is affecting our economy in a similar fashion by ____.</p>
14	<p>Flu pandemic finally ends- By the summer of 1919, the flu pandemic came to an end. Those people who were infected had either died or developed immunity. Almost 90 years later, in 2008, researchers announced they'd discovered what made the 1918 flu so deadly. It was a group of three genes that enabled the virus to weaken a victim's bronchial tubes and lungs, so that pneumonia easily developed.</p> <p>Since 1918, there have been several other influenza pandemics, although none have been quite as deadly. One pandemic from 1957 to 1958 killed around 2 million people worldwide, including some 70,000 in the United States. Another flu pandemic from 1968 to 1969 killed approximately 1 million people, including some 34,000 Americans. More than 12,000 Americans died during the H1N1 (or "swine flu") pandemic that occurred from 2009 to 2010.</p>	<p>No cure was invented for Spanish Flu, yet it eventually came to an end. How was that possible? The pandemic came to an end by ____.</p>

Draw a Venn Diagram to analyze similarities and differences between the Spanish Flu and COVID-19 outbreaks. Use evidence from the text to support your work.