

Christina School District Assignment Board

Student's First & Last Name _____ Student ID/Lunch # _____ School _____ Grade _____

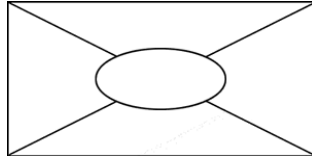
Grade Level: 7th

Week of May 11th, 2020

		No School	Day 1	Day 2	Day 3	Day 4
ELA			<p>This week we will explore the 2020 US Census and main ideas and themes. Read and respond in a paragraph to both of the prompts below.</p> <p>1. Can you think of any groups that are kept from being citizens or having the full rights of citizens in the United States today?</p> <p>2. Why do you think there are still restrictions given the laws protecting citizenship?</p>	<p>Read the article "Pro/Con". As you read underline examples of people facing challenges with accessing citizenship or the rights of citizenship. Annotate questions, comments or connections you have to these challenges. Summarize the text and answer questions 1-4.</p>	<p>Read the article "We are Still Here". As you read underline examples of people facing challenges with accessing citizenship or the rights of citizenship. Annotate questions, comments or connections you have to these challenges. Summarize the text and answer questions 1-4.</p>	<p>Writing Which citizenship issues do you feel are most important to address right now? Cite evidence from the articles in your response.</p>
Math (IM1 can be found on the 8th Grade Board)	7		<p><i>Simple Interest</i></p> <p>Answer "Which One Doesn't Belong?" and justify your choice. (attached) Read Math Notes: Simple Interest and page 96. Use examples to help</p>	<p>Complete p. 96 #3-5 (attached) Refer to Math Notes and examples from p. 96 if needed.</p>	<p>Complete 7-86, 7-87, and 7-88. (attached) Refer to Math Notes and examples from p. 96 if needed.</p>	<p>Complete 7-89, 7-90, and 7-91. (attached) Refer to Math Notes and examples from p. 96 if needed.</p>

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			complete page 96 #1-2.. (attached)			
	7+		(Math 7+ should follow the Math 8 calendar in the 8th grade packet PLUS complete the Puzzle Investigator Problem (PIP) 8 - Sierpinski's Triangles. (attached)			
Science			Why Do Pets Have Dark Eyes When Humans Have Mostly White Eyes (part 1): Read article. In BLUE, highlight or underline information about the structure of the human eye. In GREEN, highlight or underline information about how other organisms' eyes are similar to yours. In YELLOW, highlight or underline information about why different organisms have different eye structures. Also annotate any questions you have as you are reading.	Why Do Pets Have Dark Eyes When Humans Have Mostly White Eyes (part 2): Reread article and notations as necessary. Write a claim that answers the following: Why do different animals have different eye structures? Support your claim with evidence from the article. Then, explain why the evidence supports your claim.	Why Do Pets Have Dark Eyes When Humans Have Mostly White Eyes (part 3): Divide a piece of blank paper as follows:  In each of the 4 outer sections, summarize as many highlights as you can recall from the articles from both this week and last week (if you retained the articles from last week, you may use them for reference).	Why Do Pets Have Dark Eyes When Humans Have Mostly White Eyes (part 4): Working with the same paper from yesterday, write your best answers to the following questions in the center section: a) How is the organization of my body similar to other organisms? b) How is it different? c) Why might these similarities and differences be important?
Social Studies			Complete Activity 1 from the document titled, "Partnerships and Partitions-PART 1"	Complete Activity 2, Draw Borders & Questions to Ponder from the document titled, "Partnerships and Partitions-PART 1"	Complete Activity 3, Check for Understanding from the document titled, "Partnerships and Partitions-PART 1"	Complete Activity 4, Thought Questions & Activity 5, Check for Understanding from the document titled, "Partnerships and Partitions-PART 1"

PRO/CON: Should our next census ask about citizenship status?



PRO: The question allows the government to properly disburse needed funds and services

Every 10 years, the U.S. government conducts a census. The census is a series of questions that helps determine the population of each state. It's important for deciding how many representatives each state gets in Congress, among other uses.

The U.S. Census Bureau plans to include a question on the 2020 census asking whether the respondent is a U.S. citizen.

Census takers have been asking that question on one survey or another since the very first census. Even so, some people have a problem with it. They shouldn't. Such a question could be very helpful for those who help make laws. For example, it can help count how many people lack health insurance to help them afford going to the doctor.

The Census Bureau included a citizenship question through 1950. It stopped in 1960 in the hopes of increasing response rates. The question was still included on what is called the "long form" census in 1970, which went to fewer households.

In 2005, the citizenship question was added to the American Community Survey, an annual survey of a very small percentage of households.

The 10-year census has not included a citizenship question for decades now. Because of this, the government does not know how many of the respondents are citizens, non-citizens in the U.S. legally, or undocumented and in the U.S. illegally.

Health Care Coverage

During health care reform debates in the past, some of us pointed out that perhaps 25 percent of those without insurance were undocumented. That means they are unlikely to be covered by health insurance reform efforts. Sure enough, "Obamacare" excluded them from receiving health insurance discounts.

Obamacare, also known as the Affordable Care Act, is the health care law signed into law by President Barack Obama in 2010. The goal of Obamacare was to help more families get insurance and to make sure that people who were already sick could still get insurance.

Even today, there are perhaps 8 million people in the country illegally who don't have health insurance. As it stands, they will simply remain uninsured.

The Census Bureau's annual American Community Survey does ask a citizenship question. While more frequent, those surveys are limited samples, about 3.5 million out of roughly 126 million households. The smaller sample numbers are then used to draw conclusions about the country as a whole. Even then, though, the bureau doesn't include an estimate of the uninsured who are in the U.S. illegally.

The result is that estimating the number of uninsured who are in the country illegally has mostly been a guessing game.

Helpful In Making Policy Decisions

The issue is not limited to health insurance, though. The federal government funds a number of programs where taxpayer money supports immigrants in the country illegally. Knowing how many undocumented people are receiving those funds could help inform government decisions.

A citizenship question might discourage some participation. The Census Bureau has increasingly used various methods, statistical and otherwise, to fill in the gaps, though.

Some form of a citizenship question has been around for two centuries. Asking it on the census once again would help take a little of the guesswork out of many of our government rule-making challenges.

Merrill Matthews is a resident scholar with the Institute for Policy Innovation. He holds a Ph.D. in the humanities from the University of Texas.

CON: Such questions don't belong in a free country's census

For the first time since the 1950 census, the 2020 census will include a question about whether a respondent is a citizen.

The Trump administration explained some worrying plans for the 2020 census when Commerce Secretary Wilbur Ross spoke before lawmakers in 2017. Ross runs the Commerce Department, which is in charge of the U.S. Census Bureau. Ross said that he wanted census data to be "re-used" by other government departments and private businesses.

The inclusion of a citizenship question in the 2020 census is worrying. So is the willingness of the government to "re-use" census data for other purposes. For example, the data could be used to locate groups of non-citizens.

Federal law prohibits sharing census data with other government agencies. For those who believe census data abuse cannot happen, it should be noted that it has already occurred quite recently in the United States.

Census Data Used For Other Purposes

In 2004, the Department of Homeland Security (DHS) requested census data from 2000 on Americans of Arab descent. Using the census data, DHS was able to figure out where the Arab-Americans lived.

Using 1940 census data, the federal government rounded up some 120,000 Japanese-American citizens. The government put Japanese-Americans in internment camps during World War II.

President Donald Trump and other high-ranking officials often say hateful things about people from other countries. Because of this, it's safe to say that collecting citizenship information can only have a harmful intent.

The official reason given by Trump's team is that the Justice Department needs citizenship data so it can enforce the Voting Rights Act by determining who is able to vote. There's no way this is true.

The Justice Department is led by Attorney General Jeff Sessions. He has a shameful record in Alabama of opposing civil rights and voting rights. Nothing suggests he now wants to help African-Americans and other minorities vote.

Some States Oppose Citizenship Question

States and cities are right in fighting the Trump administration's unconstitutional citizenship question in court. At least 17 states have filed lawsuits against the citizenship question. Former Census Bureau directors, both Republicans and Democrats, have cautioned against asking about citizenship.

The name Jacques Fauvet is not known to many Americans. However, in France, Fauvet was known for continually warning against the misuse of census data.

Fauvet oversaw French data protection from 1984 to 1999. He pointed out that when the German Nazis took over France in 1940, one of their first acts was to seize as many detailed census records as possible.

From these records, the Nazis were able to construct their lists of who would be arrested and taken to the concentration camps. Enough said!

A graduate of the University of Mississippi, Wayne Madsen is a progressive commentator whose articles have appeared in a wide range of American and European newspapers.

Digging Deeper

Instructions: Choose the answer below that best answers the question.

1. How does the PRO author convey the importance of asking about citizenship on the census?
 - A. by summarizing the positive effects of the citizenship question while it was in use in the past
 - B. by highlighting evidence that the short-form community surveys collect inaccurate data
 - C. by acknowledging that the question might discourage some people from participating in the census
 - D. by arguing that knowing more would help the government determine who needs health care coverage
2. How does the CON author point out a weakness in the government's argument that the citizenship question will help people?
 - A. The census data might be reused by government departments and businesses.
 - B. The record and actions of the president and other officials contradict this idea.
 - C. Federal law prohibits the sharing of census data with other government agencies.
 - D. Jacques Fauvet warned that no government collects census data for good reasons.
3. The PRO author claims that asking whether people responding to the census are citizens would take the guesswork out of government rule-making challenges. Is there relevant and sufficient evidence to support this point?
 - A. The author provides more than enough evidence that asking about citizenship would help the government by providing facts and statistics about the number of undocumented people receiving funds.
 - B. The author provides evidence that asking about citizenship would help the government by illustrating how challenges to rule-making and programs have risen since the question was eliminated.
 - C. The author provides some evidence that the government has to rely on estimates for its calculations, but does not provide evidence that asking the question would be more effective than this kind of analysis.
 - D. The author provides no evidence that including a citizenship question would take the guesswork out of creating rules and programs, choosing to focus instead on how it would help voting rights.
4. Which piece of evidence is MOST relevant to the CON author's argument?
 - A. Ross runs the Commerce Department, which is in charge of the U.S. Census Bureau. Ross said that he wanted census data to be "re-used" by other government departments and private businesses.
 - B. Using 1940 census data, the federal government rounded up some 120,000 Japanese-American citizens. The government put Japanese-Americans in internment camps during World War II.
 - C. The Justice Department is led by Attorney General Jeff Sessions. He has a shameful record in Alabama of opposing civil rights and voting rights.
 - D. The name Jacques Fauvet is not known to many Americans. However, in France, Fauvet was known for continually warning against the misuse of census data.

"We are still here": Native Americans fight to be counted in U.S. census



In 2017, President Donald Trump signed an executive order that reduced government protections of national monuments. He reduced the size of Bears Ears and Grand Staircase-Escalante national monuments in Utah by nearly 2 million acres. Trump claimed the law was supported by the state and local county government where the monuments are located.

However, on the ground, many people were opposed to this action.

Native Americans account for a majority of the population in San Juan County, Utah. The county includes parts of the reservations of the Navajo Nation and the Ute Mountain Ute Tribe. Both tribes officially support the protection of Bears Ears. Through gerrymandering, the majority Native American county had a majority white board of county officials.

Gerrymandering is the dividing of an area into election districts in a way that gives one political party an unfair advantage.

Last year, everything changed. The Navajo Nation brought a lawsuit against San Juan, accusing the county of racial gerrymandering under the Voting Rights Act of 1965. The law prohibits racial discrimination in voting. The tribe won. The county was forced to redraw its election maps. In the fall of 2018, for the first time ever, the county elected a majority Native American board of county officials. The board now officially supports the protection of Bears Ears.

Fighting For Political Representation

Today, the Navajo Nation is still fighting for political representation using the U.S. census, which will take place this year. Census data helped the tribe win the lawsuit by showing that the election maps had reduced the voting power of Native American residents. The information also determines the tribe's representation in many other bodies of government, including Congress.

According to the U.S. Constitution, all residents living in the United States must be counted every 10 years. The results of the census determine seats in Congress, local election maps and how much government money an area will receive for the next 10 years. Despite the power of the U.S. census, Native Americans have historically been undercounted.

"It impacts everything," Charlene Tso said. Tso represents District 9 on the Navajo Nation's tribal council. "It impacts education, roads and maintenance, elder care, funding for everything on our reservation."

Tso serves on the Navajo Nation's Complete Count Commission for the 2020 census. The committee believes Navajos were significantly undercounted in the 2010 census, which ended up lowering government funding levels for the tribe. "We know for sure that it was nowhere near accurate. That margin, imagine what difference it makes in federal funding."

The problem is not unique to the Navajo Nation. An estimated 1 in 7 Native Americans living on tribal lands were not counted in the last U.S. census, making Native Americans the group most likely to be missed.

Living In "Hard-To-Count" Areas

An estimated 1 in 3 Native American people live in what the Census Bureau considers "hard-to-count" rural census tracts. In many states with large indigenous populations, more than half of Native American residents live in such "hard-to-count" areas.

Native Americans are also disproportionately affected by other factors such as poverty, housing insecurity and even age. Forty-two percent of Native Americans are under the age of 24.

Desi Rodriguez-Lonebear is a member of the Northern Cheyenne tribe and a demographer, which is an expert in changing human populations. She advised the Census Bureau for six years. She says another big factor is lack of trust.

"You're trying to convince people, your own relatives even, who for their whole lives wanted nothing else but to be left alone by the feds," Rodriguez-Lonebear said. "And you're coming to them and saying, 'But we really need you to fill out this form. We really need you to count.'"

Many tribal leaders and advocates are worried the undercount could be even worse in 2020. For the first time ever, the census will be mostly online. However, more than a third of Native Americans living on tribal land lack access to the internet, making it the least-connected part of the United States.

Reduced Funding For Translation Services

"It [the census] moving online almost ensures an undercount of Native Americans of historic proportions," said Natalie Landreth. She is a Chickasaw Nation member and a lawyer for the Native American Rights Foundation (NARF).

Government funding for translation into Native American languages was also reduced this year, only offering translation services to the Navajo language, according to NARF. Before, the bureau has funded translation services into many indigenous languages.

"There are census tracts in Alaska where 75 percent of the households don't speak English at home," says Landreth.

According to Jessica Imotichey, a Chickasaw Nation member and a coordinator for the L.A. region of the U.S. Census Bureau, the agency is working to ensure Native Americans are counted in 2020. "[The census] is about representation, not just politically but also visibility," Imotichey said. "Recognizing Native Americans and Alaskan Natives, that we are still here, that we still remain."

Undercounts Mean Millions Of Dollars Lost

The census started three months early in remote Alaska in January. Workers traveled to Alaskan native villages to count residents in person. While only 0.02 percent of the U.S. population will be counted in person, the majority of them will be indigenous.

Funding for census outreach campaigns varies significantly by location. While some states like California are planning to spend \$187 million on census outreach, 24 states have budgeted nothing. Three of those states, Oklahoma, North Dakota and South Dakota, have significant Native American populations.

New Mexico, along with Alaska, was the most undercounted state in 2010. Some counties returned less than 50 percent of census surveys. According to New Mexico Counts 2020, just a 1 percent undercount in 2020 could result in the loss of \$750 million in government aid to the state.

The Navajo Nation's Complete Count Commission has already met with U.S. senators and regional Census Bureau representatives. They discussed the unique challenges of counting Navajo citizens. The tribal government is looking to hire a sizable outreach team this spring, with an emphasis on hiring fluent Navajo speakers, according to Tso.

"We have to do everything possible to count every Navajo," Tso said.

Digging Deeper

Instructions: Choose the answer below that best answers the question.

1. Which section of the article BEST explains why tribal leaders expect the 2020 census to leave out even more Native Americans?

- A. Introduction [paragraphs 1-5]
- B. "Fighting For Political Representation"
- C. "Reduced Funding For Translation Services"
- D. "Undercounts Mean Millions Of Dollars Lost"

2. Select the paragraph from the section "Living In Hard-To-Count Areas" that explains why some Native Americans might NOT want to participate in the census.

- A. An estimated 1 in 3 Native American people live in what the Census Bureau considers "hard-to-count" rural census tracts. In many states with large indigenous populations, more than half of Native American residents live in such "hard-to-count" areas.
- B. Native Americans are also disproportionately affected by other factors such as poverty, housing insecurity and even age. Forty-two percent of Native Americans are under the age of 24.
- C. "You're trying to convince people, your own relatives even, who for their whole lives wanted nothing else but to be left alone by the feds," Rodrigues-Lonebear said. "And you're coming to them and saying, 'But we really need you to fill out this form. We really need you to count.'"
- D. Many tribal leaders and advocates are worried the undercount could be even worse in 2020. For the first time ever, the census will be mostly online. However, more than a third of Native Americans living on tribal land lack access to the internet, making it the least-connected part of the United States.

Which two of the following sentences from the article include CENTRAL ideas of the article?

- 1. Despite the power of the U.S. census, Native Americans have historically been undercounted.
 - 2. Native Americans are also disproportionately affected by other factors such as poverty, housing insecurity and even age.
 - 3. Many tribal leaders and advocates are worried the undercount could be even worse in 2020.
 - 4. While some states like California are planning to spend \$187 million on census outreach, 24 states have budgeted nothing.
- A. 1 and 3
 - B. 1 and 4
 - C. 2 and 3
 - D. 2 and 4

Which statement would be MOST important to include in a summary of the article?

- A. Native Americans make up a majority of people who live in San Juan County in Utah.
- B. Native American groups are working hard to get political representation through the U.S. census.
- C. Many Native Americans were against the reduction of Bears Ears and Grand Staircase-Escalante national monuments.
- D. Many Native Americans in Alaska will be counted in person for the 2020 U.S. census.

Math 7 – Week of May 25th

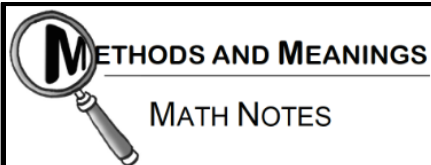
Simple Interest

Which One Doesn't Belong? Why?

$-3 - (-7) =$	$4 + (-12) =$
$4 - 17 =$	$-5 + (-8) =$

When banks lend money, they charge **interest**, which is a fee for letting the borrower use the money. Interest is usually expressed as a percent of the amount borrowed and is added to the amount that the borrower owes. For example, a bank might charge someone an 8% annual (yearly) interest rate for borrowing \$500. In addition, if you have money in a savings account, banks generally pay interest to you on the money in the account. So by leaving your money in a bank, you can earn more money.

There are different ways of calculating interest, and each one creates different patterns of growth. One kind of interest called **simple interest**.



Simple Interest

Simple interest is interest paid only on the original amount of the principal at each specified interval (such as annually or monthly). The formula to calculate simple interest is:

$$I = prt \quad \text{where} \quad \begin{aligned} P &= \text{Capital Principal} \\ I &= \text{Interest} \\ r &= \text{Rate} \\ t &= \text{Time} \end{aligned}$$

Example: Theresa invested \$1425.00 in a savings account at her local bank. The bank pays a simple interest rate of 3.5% annually. How much money will Theresa have after 4 years?

$$\begin{aligned} I = prt &\Rightarrow I = 1425(0.035)(4) = \$199.50 \\ &\Rightarrow P + I = \$1425 + \$199.50 = \$1624.50 \end{aligned}$$

Theresa will have \$1624.50 after 4 years.

In Course 2 students are introduced to simple interest, the interest is paid only on the original amount invested. The formula for simple interest is: $I = Prt$ and the total amount including interest would be: $A = P + I$.

For additional information, see the Math Notes box in Lesson 7.1.8 of the *Core Connections, Course 2* text.

Example

Wayne earns 5.3% simple interest for 5 years on \$3000. How much interest does he earn and what is the total amount in the account?

Put the numbers in the formula $I = Prt$.	$I = 3000(5.3\%)5$
Change the percent to a decimal.	$= 3000(0.053)5$
Multiply.	$= 795$ Wayne would earn \$795 interest.
Add principal and interest.	$\$3000 + \$795 = \$3795$ in the account

Problems

Solve the following problems.

1. Tong loaned Jody \$50 for a month. He charged 5% simple interest for the month. How much did Jody have to pay Tong?
2. Jessica's grandparents gave her \$2000 for college to put in a savings account until she starts college in four years. Her grandparents agreed to pay her an additional 7.5% simple interest on the \$2000 for every year. How much extra money will her grandparents give her at the end of four years?
3. David read an ad offering $8\frac{3}{4}\%$ simple interest on accounts over \$500 left for a minimum of 5 years. He has \$500 and thinks this sounds like a great deal. How much money will he earn in the 5 years?
4. Javier's parents set an amount of money aside when he was born. They earned 4.5% simple interest on that money each year. When Javier was 15, the account had a total of \$1012.50 interest paid on it. How much did Javier's parents set aside when he was born?
5. Kristina received \$125 for her birthday. Her parents offered to pay her 3.5% simple interest per year if she would save it for at least one year. How much interest could Kristina earn?

7-86 The student council is planning a spring celebration. Unfortunately, to rent a hall for the event, they will need to pay a deposit in advance of the event. Since they have not started selling tickets yet, they asked the Parent-Teacher Association for a loan of \$825 for the hall rental. The PTA agreed, but said it would charge 2% simple interest each week until the loan is paid back.

Ms. Becker, the student-council advisor, explained to the students that the amount of the loan (\$825) is called the principal amount. Until the loan is paid back, 2% (called the weekly interest rate) of the principal amount will be added each week to the amount owed.

- How much money in interest will the PTA charge each week?
- If the student council borrows \$825, how much will it owe after 1 week? After 3 weeks? Show your calculations.
- How much would the student council owe two months (8 weeks) from now? Be prepared to justify your strategy.

7-87 The student-council members realized that they would also need funds before the event to pay the DJ and photographer a deposit. They will need a second loan of \$1000 to pay for these two expenses.

- If the PTA also charges them 2% weekly simple interest for this loan, how much will be added to this loan each week?
- The PTA has decided that to cover its costs, it only needs to earn \$18 interest each week. What percent weekly interest should the PTA charge the student council for this loan? Be prepared to share your strategy.

7-88A loan agreement between the student council and the PTA has finally been reached, but the PTA will not loan the full \$1825 requested. To make sure everyone understands the agreement, the PTA created the table below.

Number of Weeks	Calculations	Total Loan Amount
0	\$1250	\$1250
1	$\$1250 + \18.75	\$1268.75
2	$\$1250 + \$18.75 + \$18.75$	\$1287.50
3		
4		

- Based on this table, how much will the student council borrow? What is the percent interest?
- How much will the student council owe after 3 weeks? After 4 weeks? Show your calculations.
- How is the amount of money that the student council owes changing each week? Show how this change can be found in your table.
- The student-council president wants to be able to check quickly how much the student council owes at any point. Use your table to write a variable expression

that shows the amount of money the club owes the PTA after any number of weeks. Make sure to define your variable.

- e. The president figured out that if the student council does not pay off the loan by the end of the school year, it would owe \$1500. How many weeks of school are left? Use your expression from part (d) to write and solve an equation to answer this question.

7-89 The treasurer of the student council decided to look into other funding options for the DJ and the photographer. With your team, examine how each loan would grow and find a way to compare the loans. Assume that a month is 4 weeks. Then find answers to the questions below.

The local bank offered to loan the student council \$955 for 1% weekly simple interest.	The Math Club offered to loan the student council \$940 for 4.5% monthly simple interest.	The Booster Club offered to loan the student council \$960 and would add \$36 interest each month.
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- a. Which loan would grow most quickly? That is, which has the most interest added each month?
- b. What is the monthly interest rate the Booster Club is offering? Show how you got your answer.
- c. For which loan would the student council owe the most money overall after 3 months? Justify your answer.

7-90 Ida wants to buy a car, but she currently does not have any money. The car she wants costs \$2500. Consider her two options and decide which loan she should take.

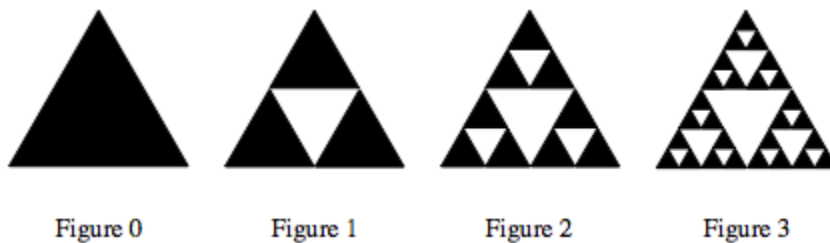
- a. She could borrow \$2500 at a monthly interest rate of 4% simple interest and pay the total after 12 months. Write a simple-interest expression and calculate what she would owe at the end of 12 months.
- b. She could borrow \$2500 at a weekly interest rate of 1% simple interest and pay the total after 12 months. Show calculations and a written explanation to justify your answer.

7-91 The Jones family wants to remodel their kitchen. They have saved \$23,000 in the last two years. Their contractor says the remodel will cost \$40,000. They can borrow the difference at a monthly interest rate of 2% simple interest. If they pay the loan off in six months, how much will they have paid?

MATH 7+ - PUZZLE INVESTIGATOR PROBLEM (PIP) 8 - SIERPINSKI TRIANGLES

Fractals are geometric structures developed by repeating a process over and over. A famous example of a fractal is the **Sierpinski Triangle**, shown below. To create this design, start with a triangle, as shown in Figure 1. Then find and connect the midpoints of all of the sides of the triangle, subdividing it into four smaller triangles. Shade all but the central triangle as shown in Figure 1.

Then repeat the process by finding and connecting the midpoints of the shaded triangles of Figure 1. Shade all but the center triangles, as shown in Figure 2. If this process is continued infinitely, the result is the Sierpinski Triangle.



- On the PI-8 Resource Page, shade in the next figure in the sequence.
- For Figures 1 through 4, write a fraction to represent the amount of the entire triangle that is shaded. As you work, look for patterns. What is happening to the numerator and denominator of the fraction? What is happening to the amount shaded?
- Use your pattern to predict what portion of Figure 5 and Figure 6 in the sequence will be shaded.
- The shaded portion of Figure 2 could be written as $(\frac{3}{4})^2$. Rewrite the other figures in this form. According to this pattern, what should the value of $(\frac{3}{4})_0$ be? Explain why.
- Is there any figure that will have less than 10% shaded? If so, use your pattern to explain how you know.

SIERPINSKI TRIANGLE

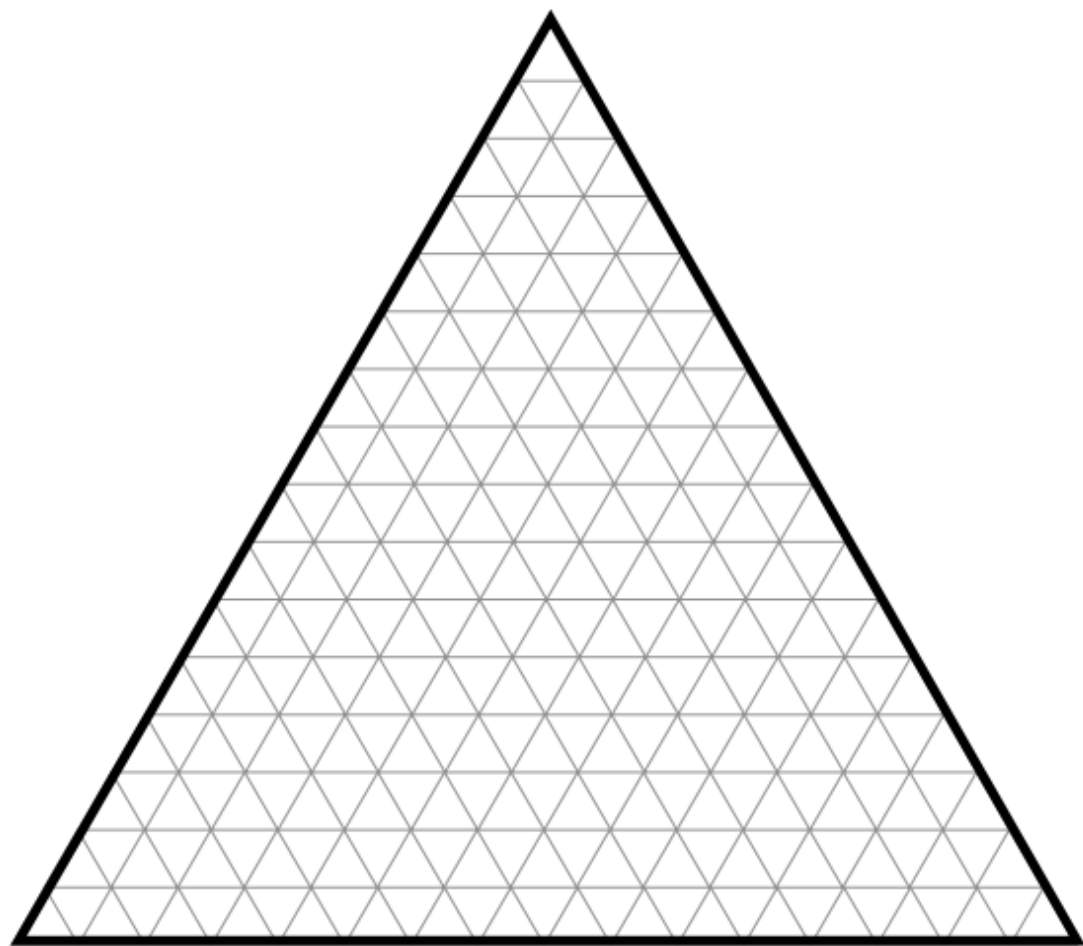


Figure 4

Why do pets have dark eyes while humans have mostly white eyes?

By Jonathan Denniss, The Conversation, adapted by Newsela staff on 08.15.19

Word Count **590**

Level **MAX**



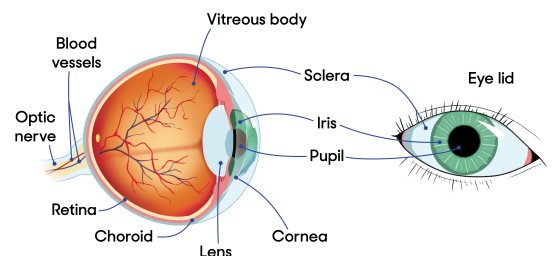
Just like humans, guinea pigs' eyes have a white sclera, or a hard covering, that helps keep the eye in a round shape. A guinea pigs' sclera is mostly hidden inside its eye socket. Photo by: Deborah Faulkner/Getty Images

Our guinea pigs have dark eyes. Why do we have white eyes?

The truth is, guinea pigs also have a white part in their eye, just like humans. But guinea pigs lead very different lives from us, so they need different eyes to help them survive.

The white part of our eyes is called the "sclera." It's a hard covering that helps keep the eye in a round shape. The sclera goes right around to the back of our eyeballs. But we can't see all of it, because it's hidden inside the eye socket: the bony cup in our skull where our eyeballs, and the muscles that make them move, sit.

Guinea pigs' eyes also have a white sclera like ours, but almost all of it is hidden inside the eye socket. So,



the colored part of their eyes is all we can see. It's usually dark brown, but sometimes it's blue or even red.

Eyes To Survive

The world is full of weird and wonderful eyes, and each type has special features to help animals survive in their natural habitat. These features have developed over millions of years, passed down from parents to babies, through a process called evolution.

Your guinea pigs' ancestors would have lived in grassy areas, eating plants and trying to avoid being caught by predators. They would have been out and about mainly in the low light of the early morning and evening.

You'll have seen that guinea pigs have a large black hole in the center of the colored part of their eyes. This is called the pupil. The pupil is what lets light into the eye.

Having a large pupil would have helped the guinea pigs' ancestors to see a wide area in the dim light. This would have helped them escape predators, and live long enough to have babies with large pupils, too.

Eyes On The Sides

Guinea pigs' eyes are also on the sides of their heads, rather than at the front like ours. This allows them to see in almost every direction without moving their heads, very useful for spotting a predator sneaking up from behind.

The downside is that guinea pigs' eyesight isn't as clear as ours, and their 3-D vision isn't very good.

That's because smaller pupils, like ours, help with seeing things clearly, and 3-D vision works better when both eyes are looking at the same object, which is difficult when they're on different sides of the head.

Our human ancestors had to be good at hunting to survive. And having good, clear, 3-D vision is very helpful when you're trying to catch prey for your dinner. That's why humans today still have eyes with small pupils, at the front of our heads.

Some theories also say that humans have evolved visible, white sclera because we're very social animals, and this can help us to see where other people are looking, or even how they're feeling, without words.

Many animals have eyes even more different from our own. For example, insects' eyes are made up of thousands of tiny "mini eyes" joined together. Some animals, like crabs, have eyes on stalks.

Spiders have different pairs of eyes that they use for different tasks, and some mollusks can have up to 100 eyes.

Check out the dragonfly, chameleon, giant squid or mantis shrimp for some more amazing eyes from the animal kingdom.

Partnerships and Partitions-PART 1

Benchmark Standard	Geography 4b: Students will explain how conflict and cooperation among people contribute to the division of the Earth's surface into distinctive cultural and political territories.
Grade Band	6-8
Vocabulary / Key Concepts	Border: An imaginary line separating one political division, such as a country, state, province or county, from another Country: A recognized territory whose government is the highest legal authority over the land and the people living within its boundaries Region: An area with one or more common characteristics or features, which give it a measure of homogeneity and make it different from surrounding areas

~This is from the DRC Unit *Partnerships and Partitions* – modified by CSD for use at home~

ACTIVITY 1:

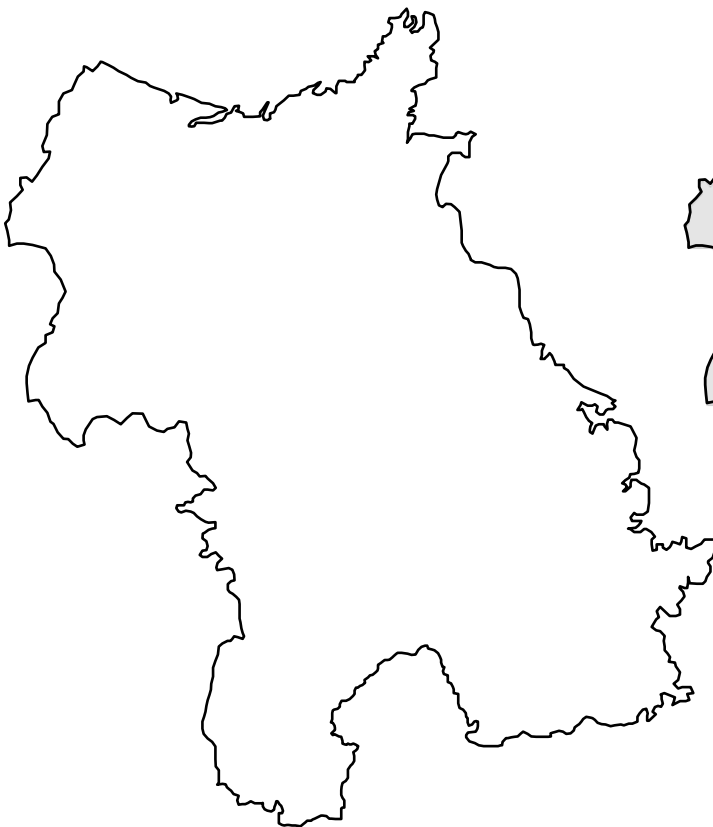
Think of a time when you crossed a political boundary or border like from state to state or country to country and answer the following questions on a separate sheet of paper:

1. How did you know where the border was?
2. Would the border be visible from outer space?
3. What do the words “border” and “political boundary” mean to you?
4. Why do people define regions or countries in any given area?

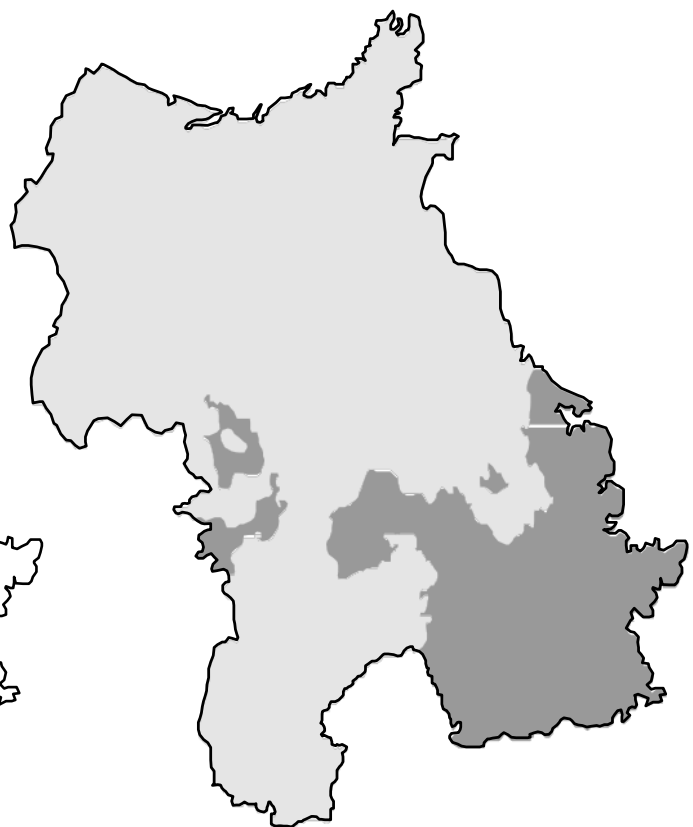
Think about borders in your community or state and answer the following questions on a separate sheet of paper:

1. How were the borders defined?
2. Do they follow a physical feature in the landscape?
3. Do they follow cultural differences between people on either side of the border?

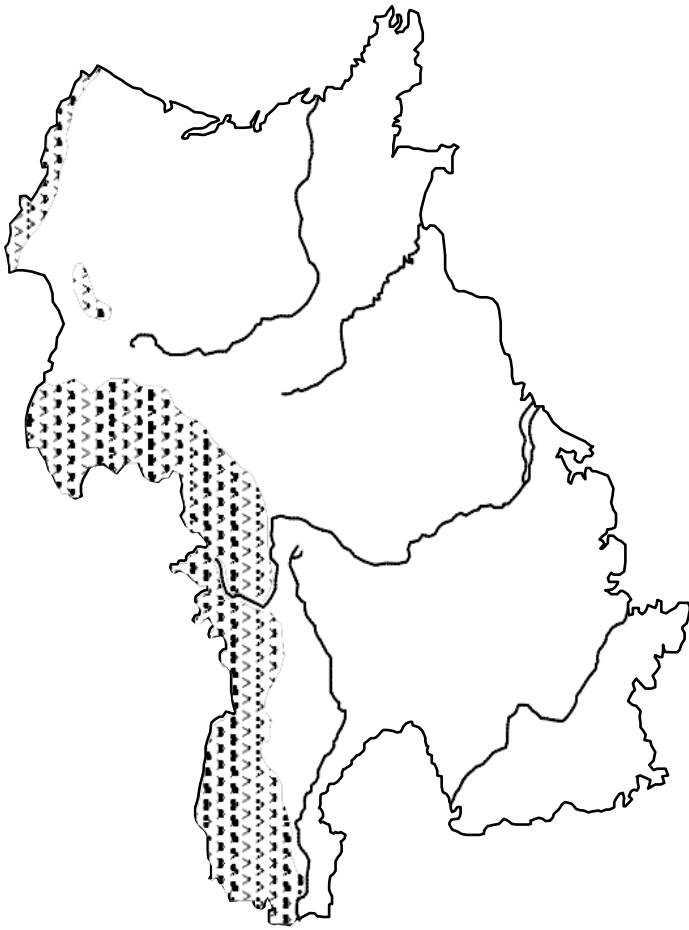
ACTIVITY 2: Define regions in an area of land. You are to draw country borders in the area below on the “Outline Map”, based on how you think the land should be divided. Draw political borders on the blank outline map of this landmass. Take into account the religions, physical features (mountains and rivers), and languages shown on the other maps. After borders are drawn answer the “Questions to Ponder.”



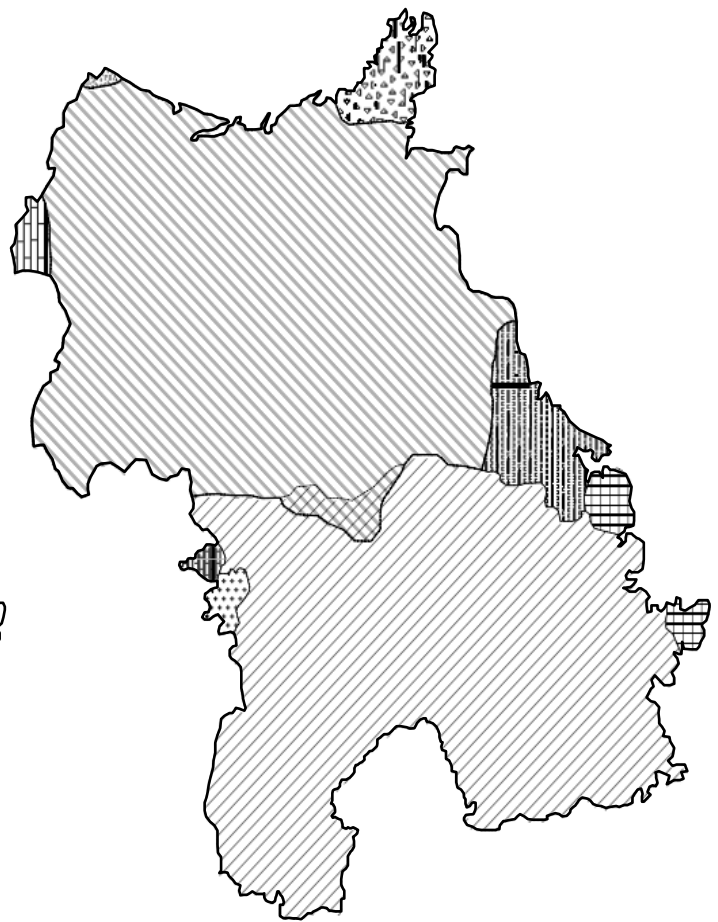
Outline Map



Religions Map



Mountains and Rivers Map



Languages Map

Questions to Ponder – answer the following questions on a separate sheet of paper:

1. Do you think physical features such as rivers are more important than cultural ones, such as language, in setting borders? Why or why not?
2. What would happen if you split this physical feature between two countries? Would people in the countries be able to share the land and/or resources or would they constantly fight over its use?
3. What would happen if a country has a mix of different cultural features (language, religion, etc.)?
4. Will this impact how the people can live and work together in that country?

ACTIVITY 3:

Check for Understanding – answer the following questions on a separate sheet of paper:

1. Physical features like rivers and mountain ranges are often used to form boundaries. Name at least one advantage and one disadvantage of using physical features as international boundaries.
2. Reasons for Regions: Why did you draw the borders where you did?

ACTIVITY 4:

Thought Questions – answer the following questions on a separate sheet of paper:

1. What information was not provided that would have made their job easier? (For example, are there coastlines? How big is the total area? How many people live here? What is the climate? Where are the closest markets?)
2. How might this information have impacted the regions and borders they set? (For example, if you divided the area evenly, how would this affect cultural groups, etc.)
3. What other things might shape a country's borders (besides the physical and cultural features you already looked at in this lesson).

ACTIVITY 5:

Check for Understanding:

1. Why are borders located where they are? Explain and support your answer with at least 2 geographic examples.