Christina School District Assignment Board

Grade Level: 7th

Week of April 20th, 2020

		Day 1	Day 2	Day 3	Day 4	Day 5
ELA		*Read the poem "The Backyard Then. As you read underline examples of imagery. On the back of the poem or a blank sheet of paper write down your first reactions to the poem. How did it make you feel? What did you see and hear as you read? Now identify the theme and summarize in 1-2 sentences what you think the poem is saying.*	*Re-read the poem, answer the Text Dependent questions 1-5.*	*Read the poem "Fifth Grade Autobiography". As you read underline examples of imagery. On the back of the poem or a blank sheet of paper write down your first reactions to the poem. How did it make you feel? What did you see and hear as you read? Now identify the theme and summarize in 1-2 sentences what you think the poem is saying.* *Answer the Text Dependent questions 1-5.*	*In 1-2 paragraphs compare the two poems. What messages are both poets sending about memories. Compare and contrast the author's use of imagery to convey those messages?*	*As we are all confined to our homes think about where you would rather be or where you want to go when quarantine ends. Write a poem about this place. Use descriptive words (imagery) so that a reader can see, hear, feel even taste the place you are describing. Share your poem with another person.*
Math (IM1 can be found on the HS Board)	**7**	*Solving Problems Involving Percent* Complete 7-27 and 7-28. (attached)	Complete 7-29 and 7-30. (attached)	Read pages 126-127 (attached). Use the examples as a guide. Complete p. 127 #5-8.	Complete p. 127 #9-12. Use the examples as a guide. (attached)	Complete 7-32 as a Journal Entry titled "Scaling Quantities". (attached)
	7+	(Math 7+ should follow the Math 8 calendar in the 8th grade packet PLUS complete the Puzzle Investigator Problem (PIP) 3 - Rumors, Rumors, Rumors. (attached)				

Christina School District Assignment Board

Science	**Self Help (part 1):** Read article. Highlight, underline, and/or annotate for understanding.	**Self Help (part 2):** Reread notations from yesterday. Write a 1-2 paragraph summary of the important takeaways from the article.	**Buzz Off (part 1):** Read article. Highlight, underline, and/or annotate for understanding.	**Buzz Off (part 2):** Reread notations from yesterday. Write a 1-2 paragraph summary of the important takeaways from the article.	**End of Week Review:** Write your answers to the following. Use this week's articles to help you: **Self Help:** a) What is Huntington's disease? b) In the Self Help section called "Inherited Disorder," what does the author describe? c) What evidence from the text supports the statement, "Huntington's disease can have serious consequences on people"? **Buzz Off:** d) Consider this statement: "If used responsibly, science can be used to help solve problems humans and the environment face." What evidence from the passage best supports that statement? e) Write what you feel is the primary purpose of this passage and why. Use evidence from the passage to support your reasoning.
Social Studies	Complete Case 1 from the document titled, "Majority Rule Case Study"	Complete Case 2 from the document titled, "Majority Rule Case Study"	Complete Case 3 from the document titled, "Majority Rule Case Study"	Complete Case 4 from the document titled, "Majority Rule Case Study"	Complete Case 5 from the document titled, "Majority Rule Case Study"

COMMONLIT

Name: _____ Class: _____

The Backyard Then

By Emma Bartley
2017

Emma Bartley is an American poet. Her writing often focuses on childhood and memories. In this poem, a speaker recalls memories of their backyard. As you read, take notes on what the speaker remembers of their backyard.

[1] It used to feel too big
and mostly abandoned, leftover land between
neighboring cul-de-sacs and the elementary
school.
Still, I would visit its few humble[1] stations —
[5] the cracked stump by the fence always crawling
with ants. The narrow space behind the garage
lined with unused slate, just standing there
waiting for my parents' hands. Then there was
the shady dirt
under the old maple tree where I read, cradled or
[10] sinking between dying tentacle roots.
Was there ever any glory there? I can
remember
a few humid evenings through the crack of the back door.
Twilight hanging like a velvet curtain, the thinning
pine trees at least only silhouettes.[2]
[15] My parents would be at the top of the empty hill
sitting at the rusty, wrought iron table, in an orb
of orange candlelight. I knew they were eating artichoke
with hot butter, scraping off the meat of the leaves with their teeth
and just casting the rest away.

"Serenity Now" by Kat Northern Lights Man is licensed under CC BY-NC 2.0.

1. **Humble** ***(adjective):*** low in rank or condition
2. the dark shape and outline of someone visible against a lighter background

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which statement expresses the main theme of the poem?
    A. Childhood homes always hold a special importance to people.
    B. Children often find special meaning in places and things that adults do not.
    C. Ordinary places can become extraordinary with a little imagination.
    D. As we grow older, our memories of the past grow more positive.

2. PART B: Which detail from the text best supports the answer to Part A?
    A. "It used to feel too big / and mostly abandoned, leftover land between / neighboring cul-de-sacs" (Lines 1-3)
    B. "Was there ever any glory there? I can remember / a few humid evenings through the crack of the back door." (Lines 11-12)
    C. "Twilight hanging like a velvet curtain, the thinning / pine trees at least only silhouettes." (Lines 13-14)
    D. "scraping off the meat of the leaves with their teeth / and just casting the rest away." (Lines 18-19)

3. PART A: How does the speaker's feelings about the backyard compare to their parents?
    A. The speaker's parents enjoyed the backyard more than the speaker did.
    B. The speaker and their parents had many happy memories in the backyard.
    C. The speaker has happier memories in the backyard than their parents.
    D. The speaker and their parents were both unimpressed by the backyard.

4. PART B: Which TWO quotes from the text best support the answer to Part A?
    A. "leftover land between / neighboring cul-de-sacs and the elementary school." (Lines 2-3)
    B. "Still, I would visit its few humble stations — / the cracked stump by the fence" (Lines 4-5)
    C. "Then there was the shady dirt / under the old maple tree where I read" (Lines 8-9)
    D. "Twilight hanging like a velvet curtain, the thinning / pine trees at least only silhouettes." (Lines 13-14)
    E. "My parents would be at the top of the empty hill / sitting at the rusty, wrought iron table in an orb of / orange candlelight " (Lines 15-17)
    F. "scraping off the meat of the leaves with their teeth / and just casting the rest away" (Lines 18-19)

5. What does it mean when the poet compares Twilight to “a velvet curtain” (Line 13)?

Name: _____ Class: _____

Fifth Grade Autobiography

By Rita Dove
1989

Rita Dove is a contemporary American writer. She is the second African American poet to receive the Pulitzer Prize for Poetry. As you read, identify what details the speaker focuses on from their past.

"Untitled" by Carl Zitsman is licensed under CC0.

I was four in this photograph fishing
with my grandparents at a lake in Michigan.
My brother squats in poison ivy.
His Davy Crockett[1] cap
sits squared on his head so the raccoon tail
flounces down the back of his sailor suit.

My grandfather sits to the far right
in a folding chair,
and I know his left hand is on
the tobacco in his pants pocket
because I used to wrap it for him
every Christmas. Grandmother's hips
bulge from the brush, she's leaning
into the ice chest, sun through the trees
printing her dress with soft
luminous[2] paws.

I am staring jealously at my brother;
the day before he rode his first horse, alone.
I was strapped in a basket
behind my grandfather.
He smelled of lemons. He's died—

but I remember his hands.

1. Davy Crockett was an American folk hero of the 1800s known for living in the western American "frontier lands" of Tennessee and Texas. He is often associated with a raccoon hat he wore.
2. **Luminous** ***(adjective):*** full of or shedding light; bright or shining

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which of the following statements best describes the speaker's point of view towards the grandfather? [RL.6]
    A. The speaker cannot understand the grandfather's death because the speaker is only four.
    B. The speaker wonders what life will be like without the beloved grandfather.
    C. As the speaker remembers their childhood, they realize they are relieved by their grandfather's death.
    D. As the speaker remembers childhood, they are emotionally reserved about their grandfather's death.

2. PART B: Which detail from the poem best supports your answer to Part A? [RL.1]
    A. "I was four in this photograph" (Line 1)
    B. "My grandfather sits to the far right / in a folding chair" (Lines 7-8)
    C. "I know his left hand is on / the tobacco in his pants pocket" (Lines 9-10)
    D. "He's died— / but I remember his hands." (Lines 21-22)

3. PART A: Which of the following best describes the tone of this poem? [RL.4]
    A. overemotional — because they miss their grandfather
    B. jealous — because their brother gets to be more independent
    C. hopeful — because their family is together and happy
    D. reflective — because they are looking back on their childhood

4. PART B: Which phrase from the text best supports the answer to Part A? [RL.1]
    A. "My brother squats in poison ivy." (Line 3)
    B. "I used to wrap it for him / every Christmas." (Lines 11-12)
    C. "sun through the trees / printing her dress with soft / luminous paws." (Lines 14-16)
    D. "the day before he rode his first horse, alone." (Line 18)

5. How does the imagery used to describe the setting contribute to the speaker's attitude towards the memory described in the poem? [RL.3]

Math 7 – Week of April 20th

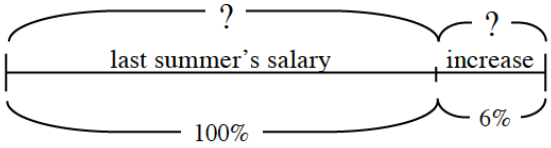
Solving Problems Involving Percent

As you have seen many times in this course, there is usually more than one way to solve a problem. When a problem uses portions (fractions, decimals, or percents), there are different ways to write the numbers and different solving strategies to choose from. Today you will look at the different multipliers that can scale a quantity and see what each of them will help you find.

7-27 Hugo and his family were shopping and purchased a new bed. The bed was a great deal at 60% off of the original cost. The bed originally cost $245.

a. Draw a diagram for this situation.
b. If Hugo scales (multiplies) the original price of the bed by 60%, what will his result represent?
c. What should Hugo scale (multiply) the original price by to find the new price of the bed?
d. Find the sale price of the bed in two different ways, that is, using two different multipliers (scale factors). How do your answers from your two methods compare?

7-28 Hugo's older sister, Sandra, had the same summer job for the past two years. Last year, she worked the entire summer and was paid a salary of $3,000. This summer, she is going to get a 6% raise in pay. To figure out how much she will make, Sandra drew the following diagram.



a. Fill in the missing information.
b. Since Sandra's salary is increasing, does it make sense that her scale factor (multiplier) should be less than 1, equal to 1, or more than 1? Why?
c. The diagram shows Sandra's original salary and the amount of the increase. What is the scale factor (multiplier) between her original salary and her new salary? That is, what number could Sandra multiply the original salary by to get the new salary?
d. Show two ways that use different scale factors (multipliers) that Sandra can use to compute her new salary.

7-29 Miranda teaches gymnastics lessons at summer camp. She is paid $12.50 per hour.

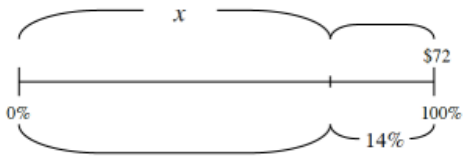
a. If Miranda were offered a raise of 100% per hour, what would her new hourly rate be? What percent of her original pay would she be paid?

b. Miranda is offered a raise of 75% of her hourly rate to teach a private lesson. How much per hour would she be paid for the private lesson? What percent of her original pay would she get?

c. What is the relationship between the percent raise that Miranda gets and her new pay as a percent of her original pay? How is this related to the scale factor (multiplier) between her original pay and her new pay?

7-30 Liam was working on a problem and drew a diagram like the one below. He then wrote the equation ($72) (0.14) = x. Does his equation agree with his diagram?

- If you agree, then solve his equation for x.
- If you disagree, write and solve a new equation that will find x in his diagram.



7-32 Journal Entry - Describe how you scale a quantity. For example, how do you know what multiplier (scale factor) to use? How can you tell if your multiplier should be more than one? Title your journal entry "Scaling Quantities" and include today's date.

SCALING TO SOLVE PERCENT AND OTHER PROBLEMS

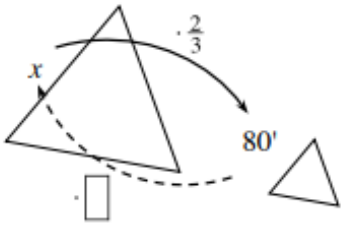
Students used scale factors (multipliers) to enlarge and reduce figures as well as increase and decrease quantities. All of the original quantities or lengths were multiplied by the scale factor to get the new quantities or lengths. To reverse this process and scale from the new situation back to the original, we divide by the scale factor. Division by a scale factor is the same as multiplying by a reciprocal. This same concept is useful in solving equations with fractional coefficients. To remove a fractional coefficient you may divide each term in the equation by the coefficient or multiply each term by the reciprocal of the coefficient. Recall that a reciprocal is the multiplicative inverse of a number, that is, the product of the two numbers is 1. For example, the reciprocal of $\frac{2}{3}$ is $\frac{3}{2}$, $\frac{1}{2}$ is $\frac{2}{1}$, and 5 is $\frac{1}{5}$.

Scaling may also be used with percentage problems where a quantity is increased or decreased by a certain percent. Scaling by a factor of 1 does not change the quantity. Increasing by a certain percent may be found by multiplying by (1 + the percent) and decreasing by a certain percent may be found by multiplying by (1 – the percent).

For additional information, see the Math Notes boxes in Lesson 7.1.4 of the *Core Connections, Course 2* text.

Example 1

The large triangle at right was reduced by a scale factor of $\frac{2}{5}$ to create a similar triangle. If the side labeled x now has a length of 80' in the new figure, what was the original length?



To undo the reduction, multiply 80' by the reciprocal of $\frac{2}{5}$, namely $\frac{5}{2}$, or divide 80' by $\frac{2}{5}$.

$80' \div \frac{2}{5}$ is the same as $80' \cdot \frac{5}{2}$, so $x = 200'$.

Example 2

Solve: $\frac{2}{3}x = 12$

Method 1: Use division and a Giant One

$$\frac{2}{3}x = 12$$

$$\frac{\frac{2}{3}x}{\frac{2}{3}} = \frac{12}{\frac{2}{3}}$$

$$x = \frac{12}{\frac{2}{3}} = 12 \div \frac{2}{3} = \frac{36}{3} \div \frac{2}{3} = \frac{36}{2} = 18$$

Method 2: Use reciprocals

$$\frac{2}{3}x = 12$$

$$\frac{3}{2}\left(\frac{2}{3}x\right) = \frac{3}{2}(12)$$

$$x = 18$$

Example 3

Samantha wants to leave a 15% tip on her lunch bill of $12.50. What scale factor should be used and how much money should she leave?

Since tipping increases the total, the scale factor is (1 + 15%) = 1.15.
She should leave (1.15)(12.50) = $14.38 or about $14.50.

Example 4

Carlos sees that all DVDs are on sales at 40% off. If the regular price of a DVD is $24.95, what is the scale factor and how much is the sale price?

If items are reduced 40%, the scale factor is (1 – 40%) = 0.60.
The sale price is (0.60)(24.95) = $14.97.

Problems

1. A rectangle was enlarged by a scale factor of $\frac{5}{2}$ and the new width is 40 cm. What was the original width?

2. A side of a triangle was reduced by a scale factor of $\frac{2}{3}$. If the new side is now 18 inches, what was the original side?

3. The scale factor used to create the design for a backyard is 2 inches for every 75 feet ($\frac{2}{75}$). If on the design, the fire pit is 0.5 inches away from the house, how far from the house, in feet, should the fire pit be dug?

4. After a very successful year, Cheap-Rentals raised salaries by a scale factor of $\frac{11}{10}$. If Luan now makes $14.30 per hour, what did she earn before?

5. Solve: $\frac{3}{4}x = 60$

6. Solve: $\frac{2}{5}x = 42$

7. Solve: $\frac{3}{5}y = 40$

8. Solve: $-\frac{8}{3}m = 6$

9. What is the total cost of a $39.50 family dinner after you add a 20% tip?

10. If the current cost to attend Magicland Park is now $29.50 per person, what will be the cost after a 8% increase?

11. Winter coats are on clearance at 60% off. If the regular price is $79, what is the sale price?

12. The company president has offered to reduce her salary 10% to cut expenses. If she now earns $175,000, what will be her new salary?

MATH 7+ - PUZZLE INVESTIGATOR PROBLEM (PIP) 3 – RUMORS, RUMORS, RUMORS

Stevens Middle School has 1500 students. During first block, a rumor is started when Susan tells three friends a secret. Each of Susan's three friends tells three of their friends during second block, who then tell three different friends during third block. Assume each person tells the rumor to only three others, and that each new person who is told the rumor has not heard it yet.

a. Find the number of students who have heard the rumor by the end of school. (Stevens Middle School has 6 blocks.)
b. What if every friend only told 2 other people? How many people would hear the rumor by the end of school?

c. How many people would each friend need to tell so that all the students at the school have heard the rumor by the end of school?

Self Help

By Kirsten Weir (945 words)

A young scientist is searching for the cure to the disease that could kill him.

Thirty-year-old Jeff Carroll is fit and healthy, but he knows he won't stay that way forever. Carroll has seen the future. He has the gene for *Huntington's disease*, an incurable, fatal *neurological* (brain) disorder.

Carroll doesn't have any symptoms yet, and he's not willing to wait around for the disease to claim him. As a neuroscience researcher at the University of British Columbia (UBC), in Vancouver, he is searching for a cure.

Inherited Disorder

Huntington's strikes one in every 10,000 Americans. Symptoms begin to show up in most people between the ages of 30 and 50. The first are usually depression, forgetfulness, clumsiness, and mood swings. As time goes on, mental deterioration sets in and uncontrollable jerking movements develop. People eventually lose the abilities to walk, speak, and care for themselves.

Huntington's disease is a *genetic* disorder, passed through DNA from parent to child. Both Carroll's grandmother and mother died of the disease. As a child, he knew his grandmother was ill. "But we never really talked about what it was," he says.

Carroll was 20 when his mother began showing symptoms of the same disease. When she was given a diagnosis of Huntington's, Carroll learned that he, too, was at risk. He had a 50—50 chance of inheriting the disease. "I decided to get tested right away," he says. "I had to know." The test confirmed his worst fears.

Carroll was serving in the U.S. Army in Europe when he tested positive. The result prompted him to take Internet biology courses in his free time so he could better understand how the disease would affect his body. "I was really fascinated," he recalls. After leaving the service, he returned to school and earned a bachelor's degree in biology. He's now researching Huntington's as he completes a doctorate in neurobiology at UBC.

Bad Stutter

A *gene*, the basic unit of heredity, is made up of a long string of chemical building blocks called *bases*. Four bases spell out a person's entire genetic code. They are adenine, cytosine, guanine, and thymine, or A, C, G, and T for short.

Everyone has a gene called the *huntingtin* gene, Carroll explains. In most people, the huntingtin gene has a section in which the bases C-A-G are repeated 17 or 18 times. However, some people inherit a *mutation*, or change in their genetic code, that causes the C-A-G section to repeat itself many more times. "It's like a stutter," he says. People who inherit too many C-A-G repeats will develop Huntington's.

"Anything above 37 repeats is associated with the disease," Carroll says. The more C-A-G repeats a person has, the younger he or she will be when symptoms first show up. Carroll has 42 C-A-G repeats, so he'll probably start showing symptoms around age 49. Until that day comes, he and the other researchers in his lab are trying to understand exactly how C-A-G repeats damage the brain.

Cutting Enzyme

Every gene holds the instructions for the production of a different protein in the human body. The huntingtin gene, Carroll says, writes the code for a "big, complicated protein," called, not surprisingly, the *huntingtin protein*.

In people with Huntington's disease, the huntingtin protein is faulty, leading to the death of *neurons*, or nerve cells, in the brain. The huntingtin protein is made up of a string of molecules, similar to pearls strung on a necklace. People with Huntington's disease have too many "pearls" on that string. Scientists believe the faulty protein kills neurons when

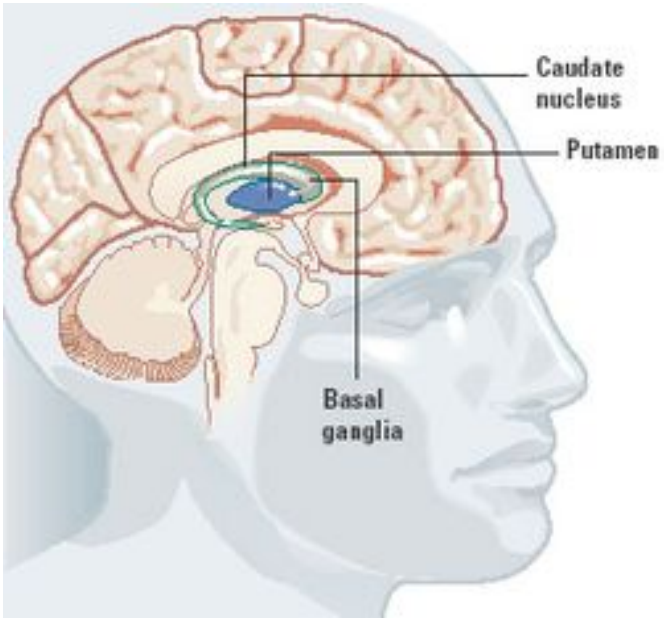
an *enzyme*, called caspase 6, slices the protein into two pieces, setting free the extra fragment of pearls to attack the neurons. An enzyme is a substance that speeds up reactions in the body.

Carroll and his colleagues at UBC are working with a strain of mice engineered to carry the human gene for Huntington's. The mice exhibit symptoms of the disease. In 2006, some of Carroll's lab mates made a breakthrough. They found a way to genetically alter the strain of mice again so that the caspase 6 enzyme could not chop the faulty huntingtin protein in two. Although their huntingtin genes had more than 100 C-A-G repeats, Carroll says, "the mice didn't get Huntington's disease. They were cured."

Unfortunately, the same technique can't be applied to people. "We can't genetically engineer humans the way we do mice," Carroll says. Instead, he's looking for a drug that will protect the faulty huntingtin protein from the cutting enzyme.

Although Carroll is racing against time, he has good reason to be optimistic about finding a treatment or even a cure for Huntington's disease. The huntingtin gene wasn't discovered until 1993, and scientists have made great strides since then.

"I'm doing what I can, and that's all I can do," Carroll says. "If I didn't think it would help before my time is up, I wouldn't be here."



Loss of Nerves

Huntington's disease kills nerve cells in the *basal ganglia*, a region of the brain that controls movement and possibly *cognition* (thinking, reasoning, and remembering). The disease also affects several other areas:

- **Caudate nucleus.** This area, which is involved in motor control, shows severe shrinkage in people who have the disease.
- **Putamen.** This area is also involved in motor control and is affected in advanced cases of the disease.

The discovery of the mutant gene responsible for Huntington's has enabled doctors to predict who will get the disease and when it will begin to develop. Researchers may eventually devise a gene therapy to treat it.

Buzz Off

By Kirsten Weir (910 words)

Can Bioengineering Mosquitoes Stop The Spread Of Tropical Diseases?

It's a bright, sunny day in the Caribbean. You roll out your beach towel and settle down in the sand when—*drat!*—a mosquito interrupts the serenity. You reach over and swat it.

If you happened to be on the island of Grand Cayman not long ago, you needn't have bothered. In a test on the island, scientists released millions of lab-created mosquitoes. The insects were engineered to self-destruct. No need for swatters.

AP Photos

A female Aedes aegypti mosquito

Although a tropical vacation without biting bugs sounds like a true paradise, there's a bigger goal at stake. Mosquitoes transmit *dengue fever*, a devastating and sometimes fatal disease. No vaccine or cure for it exists. Could tailor-made mosquitoes be the answer?

No Fly Zone

Dengue fever strikes about 100 million people each year in tropical and subtropical regions. It's also called *breakbone fever* for the joint and muscle aches and the intense headaches it causes. In some cases, the fever worsens into *dengue hemorrhagic fever*, which leads to internal bleeding, organ damage, and possible death.

AP Photos

Patients suffering from dengue fever lie on cots in a military hospital in Bogor, Indonesia.

Dengue fever is caused by a virus, which the mosquito *Aedes aegypti* spreads through its bite. Until now, the best way to control the disease has been to prevent contact between mosquitoes and humans, says Anthony James, a molecular biologist at the University of California, Irvine. One way to do that is to put up window screens. Another is to douse people and places with *insecticides* (chemicals that kill insects). Unfortunately, insecticides can harm other organisms, including beneficial insects. And mosquitoes can develop a resistance to them over time.

James believes there's a better option: *genetically engineering* the *A. aegypti* mosquito. Genetic engineering is the process of manipulating an organism's *deoxyribonucleic acid* (*DNA*). James tweaked *A. aegypti* by adding some extra *genes* to its DNA. Genes are short DNA segments that are responsible for individual traits in an organism. The genes that James added prevent flight muscles from forming in female mosquitoes. "Only the adult females feed on blood and therefore are responsible for transmitting diseases," he says. Unable to fly, the engineered females can't mate, bite, or spread dengue fever.

Umar Qayyum/Xinhua/Photoshot/Newscom

Fumigating a Pakistani city to kill dengue-transmitting mosquitoes

In order to get flightless females, James actually engineered male skeeters instead. The *transgenic* (genetically engineered) males mate with females and pass on their extra genes to their offspring. Any female mosquitoes born to those fathers are unable to fly and, therefore, unable to mate. As the genes spread, the population dwindles. "The idea is to get a zero population," James says.

So far, James has tested his mosquitoes in the lab and in large outdoor mesh cages in Mexico. He's now working on securing approval to test the engineered mosquitoes in the wild. Meanwhile, Oxitec, a British company James has collaborated with, has marched ahead and released engineered mosquitoes into nature.

Into The Wild

The Oxitec mosquitoes are engineered in a slightly different way from those James designed. The males are unable to produce healthy offspring. In 2009, the company released a batch of those males into a small area of Grand Cayman. Wild females mated with the engineered males, and their offspring died before they reached adulthood. Within three months, the mosquito population in the area fell by 80 percent.


Mohsin Raza/Reuters

A young man being treated for dengue fever in a hospital in Lahore, Pakistan

Despite the success of that first experiment, it may be awhile before transgenic mosquitoes are released on a bigger scale. The next step, James says, is to prove that the dip in a mosquito population actually reduces the number of dengue fever cases.

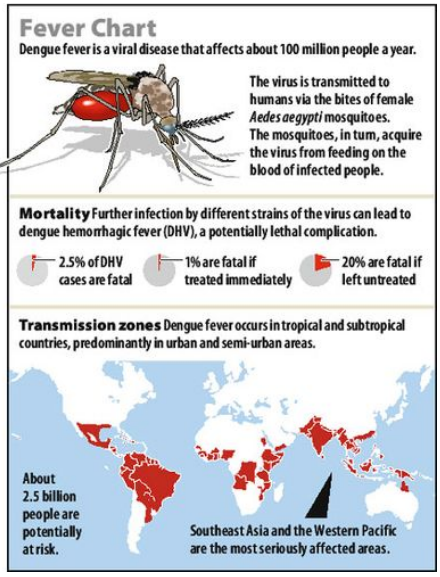
An even bigger problem may be dealing with critics who are wary of releasing transgenic organisms into the environment. Oxitec reportedly chose Grand Cayman for the experiment because of weak regulations there. Most other countries, including Mexico, where James works, have stricter policies about releasing transgenic organisms.

Genetic engineering has been going on for years. In fact, much of today's packaged food contains genetically engineered corn or soy. Still, many people are suspicious of genetic engineering. The environmental organization Greenpeace, for instance, likens transgenic organisms to "a giant genetic experiment" that could have unforeseen consequences for the environment and for human health.

James is sensitive to the criticisms. But, he says, "we don't think there are risks." For one thing, the engineered mosquitoes won't persist in the environment indefinitely. After all, they're designed to die. And in most of the world, *A. aegypti* is a nonnative species, he adds. Getting rid of the buzzing pests would actually return those habitats to a more natural state.

If the experiment is a success, dengue fever may be just the start. "Mosquitoes can transmit a number of diseases," James says. The most devastating is malaria, which kills close to 1 million people every year. Unlike dengue fever, which is spread by just one mosquito species, more than 30 species can transmit the malaria parasite. That makes it a trickier target for genetic engineering, but James contends the goal is within reach.

"We develop vaccines and medications, but for some diseases we have no tools," he says. "It's important that we look at all the science available to find something that will actually work."



AFP/Newscom; Source: WHO

Majority Rule Case Study
Social Studies Home Learning Activities

Standard Benchmark **Civics 2a**	Students will understand that the concept of majority rule does not mean that the rights of minorities may be disregarded and will examine and apply the protections accorded those minorities in the American political system.
Grade Band	6-8
Vocabulary/Key Concepts	Majority, minority, majority rule, minority rights

Focus Questions:

1. When should the rights of minorities outweigh the will of the majority?
2. How are minorities protected from abuse by a majority?

Activity

Introduction

Overall, the American people accept the principle of majority rule. Simply explained, majority rule is the idea that decisions should be based on what more than half of the people want. However, we know that a majority – the group with most people - can abuse a minority. For example, a majority of five people in a group of seven could vote to beat-up the two minority persons in the group.

Well aware of the potential danger of majority rule, the American people have come to accept a more sophisticated definition. Our definition suggests that decisions should be based on whatever more than half of the people want, but ***ONLY*** if what the majority wants does not result in harm to a minority, or take away their rights. To ensure that the minority is protected (because we might all be part of a minority at some point in time), those who make policies have passed laws and regulations that serve as a shield for those who are vulnerable.

It is also important to understand that the meaning of the word “minority” is not limited to the group with few people. In special legal situations, the word “minority” has been used to describe a group with little if any ***power***. Even though a so-called “minority group” may have more people, they may not be liked, have very little power, and are always more at risk of being abused.

Read the following case studies and decide whether they are cases where the minority should be protected, or the majority should be allowed to rule?

There are **five cases** to consider.

Case 1

The Ninth Amendment to the Constitution is interpreted to suggest that American citizens have the right to travel.

Lawmakers in State A issue an emergency declaration informing people who live in other states that they may not enter State A until further notice. The officials are trying to prevent those from other states bringing germs into their state.

Many people who do not live in State A own a second vacation home in State A. In some instances, the people who own second homes live in states where a pandemic is really bad. They want to go to their vacation homes where they believe that their families might be safer. They complain that the emergency declaration issued by the lawmakers in State A's declaration is a violation of their rights to use their property and travel.

1. Who is the majority in this case? _____
2. Who is the minority? _____

Analyze: Have the rights of the minority been disregarded?

Best Arguments for the Majority Lawmakers	**Best Arguments for The Minority** People who own vacation homes in State A

Conclude

Knowing what you know about majority rule and minority rights, is this a case where the minority should be protected? Or, should the majority be allowed to rule? Defend your conclusion.

Case 2

The Second Amendment to the Constitution is interpreted to state the citizens of the United States have a right to “bear arms” (in other words, own guns).

Lawmakers in State B pass an emergency law requiring all “non-essential” businesses, including gun stores, to close until the pandemic is over. A “none-essential” business is one that sells goods or services that are not needed in order to survive. Those who want to be allowed to purchase guns argue that the emergency law is illegal because it denies them the right to bear arms.

1. Who is the majority in this case? _____
2. Who is the minority? _____

Analyze: Have the rights of the minority been disregarded?

Best Arguments for the Majority	Best Arguments for The Minority

Conclude
Knowing what you know about majority rule and minority rights, is this a case where the minority should be protected? Or, should the majority be allowed to rule? Defend your conclusion.

Case 3

The Fifth Amendment to the Constitution contains the right to “due process”. You may recall learning about due process in 5th grade. Due process means that government must pass laws that are fair then use fair procedures to enforce those laws.

Lawmakers in State C pass an emergency law that makes it illegal to go outside one’s home during a pandemic except for medical reasons, to purchase groceries, or to walk a pet. The pandemic is in its worst phase. The number of people with the virus has never been higher. Police have been told to enforce the emergency law and fine anyone breaking the law $1,000.

One day police see a man walking through a park by himself. They immediately issue him a ticket for $1,000 and order him to return to his home.

1. Who is the majority in this case? _____
2. Who is the minority? _____

Analyze: Have the rights of the minority been disregarded?

Best Arguments for the Majority	Best Arguments for The Minority

Conclude

Knowing what you know about due process, majority rule, and minority rights, is this a case where the minority should be protected? Or, should the majority be allowed to rule? Defend your conclusion.

Case 4

The first Amendment to the Constitution guarantees American citizens the right to freedom of religion. One clause, known as the “free exercise” clause, notes that people have the right to exercise the religion of their choice. Every right has “scope” meaning that there are limits to rights. An example often mentioned involves the freedom of speech. A person cannot shout “fire” in a crowded movie theater if there is no fire because people could be harmed or even killed in the stampede to get out of the movie theater.

Lawmakers in State D pass a law that requires people to stay at home except for essential purposes during a highly contagious pandemic. A pastor of a church tells the people who go to his church that going to church is essential, and he arranges for a bus pick up people who want to go to church. Over 100 people go to the church on Sunday. Police then arrest the pastor of the church.

1. Who is the majority in this case? _____
2. Who is the minority? _____

Analyze: Have the rights of the minority been disregarded?

Best Arguments for the Majority	Best Arguments for The Minority

Conclude

Knowing what you know about freedom of religion, the COVID-19 pandemic, majority rule, and minority rights, is this a case where the minority should be protected? Or, should the majority be allowed to rule? Defend your conclusion.

Case 5

The Environmental Protection Agency was created in 1970 to pass regulations and encourage voluntary actions that help conserve our nation's natural resources and protect the American people from environmental pollution e.g. air and water pollution. Some of the regulations require the owners of companies, businesses, and factories to do things that cost them money (e.g. treating hazardous waste to get rid of dangerous chemicals before disposing of it, installing screens on top of smoke stacks to reduce air pollution, eliminating harmful contaminants from drinking water, placing labels on products that allow consumers to choose products with safer chemical ingredients, making farmers use more expensive pesticides because they do less damage to the environment etc.). There are many such regulations.

The COVID-19 pandemic has had a terrible impact on many American businesses. People are required to stay at home; many stores have been listed as "non-essential" and have had to close. Many businesses are struggling to survive and workers are losing their jobs at historic rates.

In response to the serious economic crisis brought on by a pandemic, some business owners asked the federal government to relax regulations so that they could save money, their businesses, and jobs. Government officials have agreed to do this. One unintended problem is that many of the factories that pollute are located in areas where many poor people live because it is cheaper to build factories there.

1. Who is the majority in this case? _____
2. Who is the minority? _____

Analyze: Have the rights of the minority been disregarded?

Best Arguments for the Majority	Best Arguments for The Minority

Conclude

Knowing what you know about the Environmental Protection Agency, majority rule, and minority rights, is this a case where the minority should be protected? Or, should the majority be allowed to rule? Defend your conclusion.