

Online Learning Lessons for 8th Grade

Directions: Please complete the following work below for each subject. This work will count toward your final grade and must be complete to get credit for attendance.

Student Name _____ FOR Friday, April 24th

ELA - Toberman

Chapter 19 Gathering Blue Assignments. If completed choose an article from the NewsELA Coronavirus Text Set 4 posted on Classroom. (Optional Extra Credit: Daily Journal Project)

Parent Initials: _____

ELA - Grahonya

Students will be reading Chapter 5 in *A Wrinkle in Time* and completing the vocabulary, comprehension, and constructed response assignments. See **Grahonya English Google Classroom** for further information and a link to an audio copy of the book. Students may submit this assignment via google classroom or turn it in upon return to school. This assignment will be due May 1st.

Parent Initials: _____

Math

Complete Exponent Division Shortcut Method - Worksheet 1. See **Math Google Classroom** for directions. Students may submit their presentation via google classroom or turn it in via paper/pencil.

Parent Initials: _____

Science - Hebert

Online- Continue the Habitat webquest Offline- Read the Endangered Soil article and complete the questions

Parent Initials: _____

Science - Grahonya

Students will be reading the article, "Otters Article." They need to read the entire article. See **Grahonya Science Google Classroom** for further information. Students may submit this assignment via google classroom or turn it in upon return to school.

Parent Initials: _____

History/Social Studies - Hebert

Read the Standing Rock article and complete the questions

Parent Initials: _____

History/Social Studies - Grahonya

Students will be reading the article, "Warm Hearth." They need to read the entire article. See **Grahonya History Google Classroom** for further information. Students may submit this assignment via google classroom or turn it in upon return to school.

Parent Initials: _____

Parent Signature: _____

If you have questions, please email your teacher.

Thank you!

Mrs. Russell krussell@mcusd1.net

Mrs. Hebert khebert@mcusd1.net

Mr. Toberman btoberman@mcusd1.net

Mr. Grahonya jgrahonya@mcusd1.net

Teacher Hours:
9:00 am - 11:30 am
12:30 pm - 2:30 pm

Gathering Blue E-Learning Literature Circle

Use this template to complete your Chapter Annotations and Summaries for Gathering Blue. For each chapter you will complete a separate copy of this template. Submit your completed template FOR EACH CHAPTER on Google Classroom, or hold on to your templates to be submitted upon returning to school.

Name _____ Chapter _____

Chapter Annotations:

1.

2.

3.

4.

5.

(You may do extra annotations for extra credit)

Exponent Division Rule – Notes

*When seeing a division problem with exponents, there are two methods to simplify the problem. The last two days we spent on the **expanded method** - expanding all the exponents, then **rewriting the answer using exponents**.

The second method or "shortcut" we will be practicing the next two days is this:

Division Rule: Dividing Powers with the Same Base
 When dividing powers with the same base, **KEEP** the base and **SUBTRACT** the exponents

Example: $\frac{2^7}{2^2} = 2^{7-2} = 2^5$ $\frac{x^4}{x^3} = x^{4-3} = x^1$

Example	Same Bases, Subtract Exponents	Simplified Answer
$\frac{3^5}{3^2}$	3^{5-2}	3^3
$\frac{18x^7}{3x^3}$	$\frac{18}{3} \cdot x^{7-3}$	$6x^4$
$\frac{4x^4y^2}{14xy^6}$	$\frac{4}{14} \cdot x^{4-1} \cdot y^{2-6}$	$\frac{2x^3y^{-4}}{7}$

Worked Out Examples

Quotient (Divide)

a. $\frac{2^4}{2^2}$
 $2^{4-2} = 2^2$

b. $\frac{x^5}{x^3}$
 $x^{5-3} = x^2$

c. $\frac{10x^7}{2x^2}$
 $\frac{10}{2} \cdot x^{7-2} = 5 \cdot x^5$

d. $\frac{3y^6}{12y^4}$
 $\frac{3}{12} \cdot y^{6-4} = \frac{1}{4} \cdot y^2$

e. $\frac{2^5x^4y^5}{2^2x^3y}$
 $2^{5-2} \cdot x^{4-3} \cdot y^{5-1} = 2^3 \cdot x^1 \cdot y^4$

Exponent Division Rule Shortcut Method – Worksheet 1

*Simplify the following problems using the shortcut method. (Keep the SAME base and SUBTRACT the exponents)

$$1) \frac{5^4}{5}$$

$$2) \frac{3}{3^3}$$

$$3) \frac{2^2}{2^3}$$

$$4) \frac{2^4}{2^2}$$

$$5) \frac{3r^3}{2r}$$

$$6) \frac{7k^2}{4k^3}$$

$$7) \frac{10p^4}{6p}$$

$$8) \frac{3b}{10b^3}$$

$$9) \frac{8m^3}{10m^3}$$

$$10) \frac{7n^3}{2n^5}$$

ENDANGERED SOIL

20

(1) The United Nations declared 2015 *The International Year of Soils*. There has been a growing awareness that soil isn't only important for healthy ecosystems, but that soil is also critical to our ability to make enough food to feed the world. Food security, which is the access that humans have to healthy food, is threatened when soil is threatened.

(2) The way we have been conducting intensive modern agriculture, polluting our lands and expanding urban cities has had a huge effect on the Earth's soil for the last two centuries. These things, along with the effects of climate change, have made soil endangered and has increased concerns over food security.

(3) Let's first examine the soil itself. If you think that soil is just simply dirt, then you are mistaken. Dirt isn't alive while soil is brimming with life. Besides minerals, water and decomposing organic matter, soil also contains thousands of species of small insects, worms, fungi and microorganisms. A handful of soil contains more microorganisms than there are people on Earth! One key to healthy soil is numerous and diverse soil organisms.

(4) There are two main branches of soil science: pedology and edaphology. Pedology is concerned with how soil forms. Edaphology is the study of how soil conditions affect organisms, like the plants, living in the soil.

(5) We take for granted that soil has always been here and will always be here, but pedology tells us something different. Soil forms very slowly over time. Pedogenesis is the scientific term for soil formation. The uppermost layer of soil is called topsoil and it is the most nutrient rich part of the soil. The pedogenesis of topsoil is very slow. An inch of it takes 500 to 1000 years to form. We grow almost all of our food in topsoil so it is vital that we keep it safe, yet we are destroying topsoil at a much faster rate than it can naturally form.

(6) The main reason why pedogenesis is so slow is because it depends on the breakdown of the "parent material". The parent material is the rock that forms the mineral content of the soil. This rock needs to be broken down into smaller and smaller pieces over time



through contact with the forces of nature. Once weathering forms the initial cracks in the rock, the eroding actions of water, chemical reactions and living organisms (like plants) can start to erode and break apart the rock even further. This process takes a long time causing topsoil to form very slowly.

(7) Edaphology helps us study and examine how altering our soil affects the plants grown in it. Proper soil conditions are vital for healthy plant growth. Over the last two centuries, not only have we seen a decrease in the amount of topsoil on Earth, we've also seen a huge decrease in soil quality and fertility.

(8) Every time a crop is grown in soil, the crop absorbs nutrients from the soil to help it grow. Nutrients like nitrogen, potassium, phosphorus, calcium, magnesium, sulfur and many other nutrients are sucked up by crops which are then transported to markets for sale. In natural ecosystems, like forests, plants suck up nutrients as well, but when the plants die and decompose, the nutrients are returned to the soil. The nutrients in crops end up in our toilets, trash bins and landfill sites and aren't returned to the soil. After years of farming soils in this manner, soils become drained of their nutrients causing nutrient exhaustion. For many exhausted soils, adding synthetic fertilizers can prolong the use of the soil for several more years but inevitably the soil, especially the living components of the soil, begin to suffer when so many chemicals are added. As well, most fertilizers only return nitrogen, phosphorus and potassium to the soil and no other nutrients. This helps keep the price of the fertilizer cheap but at the cost of

The Standing Rock Protests

Freckle Level: 7C

In 2014, it was announced that the Dakota Access Pipeline (DAPL) would begin construction. The DAPL is a 1,772-mile long pipeline that will be used to transport **crude oil** from North Dakota to Illinois. Concerns over the safety of the structure arose in the Standing Rock Indian Reservation. Tribe members expressed unease about a potential oil leak or spill. According to the pipeline plans, the pipeline would travel underneath their water supply. They were also concerned that the pipeline would cross sacred land. When the tribe's concerns were ignored, the Standing Rock Sioux Tribe established a protest camp to resist the pipeline's construction.

The Dakota Access Pipeline

The corporation Energy Transfer Partners planned to construct the oil pipeline from the Bakken Oil Reserve in North Dakota to a farm of oil tanks in Illinois. It would funnel crude oil to key markets in the Gulf Coast, the East Coast, and the Midwest. Energy Transfer Partners said the project would cost \$4 billion and would be completed by 2016.



A map of the Dakota Access Pipeline (shown with the red line)

In the original plans, the pipeline would cross the Missouri River near Bismarck, North Dakota. However, when concerns developed about the effects of the pipeline on the water source for the city, the plans were redrawn. Bismarck is 95 percent white. Interestingly enough, those residents claim that they never even had to object to the pipeline before the route was redrawn. Army Corps of Engineers, the DAPL was rerouted under the Missouri River and Lake Oahe, about half a mile from the Standing Rock Indian Reservation. Approximately 10,000 Sioux Indians live on that reservation land. The Standing Rock Sioux depend on the Missouri River as their water supply. Though

Writing

Skills: Informative, Writing Conventions

- One of the Standing Rock protesters explained, "The land is not a resource. It is an entity that you have a relationship with and you respect, like your grandmother, mother, and aunts." What do her words mean, and how do they relate to the Standing Rock protests? Use evidence from the text to support your ideas.

Vocab

- potential
- sacred
- established
- considered
- efficient
- federal
- disputed
- activists
- climate
- artifacts
- dismantled
- justice

Reading

Skills:

- RI.1: Explicit Information
- RI.7: Presentation of Content

RI.1: Explicit Information

Based on the text, what can you infer about the Standing Rock Sioux? Select all that apply.

Camp Actions

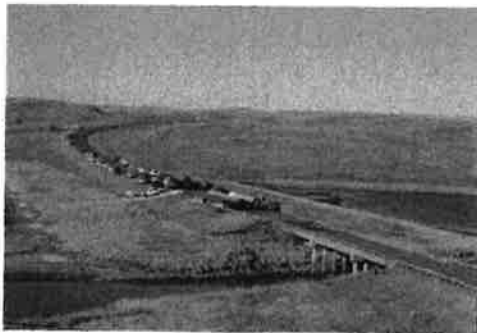
The camps were founded by Standing Rock's Historic Preservation Officer, LaDonna Brave Bull Allard. They would be places where protesters could gather in support of cultural preservation and spiritual resistance to the DAPL. The water protectors, as they became known, engaged in prayer and focused on media outreach to spread their message to the world.



Standing Rock protesters hold a sign that urges others to "Defend the Sacred"

In September 2016, Energy Transfer Partners sent bulldozers to dig along the pipeline's route. They were to dig in areas believed to house Native American graves and burial artifacts. Protesters crossed the fence between the camps and the building site to stop the bulldozers. When they did, guards used pepper spray and guard dogs to push the protectors back. Several people were injured. Though local police officers were present, they failed to intervene.

The next month, protesters set up blockades on a highway leading into the construction area. They were soon confronted by police officers. The police used pepper spray, Tasers, concussion grenades and other forms of aggression to subdue them. The conflict only calmed down after a tribal elder intervened. Several protesters were arrested in the event. In November, protestors attempted to remove blockades established by the police on a highway bridge. This time, the police fired water cannons at them, despite the freezing temperatures outside. The event was documented through video that was shared through the media and on YouTube.



A blockade at Blackwater Bridge

Energy Transfer Partners does not understand the importance of Sioux burial land.

The construction of the Dakota Access Pipeline is a complicated issue.

The local police want to help the Standing Rock Sioux.

The Dakota Access Pipeline will likely not be built.

RI.7: Presentation of Content

How does the map of the DAPL compare to the description of the pipeline in the text?

The map of the DAPL depicts just how large the pipeline is compared to what is described in the text.

The map of the DAPL shows how far the pipeline actually is from the Sioux's sacred burial land compared to what is described in the text.

The map of the DAPL shows how useful the pipeline will be to people living in surrounding areas compared to what is described in the text.

The map of the DAPL shows a different route for the pipeline compared to what is described in the text.

RI.7: Presentation of Content

How do the images present the details of the Standing Rock protests differently than the text?