

Unit Plan
Geography: Environment and Society
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SST 309-03
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Overview/Rationale/Introduction

Overview: This is a seventh grade geography unit consisting of five GLCEs. The main focus of this unit is about the impacts humans have on the environment and vice versa, specifically for the Eastern hemisphere. Students will describe how humans impact the Earth's spheres (biosphere, lithosphere, atmosphere, and hydrosphere) within the Eastern hemisphere. They will also explain how technology affects the way humans alter Earth's natural landscape. Humans change the physical environment often and students will identify ways in which revamping one place will affect another area. Lastly, students will describe how changes in the physical environment influence human decisions in order to adapt.

Rationale: It's very important that students have a complete understanding about the environment in which we reside. Whether or not they know it, they all impact it on a daily basis. Students need to realize how humans alter the environment and how it affects Earth. I want students to be aware of the impacts humans have in different locations of the planet. Since my students live in the Western hemisphere, it's necessary that they examine a location other than their own. By observing and analyzing the actions of humans in the Eastern hemisphere, students will have a broad understanding of human impacts on the environment. Not only do we effect the environment, but it influences our lives as well. Students are most familiar with natural disasters within the Eastern hemisphere. I want students to describe the various ways other places are transformed by natural disasters. Students need to recognize that everyone has to adapt to the constantly changing environment in order to survive. Overall, this unit plan will open my students' eyes about the environment and how humans change it, both positively and negatively.

Introduction: Throughout this unit plan, students will learn about geography both collaboratively and independently. Students will engage in research, hands-on/minds-on activities, games, discussions, watch videos, and much more. After such activities have been completed, students will independently explain and reflect what they've discovered about the connections between humans and the environment.

Lesson 1

GLCE (coding and wording) and Verb underlined	7 – G5.1.1 <u>Describe</u> the environmental effects of human action on the atmosphere (air), biosphere (people, animals, and plants), lithosphere (soil), and hydrosphere (water) (e.g., desertification in the Sahel Region of North Africa, deforestation in the Congo Basin, air pollution in urban center, and chemical spills in European Rivers). (Knowledge/Skill)			
Knowledge (K)	Understand (U)	DO: Demonstration of Learning (DOL)	Vocabulary	I Can
<p>Desertification- the process by which fertile land becomes desert, typically as a result of drought, deforestation, or inappropriate agriculture. Occurring in the Sahel Region of Africa</p> <p>Deforestation- the state of being clear of trees. The Congo Basin in Africa is experiencing deforestation.</p> <p>Deforestation has also occurred in Europe. (p. 284)</p> <p>Hungarian chemical sludge spill reaches Danube.</p> <p>Particle Pollution in Eastern China.</p> <p>Acid rain from factories in Europe killed many trees. (p. 285 Geography textbook)</p>	<p>The students will understand that humans have an impact on the environment in which we live in.</p>	<p>Students will create a top-tab booklet foldable. Each tab will represent one of the four spheres and students will use resources (web, textbook, etc.) to research the environmental effects human action has on each sphere specifically for the Eastern Hemisphere.</p>	<p>Atmosphere Biosphere Lithosphere Hydrosphere Desertification Deforestation Acid Rain Cyanide</p>	<p>I can tell how humans change the environment in different ways.</p>

<p>Water pollution in Venice due to industrial waste and sewage. (p. 283) Cyanide spill in local streams that eventually went into the Tisza River in Romania and killed many fish. (p. 323 Geography Textbook) Aral Sea in Russia is shrinking due to humans removing water for irrigating cotton fields. Chemicals from cotton fields got into runoff and killed fish. (p. 353) Pollution in the Ganges River in India (p. 561)</p>				
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4. Assessment ideas: *a. How will you know they've learned it?*

Students will be required to research different ways humans impact the four spheres of the environment. They will make a foldable and write the information they found within it. In addition, students will draw a picture on each tab that relates to the human action that they described for each sphere.

b. How will you grade it?

This assignment will be graded by using a rubric.

5. Sequence of Instruction (including Vocabulary): *What will you do? What will they do?*

<p>Lessons: How will you take them where they need to go? (Step-by-Step plan)</p>	<p>Instructional strategies/Social constructs: How will they work? (AND what will YOU do?)</p>	<p>Resources needed: What materials and resources will they need? (Page #s read, graphic organizers, books, posters, realia, etc...)</p>
<p>Lesson: How will you take them where they need to go? Use Gradual release: Modeling, Guided Practice, Independent practice (ITIP) Consider HOTS/Blooms/Vocabulary Checking for Understanding (Formative Assessment) Pre-test/Anticipatory set: Students will be introduced to this particular lesson by participating in the 10 by 10 instructional strategy. Students will look at the four spheres picture (Attachment A) and formulate ten observations and ten questions. Students will complete this collaboratively with their table groups. Then the students will share their observations/questions as an entire class. Modeling: The teacher will tell students that humans impact each sphere everyday. Then the teacher will tell the students that they are going to be focusing on the human action</p>	<p>Instructional strategies/Social constructs: How will they work?</p> <ul style="list-style-type: none"> • Collaborative work • 10 by 10 • Foldables 	<p>Resources needed:</p> <ul style="list-style-type: none"> • Paper and for each group to complete the 10 by 10 activity • Six pieces of different colored paper for every two students to create the foldable • Markers/colored pencils to decorate the top-tab booklet • Textbooks, educational magazines, and a computer for each student or group of students to research information for the foldable • Attachment A (picture) • Attachment B (foldable example) • Attachment C (rubric) for each student

within the Eastern Hemisphere for each of the four spheres. The teacher will show the top-tab booklet he/she made ahead of time and let students know that's what they are going to create too. As a class, the teacher will model how to make a top-tab booklet and the students will follow along. After the foldable is made, the teacher will explain what should go in the top-tab booklet (examples of human action for each of the four spheres within the Eastern Hemisphere and a drawing that relates to the human action) and how they will research information (textbook, educational magazines if available, and the internet). The teacher will show an example of a tab in the booklet to give students an idea of what goes inside the foldable. The teacher will also tell the students that they can research information about examples of human action with other students, but their foldables should NOT be identical.

Check for Understanding:

The teacher will ask these questions before students begin:

- What are the four spheres that make up the environment? (Biosphere, lithosphere, hydrosphere, and atmosphere)
- How will you research examples of human action on each of the spheres? (Textbook, magazines, and internet)
- What goes on each tab of the top-

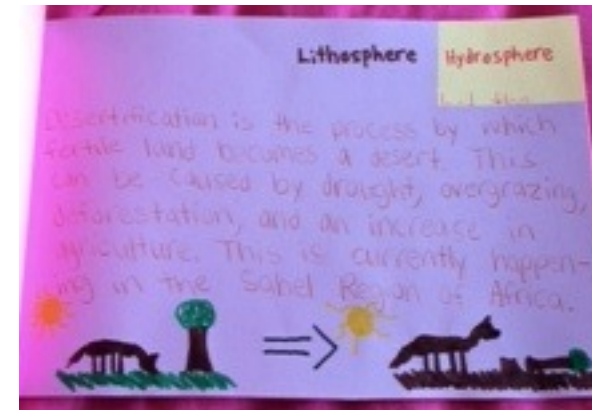
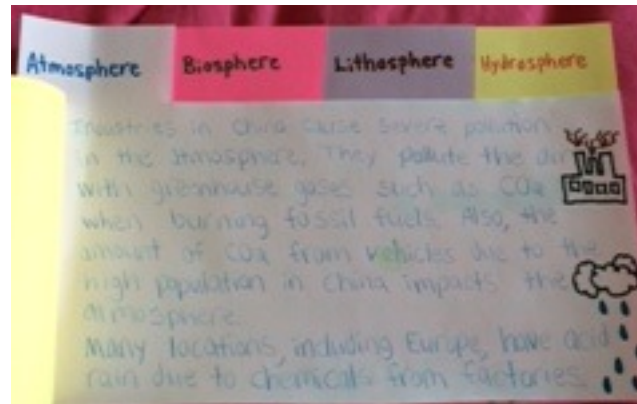
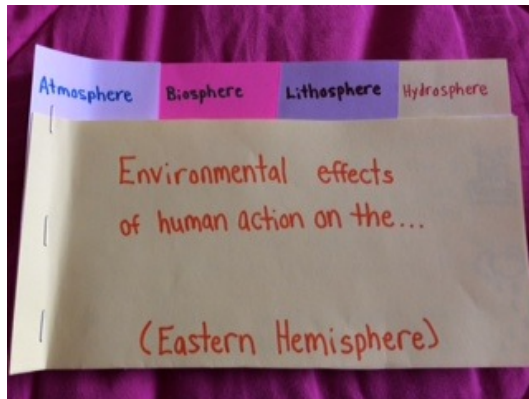
<p>tab booklet? (An example of human impact for each specific sphere and a picture illustrating the human action)</p> <ul style="list-style-type: none"> • Can you work with others? (Yes) <p>Guided Practice: The teacher will guide the class through one of the tabs. The class will think of an example of human action on one of the four tabs. The class will write about the example on the tab and draw a picture.</p> <p>Independent Practice: After the class feels comfortable filling out one tab, they will finish the rest of their top-tab booklet. If not finished in class, it will be finished as homework.</p> <p>Closure: The teacher and students will have a class discussion about the examples they found about human action the environment in the Eastern Hemisphere.</p> <p>Assessment/Reflection: Each student's foldable will be evaluated by rubric. Student will assess himself or herself based on the rubric and then the teacher will assess students with the given rubric.</p>		
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6. Resource Attachments

A.



B.



C.

Top-Tab Booklet Rubric

Student Name: _____

Point Values/ Requirements	5 points	3 points	1 point	0 points
Construction	Top-tab booklet is correctly made with a title page and four tabs		Top-tab booklet is incorrectly made with a title page OR four tabs	Top-tab booklet isn't made
Content	Every tab is labeled with a specific sphere and has a correct description of an example relating to the Eastern Hemisphere	3 of the 4 tabs are labeled with a specific sphere and have a correct description of an example relating to the Eastern Hemisphere	2 of the 4 tabs are labeled with a specific sphere and have a correct description of an example relating to the Eastern Hemisphere	None of the tabs are labeled with a specific sphere and it doesn't contain a correct description of an example relating to the Eastern Hemisphere
Drawings	Every tab contains a drawing that correctly relates to the given example	3 of the 4 tabs contain a drawing that correctly relates to the given example	2 of the 4 tabs contain a drawing that correctly relates to the given example	None of the tabs contain a drawing that correctly relates to the given example
Citation	All sources are cited and are typed on a separate piece of paper	Some sources are cited and are typed on a separate piece of paper	Some sources are cited, but it isn't typed on a separate piece of paper	None of the sources are cited

Self-Assessment Score: _____ (20 points possible)

Final Score: _____ (20 points possible)

Lesson 2

GLCE (coding and wording) and Verb underlined	7 – G5.1.2 <u>Describe</u> how variations in technology affect human modifications of the landscape (e.g., clearing of agricultural land in Southeast Asia, fish factories in North Atlantic and Western Pacific Ocean, and damming rivers to meet needs for electricity). (Knowledge/Skill)			
Knowledge (K)	Understand (U)	DO: Demonstration of Learning (DOL)	Vocabulary	I Can
<p>Indonesia’s fires: a hazy challenge for Southeast Asia</p> <p>Three Gorges Dam in China is causing landslides, ruining ecosystems, and may even trigger an earthquake. (p. 628)</p> <p>Farming has caused desertification of the land in the Sahel (p. 424)</p> <p>Drilling for oil in Nigeria has caused the land to change; oil spills, fires, acid rain (p. 425)</p> <p>Aswan High Dam in Egypt built to control floodwaters and supply water to farmers. It decreased fertility in the soil and raised water table so salt in earth decreases fertility. (p. 427)</p>	<p>Students will understand that humans alter the land by using technology.</p>	<p>Students will choose a topic about a human modification to the landscape due to advancements in technology. Then students will write a five-paragraph essay about their topic.</p>	<p>Technology Landscape Dams Landslides Earthquakes Acid Rain Desertification</p>	<p>I can tell how humans change our land by using different types of technology.</p>

<p>Drip irrigation in Southwest Asia (Israel) is used to slowly drip water on plants in order to conserve water. Small pipes are put into the ground. (p. 496)</p>				
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4. **Assessment ideas:** a. *How will you know they've learned it?*

Students will ultimately write a five-paragraph essay about the topic they chose. While students are researching their topic, they will fill out a chart to show their progression towards the required essay.

b. *How will you grade it?*

This assignment will be graded by a checklist.

5. **Sequence of Instruction (including Vocabulary):** *What will you do? What will they do?*

<p>Lessons: How will you take them where they need to go? (Step-by-Step plan)</p>	<p>Instructional strategies/Social constructs: How will they work? (AND what will YOU do?)</p>	<p>Resources needed: What materials and resources will they need? (Page #s read, graphic organizers, books, posters, realia, etc...)</p>
<p>Lesson: How will you take them where they need to go? Use Gradual release: Modeling, Guided Practice, Independent practice (ITIP) Consider HOTS/Blooms/Vocabulary Checking for Understanding (Formative Assessment) Pre-test/Anticipatory set: Students will be introduced to this lesson by participating in the text rendering instructional strategy. Table groups will receive an article called, “Preserving The Rainforests” and then will summarize the article in to a paragraph, sentence, phrase, and word, respectively. Then each group will share their word with the rest of the class. The teacher will introduce the topic of this lesson: humans change the land by using different types of technology. The teacher will tell the students that they are to research a way that technology is used by humans to alter the landscape within the Eastern Hemisphere. Once students chose a topic, they will research about it in order to write a five-paragraph essay.</p>	<p>Instructional strategies/Social constructs: How will they work?</p> <ul style="list-style-type: none"> • Text rendering • Cooperative group work • Independent research using the internet 	<p>Resources needed: What materials and resources will they need? (also included on Works Cited page)</p> <ul style="list-style-type: none"> • Printed article for each table group for text rendering activity • Colored computer paper, one, for each table group • Pencils • Computer with internet access for each student • Textbook, magazines, any other resources needed for research • Attachment A (research chart) for each student • Attachment B (checklist) for each student

Modeling:

Since the students are ultimately writing a five-paragraph essay, the teacher needs to write a five-paragraph essay on a particular topic related to the GLCE. No students in the class should use the topic done by the teacher. The teacher will explain what the final essay needs to contain and look like.

Check for Understanding:

The teacher will ask these questions before students begin:

- What does your topic need to be about? (Technology used by humans that modify the landscape within the Eastern Hemisphere)
- Is this essay done independently or in groups? (Independently)
- After you complete your research, what do you need to do? (Write a five-paragraph essay)
- Any further questions?

Guided Practice:

The teacher needs to guide his/her students in regards to research. The teacher should pick a topic and then go through a brief overview of the research chart with students. The teacher should give specific websites that will help students answer the questions from the chart.

Independent Practice:

The students will use computer, both in school and at home, in order pick a topic and then answer questions from the chart based on the topic. After compiling research, students will write their five-

paragraph essay using the provided checklist.

Closure:
Students will briefly share a few sentences about their topic from their essay to the entire class. Also, they will state what they learned from completing this paper.

Assessment/Reflection:
Each students essay will be evaluated using the checklist. Student will assess himself or herself based on the checklist and then the teacher will assess students with the given checklist.

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6. *Resource Attachments*

A.

Research Chart

Questions:	For your topic... Where within the Eastern Hemisphere is it located?	For your topic... What technology is used to modify the landscape? (Describe the modification process in detail)	For your topic... Why are humans modifying the landscape? What are the advantages and disadvantages due to the modification?	For your topic... Any additional information that would add detail to your paper (e.g. interesting facts, graphs, charts, etc.)
Answers:				

B.

Five-Paragraph Essay Checklist

Directions: This checklist offers the guidelines in order to write your essay. As you write your paper, check off each task on the provided line. This checklist will be used in order to grade your finished essay.

First Paragraph (Introductory):

- _____ Engaging lead for the beginning of your essay **(2 points)**
- _____ Topic sentence telling the reader what your essay is about **(10 points)**

Second Paragraph:

- _____ Location of the area being discussed (from the “Research Chart”) **(5 points)**
- _____ Details about the local area (e.g. weather, population, what the area is known for, etc.) **(5 points)**

Third Paragraph:

- _____ Technology used to modify the landscape for your particular example (from the “Research Chart”) **(5 points)**
- _____ Describe the process of your example and how specifically the landscape is modified (from the “Research Chart”) **(5 points)**

Fourth Paragraph:

- _____ Why are humans modifying the landscape? (from the “Research Chart”) **(5 points)**
- _____ Advantages and disadvantages of the modification (from the “Research Chart”) **(5 points)**

Fifth Paragraph (Conclusion):

- _____ Briefly summarize what you discussed in the second, third, and fourth paragraph **(3 points)**
- _____ What did you learn from your chosen topic? **(5 points)**
- _____ How will knowing this help you in the future? **(3 points)**

Conventions & References:

_____ No spelling errors or grammar mistakes (Reread and revise your paper; look for mistakes!) **(5 points)**

_____ Five-paragraph format **(5 points)**

_____ Each paragraph has at least five sentences **(2 points)**

_____ All websites, textbooks, magazines, etc. are cited at the end of the essay on a separate page **(10 points)**

Self-Assessment Score: _____ (75 points possible)

Final Score: _____ (75 points possible)

Lesson 3

<p>GLCE (coding and wording) and Verb underlined</p>	<p>7 – G5.1.3 <u>Identify</u> the ways in which human-induced changes in the physical environment in one place can cause changes in other places (e.g., cutting forests in one region may result in river basin flooding elsewhere as has happened historically in China; building dams floods land upstream and permits irrigation downstream as in Southern Africa, the Aswan Dam flooded the upper Nile Valley and permitted irrigation downstream). (Knowledge/Skill)</p>			
<p>Knowledge (K)</p>	<p>Understand (U)</p>	<p>DO: Demonstration of Learning (DOL)</p>	<p>Vocabulary</p>	<p>I Can</p>
<p>Flooding of the Yangtze River in China, 1998 (p. 640) https://circle.ubc.ca/bitstream/handle/2429/42743/You_XinZong_FRST_497_Graduating_Essay_2012.pdf?sequence=1 Floods in Southern Africa region are caused by the Kariba Dam and the Cahora Bassa Dam http://www.unocha.org/ro-sa/about-us/about-ocha-rosa http://www.internationalrivers.org/resources/environmental-impacts-of-large-dams-african-examples-2029 The Aswan Dam helps prevent flooding in the Nile Valley. During the course of its life, the dam had to be raised. More fertilizers are used on</p>	<p>The students will understand that alterations in the physical environment due to humans can affect multiple places.</p>	<p>Students will complete notes on a presentation about the Aral Sea. In addition, they will complete a cause and effect graphic organizer based on the Aral Sea.</p>	<p>Basin Dam Flood Irrigation</p>	<p>I can tell how changes to the land made by humans in one place can cause changes in other places.</p>

<p>crops due to the lack of irrigation. http://sitemaker.umich.edu/sec004_gp5/home Erosion from acid rain (from factories) caused floods in Europe by increasing the amount of seawater in the lagoon in Venice. (November 1966) Nuclear Explosion at Chernobyl. The radiation moved in the atmosphere, which caused it to spread in other locations. The radiation affected streams, fish, groundwater, trees, animals, etc.</p>				
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<p>GLCE (coding and wording) and Verb underlined</p>	<p>7 – G5.2.1 <u>Describe</u> the effects that a change in the physical environment could have on human activities and the choices people would have to make in adjusting to the change (e.g., drought in Africa, pollution from volcanic eruptions in Indonesia, earthquakes in Turkey, and flooding in Bangladesh). (Knowledge/Skill)</p>			
<p>Knowledge (K)</p>	<p>Understand (U)</p>	<p>DO: Demonstration of Learning (DOL)</p>	<p>Vocabulary</p>	<p>I Can</p>
<p>Droughts in Africa have caused many troubles for people living in that location. Lack of food and water, increase of food prices, malnutrition, and livestock deaths. Other countries have to step in and give people of that area food and water. http://www.opusa.org/drought-crisis-in-east-africa-disaster-response/ Pollution from volcanoes causes trouble with breathing, people in that area have to relocate, and volcanic smoke covers the sun/ fills the atmosphere. http://www.cnn.com/2014/02/01/world/asia/indonesia-volcano/ Earthquakes cause major structural damage and can easily kill people. Citizens need to learn the steps to take when an</p>	<p>The students will understand that humans have to prepare and adapt to changes in the physical environment.</p>	<p>Students will answer questions about the Aral Sea and its impact on humans. Also, students will complete a chart about global issues and how it affects humans.</p>	<p>Drought Volcanoes “Ring of Fire” Earthquakes Floods Tsunami</p>	<p>I can tell how humans have to make decisions and adjust to changes in the environment they live in.</p>

<p>earthquake happens (hiding under something structurally sound). Many earthquakes have happened in Turkey due to faults from tectonic plate movement. http://www.cnn.com/2013/12/28/world/europe/turkey-earthquake/ Many things cause floods and humans need to be aware of the reasons. Citizens need to know the precautions to take when there's a flood and where to evacuate; also flood warnings. http://www.sln.org.uk/geography/schools/blythebridge/gcsebangladesh.htm Monsoons in South Asia (p. 595)</p>				
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4. **Assessment ideas:** a. *How will you know they've learned it?*

Students will complete various worksheets (graphic organizer, chart, questions) about the Aral Sea and other global issues effecting the environment.

b. *How will you grade it?*

This assignment will be graded by a rubric.

5. **Sequence of Instruction (including Vocabulary):** *What will you do? What will they do?*

<p>Lessons: How will you take them where they need to go? (Step-by-Step plan)</p>	<p>Instructional strategies/Social constructs: How will they work? (AND what will YOU do?)</p>	<p>Resources needed: What materials and resources will they need? (Page #s read, graphic organizers, books, posters, realia, etc...)</p>
<p>Lesson: How will you take them where they need to go? Use Gradual release: Modeling, Guided Practice, Independent practice (ITIP) Consider HOTS/Blooms/Vocabulary Checking for Understanding (Formative Assessment) Pre-test/Anticipatory set: Students will be introduced to this lesson by discussing the interaction between humans and the environment. The teacher will say that by using, adapting to, and modifying the environment, we're interacting with it. Once the class has discussed examples of interactions, students will fill out the "Reviewing Human-Environment Interaction" chart. The class will share a few examples of each category and then dive into the main portion of the lesson. Modeling: The teacher will go through a presentation with her students about the Aral Sea. The teacher will provide a handout with</p>	<p>Instructional strategies/Social constructs: How will they work?</p> <ul style="list-style-type: none"> • Graphic organizer • Presentation • Independent work • Group work • Jigsaw puzzle 	<p>Resources needed: What materials and resources will they need? (also included on Works Cited page)</p> <ul style="list-style-type: none"> • Pencils • Attachment A (Reviewing Human-Environment Interaction) for every two students • Attachment B (PowerPoint Notes) for each student • Attachment C (The Shrinking of the Aral Sea) for each student • Attachment D (The Aral Sea: Identifying Causes and Effects) for each student • Attachment E (Sample Answers for The Aral Sea: Identifying Causes and Effects) needed just for the teacher • Attachment F (Identifying Global Problems Relating to Human/Environment Interaction) for each student • Posters for jigsaw puzzle activity,

<p>questions on it to keep the students engaged. The teacher will explain the handout, “PowerPoint Notes”, to students. Once the presentation is over, students will read the text selection, “The Shrinking of the Aral Sea” and answer question about it. Then students will complete a graphic organizer, “The Aral Sea: Identifying Causes and Effects”, which is about the causes and effects of the Aral Sea shrinking. The teacher will aid students in completing one box of the graphic organizer before students finish it on their own. Lastly, the teacher will describe the “Identifying Global Problems Relating to Human/Environment Interaction” chart students are to complete to further their understanding of human-environment interaction. Both the teacher and student will read one poster and fill out one row before students finish it in groups. Each group will participate in the instructional strategy of jigsaw puzzle. Each group of students will read one poster and complete one row from the chart. Then, students will present their information to the class so they can take notes on the remaining posters.</p> <p><u>Check for Understanding:</u> The teacher will ask these questions before students begin:</p> <ul style="list-style-type: none"> • While reading “The Shrinking of the Aral Sea”, what are you filling out? (Cause and Effect graphic organizer) 		<p>Identifying Global Problems Relating to Human/Environment Interaction, are attached to this link (5: Human/Environment Interaction) under Lesson Sequence- Lesson 1: Supplemental Materials; one copy of each poster will be needed</p> <ul style="list-style-type: none"> • Attachment G (Human/Environment Interaction Lesson Rubric) for each student
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<ul style="list-style-type: none">• What is the only work done in groups for this lesson? (“Identifying Global Problems...” chart)• Any further questions? <p><u>Guided Practice:</u> The teacher will guide students during the presentation and for the beginning of the required worksheets.</p> <p><u>Independent Practice:</u> The students will finish the worksheets both alone and with other classmates.</p> <p><u>Closure:</u> Students will answer these questions independently and then discuss it with the entire class: What change made by humans on the environment caused the shrinking of the Aral Sea? How did this change impact human activity? How did humans adapt to the change?</p> <p><u>Assessment/Reflection:</u> Students will have their various worksheets graded by a rubric.</p>		
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6. *Resource Attachments*

A.

6th Grade Social Studies: World Geography and Global Issues
 Unit 5: Human/Environment Interaction

SS060501
 Lesson 1

Reviewing Human-Environment Interaction

	Using the Environment	Modifying the Environment
 Our Community		
 Michigan		
 The United States		
 The World		

B.

6th Grade Social Studies: World Geography and Global Issues
Unit 5: Human/Environment Interaction

SS060501
Lesson 1

**PowerPoint Notes
page 1**

1. Describe what you see in this photograph (SLIDE 2)

2. Where do you think this place is? (SLIDE 2)

3. What do you think caused the Aral Sea to shrink? (SLIDE 4)

4. On what continent is the Aral Sea? _____ (SLIDE 5)

5. In what country or countries is the Aral Sea? (SLIDE 5)

6. How might the fact that the Aral Sea is shared by two countries make it challenging to solve the problem of the drying up of the sea? (SLIDE 5)

7. Describe what is happening to the Aral Sea between 2000 and 2009 (SLIDES 6-15)

8. What might have caused the Aral Sea to have more water in 2010? (SLIDE 16)

9. What might have caused the Northern Aral Sea to have more water in 2006? (SLIDES 19 AND 20)

C.

6th Grade Social Studies: World Geography and Global Issues
Unit 5: Human/Environment InteractionSS060501
Lesson 1

The Shrinking of the Aral Sea

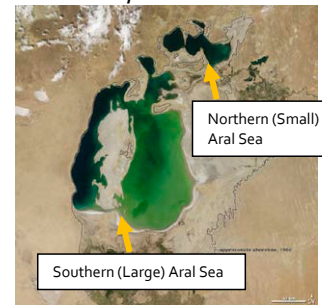
In the 1960s, the Soviet Union undertook a major water diversion project on the arid plains of Kazakhstan, Uzbekistan, and Turkmenistan. The region's two major rivers, fed by snowmelt and precipitation in faraway mountains, were used to transform the desert into farms for cotton and other crops. Before the project, the Syr Darya and the Amu Darya rivers flowed down from the mountains, cut northwest through the Kyzylkum Desert, and finally pooled together in the lowest part of the basin. The lake they made, the Aral Sea, was once the fourth largest in the world.

Although irrigation made the desert bloom, it devastated the Aral Sea. In 2000, the lake was already a fraction of what it was in 1960. The Northern Aral Sea (sometimes called the Small Aral Sea) had separated from the Southern (Large) Aral Sea. The Southern Aral Sea had split into eastern and western lobes that remained tenuously connected at both ends.

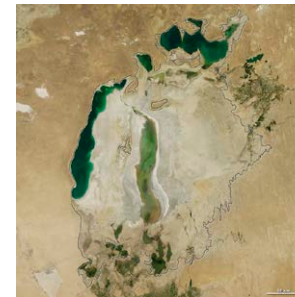
By 2001, the southern connection had been severed, and the shallower eastern part retreated rapidly over the next several years. Especially large retreats in the eastern lobe of the Southern Sea appear to have occurred between 2005 and 2009, when drought limited and then cut off the flow of the Amu Darya.

As the lake dried up, fisheries and the communities that depended on them collapsed. The increasingly salty water became polluted with fertilizer and pesticides. The blowing dust from the exposed lakebed, contaminated with agricultural chemicals, became a public health hazard. The salty dust blew off the lakebed and settled onto fields, degrading the soil. Croplands had to be flushed with larger and larger volumes of river water. The loss of the moderating influence of such a large body of water made winters colder and summers hotter and drier.

In a last-ditch effort to save some of the lake, Kazakhstan built a dam between the northern and southern parts of the Aral Sea. Completed in 2005, the dam was basically a death sentence for the southern Aral Sea, which was judged to be beyond saving. All of the water flowing into the desert basin from the Syr Darya now stays in the Northern Aral Sea. Between 2005 and 2006, the water levels in that part of the lake rebounded significantly and very small increases are visible throughout the rest of the time period. The differences in water color are due to changes in sediment.



Aral Sea in 2000



Aral Sea in 2012

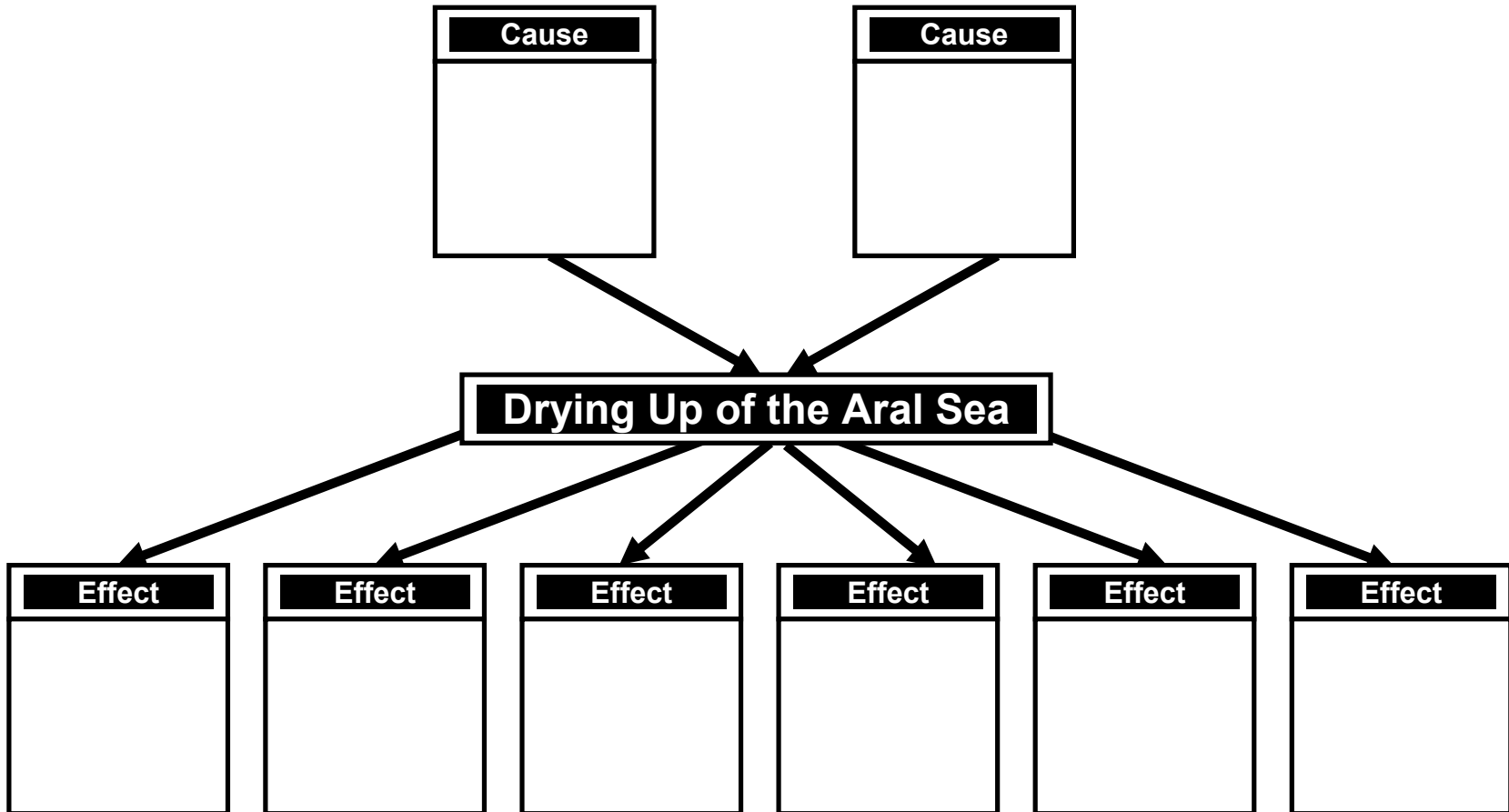
Adapted from: *Shrinking of the Aral Sea*. Earth Observatory. NASA. 3 December 2013
<http://earthobservatory.nasa.gov/Features/WorldOfChange/aral_sea.php>.

D.

6th Grade Social Studies: World Geography and Global Issues
Unit 5: Human/Environment Interaction

SS060501
Lesson 1

**The Aral Sea
Identifying Causes and Effects**

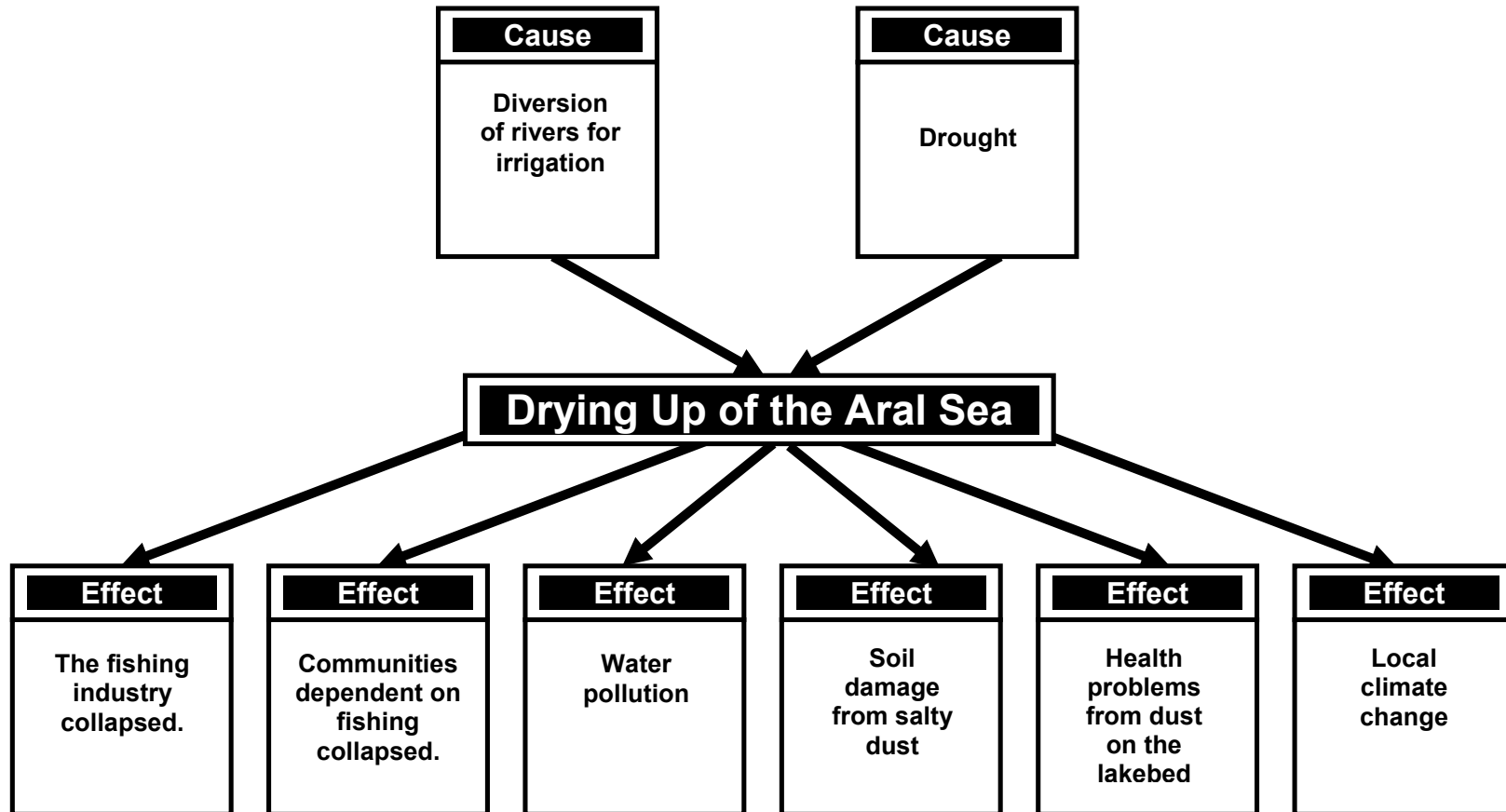


E.

6th Grade Social Studies: World Geography and Global Issues
Unit 5: Human/Environment Interaction

SS060501
Lesson 1

The Aral Sea
Identifying Causes and Effects – Sample Answers



F.

6th Grade Social Studies: World Geography and Global Issues
 Unit 5: Human/Environment Interaction

SS060501
 Lesson 1

Identifying Global Problems Relating to Human/Environment Interaction

	What global problem was the focus of the year?	What is one reason it is a global problem?
2004		
2005		
2006		
2007		
2008		
2009		
2010		
2011		
2012		
2013		

G.

Human/Environment Interaction Lesson Rubric
 (Put one check mark per assignment on the provided lines based on completion)

Assignments	Fully Completed (10 points)	Partially Completed (5 points)	Not completed (0 points)
Reviewing Human-Environment Interaction Chart	_____	_____	_____
PowerPoint Notes Questions	_____	_____	_____
The Aral Sea: Identifying Causes and Effects Graphic Organizer	_____	_____	_____
Identifying Global Problems Relating to Human/Environment Interaction Chart	_____	_____	_____

Final Score: _____ (40 points possible)

Lesson 4

4. **Assessment ideas:** a. *How will you know they've learned it?*

Students will complete a word scramble and a chart based on the vocabulary words.

b. *How will you grade it?*

This assignment will be graded by a scoring guide.

5. **Sequence of Instruction (including Vocabulary):** *What will you do? What will they do?*

<p>Lessons: How will you take them where they need to go? (Step-by-Step plan)</p>	<p>Instructional strategies/Social constructs: How will they work? (AND what will YOU do?)</p>	<p>Resources needed: What materials and resources will they need? <i>(Page #s read, graphic organizers, books, posters, realia, etc...)</i></p>
<p><u>Step One of Building Academic Vocabulary: Description</u></p> <p>Lithosphere: Teacher-Talk: “What is below your feet?” (Students will say floor, ground, etc. I will tell them to keep giving me answers until someone says something along the lines of rocks or rock layers.) “Yes, under our feet are layers of rocks. Let’s look at this website to give us some further information about rocks. (Students will watch the video) “What word did you see that explains the rock layers 100 km thick?” (Students will answer lithosphere) “Let’s all say lithosphere together a couple of times.” (Class and I will say the word lithosphere) “Good, now let me explain what exactly the lithosphere is. It’s the rock layers that make up the outer most part of</p>	<ul style="list-style-type: none"> • Think-Pair-Share • Independent work • Collaborative Work 	<p>Lithosphere:</p> <ul style="list-style-type: none"> • Whiteboard/Chalkboard for teacher • Markers for teacher • 3x5 Notecard for each student • Pencil for each student <p>http://studyjams.scholastic.com/studyjams/jams/science/rocks-minerals-landforms/lithosphere-hydrosphere-atmosphere.htm</p> <p>Desertification:</p> <ul style="list-style-type: none"> • Attachment A (Image) • Journal for each student • Pencil for each student <p>Volcanoes:</p> <ul style="list-style-type: none"> • Loose leaf paper for each student • Pencil for each student <p>https://www.youtube.com/watch?v=Be7o6BYVOzA</p> <p>Dams:</p> <ul style="list-style-type: none"> • Journal for each student • Pencil for each student • Attachment B (Image) • 3x5 Notecard for each student

<p>Earth’s surface.” (Teacher will draw a circle on the board and label the line of the circle and a portion of the inside of the circle, 100 km, as the lithosphere) “That portion is the lithosphere.”</p> <p>Desertification: Teacher-Talk: “What do you see in this picture?” (The teacher will list the things all the students say on a whiteboard/chalkboard.) “Is there many plants in this picture?” (Students should respond saying no.) “This picture reminds me of the desert and today’s word is desertification. This means that land that was once capable of having vegetation no longer can. As you see in the picture, the ground is very dry and contains little nutrients. There are multiple reasons as to why desertification takes place.”</p> <p>Volcanoes: Teacher-Talk: “Okay, I’m going to show you a short video. Get out a piece of paper and as you’re watching the video, write down at least five things you read/see.” (Students will watch the video.) “What do you think the video was trying to tell you about? How could you tell?” (Teacher and students will discuss the video and what they</p>		<p>Tsunami:</p> <ul style="list-style-type: none"> • Journal for each student • Pencil for each student <p>http://www.neok12.com/video/Natural-Disasters/zX53095a467b677a5e0c7e0a.htm</p>
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saw.) “Volcanoes are openings in Earth’s surface that releases magma at certain times. As you saw in the video, it can do much damage to the surrounding environment.”

Dams:

Teacher-Talk: “Imagine that you were standing right in this picture as a journalist. In your journal, write down a description of this picture based on your five senses.”

(Students will write down a description in their journal and then the teacher will facilitate a discussion about the dam.) “This is the Three Gorges Dam in China. As you can see, it is man-made and very complex. It controls the water going through this particular area.”

Tsunami:

Teacher-Talk: “I want everyone to watch this video very closely and answer these questions during/after the video in your journal. What does tsunami mean in Japanese? What causes a tsunami? Why are tsunamis so large in height toward land? What are your reactions/emotions after seeing it destroy communities?” (Students will watch the video and then they will discuss the questions together as a class.)

<p><u>Step Two of Building Academic Vocabulary: Restate</u></p> <p>Lithosphere: Teacher-Talk: “Now that I have introduced you to the term lithosphere, I want you to describe the term in your own words to your classmates by writing on a 3x5 notecard. Then, after you’ve finished, switch notecards with someone around you and read each other’s explanations.”</p> <p>Desertification: Teacher-Talk: “Now that I have introduced you to the term desertification, I want you to write the term in your journal and then explain it as if you were teaching it to an alien who is unaware of deserts.</p> <p>Volcanoes: Teacher-Talk: “Now that I have introduced you to volcanoes, I want you to write down information about volcanoes in your own words. Continue this on the sheet of paper that you took notes on.”</p> <p>Dams: Teacher-Talk: “Now that I have introduced you to the term dam, I want you to describe the term in</p>		<p>Students will continue to use the materials as listed above</p>
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<p>your own words to your classmates by writing on a 3x5 notecard. Then, after you've finished, switch notecards with someone around you and read each other's explanations."</p> <p>Tsunami: Teacher-Talk: "Now that I have introduced you to tsunamis, I want you to write the term in your journal and then explain it using the answers to the questions we discussed while using your own words.</p>		
<p><u>Step Three of Building Academic Vocabulary: Nonlinguistic Representation</u></p> <p>Lithosphere: Teacher-Talk: "Once you've finished reading your classmates' notecard, I want you to draw something that represents the term lithosphere. Draw something that's going to help you remember the term. Complete this on the backside of your 3x5 notecard."</p> <p>Desertification: Teacher-Talk: "Once you've finished writing in your journal, I want you to draw something that represents the term desertification. Draw something that's going to help you remember the term. Complete this in your journal."</p>		<p>Students will continue to use the materials as listed above</p>

<p>Volcanoes: Teacher-Talk: “Once you’ve finished, I want you to draw something that represents volcanoes. Draw something that’s going to help you remember the term. Complete this on your sheet of paper.” (Have some students show their pictures to the class.)</p> <p>Dams: Teacher-Talk: “Once you’ve finished reading your classmates’ notecard, I want you to draw something that represents the term dam. Draw something that’s going to help you remember the term. Complete this on the backside of your 3x5 notecard.”</p> <p>Tsunami: Teacher-Talk: “Once you’ve finished writing in your journal, I want you to draw something that represents the term tsunami. Draw something that’s going to help you remember the term. Complete this in your journal.”</p>		
<p><u>Step Four of Building Academic Vocabulary: Activities</u></p> <p>Teacher-Talk: “With a partner, I want everyone to complete the word scrambler worksheet. In addition to that, I want you to fill out the</p>		<p>Attachment C (Word Scramble) Attachment D (Similarities and Differences Chart)</p>

<p>“similarities and differences” chart. For this part, you and your partner should find two words that are somewhat similar to each other. Hint: there should be four pairs with similarities. Then I want you and your partner to discuss how the word pairs are different as well. Make sure you and your partner work together and have a quality conversation about the vocabulary words.” (Students will partner and work on the two activities.)</p>		
<p><u>Step Five of Building Academic Vocabulary: Student Discussion</u></p> <p>Students will participate in discussions when completing the activities for step four. They have also shared their explanations of certain words during step two.</p>		<p>Students will continue to use the materials as listed above</p>
<p><u>Step Six of Building Academic Vocabulary: Games</u></p> <p>Teacher-Talk: “Now that you have learned more about the vocabulary words, I want to challenge you all! From the five words we have discussed, I’m going to form groups of students and have each group make a skit using three of the five words. Really try to think about the “similarities and differences” chart you filled out in order for your skit</p>		<p>Students will continue to use the materials as listed above</p> <ul style="list-style-type: none"> • Attachment E (Scoring Guide)

<p>to make sense. Be creative as you can and I want everyone involved in the skit. I'll give you ten minutes to prepare and then each group will share their skit with the class." (The teacher will form groups of 3-4 students. In addition, the teacher will assign a combination of three words to each group.)</p>		
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6. *Resource Attachments*

A.



B.



C.

Word Scramble

	Scramble	Answer
1	oftseientidraic	
2	tsnimau	
3	hrheieotpls	
4	smda	
5	ocsoaelvn	

D. “Similarities and Differences” Chart

Word Pairs	Similarities	Differences

E.

Vocabulary Lesson Scoring Guide

<u>Score</u>	<u>Criteria</u>
4	Student fully completed their 3x5 notecard, journal, sheet of paper, drawings, word scramble, chart, and participated in discussion of the vocabulary words with their classmates.
3	Student fully completed five of the seven requirements above.
2	Students fully completed four of the seven requirements above.
1	Students completed two or less of the seven requirements above.
0	Student neglected to complete any of the assigned tasks.

Final Score: _____ (Highest possible score is a 4)

Citation Page

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