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Grade Level: 6th

Time Frame: Three 50 minute periods to complete lesson; four to five if power points are presented to the class.

Learning Outcomes:

Upon completion of this unit, the student will be able to:

1. Identify ways people adapt to extreme environments,
2. Analyze how different cultures adapt to the same environments, and
3. Identify and describe ways people have modified their environment in order to live in extreme environment, including the use of technology.

Connection to the Curriculum:

This lesson is intended for a 6th grade World Cultures course. As written, the lesson provides an introduction to culture groups in various extreme environments and can be used in an introductory unit for the course. However, the activity can be easily modified to be used within a specific regional unit. The lesson assumes that students have already been instructed on various climates and ecosystems and are somewhat familiar with the environments of areas such as deserts, forests, tundra, etc. If not, a brief introduction may be necessary or students may need to be given a bit more time during their research to investigate these concepts.

TEKS Strand(s) Objective(s):

7. understands the impact of interactions between people and the physical environment on the development and conditions of places and region [GS14,GS15,GS16]
- a. identify and analyze ways people have adapted to the physical environment in various places and regions [GS15-1,2,3]
 - b. identify and analyze ways people have modified the physical environment such as mining, irrigation, and transportation infrastructure [GS14-1,2,3]
 - c. describe ways in which technology influences human interactions with the environment such as humans building dams for flood control [GS15-3]

Materials:

For Student Use:	
Computer lab with internet access and Power Point	
National Geographic Education's Online Encyclopedia	Students can use any information found throughout the National Geographic website, but the Encyclopedia entries on desert , bayou , prairie , steppe , taiga , and arctic will prove the most useful.
Mapshots Note-taking template	One printed copy per student.
Textbooks, Atlases, and other materials as needed	Use whichever textbook and/or atlases your school has available. In addition, check your school library to see what resources may be found there.

Colored pencils	
National Geographic MapMaker Interactive Climate Map	
For Teacher Use:	

References:

National Geographic. (n.d.). *Encyclopedia*. Retrieved July 13, 2014, from National Geographic Education: http://education.nationalgeographic.com/education/encyclopedia/?ar_a=1
Texas Education Agency. (2006). *Social Studies*. Retrieved July 14, 2014, from Lighthouse Initiative for Texas Classrooms: <http://www.tealighthouse.org/socialstudies/index.php>

Strategies: Students will use the Mapshots note taking technique from the TEA Lighthouse initiative. In this technique, students will research a particular climate across different continents and take notes over its specific characteristics and how people have adapted to it in each region. A more thorough description of the technique can be found in the TEA Lighthouse Publication [Strategies and Skills for Social Studies](#). Use the link to open the publication and scroll down to find the section on Mapshots.

Questions: Below are some examples of higher order thinking questions which can be used with this lesson. They can be used per teacher discretion at various times in the lesson – as pre and post checks or as formative assessment during the lesson.

Explain how people have to adapt to living in extreme environments.

Answers will vary depending upon the environment each group chose to research, but should include references to clothing and housing in particular.

Explain how people have used technology to adapt to living in extreme environments.

Answers can include the invention of rain gear, storm sewers, and drainage basins to deal with heavy rainfall and flood waters; air conditioning to deal with extreme heat; heaters and high tech clothing to deal with extreme cold.

Explain how people from different cultures have adapted to living in similar environments.

Answers will vary depending upon the environment each group chose to research, but can include references to architecture (roof lines to deal with heavy rain, building materials such as adobe to deal with high heat), language (toponyms and naming of various types of snow, rain, storms, etc.), food (dealing with storage in extreme weather, finding food in extreme environments), etc.

Procedures to conduct the lesson:

Starting the Lesson: 5 minutes

For the warm up, have students write a brief description of the environment in which they live. Tell them to include any information on the climate and vegetation that they can. Then, have them describe the ways people have adapted to living within their climate region, including the use of any technology that has assisted people in dealing with their environment.

Asking Geographic Questions: Day One: 10 – 15 minutes

How do people adapt to living in extreme environments?

NOTE: Not all environments are found on all continents. Make sure that every student in the group has at least one region to research.

How do people adapt to living in extreme environments?

1. Explain to the students that they will be completing a group project where each group researches a particular environment and explores how people have adapted to living within that environment. Have students collect pictures that represent their environment.
2. Divide the class into groups of 3.
3. Assign each group a specific environment – desert, arctic/tundra, bayou/wetlands, prairie, steppe, taiga, rainforest, etc. More than one group can research the same environment, if necessary.
4. Give each student a copy of the Mapshots handout.
5. Have them write the name of the environment they are researching in the top box.
6. Provide a brief explanation of how they are to use the template.
7. Each student in the group will research two world regions to investigate how people in those regions adapt to this type of environment.

NOTE: Not all environments are found in all regions. Make sure that every student in the group has at least one region to research.

The Lesson:

Acquiring Geographic Information: Day One: Remainder of period

Have each group begin by locating their environment on a [world climate map](#) and coloring in the appropriate areas on the map in the center of their handout. They will need to determine which world continents contain their environment. Then, they will divide the continents so that each student in the group researches one or two continents.

Student Independent Research:

Each student will begin with a search for the environment and how people in general have adapted to it in his/her assigned region. A good place to begin is the National Geographic Education's Encyclopedia (see materials for link). This will provide an overview of the environment and a brief introduction to how people live within it. **NOTE:** Forest and rainforest are not found in the encyclopedia. Students researching these environment will need to use another encyclopedia or source of information to begin.

Once they have completed their initial research, each student will investigate one particular culture from each continent they have selected to study. They will search to find information on how that culture or group of people have adapted to their environment.

Organizing Geographic Information: Day One: Concurrent with previous step
While students are conducting their research, they will take record the information they find on the environment and cultures found there on their Mapshots handout.

Analyzing Geographic Information: Day Two: 15 minutes

Once each student has completed his/her independent research, the group will gather and review all of the information. Each student should record the notes the other group members have taken on their own sheet, so all group members have the same information.

Answering Geographic Questions: Day Two and Three

Each group will build a Power Point presentation where they answer the Guiding Geographic Question. Their power point will need to:


- Identify the environment they studied – including a map,
- Explain how people have adapted to that environment – including the use of technology,
- Describe specific examples of cultures who live in that environment,
- Explain how the cultures have adapted in unique ways, and
- Provide illustrations of specific adaptations.

End the Lesson:

Have students present their power points to the class. Once students have completed their Power Point, have a discussion with the students asking them to discuss how people adapted to the environment they researched. How are the adaptations similar to each other and how are they different? If desired, you can have students write a brief summary to hand in as an exit ticket.

Evaluation/Assessment: The rubric below is written to assess each individual student's work. The power point "grade" should be applied to all members of the group evenly. If students present to the class, a separate presentation grade can be added.

	Not There Yet	Satisfactory	Clearly Outstanding
Content	<p>1 Point</p> <ul style="list-style-type: none"> ▪ Mapshots notes are missing or largely incomplete. ▪ Map and photos selected are not appropriate. ▪ Written content does not address guiding questions or is largely incomplete. ▪ Written answer does not utilize appropriate vocabulary. ▪ Written answer is difficult to read due to spelling and/or grammar errors. 	<p>2 Points</p> <ul style="list-style-type: none"> ▪ Mapshots notes are mainly complete. ▪ Map and photos are appropriate. ▪ Written content adequately answers the guiding questions. ▪ Written answer correctly utilizes appropriate vocabulary. ▪ Written answer is generally free from spelling or grammar errors. 	<p>3 Points</p> <ul style="list-style-type: none"> ▪ Mapshots notes are thorough. ▪ Maps and photos are thorough and enhance the presentation. ▪ Written content thoroughly answers the guiding questions. ▪ Written answer demonstrates mastery of appropriate vocabulary. ▪ Written answer is largely free from spelling or grammar errors.
Appearance	<p>0.75 Points</p> <ul style="list-style-type: none"> ▪ Map and photos are not clear. ▪ Power point shows minimal effort. 	<p>1.25 Points</p> <ul style="list-style-type: none"> ▪ Map and photos are clear and legible. ▪ Power point shows effort and attention to detail. 	<p>2 Points</p> <ul style="list-style-type: none"> ▪ Map and photos are clear and legible and enhance the presentation. ▪ Power point shows great effort and attention to detail.

Topic or Concept:	Europe:	Asia:	
			Australia/Oceania:
	North America:	South America:	
			Africa: