



Desertification: Cause and Effect

Author
Grade Level
Duration

Barbara Stout
7
1-2 class periods

National Standards

GEOGRAPHY

Element 1: The World in Spatial Terms

1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

Element 2: Places and Regions

4. The physical and human characteristics of places

5. People create regions to interpret Earth's complexity

Element 5: Environment and Society

14. How human actions modify the physical environment

15. How physical systems affect human systems

Element 6: The Uses of Geography

17. How to apply geography to interpret the past

18. How to apply geography to interpret the present and plan for the future

AZ Standards

ELA

Reading

Key Ideas and Details

7.RI.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

7.RI.3 Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

Writing

Text Types and Purposes

7.W.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.

b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.

c. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.

Arizona Social Science Standards

GEOGRAPHY

The use of geographic representations and tools helps individuals understand their world.

7.G1.1 Use and construct maps and other geographic representations to explain the spatial patterns of cultural and environmental characteristics.

7.G1.2 Analyze various geographic representations and use geographic tools to explain relationships between the location of places and their environments.

Human-environment interactions are essential aspects of human life in all societies.

7.G2.1 Explain how cultural demographic patterns, economic decisions, and human adaptations shape the identity of nearby and distant places.

Examining human population and movement helps individuals understand past, present, and future conditions on Earth's surface.

7.G3.2 Analyze how relationships between humans and environments extend or contract patterns of settlement and movement.

7.G3.3 Evaluate the influences of long-term, human-induced environmental change on spatial patterns and how it may cause conflict and promote cooperation.

Global interconnections and spatial patterns are a necessary part of geographic reasoning.

7.G4.1 Analyze cultural and environmental characteristics among various places and regions of the world.

7.G4.3 Analyze how changes in population distribution patterns affect changes in land use in places and regions

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- d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
- e. Establish and maintain a formal style.
- f. Provide a concluding statement or section that follows from and supports the information or explanation presented.

SIOP Elements

Preparation Adapting content Linking to background Linking to past learning Strategies used	Scaffolding Modeling Guided practice Independent practice Comprehensible input	Grouping Option Whole class Small groups Partners Independent
Integrating Processes Reading Writing Speaking Listening	Application Hands on Meaningful Linked to objectives Promotes engagement	Assessment Individual Group Written Oral

Arizona ELP Standards

Stage IV

Basic

Reading

Standard 4: The student will analyze text for expression, enjoyment, and response to other related content areas. The student will demonstrate knowledge of reading comprehension by:

B-13: identifying the cause and effect relationship between two related events in a literary selection.

B-24: locating information from external text within nonfiction text for a specific purpose.

Writing

Standard 1: The student will express his or her thinking and ideas in a variety of writing genres. The student will express his or her thinking and ideas by using a variety of writing genres, as demonstrated by:

B-4: writing a paragraph based on research using topic sentences, main ideas, relevant facts, details, and concluding statements.

Overview

The desert environments around the world are expanding every day due to both natural causes such as drought, wind, and erosion, as well as human causes such as overgrazing, poor conservation practices, and lack of crop rotation. This process of desert expansion is called

desertification and is threatening various regions of the world.

Purpose

In this lesson, students will become familiar with the causes and effects of desertification through mapwork, completing a color-coding activity, and

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writing a short essay. This lesson contains adaptations for diverse learners (ELLs).

Key Vocabulary

desert -an area that receives less than 10 inches of rain per year

desertification -is the spread of deserts into once productive grasslands

irrigate -the method of bringing water to dry areas

nomad - people who travel from place to place with their possessions and animals

Sahel - grassland south of the Sahara Desert that is slowly disappearing

erosion -the loss of soil due to wind or rain

overgrazing -the destruction of vegetation by putting too many animals on the land for too long a time

drought -long periods without rain

Materials

- African Regions map
<https://geoalliance.asu.edu/sites/default/files/LessonFiles/Stout/desertification/AFREG.pdf>
- African Regions map (with place names) labeled
<https://geoalliance.asu.edu/sites/default/files/maps/AFREGNM.pdf>
- Physical Regions of Africa reading
- Colored pencils and/or highlighters
- Vocabulary Cards
- Desertification reading and Answer Key
- Writing Prompt for Causes and Effects of Desertification
- Desertification Essay Rubric (Ideas and Content)
- Desertification True/False Quiz and Answer key (optional)
- Desertification Boogaloo (optional)
- Sahel Yes Ma'am (optional)

Objectives

The student will be able to:

- Locate places and regions on a map of Africa.
- Define vocabulary words related to desertification.
- Identify causes and effects relating to desertification.
- Write an expository essay.

Procedures

Note: Two optional activities can be added in any time remaining in each session. They are the

Desertification Boogaloo and Sahel Yes Ma'am which can be done as chants/raps.

SESSION ONE

1. Brainstorm with the students: *What it is like in Africa? What is the landscape like, the people, etc.?*

Record responses on the whiteboard. **(Preparation: Linking to background)**

2. Distribute the African Regions Map, colored pencils, and the Physical Regions of Africa reading. Project the Africa Regions Map. As a whole class, have students take turns reading the material out loud. As a section is discussed, model how to label and color the regions. **(Scaffolding: Modeling; Grouping Option: Whole class)**

3. Project the Vocabulary Cards. Have students copy the definitions on the back of their map paper and draw an illustration to remind them of the meaning of the word. **(Scaffolding: Comprehensible input)**

SESSION TWO

1. Distribute the Desertification reading and three colors of highlighters or colored pencils to each student. Project the reading as well.

2. Instruct students that they will be looking for causes and effects on the first page of the reading. They should use one color of highlighter to mark the causes of desertification and one color to mark the effects of this cause. They should also create a "key" to their colors at the top of the page. Illustrate how to do this. **(Scaffolding: Modeling, Integrated Processes: Reading, Writing)**

3. As a whole class or in partners, have the students read the first page and highlight causes and effects. **(Application: Linked to objectives, Hands on; Grouping Option: Whole class)**

4. As a whole class or in partners, have the students read the second page and highlight what can be done about desertification. Remind students to create a "key" for this third color at the top of the second page. **(Application: Linked to objectives, Hands on; Integrated Processes: Reading, Writing; Grouping Option: Whole class)**

5. Conclude the class by giving the Desertification True/False Quiz (optional) and/or assigning the essay using the Writing Prompt for Causes and Effects of Desertification. Be sure to share the Desertification Essay Rubric (Ideas and Content) so students understand how the assignment will be graded. Allow students to use their color-coded Desertification readings to assist in filling in the information on the writing prompt and then for their essay. The essay can be homework. **(Assessment: Individual, Written)**

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Assessment

Geography

The mapwork can be graded for completeness and accuracy. Mastery will be considered a score 90% or higher.

Grade the Desertification True/False Quiz. Mastery will be considered a score of 80% or higher.

ELA and Geography

Utilize the Desertification Essay Rubric (Ideas and Content) to score the essay. Mastery will be considered 4 or higher.

A test can be given over the vocabulary terms used in the lesson. Mastery will be considered a score of 80% or higher.

Extensions

Have students analyze cause and effect issues concerning deforestation.

Sources

- *Expanding Deserts* by Paula Hogan
- *The Spread of Deserts* by Ewan McLeish
- *Last Frontiers for Mankind: Deserts* by Lawrence William
- United Nations Secretariat of the Convention to Combat Desertification
- UN Food and Agriculture on desertification
- Land Degradation and Desertification
- National Geographic Video "Africa's Physical Features"
- NGS Africa's Natural Realms Map, September 2001