

Africa's Great Green Wall

Desertification of the Sahel

Sarah Brewer
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Grade Level	7th Grade	**Time Frame**	2 class periods
Subject	Social Studies	**Duration**	90–100 minutes
Course	World Geography		

Essential Question

How do interactions between humans and their environment impact both the people and the natural environment of the Sahel? Why is Africa building a Great Green Wall?

Summary

In this lesson, students will work together to determine the definition of desertification and create a chart to explain the causes and effects of desertification in the sub-Saharan Sahel region. Then, students will learn how Africa is responding to desertification with a project called the Great Green Wall and how growing the Great Green Wall has changed life in the Sahel. Based on what they have learned about the causes and effects of desertification, students will write their own social media posts to raise awareness about the Great Green Wall initiative.

Snapshot

Engage

Students use the Think-Pair-Share strategy to analyze an untitled map.

Explore

Students compare two maps to form what they think *desertification* means.

Explain

Students examine an article about desertification in the Sahel to determine the causes and effects of this process on the region.

Extend

Students view the short video about how Africa is responding to desertification and how both desertification and the Great Green Wall project represent human-environment interactions.

Evaluate

Students craft a social media post to raise awareness of desertification and the Great Green Wall initiative.

Standards

ACT College and Career Readiness Standards - Reading (6-12)

CLR301: Locate simple details at the sentence and paragraph level in somewhat challenging passages
CLR302: Draw simple logical conclusions in somewhat challenging passages

Oklahoma Academic Standards (Social Studies Practices (7th Grade))

7.4.1: Analyze the impact of climate events, weather patterns and natural disasters on human populations and the environment, resulting in forced migrations, scarcity of consumer goods, economic activities, and loss of life.
7.4.2: Explain how climate change is affecting environments and human populations.
7.4.4: Evaluate the effects of human modification of and adaptation to the natural environment through transformation caused by agriculture, the use of modern irrigation methods, industry, demand for energy, and urbanization.

Attachments

- Causes and Effects—Africa's Great Green Wall - Spanish.docx
- Causes and Effects—Africa's Great Green Wall - Spanish.pdf
- Causes and Effects—Africa's Great Green Wall.docx
- Causes and Effects—Africa's Great Green Wall.pdf
- Desertification in the Sahel—Africa's Great Green Wall - Spanish.docx
- Desertification in the Sahel—Africa's Great Green Wall - Spanish.pdf
- Desertification in the Sahel—Africa's Great Green Wall.docx
- Desertification in the Sahel—Africa's Great Green Wall.pdf
- Exploring Desertification—Africa's Great Green Wall - Spanish.docx
- Exploring Desertification—Africa's Great Green Wall - Spanish.pdf
- Exploring Desertification—Africa's Great Green Wall.docx
- Exploring Desertification—Africa's Great Green Wall.pdf
- Gallery Walk Images—Africa's Great Green Wall.pptx
- Gallery Walk Journal—Africa's Great Green Wall - Spanish.docx
- Gallery Walk Journal—Africa's Great Green Wall - Spanish.pdf
- Gallery Walk Journal—Africa's Great Green Wall.docx
- Gallery Walk Journal—Africa's Great Green Wall.pdf
- Lesson Slides—Africa's Great Green Wall.pptx

Materials

- Lesson Slides (attached)
- Exploring Desertification handout (attached; one per student)
- Desertification in the Sahel article (attached; one per student)
- Causes and Effects handout (attached; one per student)
- Gallery Walk Images slide deck (attached; optional; one set)
- Gallery Walk Journal handout (attached, optional; one per student)
- Highlighters (two colors per student)

10 minutes

Engage

Use the attached **Lesson Slides** to guide the lesson. Begin by displaying the map on **slide 3**. Hand each student a copy of the attached **Exploring Desertification** handout. Have students use the Think-Pair-Share strategy to create individual hypotheses explaining what they think the various colors on the map might represent based on their prior knowledge. Students should write their hypotheses in the "Think" column of the first row of their table (next to question). Then, to further develop their hypotheses, ask students to pair up or place students in small groups. Ask students to share their hypotheses with their partner, discuss, and come to a consensus about what they think the colors on the map represent. Students should write this consensus in the "Pair" column of that same row. After students have had time to do so, ask each pair to share their thoughts with the class. Lead a brief class discussion to foster understanding of each hypothesis. Then, ask students to summarize what the colors of the map might represent based on shared knowledge in the "Share" column.

Teacher's Note: Lesson Modification

If students struggle with their hypotheses, scaffold the activity by drawing attention to the United States as a starting place. Students then might note that the southwest region of the United States (Nevada, Arizona, and New Mexico, for example) tends to be hot and dry. They can note the corresponding coloration on the map and apply this thinking to the rest of the world.

Possible Student Responses:

Students should eventually note that yellow and red shades on the map represent how dry or arid the land is. Green areas may be noted as lusher and more fertile, whereas lighter yellow areas may be noted as deserts.

The title of this map is "Patterns of Aridity."

Once the class discussion has established that the yellow and red areas of the map represent the Earth's driest places, ask students where the most arid place on Earth appears to be. Students should note Northern Africa.

Move to **slide 4** to read the lesson's essential questions: “How does the interaction between humans and their environment impact both the people and the natural environment of the Sahel? Why is Africa building a Great Green Wall?” Display **slide 5** and go over the learning objectives for this lesson.

To answer these questions, students will learn about an area in Africa called the Sahel and investigate the interactions between those who live there and their environments.

Optional Modification for Distance Learning

To make use of this lesson in an online or distance learning environment, sort students into pairs or small groups, and assign each group their own digital version of the Exploring Desertification handout. Consider sharing the map from the slide and facilitating a class discussion about what the areas of the map represent with a discussion board using your Learning Management System (LMS). Download all attachments to use this lesson in Google Classroom.

25 minutes

Explore

Move to **slide 6**, which shows a map of the Sahara Desert and the Sahel region. Use this map to illustrate that the Sahara is the largest desert in the world; in fact, *Sahara* is the Arabic word for *desert.* Explain that the Sahel is a semiarid grassland along the Sahara's southern edge. *Sahel* is the Arabic word for *coast*, as the Sahel region is the border between the Sahara Desert and the savannas to the South.

Move to **slide 7** and draw attention to the comparison between two maps: the map of the Sahel area on the left and the "Vulnerability to Desertification" map on the right. Ask students to examine these two maps to determine what the term *desertification* might mean. Ask students what they think the title of the second map, "Vulnerability to Desertification," means. Let the class discussion come to the conclusion that the map shows areas that are at risk of desertification.

Seeing the maps side by side, students should note that the Sahel, or certain parts of it, is at high risk of desertification. Ask guiding questions, as needed, to help students draw this conclusion. Next, ask students, given the class discussion so far, what do they think the term *desertification* might mean. Have students record their individual hypothesis in the "Think" column of the second row of the table on their handout. Next, ask students to share their thoughts with their partner. Allow time for each pair to come to a consensus and record their answers in the "Pair" column. When ready, ask pairs to share their thoughts with the whole class. Have students summarize responses from the class in the "Share" column.

Intended Student Responses:

Students may conclude that desertification is likely to occur when land becomes a desert. If the Sahel is at risk of desertification, it could mean the Sahara Desert is getting bigger.

Optional Modification for Distance Learning

Modify this activity in the same way that you did for the Engage phase of the lesson.

25 minutes

Explain

Show **slide 8** and discuss the definition of *desertification*: desertification is the process by which land becomes drier and drier until it turns into desert. This is an advanced form of land degradation. Consider explaining to students that land degradation includes the deterioration or depletion of the soil, resulting in the inability to support vegetation. Ask students to record this definition at the bottom of their handout for reference during the rest of the lesson. Now that students have learned about desertification, the next activity will involve learning about the causes and effects of desertification in the Sahel.

Display **slide 9**. Hand each student a copy of the attached **Desertification in the Sahel** article. Have students continue to work with their partner and use the Categorical Highlighting strategy to highlight the causes of desertification in one color and the effects of desertification in a different color. If highlighters are not available, students can circle causes and underline effects. Remind students that the causes of desertification are the things that contribute to making desertification happen. Effects of desertification are the things that occur as a result of desertification.

Allow enough time for students to read and highlight. Once finished, display **slide 10** and pass out a copy of the attached **Causes and Effects** handout to each pair**.** Ask students to work with their partner to write at least 3 causes above and at least 3 effects below the "desertification" image on the handout.

Once this is finished, ask for volunteers to share out answers, add missing information, and clarify any misconceptions.

Possible Student Responses:

- **Causes:** climate change, drought, rainfall patterns, cash crops, wearing out the soil, not rotating crops, overgrazing, deforestation, strong wind gusts, growing population, overexposure to heat from the sun
- **Effects:** no nutrients in the soil, land can't grow vegetation, vegetation is damaged or destroyed, change to traditional livelihoods, migration of people and animals, poverty of the community, not enough resources for the people who live there, water scarcity

Optional Modification for Distance Learning

For online or distance learners, share digital versions of the Desertification in the Sahel article. Student pairs can use shared Google Docs as a collaborative workspace to highlight causes and effects with Google Docs tools.

Students can record the causes and effects of desertification if you share a copy of slide 10 and have students use Google Slides or they could create a more visually appealing one with a tech tool like Canva. Download all attachments to use this lesson in Google Classroom.

15 minutes

Extend

Now that students have learned about the causes and effects of desertification, introduce the next activity, which involves learning about what steps are being taken in the Sahel to prevent it. Move to **slide 11** to show a visual of this effort, called the Great Green Wall.

Explain to students that the Great Green Wall was a project started in 2007 to combat the desertification of the Sahel. Consider visiting https://www.unccd.int/our-work/ggwi/great-green-wall-accelerator for more information about this project to share with the class or have students do so if time permits.

Have students take out a piece of notebook paper. Share with students that they are going to watch an introductory video about the Great Green Wall. Tell students that while they watch the video, they are to write reasons the Great Green Wall is being built on their paper.

Display **slide 12** and play the *Why Is Africa Building a Great Green Wall?* video on the slide. Consider showing the video more than once if it would help students take notes. As an alternative, if students have access to their own device, they may view the video again on their own or in small groups.

Embedded video

https://youtube.com/watch?v=4xls7K_xFBQ

Once students have finished taking notes, ask them to share some of their takeaways with their groups. Then, ask for volunteers to share some of their answers with the class.

Possible Student Responses:

The Great Green Wall is a wall made up of trees, grasslands, and other vegetation. The wall was made by planting seeds to grow all kinds of vegetation. The goal of the wall is to heal the land by reversing the effects of desertification. The Great Green Wall is supposed to create new plants, supply nutrients to the soil, and provide more water within the Sahel. The project will also create jobs, increase the local population, and prevent people from migrating away from the Sahel. This project will enable humans and animals to provide for themselves and their families.

Additionally, explain to students that, since its inception, the Great Green Wall initiative has evolved from simply planting a wall of trees to supporting a wide range of conservation strategies. One example is the emphasis on growing more sustainable crops, rather than crops that will sell to other regions. Others include implementing crop rotation methods, using sustainable irrigation practices, etc.

Optional Modification for Distance Learning

For online or distance learners, have them independently watch the video and take notes. Then, facilitate a discussion over students' takeaways from the video using a discussion board in your LMS. Download all attachments to use this lesson in Google Classroom.

15 minutes

Evaluate

Teacher's Note: Activity Preparation

Students are going to create a social media post and need a location to share their creation. Before students begin this phase of the lesson, create a Padlet. Consider the following settings selections:

- **Format:** Wall
- **Engagement:** Enabling comments enables students to comment on posts made by their peers; enabling "like" reactions allows students to like posts made by their peers.
- **Login:** If students do not log in, their post can be anonymous. Consider having students edit their "guest" name or put their name as the title of their post.
- If you are keeping the same Padlet for all of your class sections, be sure to go to "Settings" > "Layout" > "Sort by" and select "Date published." Then, select "Newest first" for sort order so that you can see the current class's submissions at the top.

Consider sharing the link or QR code with your students on **slide 13** or through your Learning Management System (LMS).

Share with students that another important aspect of the Great Green Wall project is raising public awareness. For the next activity, explain to students that the United Nations Convention to Combat Desertification has launched a public awareness campaign on the Great Green Wall that is called "World Wonder." Public awareness can bring in financial support needed to make this wall a reality.

Show **slide 13** and introduce the GramIt strategy. Have students demonstrate their understanding of the Great Green Wall by creating a social media post. Have students think about something they learned that impacted their feelings toward the Great Green Wall. Did their understanding of a certain cause or effect impact their thinking? Tell students to use that information (what they learned today) to create their social media post, bringing awareness to this cause. Students should keep in mind the global awareness initiative and how they can inform the public about the causes and effects of desertification and how the Great Green Wall combats it.

Direct students to go to the Padlet link you shared and create a post using the "+" button located in the bottom right corner of the page.

Alternative or Additional Activity

If time allows or if you would like an alternative evaluation, have students complete a Gallery Walk. Before the gallery walk, open the attached **Gallery Walk Images** slide deck and choose which photos you would like students to see. Print those photos and hang them at different points throughout the room.

Unhide and display the hidden **slide 14** and pass out a copy of the attached **Gallery Walk Journal** handout to each student. To start the Gallery Walk, divide students into groups based on the number of photos hanging in the room. There should be one group starting at each photo. Give students three minutes at each photo to record in their journals how the photo relates to desertification in the Sahel. After one complete round has been made, and every group has visited every gallery photo, have groups return to their first photo. Ask a representative from each group to explain how their photo is related to desertification in the Sahel with the class.

Additionally, students can turn in their Gallery Walk Journals as a summative assessment.

If conducting this lesson in an online or distance learning environment, you may choose to share the attached Gallery Walk Images slide deck through your LMS and have students add notes about each image within a discussion board. Download all attachments to use this lesson in Google Classroom.

Resources

- BBC News. (2017, September 26). Why is Africa building a great green wall? BBC News. https://www.youtube.com/watch?v=4xIs7K_xFBQ
- Boehm, R. G. (2005). Glencoe world geography. New York: Glencoe/McGraw-Hill.
- Foster, K, (2018, October 30). Wall or mosaic? Fighting desertification in the Sahel. Harvard Political Review. https://harvardpolitics.companylogogenerator.com/world/wall-or-mosaic-fighting-desertification-in-the-sahel/
- K20 Center. (n.d.). Categorical highlighting. Strategies. https://learn.k20center.ou.edu/strategy/192
- K20 Center. (n.d.). Canva. Tech Tools. https://learn.k20center.ou.edu/tech-tool/612
- K20 Center. (n.d.). Gallery walk / carousel. Strategies. https://learn.k20center.ou.edu/strategy/118
- K20 Center. (n.d.). GramIt. Strategies. https://learn.k20center.ou.edu/strategy/2554
- K20 Center. (n.d.). Google Classroom. Tech Tools. https://learn.k20center.ou.edu/tech-tool/628
- K20 Center. (n.d.). Google Docs. Tech Tools. https://learn.k20center.ou.edu/tech-tool/2327
- K20 Center. (n.d.). Google Slides. Tech Tools. https://learn.k20center.ou.edu/tech-tool/2335
- K20 Center. (n.d.). Think-Pair-Share. Strategies. https://learn.k20center.ou.edu/strategy/139
- K20 Center. (n.d.). Padlet. Tech Tools. https://learn.k20center.ou.edu/tech-tool/1077
- Thelwell, K. (2019, May 30). What are the causes of desertification? https://borgenproject.org/what-are-the-causes-of-desertification/
- United Nations Convention to Combat Desertification. (n.d.). *The great green wall initiative*. https://www.unccd.int/our-work/ggwi