

Happy Feet and Madagascar: Using Children’s Films to Teach the Tough Stuff; An Animated Guide for Teaching About Global Warming and Climate Change

Becca Gregory, The University of Texas, Social Studies/Geography, Grades K-2, Lesson to be divided into five 90 minute lessons.

Introduction:

This five-part lesson is intended to encourage young students (K-3) to learn about Antarctic marine life and African wildlife and their connections to global ecosystems. Additionally, students will be introduced to the concepts of global warming and climate change. The goal of this lesson is to establish the connections between wildlife, global warming, climate change, and environmental awareness.

Geographic Connections:

- D2.Geo.4.K-2: Explain how weather, climate, and other environmental characteristics affect people’s lives in a place or region.
- D2.Geo.5.K-2: Describe how human activities affect the cultural and environmental characteristics of places or regions.
- D2.Geo.6.K-2: Identify some cultural and environmental characteristics of specific places.

Vocabulary:

Global warming, climate change, endangered, protect, globe, map, continent, country, and food chain.

Content Standards:

- CCSS.ELA-LITERACY.RI.K.1: With prompting and support, ask and answer questions about key details in a text.
- CCSS.ELA-LITERACY.RI.K.2: With prompting and support, identify the main topic and retell key details of a text.
- CCSS.ELA-LITERACY.R.1.2.3: With prompting and support, describe the connection between two individuals, events, ideas, and pieces of information in a text.

Essential Question:

“What can we do to help stop global warming and climate change?”

Placement of Lesson within Broader Curriculum/Context:

This five-part lesson will be placed in the middle of the Social Studies (Human-Environment Interaction) and English Language Arts Standards (Reading Informational Text) Units for content standards by grade level. Student assessment for this five-part lesson will help determine if the student has achieved all learning outcomes set forth by this lesson and is ready to move on to the next instructional unit prescribed within content standards.

Learner Background:

As a means of creating a foundation for this five-part lesson, students will be asked to watch two films at home with their families: Happy Feet and Madagascar. Watching these two animated

films will help establish a connection between wildlife, marine life, and the importance of environmental conservation. The connections and concepts presented in the films directly correlate to goals and objectives of this lesson: connecting human and animal interactions with global warming and climate change.

Objective(s) for Lesson:

Upon completion of this five-part lesson, students will be able to:

- Locate Antarctica and Africa on a globe and on a map
- Differentiate between the weather patterns/climate characteristics between these two regions
- Identify animal life for both regions
- Identify and give examples of basic food chains for both regions
- Define and give examples of climate change
- Define and give examples of global warming
- Navigate a web page
- Understand the basic procedure for creating a blog page

Integration of 21st Century Skills:

As a group, the class will identify the key points of the lesson to transfer into a blog that will be shared with schoolmates and family members. Additionally, students will participate in a video chat (with parent/guardian permission) with a wildlife conservationist/park ranger. This will create a question and answer forum with a chance for students to employ new knowledge and ask questions. Students, teacher, and the park ranger will all collaborate with one another on conservation techniques that foster environmental awareness/consciousness.

Assessment:

Instructor will employ formative assessment techniques that monitor individual student progress throughout the five-part lesson. Assessment will be measured through the goals and objectives set forth for this lesson, i.e. creation of a food chain, the ability to identify key points of each daily lesson, and climate characteristics of Africa and Antarctica.

Materials:

Day 1: Globe, map, butcher paper, markers

Day 2: Ranger Rick magazines that feature Antarctic/African marine and wildlife, encyclopedias, Happy Feet movie, Madagascar movie

Day 3: Construction paper, markers, yarn, glue

Day 4: Computer, web camera

Day 5: poster board, reusable shopping bags, energy-efficient light bulbs

Lesson Development/Instructional Strategies:

Day 1: Geography and Climate

- As a class, students will be presented with a globe and a map. Teacher will show class where Antarctica and Africa are located on both geographical representations. The teacher will then ask individual students locate one of both locations on the globe and/or map. Using prior knowledge gained from watching Happy Feet and Madagascar, students will then discuss climate characteristics of both locations. In small groups, students will then be asked to create a chart depicting climate, local wildlife, and geographical characteristics of Antarctica and Africa.

Day 2: The Animals of Antarctica and Africa

- Students will examine the differences between marine wildlife and land wildlife. Additionally, students will discuss the weather/climate and its effects on the animals of Antarctica and Africa. In small groups, students will choose one resource to examine how wildlife is affected by weather, i.e. Ranger Rick magazines that depict African and/or Antarctic wildlife, encyclopedia, or an online resource of student choice. Students can also reference the Happy Feet and Madagascar movies.

Day 3: Understanding the Food Chain

- Teacher will define a food chain and give an example, i.e. plants → cows → humans. For the marine life food chain, teacher will explain the importance of the small marine life such as phytoplankton and their importance to the entire marine food chain, i.e. phytoplankton → fish → seals → sharks → killer whales. To demonstrate a food chain for African wildlife, teacher can explain the food chain in a manner such as: ants → lizards → birds → lions. The lesson will continue with explanations and examples of where animals get their food based on geographical location. The closing of this portion of the lesson will include an explanation with examples of how climate change/global warming can affect how these animals function in their native habitats, i.e. melting of polar ice caps in Antarctica and droughts/floods in Africa. Students will then be asked to assemble into small groups and construct examples of a food chain for Antarctic animals and African animals. On a piece of construction paper, students will draw their examples/depictions of a food chain and connect the chain with yarn. Students will also need to label their food chains. This will be done for the wildlife of Antarctica and Africa.

Day 4: Technological Integration

- This section of the lesson is designed to encourage technological/digital literacy. With parent/guardian permission, as a class students will participate in a video chat with a conservationist/park ranger/researcher. This will create a platform for students to ask questions to an individual that has first hand experience with wildlife and how their wellbeing is affected by climate change/global warming. In an attempt to tie the previous lessons into the video chat, the class will then create a blog page (with teacher supervision) documenting what students have learned and possible conservation methods that can lessen/eliminate the negative affects of climate change/global warming on wildlife, as well as the planet. Students, teacher, and the park ranger/conservationist will

all collaborate with one another on conservation techniques that foster environmental awareness/consciousness.

Day 5: How to Help the Earth and Its Animals

- During the final piece of this five-part lesson, students will be asked to create an action plan that fosters environmental awareness/consciousness, i.e. reusable shopping bags, energy saving light bulbs, carpooling or walking to school and how these examples can help reduce climate change/global warming. Students will be expected to know the importance and dangers of ignoring climate change/global warming and be able to express this knowledge verbally and through creation of a chart or diagram that will be shown and explained to schoolmates. Students will then share their action plan with their families and schoolmates. Students will encourage families and schoolmates to make a pledge to “go green” and be environmentally aware and conscious. As a class, students will present their blog and action plan to their schoolmates via classroom visitations. Students will then have physical examples of environmental awareness to show their families and schoolmates, i.e. reusable shopping bags, reusable water bottles, and items made from recycled materials. The class will then be encouraged to pledge to help make the school “go green” and reduce contributions to global warming/climate change.

Students Needing Differentiated Instruction:

- For students that require adherence to IEP’s, this lesson can be easily modified by having the student(s) with an IEP pair up with a classroom buddy that can offer peer guidance and assistance throughout the lesson. The teacher can then offer students with an IEP flash cards and visuals noting key points of each part of the five-part lesson. Additionally, gifted and talented students should be encouraged to take the lesson a step further. An option for this group of students can be for them to choose a country or continent of their choosing and explore native wildlife and the effects of climate change/global warming in that particular region. This additional lesson can be shared with the class and added to the class blog. Struggling learners should be offered additional assistance as needed, i.e. flash cards, additional resources, or tutoring sessions. Struggling learners can be paired up with another classmate that can offer peer assistance. English language learners should be offered the material in their native language first in an attempt for the student to familiarize himself or herself with the material. The student will then be given the same material in English, allowing for the student to begin making connections/translations with the material in English. Having an English language learner translate information can strengthen their comprehension and acquisition of the English language. Pairing up the English language learner with a native speaker for class activities can also prove beneficial for second language acquisition. Collaborative learning in a democratic classroom environment offers an opportunity for students of all abilities to learn in a safe and enriching environment.