

RESOURCE LIBRARY | ACTIVITY : 50 MINS

The Impacts of the Anthropocene Epoch

Students explore the Anthropocene's cultural and environmental complexities. Maintaining their planetary steward worldview, students gather information on how ecosystems and species have been affected so far during the time period called the Anthropocene.

GRADES

6, 7, 8

SUBJECTS

Anthropology, Biology, Ecology, Conservation, Earth Science, Geology, Oceanography, Geography, Human Geography, Physical Geography, Social Studies, Civics

CONTENTS

3 Links, 1 PDF, 1 Resource

OVERVIEW

Students explore the Anthropocene's cultural and environmental complexities. Maintaining their planetary steward worldview, students gather information on how ecosystems and species have been affected so far during the time period called the Anthropocene.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/impacts-anthropocene-epoch/>

DIRECTIONS

***Engaging in the Fight Against Extinction* Unit Driving Question:** *How can we, as planetary stewards, take an active role in saving species from extinction?*

***The Sixth Mass Extinction?* Lesson Driving Question:** *How have humans impacted Earth for better and for worse?*

1. Engage students to consider how humans have made a lasting mark on the planet.

- Use [Google Earth](#) to show students satellite images of a place that has visible signs of human impact (such as Disney World; New York City; Las Vegas; Tagebau Hambach, Elsdorf, Germany; the Democratic Republic of the Congo).
- Ask students to discuss the following:
 - *What is the human impact on these locations?*
 - *Which of these impacts are permanent?*
 - *Which could be changed over time?*

2. Introduce students to the Anthropocene Epoch (Age of Humans) and explore this unofficial unit of geologic time.

- Build students' background knowledge using multimedia resources. Share with students that they will need to be able to define Anthropocene Epoch using these sources:
 - [Anthropocene](#) encyclopedia entry
 - [What is the Anthropocene?](#) (3:14) video
 - Merriam-Webster's Dictionary's definition of [Anthropocene](#)
- Distribute a copy of the [Exploring the Anthropocene Epoch](#) handout to each student. Guide students through a close reading of the first three sections (listed below) of [The Age of Humans: Evolutionary Perspectives on the Anthropocene](#) article and have students respond to the first five questions on the handout.
 - Section 1: *What is the Anthropocene?*
 - Section 2: *When did it begin?*
 - Section 3: *Why does the Anthropocene matter?*
- After students have completed reading and answering questions one through five on the handout, conduct a full-class discussion to review students' responses.

3. Students brainstorm and classify what they believe to be the positive and negative qualities of humans on the *Exploring the Anthropocene Epoch* handout.

- Have students answer question six on the *Exploring the Anthropocene Epoch* handout. Give students a few minutes to brainstorm both positive and negative human

qualities that they believe influence humanity's impact on the environment and list these qualities in the appropriate columns of the T-chart.

- In their research teams, have students share their brainstormed lists and work together to identify the most positive and negative qualities that specifically influence environmental issues.
 - *Positive examples:* creativity, cooperation, problem solving, kindness, adaptability, common sense
 - *Negative examples:* laziness, vanity, selfishness, vengeance, discrimination, hypocrisy
- Call on students to share one of their examples of a positive or negative trait and provide an example of how that positively or negatively impacts Earth.
- Explain that as students begin work on their projects, they will find evidence of these traits both in actions that lead to extinction and in efforts that support species survival. Then, when developing their pamphlets, they can appeal to these traits when proposing specific action steps that others can take to prevent the extinction of a species.

4. Debrief students by having them respond to closing questions.

- Facilitate a class discussion about how the positive and negative qualities of humans can either help or hurt the future of our planet. Ask:
 - *As planetary stewards, which human qualities will be most important to protecting the future of the planet?*
 - *What actions can we take to emphasize our positive qualities and support the sustainability of Earth?*
 - *What actions might you personally change to make yourself an even stronger planetary steward?*
- Have students write their responses to the following questions on two sticky notes:
 - *What do you want Earth to look like in the future? To what parts of our planet do we need to pay more attention?*
 - *What changes do you think humans will need to make in order to have that future?*
- Label two pieces of chart paper with the questions and direct students to place their sticky notes with their answers on the appropriate paper. These questions will be revisited later in the unit.

Tip

Continue adding key terms to the unit word wall throughout the lesson or teach these key terms prior to the unit so that the word wall is visible throughout the two-week span.

Informal Assessment

Exploring the Anthropocene Epoch: Collect student worksheets and check for appropriate responses and enlightening reflections that might be shared in the following lesson.

OBJECTIVES

Subjects & Disciplines

Anthropology

Biology

- Ecology
- Conservation

Earth Science

- Geology
- Oceanography

Geography

- Human Geography
- Physical Geography

Social Studies

- Civics

Learning Objectives

Students will:

- Determine the impacts of humans on the environment during the Anthropocene Epoch.

Teaching Approach

- Project-based learning

Teaching Methods

- Brainstorming
- Cooperative learning
- Research

Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
 - Information, Media, and Technology Skills
 - Information Literacy
 - Information, Communications, and Technology Literacy
 - Media Literacy
 - Learning and Innovation Skills
 - Communication and Collaboration
 - Creativity and Innovation
 - Critical Thinking and Problem Solving
- 21st Century Themes
 - Environmental Literacy
 - Global Awareness
- Critical Thinking Skills
 - Analyzing
 - Remembering
 - Understanding
- Geographic Skills
 - Acquiring Geographic Information
 - Analyzing Geographic Information
 - Organizing Geographic Information

National Standards, Principles, and Practices

COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS
& LITERACY

- **CCSS.ELA-LITERACY.RH.6-8.2:**

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

- **CCSS.ELA-LITERACY.RH.6-8.7:**

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

- **CCSS.ELA-LITERACY.WHST.6-8.9:**

Draw evidence from informational texts to support analysis, reflection, and research.

THE COLLEGE, CAREER & CIVIC LIFE (C3) FRAMEWORK FOR SOCIAL STUDIES STATE STANDARDS

- **D2.His.1.6-8:**

Analyze connections among events and developments in broader historical contexts.

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Chart paper
- Markers

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per learner, 1 computer per pair, Monitor/screen, Projector, Speakers

PHYSICAL SPACE

- Classroom
- Media Center/Library

GROUPING

- Heterogeneous grouping
- Large-group instruction
- Large-group learning

- Small-group learning
- Small-group work

BACKGROUND & VOCABULARY

Background Information

The Anthropocene Epoch, or the Age of Man, is the name given to the time period up to the present in which humankind has had a significant impact on the natural world. Though the date of the start of this new era is debated, the Anthropocene follows the Holocene, which started about 12,000 years ago, when humans began engaging in agriculture, in addition to hunting and gathering. Due to the impacts humans have had on Earth's biomes, evidence suggests that we may be causing the extinction of many of Earth's species, and perhaps, even our own.

Prior Knowledge

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Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
Anthropocene	<i>noun</i>	period of time during which human activities have impacted the environment enough to constitute a distinct geological change.
biodiversity	<i>noun</i>	all the different kinds of living organisms within a given area.
biome	<i>noun</i>	area of the planet which can be classified according to the plant and animal life in it.
endangered species	<i>noun</i>	organism threatened with extinction.
epoch	<i>noun</i>	particular period of time in history marked by an event that begins a new period.

Term	Part of Speech	Definition
Holocene	<i>noun</i>	having to do with the present geological time period. The Holocene Epoch began at the end of the last glacial period, about 10,000 years ago.
mass extinction	<i>noun</i>	extinction event in which a large number of species go extinct in a relatively short period of time.
species	<i>noun</i>	group of similar organisms that can reproduce with each other.
stewardship	<i>noun</i>	responsible management to ensure benefits are passed on to future generations.

For Further Exploration

Articles & Profiles

- [National Geographic: Rae Wynn-Grant](#)



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