

Academic Adventures – Conservation

Author: Six Flags Great Adventure Education Team

Subject(s):	Wildlife Conservation - Virtual
Topic or Unit of Study:	Science: Six Flags Great Adventure & Safari
Grade / Level:	6-8
Time Allotment:	4 videos (5-7 minutes each)
Behavioral Objective:	<p>SWBAT define ENDANGERED SPECIES and provide 3 examples</p> <p>SWBAT compare/contrast ENDANGERED SPECIES vs. EXTINCT SPECIES vs. FUNCTIONALLY EXTINCT SPECIES</p> <p>SWBAT communicate 3 solutions that will reduce the impact of CLIMATE CHANGE</p> <p>SWBAT give 3 examples of actions they can take at home to help save the environment</p> <p>SWBAT describe the three R's and give an example of each</p> <p>SWBAT explain in their own words how an ECOSYSTEM will be impacted if one species is removed from a food chain</p> <p>SWBAT define HABITAT DESTRUCTION and provide 3 examples</p> <p>SWBAT define and compare PRODUCERS and CONSUMERS and provide an example of each</p> <p>SWBAT identify 2 types of FOSSIL FUELS</p> <p>SWBAT recall 2 examples of RENEWABLE ENERGY</p> <p>SWBAT define CONSERVATION OF WILDLIFE in their own words</p> <p>SWBAT recall why BIODIVERSITY is so important to an ecosystem</p> <p>SWBAT identify the direction energy flows in an ecosystem and explain why</p> <p>SWBAT identify all aspects of a FOOD PYRAMID including its TROPIC LEVELS</p>

SWBAT construct their own FOOD CHAIN and FOOD PYRAMID

SWBAT recall 2 FACTORS OF EXTINCTION

SWBAT recall and explain 2 reasons humans have a negative impact on animals and their habitats

SWBAT identify 1 way they can help fight CLIMATE CHANGE in their own community and explain why it would help

SWBAT give 3 examples of POLLUTION

SWBAT in their own words define what an INVASIVE SPECIES is and provide an example

SWBAT compare/contrast RENEWABLE vs. NON-RENEWABLE RESOURCES giving an example of each

SWBAT recall 1 way zoological facilities are contributing to animal conservation efforts

SWBAT recall 2 government agencies that are helping to combat extinction

Standards:

New Jersey State Learning Standards

Subject: **SCIENCE Grades 6-8**

- **MS-LS2: Ecosystems: Interactions, Energy, and Dynamics**
 - MS-LS2-1: Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
 - MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services
- **MS-ESS3: Earth and Human Activity**
 - MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment
 - MS-ESS3-5: Ask a question to clarify evidence of the factors that have caused climate change over the century

Summary:

Conservation videos 1-4 build upon each other to introduce students to the context that follows. The virtual lessons are conveyed with the help of an Animal Educator and various safari animals. The recorded content begins with an educator defining conservation as a whole. We then explore how all ecosystems are interconnected and how energy flows through them. We identify producers and consumers and explain all aspects of an energy pyramid.

Types and factors of extinction will be discussed with the help of animal examples. How and why human activity both directly and indirectly is the number one cause of earth's 6th mass extinction event will be explored. The three most common types of pollution will be defined and examples are given. We will discuss how these three types are directly leading to global warming.

Other contributing factors of extinction introduced are the concepts of poaching, over-hunting, invasive species, and the pet trade. Conservation efforts currently underway are discussed on a global, national, and local scale. Examples of all of these are provided.

Next we will explore what zoological facilities like Six Flags are doing to be at the forefront of conservation. We will discuss various topics such as the species survival plan, solar energy, and the World Conservation Network.

Lastly we will discuss what actions students can take at home to help the environment and lessen their carbon footprint. This will be done by introducing the three R's.

**Differentiated
Instruction:**

Students with special education/physical needs:

Follow I.E.P.s, B.A.P.s, and 504 plans exactly as written with directions and requirements given to S.F.G.A. Education Staff by the teacher or school nurse at least 1 day prior to scheduled session.

All presentations can be provided in written, visual, and verbal formats.

Students that are underserved and at risk for failure:

The entire program will provide students with a new foundation of knowledge to create a schema that may help to increase standardized testing abilities and intrinsic motivations.

English Language Learners:

E.L.L. teachers are encouraged to join for interpretation.

Advanced Learners:

Advanced information and activities can be discussed further with education staff.

**Instructional Materials /
Resources/ Assessments:**

Instructional Materials & Resources:

Virtual lesson necessities, animals, downloadable content, animal facts and information. Concept mastery will be determined by educator and teacher observations of questions and answering abilities throughout the classroom experience.

Assessments:

Presentations are in line with New Jersey State Learning Standards. Teachers are encouraged to review material as it correlates to their own curriculum.