

Academic Adventures – Conservation

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<b>Subject(s):</b>	Wildlife Conservation – Virtual
<b>Topic or Unit of Study:</b>	Science: Six Flags Great Adventure & Safari
<b>Grade / Level:</b>	K-5
<b>Time Allotment:</b>	4 videos (5-7 minutes each)
<b>Behavioral Objective:</b>	SWBAT give 1 example of an ENDANGERED SPECIES
	SWBAT compare/contrast ENDANGERED SPECIES vs. EXTINCT SPECIES
	SWBAT communicate 1 solution that will reduce the impact of CLIMATE CHANGE
	SWBAT give 1 example of an action they can take at home to help save the environment
	SWBAT describe the three R's
	SWBAT explain in their own words what makes up an ECOSYSTEM
	SWBAT define HABITAT DESTRUCTION and provide 1 example
	SWBAT in their own words define PRODUCERS and CONSUMERS and provide an example of each
	SWBAT identify 2 types of FOSSIL FUELS
	SWBAT recall 2 examples of RENEWABLE ENERGY
	SWBAT define CONSERVATION OF WILDLIFE in their own words
	SWBAT recall why BIODIVERSITY is so important to an ecosystem
	SWBAT identify the direction energy flows in an ecosystem and explain why
	SWBAT identify 3 aspects of a FOOD PYRAMID including TROPHIC LEVELS
	SWBAT construct their own FOOD CHAIN

SWBAT recall 2 FACTORS OF EXTINCTION

SWBAT 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

SWBAT give 1 example of POLLUTION

SWBAT in their own words define INVASIVE SPECIES

SWBAT compare/contrast RENEWABLE vs. NON-RENEWABLE RESOURCES

SWBAT recall 1 way zoological facilities and government agencies are helping to combat extinction

## Standards:

### New Jersey State Learning Standards

Subject: **SCIENCE** Grades K-5

- **K-ESS3: Earth and Human Activity**
  - K-ESS3-3: Communicate solutions that will reduce the impact of climate change and humans on the land, water, air, and / or other living things in that local environment
- **2-LS2: Ecosystems: Interactions, Energy, and Dynamics**
  - 2-LS2-2: Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants
  - 2-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats
- **3-LS1: From Molecules to Organisms: Structures and Processes**
  - 3-LS1-1: Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death
- **3-LS2: Ecosystems: Interactions, Energy, and Dynamics**
  - 3-LS2-1: Construct an argument that some animals form groups that help members survive
- **3-LS4: Biological Evolution: Unity and Diversity**
  - 3-LS4-4: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change
- **3-ESS2: Earth's Systems**
  - 3-ESS2-1: Obtain and combine information to describe climates in different regions of the world
- **4-ESS3: Earth and Human Activity**

- 4-ESS3-1: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment
- 5-ESS3: **Earth and Human Activity**
  - 5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources environment, and address climate change issues.

### **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 6<sup>th</sup> 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 standardize 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.