

**RESOURCE LIBRARY**  
UNIT

## Extinction Stinks!

As many as one million species face the reality of extinction unless humans work to protect them. Understanding the complexity of conservation requires exploring species' needs, regional biodiversity, and the services ecosystems provide to humans and other organisms. This unit empowers students to act as experts to design and pitch a solution to help one species' fight against extinction.

**GRADES**

6 - 8

**SUBJECTS***Biology, Ecology, Conservation, Storytelling***CONTENTS**

3 Lesson plans

For the complete unit with media resources, visit:

<http://www.nationalgeographic.org/unit/extinction-stinks/>

## In collaboration with



## UNIT OVERVIEW

Students explore the root causes of extinction and the complexity of conservation efforts through a class-wide focal species, the Sumatran rhino. Students use videos, maps, and hands-on activities to learn about the challenges faced by the Sumatran rhino and the relationships it has with other species in its ecosystem. Then, small groups receive a target species assignment and become experts in the life history of those other species. Students then design one possible conservation strategy to protect their target species and prepare a grant proposal and funding pitch to try to gain support for their idea. After the unit, students can

use their newfound knowledge to share their expertise with the community and support ongoing conservation efforts to protect endangered and threatened species locally or globally.

Use this [unit at a glance](#) to explore a brief outline of the materials included in this unit.

**Unit Driving Question:** *How can we prevent a species from going extinct while also meeting the needs of humans and other local species*

## LESSON 1: IT'S ALL ABOUT THE RESOURCES

1 3 HRS 45 MINS



Students brainstorm what they know and need to learn about endangered species, in order to best answer the driving question for the unit. Students then engage with a variety of sources about the Sumatran rhino to learn about conservation concepts, including causes of extinction, food webs, and ecosystem services. This lesson is part of the [Extinction Stinks!](#) unit.

## LESSON 2: ELIMINATING EXTINCTION—IT'S COMPLICATED! 1 4 HRS 35 MINS



Students receive their target species and perform background research. Students learn about working with local populations to protect endangered species and read several conservation success stories. Students engage with two conservation storytellers and apply the power of storytelling to their target species. They then compare two grant proposals to prepare for writing their own proposals. This lesson is part of the [Extinction Stinks!](#) unit.

## LESSON 3: SHARING SOLUTIONS 1 4 HRS 10 MINS



Students create a grant proposal for their chosen solution to submit to potential funders. In addition to a written proposal, students discuss best practices for delivering a presentation and create a brief pitch to share their ideas with a live audience. They then share their ideas in a final presentation and evaluate their learning in the unit. This lesson is part of the *Extinction Stinks!* unit.

## BACKGROUND & VOCABULARY

### Vocabulary

<b>Term</b>	<b>Part of Speech</b>	<b>Definition</b>
<b>biodiversity</b>	<i>noun</i>	all the different kinds of living organisms within a given area.
<b>captivity</b>	<i>noun</i>	confinement or imprisonment.
<b>carnivore</b>	<i>noun</i>	organism that eats meat.
<b>conservation</b>	<i>noun</i>	management of a natural resource to prevent exploitation, destruction, or neglect.
<b>consumer</b>	<i>noun</i>	organism on the food chain that depends on autotrophs (producers) or other consumers for food, nutrition, and energy.
<b>criteria</b>	<i>plural noun</i>	set of standards or rules.
<b>cultural services</b>	<i>noun</i>	non-material benefits that humans obtain from ecosystems, e.g., sense of home, mental and physical health, tourism, spiritual experience, etc.
<b>decomposer</b>	<i>noun</i>	organism that breaks down dead organic material; also sometimes referred to as detritivores
<b>digital story</b>	<i>noun</i>	fictional or nonfictional narrative told through the use of media such as photos, maps, video, and audio recordings.
<b>ecosystem</b>	<i>noun</i>	community and interactions of living and nonliving things in an area.
<b>endangered species</b>	<i>noun</i>	organism threatened with extinction.
<b>extinction</b>	<i>noun</i>	process of complete disappearance of a species from Earth.
<b>food web</b>	<i>noun</i>	all related food chains in an ecosystem. Also called a food cycle.
<b>genetic diversity</b>	<i>noun</i>	difference or variety of units of inheritance (genes) in a species.

<b>Term</b>	<b>Part of Speech</b>	<b>Definition</b>
<b>gestation</b>	<i>noun</i>	pregnancy, or the period from conception until birth.
<b>grant</b>	<i>noun</i>	money given to a person or group of people to carry out a specific project or program.
<b>grant writing</b>	<i>noun</i>	process of applying to a person, business, or other organization for money or other funding.
<b>habitat</b>	<i>noun</i>	environment where an organism lives throughout the year or for shorter periods of time.
<b>herbivore</b>	<i>noun</i>	organism that eats mainly plants and other producers.
<b>isolation</b>	<i>noun</i>	separation from other people, habitats, or communities.
<b>omnivore</b>	<i>noun</i>	organism that eats a variety of organisms, including plants, animals, and fungi.
<b>pitch</b>	<i>verb</i>	present an idea or information in such a way as to gain support from one's audience, usually in the form of a short speech or presentation, which is referred to by the same word ( <i>pitch</i> , noun).
<b>producer</b>	<i>noun</i>	organism on the food chain that can produce its own energy and nutrients. Also called an autotroph.
<b>provisioning services</b>	<i>noun</i>	material benefits humans obtain from ecosystems, e.g., food, water, lumber, fiber, etc.
<b>regulating services</b>	<i>noun</i>	ways in which ecosystems regulate fluctuating factors in the environment, such as disease, climate, water cycles, nutrient cycles, etc.
<b>species</b>	<i>noun</i>	group of similar organisms that can reproduce with each other.
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<b>species range</b>	<i>noun</i>	native, geographic area in which an organism can be found. Range also refers to the geographic distribution of a particular species.
<b>supporting services</b>	<i>noun</i>	benefits provided by ecosystems that are indirectly supportive of other types of ecosystem services, e.g., providing habitat, nutrient cycling, maintaining genetic diversity, etc.
<b>threatened species</b>	<i>noun</i>	organism that may soon become endangered.
<b>threshold</b>	<i>noun</i>	point in a process that must be met to start a new stage in the process.

