



GRADE 7



COAST TO CACTUS

IN SOUTHERN CALIFORNIA

Curriculum and Lesson Plan Resource Guide



theNAT
SAN DIEGO NATURAL HISTORY MUSEUM



Grade 7 Predicting Changes Over Time

Essential Question

How does a habitat react to human development?

Habitat loss due to destruction, fragmentation, or degradation is the major threat to the survival of wildlife. An ecosystem can be dramatically changed by human activities such as agriculture and urban development. Drastic changes in a habitat might damage an ecosystem so that it is no longer able to provide food, water, and shelter for the plants and animals that live in it.



Activity: Write Your Own Habitat Adventure

In this activity students focus on different disruptions that can occur in a habitat. Students predict how those changes affect the habitat by writing a story through the process of answering guiding questions.

Materials

- Printed worksheets
- Notebook
- Writing and drawing tools
- Access to a computer with Internet (optional)

This activity is best done by students working in groups during or after a visit to the *Coast to Cactus in Southern California* exhibition. (See page 2 for activity instructions.)

Write Your Own Habitat Adventure

Advance Preparation

- Read through the activity instructions.
- Print worksheets, one for each student.
- Schedule a field trip to theNAT. Reservations are required for all group visits. Please call 619.255.0349 to make your reservation or go online to www.sdnat.org/schoolprograms.

Before your Museum visit

- Begin by giving your students an introduction to the southern California habitats represented in the *Coast to Cactus in Southern California* exhibition. These regions include desert, mountain, chaparral, coastal sage scrub (represented by Torrey Pines), coastal wetland, riparian, and urban canyon habitats.
- Break your class into groups and assign each group a habitat. Pass out the worksheets to each group member.

During your Museum visit

- Make sure your students bring notebooks to collect information about their assigned region.
- During exploration of the exhibition make sure students record the animals and plants featured in their assigned habitat. Have them think about the animals' and plants' relationship with the human population and with each another.
- Students can work together as a group to construct the story for their habitat. This can be finished in the Museum or back in the classroom.

Back in the classroom

1. Have students complete their habitat stories if they were not completed during the Museum visit. Students can use the *Explore the Region from Coast to Cactus* website to learn more about the different habitats in the southern California region. They can find more information about the plants and animals from their assigned region at coasttocactus.sdnhm.org.

NGSS Alignment for Grade 7

Performance expectation: MS-ESS3-3

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data Constructing Explanations and Designing Solutions	ESS3.C: Human Impacts on Earth Systems	Patterns Cause and Effect Stability and Change

Interdisciplinary Common Core Connections: RST.6-8.1, RST.6-8.7, WHST.6-8.7, WHST.6-8.8, WHST.6-8.9

2. Have your students share their stories with the class.

Extension

- Have your students research contemporary or historical news related to habitat loss in the southern California region. **Can they find information about wildfires, urban development, or drought?** Students can share images and articles with classmates.
- Have your students research an endangered or threatened species that lives in southern California. Students can report on what caused the species to become endangered or threatened and design solutions to prevent the species from becoming extinct.

What will they learn?

During this activity students learn about the baseline health of a southern California habitat and the changes that can disrupt the ecosystem in that habitat. Using information found in the *Coast to Cactus in Southern California* exhibition, students research and predict the changes that would occur in reaction to natural and human-caused disruptions.

Additional Resources

- Visit the *Explore the Region from Coast to Cactus* website to learn more about the different habitats in the southern California region. You can find more information at coasttocactus.sdnhm.org.
- Check out a specimen from our Nature to You Loan Library. For more information visit sdnat.org/specimensearch or contact the Loan Library at loanprogram@sdnhm.org or 619.255.0236.
- Visit the San Diego Natural History Museum and explore our *Coast to Cactus in Southern California* exhibition. San Diego is known for its incredibly diverse terrain, ranging from the beaches and chaparral near the coast, to the mountains and the desert farther afield. Using specimens from the Museum's scientific collections, alongside immersive environments, hands-on exhibits, live animals, and innovative media, *Coast to Cactus in Southern California* illustrates that richness by taking visitors on a journey through these habitats to explore the plants and animals that live in them.



Key words

Habitat:

The place or type of place where a plant or animal naturally or normally lives or grows.

Disruption

To cause something to be unable to continue in its normal way; to interrupt the normal progress or activity of something.

Ecosystem

Everything that exists in a particular environment. An ecosystem includes living things, such as plants and animals, and things that are not living, such as rocks, soil, sunlight, and water.

Non-native species

Plants or animals that do not live or grow naturally in a particular region.

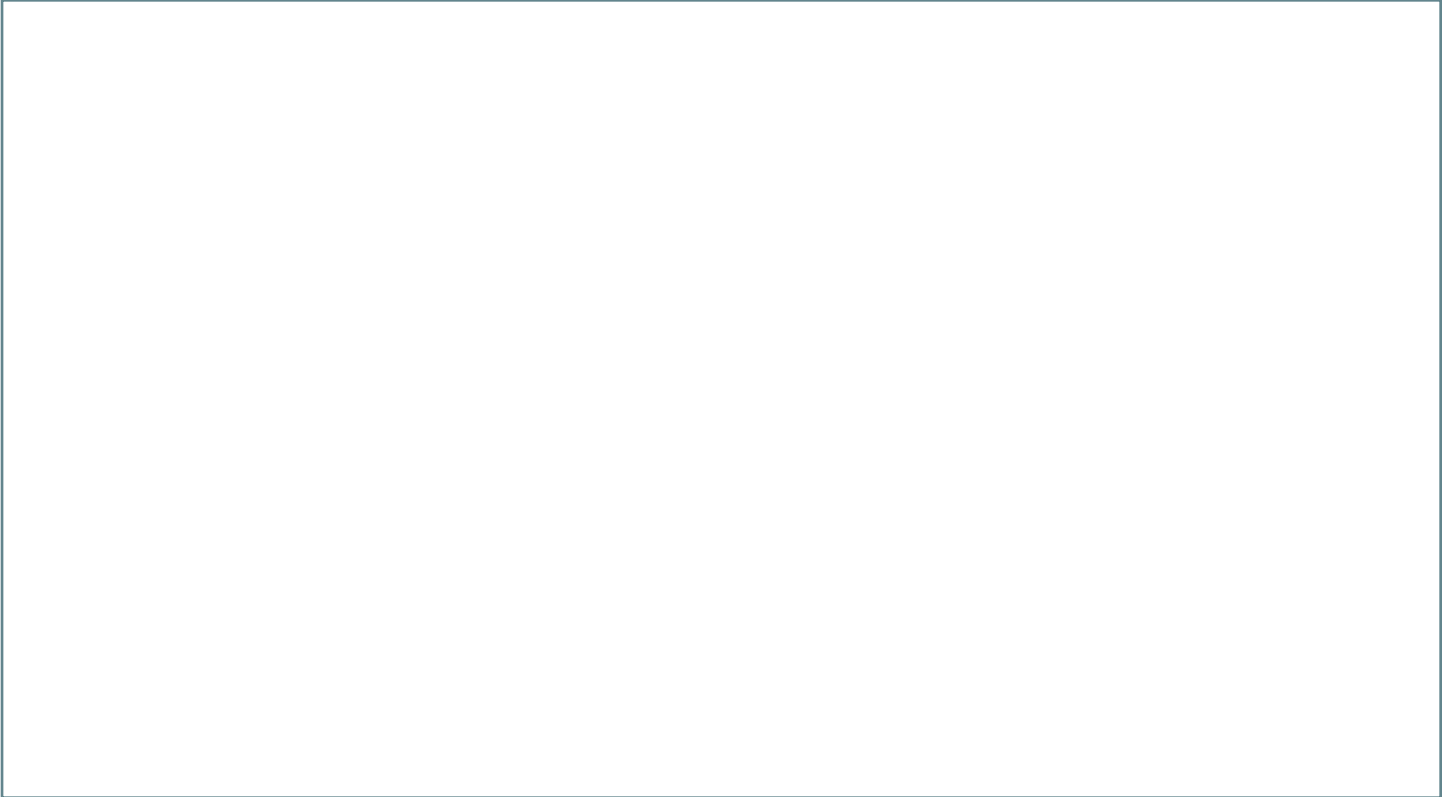
Invasive species

Plants or animals that are not native and often harmful to native species.

Habitat

Name: _____

1. Draw a picture of your habitat.



2. Describe the baseline for your habitat. **What is the average weather pattern for a year? Does it rain or snow at all?** List some of the animals and plants that occur in your habitat. **Do people live in the area? What kind of natural resources (food, water, and shelter) exist in your habitat?**

Habitat

Name: _____

3. A disruption has affected your habitat. See below what has caused the disruption in your assigned habitat.

Chaparral: Fire

Mountains: Fire

Desert: Invasive plant species

Coast: Non-native bird that eats a lot of food

Urban canyon: Non-native plant species

Riparian: Invasive species of fish

How does this disruption change the ecosystem? How do plants or animals react to this change? Does this change have an effect on natural resources (food, water, and shelter)?

4. Humans have decided to build a shopping mall in your habitat. Describe how this affects the ecosystem. ***What is destroyed to make room for the mall and the roads leading to it? How do the roads affect animal movement in the area? Do humans get water from local rivers or stream? Are humans dumping trash?***
