

RESOURCE LIBRARY | ACTIVITY : 1 HR 40 MINS

Assisting Animal Migrations

Students identify and explain how humans can assist animal migrations. Through a jigsaw activity, group members learn about three examples of efforts to support animal migrations and reflect on the efficacy of these actions. Students then research additional ways humans can assist migratory animals and evaluate which of these actions would be most helpful to the focal species in the geographic area represented in their game board.

GRADES

6, 7, 8

SUBJECTS

Conservation, Geography, Social Studies

CONTENTS

4 Links, 2 PDFs, 1 Resource

OVERVIEW

Students identify and explain how humans can assist animal migrations. Through a jigsaw activity, group members learn about three examples of efforts to support animal migrations and reflect on the efficacy of these actions. Students then research additional ways humans can assist migratory animals and evaluate which of these actions would be most helpful to the focal species in the geographic area represented in their game board.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/assisting-animal-migrations/>

In collaboration with

DIRECTIONS

Interrupted Migrations Unit Driving Question: *How can human activities help or hinder animal migrations?*

Helping Animals Migrate Lesson Driving Question: *How has human activity changed the environment?*

1. Introduce innovations that help salmon migrate when human developments interrupt their route.

- Begin by activating students' prior knowledge by discussing the following questions as a class:
 - *What do you already know about salmon migration?*
 - *What kinds of human impacts might get in the way of salmon being able to spawn?*
(Possible responses: dams, pollution, fishing)
- As a class, watch the video, *Whoosh Innovations' "Salmon Cannon" Gives Fish a Boost Over Dams*. After watching the video, ask students: *What are the benefits of the salmon cannon? What are the risks?*
- Then, as a class, watch the video, *Salmon in the City* up to at least the 1:50 minute mark. After watching the video, ask students: *What are the benefits of the salmon ladder? What are the risks?*
- Throughout the class discussions, guide students to make the connection on how creativity and innovation may be needed to develop solutions to interrupted migrations.

2. Students jigsaw read resources to introduce them to three species that have benefited from human assistance.

- Distribute copies of the *How Humans Assist Animal Migration* handout to each student. Assign each member of the project groups a different resource to explore and learn more about. The three resource options are:
 - *The Path of the Pronghorn*
 - *Snake Migration*
 - *River Revives After Largest Dam Removal in U.S. History*

- Have each student complete their *How Humans Assist Animal Migration* handout as they read or watch their assigned resource. After completing the handout, have each student teach the other members of their group what they have learned.
- Ask students: *Which, if any of these, would be a good solution to the human impact on your game board? Why?*

3. Groups research positive human actions that may support animal migration.

- Students have already created two sets of cards for their game in previous activities: human impact cards and critter cards. In this step, students will create a third set of cards for their game—positive action cards.
- Distribute one copy of the *Positive Action Cards Research* handout to each group. Read the directions for creating the cards as a class.
 - Have students work together in their groups to conduct their research, completing the table on the handout prior to creating the cards in Step 4.

4. Students create a set of positive action cards for their games.

- As groups finish their research from Step 3, have students begin creating the positive action cards by following the instructions on the *Positive Action Cards Research* handout.
- Once each group has finished creating their cards, conduct a class discussion to debrief the activity. Ask students: *Which of these positive actions are most relevant to your geographic area? Why?*

Tip

Step 1: Watching up to 1:50 of the *Salmon in the City* video is long enough to know what and where the salmon ladder is. Have students watch more of the video to learn how many types of salmon migrate and the duration of the migration, the importance of salmon to indigenous communities in Washington state, the history of how humans have impacted the geography, and the history of fish ladder design back to 1911.

Informal Assessment

Positive Action Cards Research: Collect students' *Positive Action Cards Research* sheets. Make sure students have accurate information for each response.

Extending the Learning

Have students come up with actions to take in their school or community to educate about and/or assist animal migration. For example, the class could seek permission to plant a butterfly garden or could spend a day picking up trash in an area that supports migratory wildlife.

OBJECTIVES

Subjects & Disciplines

- Conservation
 - Geography
 - Social Studies

Learning Objectives

Students will:

- Research how humans can assist migratory animals.
- Explain different positive actions people can take to support animal migration by creating positive action cards.

Teaching Approach

- Project-based learning

Teaching Methods

- Jigsaw
- Multimedia instruction
- Research

Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
 - Learning and Innovation Skills
 - Communication and Collaboration
 - Critical Thinking and Problem Solving
- 21st Century Themes
 - Civic Literacy
 - Environmental Literacy
 - Global Awareness
- Critical Thinking Skills
 - Analyzing
 - Applying
 - Creating
 - Evaluating
 - Remembering
 - Understanding

National Standards, Principles, and Practices

COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

• Reading Standards for Informational Text 6-12:

Key Ideas and Details, RI.8.2

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

• D2.Civ.12.6-8:

Assess specific rules and laws (both actual and proposed) as means of addressing public problems.

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Colored construction paper
- Colored markers
- Glue
- Cardstock paper
- Scissors (one per pair of students)

REQUIRED TECHNOLOGY

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

PHYSICAL SPACE

- Classroom

SETUP

Students will need to have chairs and desks/tables that can be easily rearranged into small groups.

GROUPING

- Jigsaw grouping
- Small-group learning
- Small-group work

RESOURCES PROVIDED: UNDEFINED

- Whoosh Innovations' "Salmon Cannon" Gives Fish Boost Over Dams
- Salmon in the City
- Path of the Pronghorn

RESOURCES PROVIDED: HANDOUTS & WORKSHEETS

- [How Humans Assist Animal Migration](#)
- [Positive Action Cards Research](#)

RESOURCES PROVIDED: ARTICLES & PROFILES

- Snake Migration
- National Geographic: River Revives After Largest Dam Removal in U.S. History

BACKGROUND & VOCABULARY

Background Information

Although animals face many obstacles created by humans on their migratory journeys, there are ways that humans can limit or minimize human impacts and assist migration. One often-cited example of the ways people are assisting animal migration is through the construction of animal corridors—an effort to increase habitat connectivity—where animals’ migratory pathways are maintained or restored. These are not the only actions groups and individuals are taking, however. A memorable example is of the “salmon cannon,” which assists fish in their journey back to their spawning grounds. Assisting migration can occur through individual actions, or through more widespread changes in law and policy, and wildlife management.

Public awareness has been used to build support for helping preserve migratory routes. One vehicle for sharing this kind of geographic information is through games. The use of games in social studies has shown to improve a student’s role in and understanding of the world. Learning about animal migration through a game will support a call to action for the student in sharing the future of animal migration.

Prior Knowledge

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Recommended Prior Activities

- [Geography Matters](#)
- [Intersecting Actions](#)
- [Map That Game Board](#)
- [Meet Migratory Animals](#)

Vocabulary

Term	Part of Speech	Definition
animal migration	<i>noun</i>	process where a community of animals leaves a habitat for part of the year or part of their lives, and moves to habitats that are more hospitable.
assist	<i>noun</i>	to help or support.
corridor	<i>noun</i>	hallway, or connecting passage of land.
interconnected	<i>adjective</i>	connected with one another.
region	<i>noun</i>	any area on Earth with one or more common characteristics. Regions are the basic units of geography.

For Further Exploration

Articles & Profiles

- [National Park Service: Elwha River Restoration](#)
- [Cornell Lab of Ornithology: Why Birds Hit Windows—and How You Can Help Prevent It](#)
- [Wildlife Crossings](#)
- [USFS: Snake Migration: LaRue-Pine Hills](#)



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