

RESOURCE LIBRARY | ACTIVITY : 1 HR 40 MINS

# Intersecting Actions

Students use a video of elk migration in Yellowstone National Park to understand the concept of migration, what can motivate migration, and why it is important for humans to respect migratory routes. They then participate in a guided visualization activity to brainstorm the consequences of various human modifications to the environment.

## GRADES

6, 7, 8

## SUBJECTS

*Biology, Ecology, Conservation, Geography, Social Studies*

## CONTENTS

3 Links, 1 Video, 2 PDFs

## OVERVIEW

Students use a video of elk migration in Yellowstone National Park to understand the concept of migration, what can motivate migration, and why it is important for humans to respect migratory routes. They then participate in a guided visualization activity to brainstorm the consequences of various human modifications to the environment.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/intersecting-actions/>

## In collaboration with



## DIRECTIONS

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

**Mapping Human Interruptions to Migration Unit Driving Question:** How has human activity changed the environment?

**1. Activate students' prior knowledge with a brief Turn-and-Talk with a neighbor about the meaning of migration.**

- Set the stage for students by telling them that they may have heard the term migration used in different ways. We often hear about the migration of people. In this unit, we will be learning about animal migration.
- Ask students to discuss with a neighbor:
  - *What is animal migration?*
  - *What kinds of animals migrate?*
  - *Why do you think animals migrate?*
  - *How far do you think animals migrate?*

**2. Students watch a video to learn about elk migration behaviors.**

- In this video, students learn about one species of migratory animals, the elk that migrate through Yellowstone National Park.
- As a class, watch *Yellowstone's Great Migration*. As they watch, have students listen for and take notes about the following:
  - *What is migration?*
  - *Why do the elk migrate?*
  - *How far do the elk migrate?*
  - *Why does tracking and mapping the elk matter?*

**3. Lead students on an imagined journey through the Yellowstone landscape to think about human impacts on that environment.**

- Divide students into six groups—these will be the groups that students work in for the duration of the unit. Distribute a set of *Human Impact Cards Set 1* to each group and give

students a few minutes to review the cards.

- Display an image of Yellowstone National Park, such as [this image](#) of a Bull Elk from the National Park Service. Remind students that the boundary of Yellowstone in the video was surrounded by unprotected land that has been, to some extent, developed by humans.
- Ask students to imagine that they have traveled back in time and that they are in the scene of the photograph, which is *near* the border of Yellowstone, but *outside* of what is now the national park before any development has happened.
  - Ask: *What do you think it looked and sounded like to be in a place like that?* After a few minutes of quiet thinking, elicit several student responses.
- With the image of Yellowstone still displayed, follow the [Creating Our World Transcript](#) to guide students through an imagined journey.
  - Stop at each question so teams can decide which card best fits the human impact that is being described.
  - Pause to discuss the implications as prompted in the transcript.

#### **4. Guide students in a discussion about the benefits of development.**

- Ask students: *What are some of the ways human lives are impacted by the kinds of developments highlighted in the Creating Our World exercises you just experienced?* (possible responses: roads, dams, fences, landfills, urban sprawl).
- Have students look through their *Human Impact Cards Set 1*. Ask students:
  - *How is your life made easier by the human impacts listed on your cards?*
  - *What are some drawbacks to these human impacts?*
  - *How do you think the elk surrounding Yellowstone might have been impacted as towns and roads started to appear?*
- Record student responses on chart paper.

#### **5. Introduce the *Interrupted Migrations* unit final project.**

- Explain to students that people may sometimes develop areas only thinking about human benefits, but not thinking about the impact on animals and the environment. In this unit, students will design and construct a board game that teaches players about the impact of

human activities on animal migration and inspires them to take action to protect migrating animals.

- Explain that students have already created the first pieces of their games—the *Human Impact Cards Set 1*.
- Discuss with students how games can be an engaging way to teach people about issues.
- Allow students to explore the following online games about migrating birds as examples:
  - Audubon Society's [Mission Migration Game](#)
  - National Zoo's [Migratory Birds Game](#)

## 6. Create a class Know and Need to Know chart.

- Elicit responses to the unit driving question, *How can human activities help or hinder animal migrations*, by having students discuss with a partner:
  - *What do we already know about how human activities impact animal migrations?*
  - *What do we need to know about human activities and animal migrations in order to develop a game about this problem that we can share with our community?*
- Have students share their thoughts in a whole-class discussion, recording their ideas on a class Know and Need to Know chart. Keep the chart in a visible place in the classroom, or easily accessible online, to refer to students' expertise and questions with which they started off the unit.

## Tip

Step 3: Continue to remind students to use the *Human Impact Cards Set 1* to respond to the questions posed as the story progresses.

## Modification

Step 3: To give students more autonomy, the Creating Our World exercise can be independently conducted in each small group. Assign one student to be the reader while the others respond to the questions and create the cards.

## Tip

Step 5: Access the games prior to class to ensure you have any necessary plug-ins for play.

# Informal Assessment

**Creating Our World:** The Know and Need to Know chart assesses students' content knowledge and their understanding of the purpose and requirements of the project.

## OBJECTIVES

## Subjects & Disciplines

### **Biology**

- Ecology
- Conservation

### **Geography**

### **Social Studies**

## Learning Objectives

Students will:

- Understand what animal migration is through the case of Yellowstone elk.
- Explore different ways humans have impacted the environment and animal migrations.
- Identify how human actions can change physical environments.

## Teaching Approach

- Project-based learning

## Teaching Methods

- Brainstorming
- Cooperative learning
- Multimedia instruction

## 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
  - Environmental Literacy
- Critical Thinking Skills
  - Analyzing
  - Remembering
  - Understanding

# National Standards, Principles, and Practices

## COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

### • CCSS.ELA-LITERACY.SL.7.1:

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on Grade 7 topics, texts, and issues, building on others’ ideas and expressing their own clearly.

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

### • D2.Geo.4.6-8:

Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places.

## Preparation

## What You’ll Need

## MATERIALS YOU PROVIDE

- Chart paper

## REQUIRED TECHNOLOGY

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

## PHYSICAL SPACE

- Classroom

## SETUP

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

## GROUPING

- Large-group instruction
- Small-group learning

## RESOURCES PROVIDED: UNDEFINED

- Yellowstone's Great Migration

## RESOURCES PROVIDED: HANDOUTS & WORKSHEETS

- [Human Impact Cards Set 1](#)
- [Creating Our World Transcript](#)

## RESOURCES PROVIDED: INTERACTIVES

- Audubon Society: Mission Migration Game
- Smithsonian National Zoo: Migratory Birds Game

## RESOURCES PROVIDED: IMAGES

- National Park Service: Bull Elk Bugling, Mammoth Hot Springs

## BACKGROUND & VOCABULARY

# Background Information

Humans have changed the natural world in many ways. Some of the most relevant changes have included building cities, creating spaces for agriculture and grazing, and energy production. These actions have largely benefited human populations, but these changes have also had increasingly dire consequences for the migrations of a wide range of animals. Whether the species impacted is the Arctic tern and its lengthy migration over multiple continents, or the lesser-known vertical migration of ocean plankton, when the natural world is changed, migration is changed too, and the outcome for the entire ecosystem can shift. As humans have changed the natural world, the natural corridors for animal migration shift or are closed. Loss of migratory routes has a negative impact on migratory species.

## Prior Knowledge

### []

## Recommended Prior Activities

- None

## 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.
corridor	<i>noun</i>	hallway, or connecting passage of land.
migration	<i>noun</i>	movement of a group of people or animals from one place to another.
range	<i>noun</i>	agricultural land where livestock graze.



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