

BAT MIGRATION

OBJECTIVE:

The students will explain how behavioral traits, such as migration, increases the chances of survival of the species.

NGSS: MS-LS1-4 (Animals)

NGSS CONNECTION:
MS-LS2-1

**MATERIALS:**

- Bat Migration Map Student Response Sheet (per student)
- Migration Map (per student or group)



TIME: 1-2 hours

Teacher preparation

- Prepare to show the 5-minute video and the 8-minute video, and the short power point presentation.
- Copy Bat Migration Map Student Response Sheet for each student.
- Copy Migration Map for each student or group.

Engage

- Show students the informational video about bats, approximately 5 minutes.

Bracken Caves Batnado from all Angles. What is a Batnado?
Bat Conservancy International:

<https://www.youtube.com/watch?v=k6iTX2MELi8>

- Show 8-minute video then continue the conversation of new understandings about bats.

Bat Caves of Texas from Texas Parks and Wildlife:

<https://www.youtube.com/watch?v=ZGnzm6A8Dnk>

Explore

Student groups may view the “Bat Migration Behavioral Adaptation for Survival” Power Point as a team to continue their student discussion.

The discussion should emphasize the importance of migration as behavioral adaptation for survival of the species. Encourage students to discuss what they saw and what they wonder about with their team.

Explain

1. Facilitate a class discussion about the challenges bats have when they migrate and this behavioral adaptation for survival. Students should be able to answer the following questions:
 - » Why do bats migrate?
 - » What are the benefits of migration for survival of the species?
 - » What challenges come with migration?

2. Students will analyze and complete the Bat Migration Map Student Response sheet with a partner and share their findings with the whole group.

Evaluate

Student teams share their three key points they have summarized about bats and their behavioral adaptation- migration.

Elaborate (optional)

GROUP PROJECT FOR MIGRATION & HIBERNATION

Minecraft Edu or platform source project; students will explore the hibernation and migration patterns of bats in their region. They will create a virtual world that represents the habitats of these bats and observe their behaviors in different seasons.

- Divide students into small groups and provide each group with a designated area in Minecraft or other source.
- Students will create a habitat for a regional bat that reflects both summer and winter conditions.
- Encourage students to research the specific types of bats found in their area and design their habitats accordingly.
- Students should include features like caves, trees, water sources, and relevant vegetation in their virtual worlds.
- Students will research and present the hibernation and migration habits of their chosen bats.
- Students will include labels, signs, and/or boards identifying the bats, their hibernation habits, and their migration habits.
- Students will visit and explore the virtual worlds created by other groups.
- Students will take notes and observe the bats' activities, noting the difference between summer and winter conditions.
- Students will discuss and compare the hibernation and migration strategies of the different bat species.