

BAT MIGRATION CHALLENGE GAME

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:**

- 1 Bat Migration Gameboard (per group)
- 1 die (per group)
- 1 set of game cards (per group)
- 1 movable game piece (per student)
- 1 Student Response Sheet for Migration Game worksheet (per student)



TIME: 1 hour

Teacher preparation

1. Gather the following materials each group:
 - » 1 Bat Migration Gameboard
 - » 1 die
 - » 1 set of game cards (cut into cards from full sheet)
2. Gather the following materials for each student:
 - » 1 moveable game piece
 - » 1 “What Happened During Migration” work sheet

Engage

If needed, review migration with informational video. This video was viewed in migration lesson.

Bat Caves of Texas from Texas Parks and Wildlife:

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

Encourage students to discuss what they saw and what they wonder about bat migration with a shoulder partner. Tell the students that they will experience the challenges that bats face when they migrate from Mexico back to Texas.

Explore

Students will play the Bat Migration Challenge Game and fill in the Student Response Sheet for Migration Game worksheet. When the group has completed playing, have them discuss what they learned and what they noticed about bats.

Explain

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?

BAT MIGRATION CHALLENGE GAME

- What challenges come with migration?
- What have you learned from playing the Migration Challenge Game?

ELPS

Teacher models for students and strategically groups students who need additional support with others. Teacher provides sentence stems for students during science talk.

Elaborate (optional)

GROUP PROJECT FOR MIGRATION & HIBERNATION:

Students will explore the hibernation and migration patterns of bats in Texas. They will create a virtual world as in Minecraft, 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.
- Students will create a habitat for a Texas bat that reflects both summer and winter conditions.
- Encourage students to research the specific types of bats found in Texas 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 Texas bat species.