



The CREATES Literacy Project

Lesson Title: Biodiversity and Bat Conservation in the Sonoran Desert

Teachers: Patrick Taylor and Caitlin Brenton

Grade Levels: 7th and 8th

Duration of Module: 4 days

Learning Objectives	
Students will be able to communicate the importance of bat conservation for preserving Sonoran Desert biodiversity.	
Vocabulary	Materials
<ul style="list-style-type: none"> • Biodiversity • Conservation • Pollinator 	<ul style="list-style-type: none"> • Article on bat conservation • Seek by iNaturalist App • Tiktok App or other video creation software

Creative Communication Strategy Implemented	Students will communicate what they learn about bat conservation and biodiversity of the Sonoran Desert through the creation of a group video.
Literacy Strategy Implemented	<ul style="list-style-type: none"> • Paraphrasing • Summarizing in Science • Interactive Read-Alouds • Interactive Reading Guides • Strategies for Vocabulary Instruction • Writing a Scientific Explanation Using the Explanation Tool



Order of Activity

Day 1

- As students enter the classroom, instruct them to answer to the following bellwork questions in their science notebook:
 - What is biodiversity?
 - What plants and animals make the Sonoran Desert a unique, or special, place?
 - List TWO pollinators we can find in the desert.
 - Ask for volunteers to share out their answers to the bellwork questions
- Ask students to raise their hand if they think that bats are pollinators
 - Discuss what characteristics define a pollinator
 - Ask students what kinds of flowers bats are attracted to and the characteristics of these flowers (white, open at night, high off the ground, etc.)
- Show students a [video](#) of local Sonoran Desert bats
 - Instruct students to write down their answers in their science notebooks to the following questions after watching the video:
 - What are two things you notice about this video?
 - What is one question you have about this video?
- Tell students that today their class will be participating in a bioblitz activity in the school's outdoor classroom
 - Explain the following procedures before going outside:
 - Have students download the app "Seek by iNaturalist" on their phones
 - Use the app to identify plant and animal species in the outdoor classroom
 - While students are in the outdoor classroom they must take a picture of the plant/animal species and write down in their science notebooks:
 - The name of the plant/animal species
 - Two facts about each plant/animal species
 - The goal of this bioblitz activity is to identify and research as many plants and animals as possible in the outdoor classroom

Day 2

- As students enter the classroom, instruct them to answer to the following bellwork questions in their science notebook:
 - What is one plant you identified yesterday?
 - What is one animal you identified yesterday?
 - What are TWO plants you would add to the outdoor classroom to increase pollinators coming to visit?
- Instruct students to read the [article on bat conservation](#) using the literacy strategy [summarizing in science](#)
 - Explain to students that this task will be broken down into 4 sequential parts:
 - 1) First, summarize what you read by writing down what is said in the article in your own words 2) Second, draw a picture on your individual whiteboard that represents your summary 3) Third, create a class summary of the article 4) Lastly, draw a group picture on the classroom whiteboard that represents the class summary of the article

Day 3

- As students enter the classroom, instruct them to answer to the following bellwork questions in their science notebook:
 - What is the problem with bats?
 - What are some things we can do to help bats?



- Why is it important to add plants that grow well in the desert to the outdoor classroom?
- Introduce students to their task for the day: creating a 1-2 minute long TikTok video in their assigned groups
 - The video must include answers to the following questions:
 - What is biodiversity? (Show it with what you found in the outdoor classroom)
 - Why are bats important to the biodiversity in Tucson? (What do bats do)
 - What is happening to the bats? What can we do to help the bats? (Think outdoor classroom, what can we add?)
- Explain to students that they will start by creating a written outline for their video which should include:
 - Who is doing what?
 - Who is filming?
 - Who is in the video?
 - Who is editing the video?
 - What information are you going to include?
 - Do you need to research anything?
 - Do you need to look back at your reading?
 - Do you need to look back at your notes?
- After finishing their written video outline, tell students that the class will go to the outdoor classroom to film their videos
- Finish filming the videos, and explain to students that they will be responsible for editing the videos the following day in class

Day 4

- As students enter the classroom, instruct them to answer to the following bellwork questions in their science notebook:
 - What would you like to add to the outdoor classroom that is NOT a plant?
 - What do you think some of the benefits are to making the outdoor classroom a nice place for our school?
 - What do you still need to do to have your video ready to watch in class today?
- Give students 30 minutes to edit their TikTok videos that they recorded the day prior
- Instruct students to upload the final edited version of the video to google classroom
- Tell students that they will be responsible for written peer evaluation of all videos.
 - Instruct students to write down their answers to the following question about each video and to title each peer evaluation with the first names of the group members:
 - What did you like about their video and/or learn from their video?

Evaluation/Assessment

Grade and assess the submitted videos for overall effort and effectiveness of science communication.