



Leaping Lemurs!

Lesson Plan for Grades: 7 Length of Lesson: 45 min
Authored by: UT Environmental Science Institute Date created: 10/7/2020
Subject area/course: <ul style="list-style-type: none">• Science
Materials: <ul style="list-style-type: none">• Ethogram handouts (attached below)
TEKS/SEs: §112.19. Science, Grade 7 (11) Organisms and environments. The student knows that populations and species demonstrate variation and inherit many of their unique traits through gradual processes over many generations. The student is expected to: <ul style="list-style-type: none">• (B) explain variation within a population or species by comparing external features, behaviors, or physiology of organisms that enhance their survival such as migration, hibernation, or storage of food in a bulb.
Lesson objective(s): <ul style="list-style-type: none">• Students will be able to identify behaviors from videos and input their observations into an ethogram efficiently.
Differentiation strategies to meet diverse learner needs: <ul style="list-style-type: none">• The teacher should ask students whether they prefer to read or watch videos to learn about concepts; then have students learn in their preferred learning style. However, the teacher may assign students certain methods to improve their skills. For example, if a student prefers reading, teachers may have them watch a video and take notes to improve their listening skills.• ELL students and students with learning disabilities should have multiple forms of instruction including visual and written instruction sheets as well as a verbal instruction and demonstration.
ENGAGEMENT (5 minutes) <ul style="list-style-type: none">• Ask the students what occurs when we observe situations. What are things we notice? Write down answers on board. Follow up by asking what they think scientists look for when observing their experiments.• After these questions, inform the students that during this lesson, they will be doing observations of their own. Virtual Learning Component: <ul style="list-style-type: none">• Give the students 1 minute to think about a situation that has happened in the past or is happening currently around them. After a minute, ask the students to share some of their examples. Take note of the examples they are saying and what their observations tell the class about the environment as a whole.



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EXPLORATION (15 minutes)

In this section, students will watch a video of lemurs and record their observations on different types of ethograms.

- Ask the students if they know what an ethogram is or what it is used for. Introduce an example of an ethogram and explain how to fill it out.
- Provide ethograms for the students. There are 3 different versions of ethograms attached at the end of this lesson plan and here. Each ethogram has students record observations in different increments of time.
- Give instructions over how the video will be played, which students should record, and which should be the timekeepers (reminding the scribing student to record information).
- During their observations, students should put a tally in each box of what they see the lemur doing or record their information by writing a quick blurb about what the lemur is doing at the recorded time periods.
- Give students time to figure out how to record time efficiently or walk them through instructions on how to record their data and record time.
- Play the [video \(https://www.youtube.com/watch?v=8ijuS_f0CnM\)](https://www.youtube.com/watch?v=8ijuS_f0CnM).
- Alternate videos that are longer: <https://www.youtube.com/watch?v=nqH0LWOHtxc> , <https://www.youtube.com/watch?v=aoBDyEPCmTc>

Virtual Learning Component:

- If breakout rooms are not accessible, students won't be able to work in groups. Give students instructions on how to record observations on an ethogram. Then, send them copies of the different ethograms and divide the students into groups by alphabet. When the video is playing, the student will be doing observations and recording on their own.
- If breakout rooms are accessible, send the students into breakout rooms after giving instructions. Assign roles to each of the students in the rooms and allow enough time (5 minutes) for students to watch, record, and discuss the video. At the end of the 5 minutes, bring students back together to share out.

EXPLANATION (10 minutes)

- The students then share their findings in groups that are respective to which ethogram they used (i.e. students who did every 30 seconds will group together)
- The point of grouping students like this is so they may discuss their findings to ensure accuracy, to talk about what was difficult and what was not (if anything), and to discuss what they learned about Sifaka lemurs.
- When the class comes together as a whole, the teacher should ask for the student's responses on the questions from above.
- The general consensus should be that the students who recorded every 15 seconds had the most accurate data, while the students who recorded every 45 seconds do not. Although recording the data every 15 seconds is tough, it is more important to be accurate and collect the animal's behavior. Ask the students why they think it is important to keep track of an animal's behavior in the wild and in captivity (such as a zoo).

Virtual Learning Component:

- When students discuss their findings in groups, if accessible place students in breakout rooms based on which ethograms they filled out. If breakout rooms are not available, consider having an open class discussion about their findings. Asking broad questions may motivate a class discussion (i.e. what was difficult about recording your observations?) or you could



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single out each different type of ethogram group and ask them what the general consensus was. After hearing from each group, ask the students what they think. Which type of recording is most accurate? What is one they think would be most applicable to animals in the wild?

ELABORATION (10 minutes)

- Take the students' answers from the end of the explanation and use them to propel a conversation over the importance of using ethograms.
- Ethograms are used for animals everywhere for a lot of reasons. The Denver Zoo uses an ethogram to record animals' daily routines so they know what to feed it, when to feed it, can catch illnesses before the get bad, and to know when they can go into the animals' habitat. For animals in the wild, take [Dr. Lewis' research in Madagascar](#) for example. Her team found that lemurs stayed in three specific areas, so they monitored those areas while recording their data. Dr. Lewis's research is a long-term project that focuses on the behavior, demography, ecology, genetics, health and morphology of the species. Tracking each of these topics helps us understand lemurs needs, what the future looks like for them, and how they are changing in their environment.
- *No additional accommodations needed for virtual learning component.*

EVALUATION (throughout entire lesson) (5 minutes)

- An exit question to check for understanding: create an observable situation of a habitat and animal you want to learn more about. Describe its importance for knowing more about this animal and its environment.
- *No additional accommodations needed for virtual learning component.*

SOURCES AND RESOURCES

- **Dr. Rebecca Lewis *Hot Science At Home* #1.3, "Leaping Lemurs",** <https://www.esi.utexas.edu/talk/leaping-lemurs/>
- **Dr. Rebecca Lewis's Research Station website:** <https://labs.la.utexas.edu/ankoatsifaka/>



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ETHOGRAM

Researcher: _____

Animal Observed: _____

	Leaping	Sitting/Inactive	Eating/Drinking	Climbing	Playing
:30					
1:00					
1:30					
2:00					
2:30					
3:00					



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ETHOGRAM

Researcher: _____

Animal Observed: _____

	Leaping	Sitting/Inactive	Eating/Drinking	Climbing	Playing
:45					
1:30					
2:15					
3:00					



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ETHOGRAM

Researcher: _____

Animal Observed: _____

	Leaping	Sitting/Inactive	Eating/Drinking	Climbing	Playing
:15					
:30					
:45					
1:00					
1:15					
1:30					
1:45					
2:00					
2:15					
2:30					
2:45					
3:00					