

Lions, Tigers & Monsters, Oh My!

Week 4: Grades 6-8

Day	Topics	Related Standards
1	A Monsterous Task!	Develop and use a model to explain how natural selection may lead to increases and decreases of specific traits in populations over time.
2	It's Dinner Time!	
3	Monsters in Love	Construct an explanation of how genetic variations occur in offspring through the inheritance of traits or through mutations.
4	Family of Monsters	
5	Ladies & Gentlemen, I Present to You...	

Lions, Tigers & Monsters, Oh My!

Day 1: A Monsterous Task!

Teacher/Parent Background:

Lions, tigers and monsters? Yes, you read that correctly; monsters! By creating a unique monster to survive in a specific environment, students will apply their understanding of adaptations. All animals and plants (including monsters!) have specific structures and behaviors that help them survive in their environments.

Overview:

In this activity, students will begin to imagine their unique monster by brainstorming the structures it possesses that help it to survive in an ecosystem of their choosing.

Related Standards:

- Develop and use a model to explain how natural selection may lead to increases and decreases of specific traits in populations over time.

Key Terms:

- Structural Adaptation: physical feature of an organism that helps it to survive in its environment.
- Behavioral Adaptation: things organisms do to help them survive in their environments.
- Biotic: Living things
- Abiotic: Non-living things

Materials List:

- Pen/pencil
- Possible visual representation resources:
 - Colored pencils/crayons/markers
 - Internet access for images/pictures
 - Internet access - optional for *Extensions*
- *Student Resources - Pages 5-7*
 - *Monster Project Details*
 - *Animal Track Adaptations*
 - *My Monster's Portrait*

Activity Description:

1. Introduce students to the project details.
 - a. Inform students that they will have time on Day 5 to build a 3D model of their monster, as they may make changes to their monster throughout the week.
2. To help remind students about adaptations they will observe images of animal tracks in different environments and complete the *Animal Track Adaptation* chart (example below) and answer the questions.

Animal Tracks			
			
What does it do? (climb, grab, swim, jump, run)	What does it do? (climb, grab, swim, jump, run)	What does it do? (climb, grab, swim, jump, run)	What does it do? (climb, grab, swim, jump, run)
(Bear Tracks) climb, grab, run	(Duck Tracks) swim	(Deer Tracks) run, jump	(Bird Tracks) climbing, grabbing, running
What environment do you think it is best adapted for?	What environment do you think it is best adapted for?	What environment do you think it is best adapted for?	What environment do you think it is best adapted for?
Woods, grassy areas, mountains	Ponds, lakes. swamps	Wooded areas, fields	Rocky areas, wooded areas with trees

4. Guide students to choose an environment that they would like their monster to live in and the kinds of adaptations their monster needs to survive in their chosen environment.

5. Ask students to draw a detailed picture of their monster with adaptations labeled and environment described.

Closure:

- After the activity has concluded, engage in a discussion with students:
 - How would you best describe your monster?
 - What about your monster's structures help it survive?
 - What else might we need to know about your monster, as the project continues?

Extensions:

Continue the Project!

- Encourage students to research ([example source 1](#) & [example source 2](#)) animal behaviorists or zoologists to learn more about what they do. For example, ask students to research:
 - What does an animal behaviorist/zoologist do?
 - What kind of training do they need?
 - What career opportunities do they have?

Student Resources

Monster Project Details

Dear Student,

As a local animal behaviorist, my team and I are interested in working with you to learn more about your newly discovered monster! My sources have informed me that you are currently in the process of identifying and observing this new creature. You have been tasked with presenting your findings to my team as soon as possible, so that we may study this monster as well. Please closely follow all the project details outlined below:

- 1. Your project report must include a description and visual representation of the following:**
 - a. The monster's physical and behavioral adaptations.
 - b. The monster's ecosystem.
 - c. The monster's feeding relationships, including what/how it eats and what eats it.
 - d. The monster's offspring and family.

- 2. You may use the following resources to create visual representations:**
 - a. Drawings
 - b. Pictures/videos
 - c. 3D models (this is our preferred method of studying!)

- 3. In addition to the project portfolio, you must prepare a presentation:**
 - a. Explain each part of the portfolio to a family member, friend, teacher, etc. Walk someone through your findings!
 - b. The presentation can take place through one of the following ways:
 - i. Face-to-face
 - ii. Video conferencing/recording

My team eagerly awaits your report. Best of luck out there!

Dr. Lilly Padton

Animal Track Adaptations

1. Observe the animal tracks and use your observations to complete the chart below.

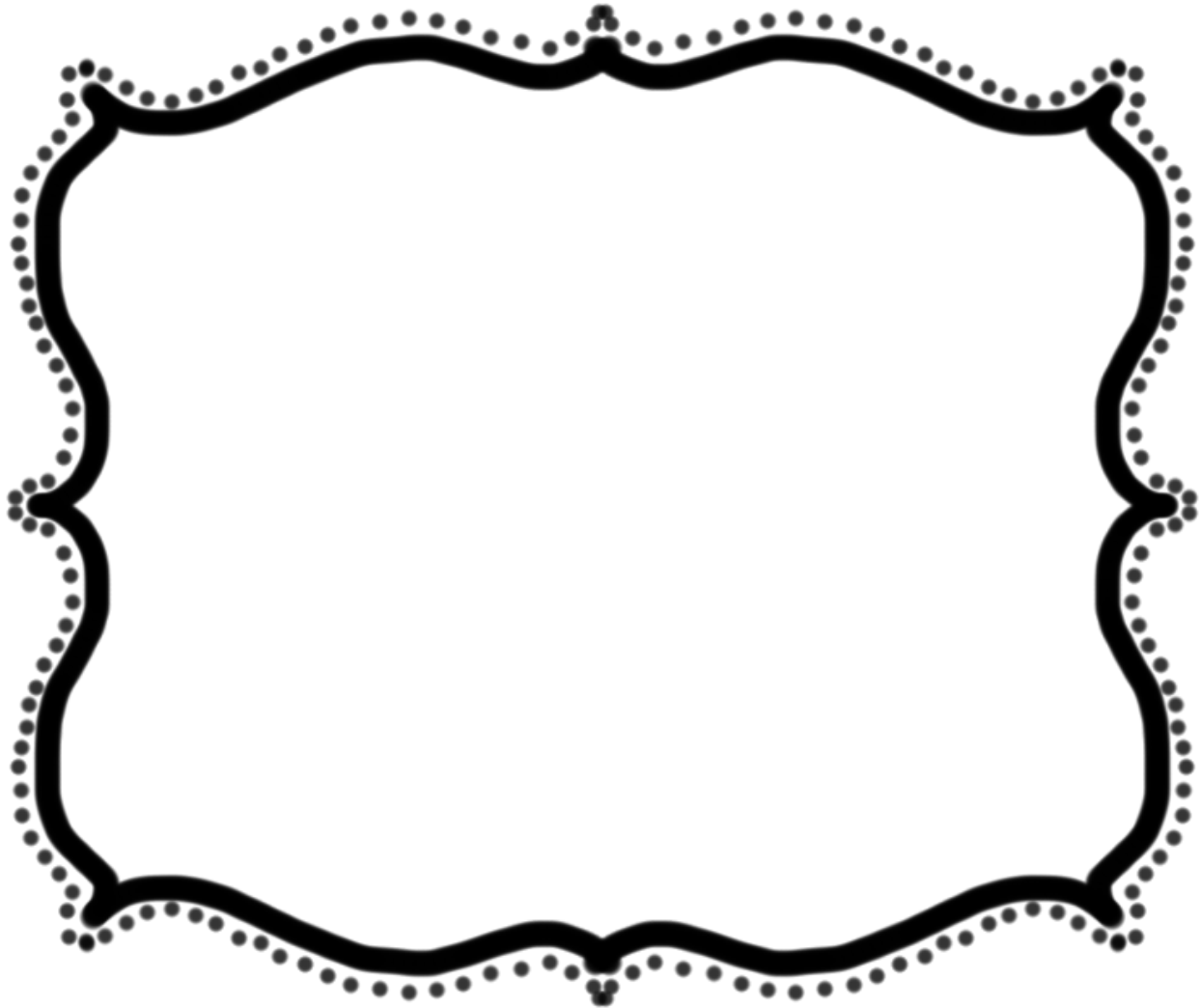
Animal Tracks			
			
What does it do? (climb, grab, swim, jump, run)	What does it do? (climb, grab, swim, jump, run)	What does it do? (climb, grab, swim, jump, run)	What does it do? (climb, grab, swim, jump, run)
What environment do you think it is best adapted for?	What environment do you think it is best adapted for?	What environment do you think it is best adapted for?	What environment do you think it is best adapted for?

Think about the monster you are going to create and the environment in which it lives.

How is your monster adapted to...

1. **It's environment:**
 - a. Behavioral Adaptation
 - b. Structural Adaptation
2. **Eating**
 - a. What does it eat?
 - b. How does it eat?
3. **Avoid Predators:**
 - a. Behavioral/Structural Adaptations
4. **Moving Around**
 - a. How does it move?

My Monster's Portrait



Monster Brainstorming!

Describe the environment in which your monster lives (temperature, biotic and abiotic factors, rainfall, etc.)

Label and describe the adaptations your monster has to help it survive in your chosen environment.