

Wild Feet Exploration Lesson Plan

Context (InTASC 1,2,3)

Lesson Plan Created By: Alyssa Horpedahl

Created:

Lesson Topic: Animal Structures

Grade Level: 1st Grade

Duration: 2 or 3– 35 minute class period

Kit Contents: http://odin-primo.hosted.exlibrisgroup.com/nmy:nmy_all:ODIN_ALEPH007757036

Desired Results (InTASC 4)

Purpose: The purpose of this activity is to introduce students to the idea that animals have special characteristics that help them to survive and be able to do the things they do through the engineering design process. This activity will focus on the structure of animals' feet and how those characteristics can be applied to a human shoe.

North Dakota English Language Arts & Literacy Content Standards:

- Writing Standards: Types and Purposes
 - W.2 (Grade 1) Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

North Dakota Science Content Standards

- Science Standards: Structure and Function
 - LS.1a (Grade 1) All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

Objectives:

1. The student will be able to identify animal feet and how the characteristics of those feet help the animal to live.
2. The student will be able to create a model of a shoe that has characteristics from animals to help the human to walk on smooth, sloped surfaces.

Assessment Evidence (InTASC 6)

Evidence of meeting desired results: The student will be able to write a short paragraph stating facts they learned through this activity about animal feet structures and how they help the animal live where they do.

Learning Plan (InTASC 4,5,7,8)

Instructional Strategy: (Check all that apply)

Direct Indirect Independent Experiential Interactive

Technology Use(s): (Check all that apply)

Student Interaction Align Goals Differentiate Instruction Enhance Lesson

Collect Data N/A

Hook and Hold:

Show the BrainPop Jr. video called “Camouflage” to the students.

<https://jr.brainpop.com/science/animals/camouflage/preview.weml> This video will get them thinking about reasons why animals have to have unique features. Explain to the students that camouflage is just one way that animals make sure they can survive. They also have special feet to help them live too.

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Materials:

- Wild Feet Exploration Kit
- ActiveBoard & Projector with sound

Procedures:

1. Tell the students that today they are going to become engineers to help solve a problem! Explain that engineers are people who use science and math to solve problems and help people.
2. Read the short story on page one of the Activity Book to the students titled, “Engineers Needed” and go on to explain that engineers use a special set of steps to solve their problems. Display the problem solving steps for the kids to see as you go along.
3. Discuss the problem on page 2 in the activity book.
4. Do the “Animal Feet Cards” activity to help kids figure out ideas for creating a model of a shoe that doesn’t slip – they can do this in pairs, or small groups. They simply need to match the feet to the animal they think it belongs to. Discuss the proper matches as a class after students had enough time to work.
5. Go to page 4 in the activity book and discuss how sometimes people copy things in nature to make things that work for us. Discuss Velcro as you go through pages 4 & 5.
6. Discuss and post the goals for this activity – to create a model of a shoe that doesn’t slip when walking on sloped and smooth ground.
7. Discuss human feet on page 7.
8. Do the activity test on pages 8-9 to try out different materials on a ramp and see if they stick or slide.
9. Hand out the “Shoe Plan” reproducible to the students and instruct them to draw a model of a shoe that they think would solve the problem.
10. Put students in teams to create their actual shoe model. Help the students test their ideas on the ramp as the teacher guide states.
11. *Refer to the teacher guide found in the “Wild Feet” kit for more detailed instructions if you wish

Summary: The last step in the activity guide is to “Think and Plan Again” – discuss pages 15-16 with your students about what they learned and how they could create an even better shoe next time. To wrap up the lesson students need to write 3-5 sentences explaining what they learned about animal feet and how they help animals to survive.

Reflection (InTASC 9)**Reflect On:**

- *Preparation*
- *Planning*

- *Teaching*
- *Student Engagement and Participation*
- *Evidence of Student Learning*

Standards

Council of Chief School Officers. (2011, April) *Interstate Teacher Assessment and Support Consortium (InTASC) model core teaching standards: a resource for state dialogue*. Washington DC. Retrieved from

http://www.ccsso.org/documents/2011/intasc_model_core_teaching_standards_2011.pdf

North Dakota Department of Public Instruction. (2011) *North Dakota English language arts & literacy content standards*. Bismarck, ND. Retrieved from https://www.nd.gov/dpi/uploads/87/ELA_JUN0811.pdf

North Dakota Department of Public Instruction. (2011) *North Dakota Science content standards*. Bismarck, ND. Retrieved from

https://www.nd.gov/dpi/uploads/132/NDScienceStandardsDraftFormat2_FirstGrade.pdf

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