

Unit 2: Animals Surviving and Thriving

WEEK 5 Lesson 2

Science and Engineering

Designing a Coat

Lesson from (<https://www.stemmaterials.org/inspired-by-nature/>)

S & E Big Ideas	Like people, animals also have coats that serve a specific purpose. Some coats are meant to keep animals warm. Some coats are meant to keep animals dry. Other times, an animal's coat is used to protect it from predators.
S & E Guiding Question	How are animal coats similar to coats that people use?
Content Objectives	I can discuss, write, and draw about how coats for humans are similar to and inspired by animal coats. (1-LS1-1)
Language Objective	I can describe how a coat is similar to and different from the coat of an animal. (SL.1.1)
Vocabulary	coat: an animal's covering of fur or hair.
Materials and Preparation	<ul style="list-style-type: none">● Coats on Animals slides (slides 11-19)● pom-poms, at least one per child● paper● pencils● spray bottles, 4-5, optional <p>Decide how children will “test their coats.” If it is raining, children can expose their pom-poms to the rain for 5-10 seconds. If it is not raining, it is possible to simulate rain by sprinkling water on the pom-poms or using the spray bottle.</p> <p>Enough of the following materials for children to create:</p> <ul style="list-style-type: none">● construction paper● plastic wrap● aluminum foil● wax paper● tissue paper

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	<ul style="list-style-type: none"> ● tape ● glue
Opening 10 minutes	<p>Show the Coats on Animals slides presentation, slides 11-19.</p> <p><i>We have been learning about the animals that live around us. We have studied animals' behaviors and structures, and we've thought about how animal structures can inspire people and how people mimic special features of animals to help solve problems.</i></p> <p>Show a pom-pom. <i>Today you will design a coat for a pom pom creature! The coat you design should keep it dry and warm in wet and cold weather.</i></p> <p>Ask two questions: <i>What material do you want to use? What shape do you want to make the coat?"</i></p> <p>Show samples of the various materials. Allow time for children to touch, feel, and consider each material. Prompt children to share their initial thoughts about the materials.</p> <p>Distribute the paper and pencils. Invite children to quickly sketch their plans.</p>
Investigation 20 minutes	<p>Offer the various materials for children to build their coats. Allow time for children to experiment and build. After, invite children to test their coats.</p> <p>Gather the children in a whole group. Turn and Talk: <i>Was the coat able to protect the pom pom? Why or why not? What could you do differently next time?</i></p> <p>Invite a few children to share their reflections. Make connections to previous learning from the Unit.</p>
Standards and Practices	1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
Ongoing assessment	Take note of observations children make, questions they ask, and vocabulary they use in relation to biomimicry.