Lesson Title	Animal Adaptations	Planned Teaching Date	

Learning Objective

Through reading, writing reflection, and an outdoor investigation students gain an understanding of some physical (camouflage, mimicry) and behavioral adaptations that can protect an animal from predation.

Essential Question (s)

1. How do physical and behavioral adaptations (such as camouflage, behaviors, and mimicry) help an animal survive in its habitat?
2. How are these physical features and behaviors examples of an animal adapting to its environment?

Materials/Supplies/Data Sheets

Reading: Student journals & pencils for writing
Outdoor activity: Variety of toy animals with various coloration patterns
Whiteboard clipboards, datasheet & pencil

Bloom's Level and Question(s) or DOK

Bloom's levels 1-5:
Recognize & describe (level 1)
Summarize (level 2)
Generalize (level 3)
Compare, analyze & infer (level 4)
Design (level 5)

Reading, Writing, & Science Literacy Connections	Standards Emphasis
National Geographic Book *Tricks, Traps, and Tools*	**VA Science (2018)** 3.1f (science & engineering practice),3.4b (organism adaptations may be physical or behavioral) NGSS Performance Expectation 3-LS4-2 Biological Evolution: Unity and Diversity	Next Generation Science Standards **VA English (2023)** 3.RV (reading & vocabulary), 3.RI (reading informational texts)
Supplementary Book Options *Looking for Animals* by Lawrence F. Lowery (NSTA Press) *Verdi* *Paddle, Perch, Climb* and *BEAKS!*	**VA Science (2018)** 3.4b **VA English (2023)** 3.RI
Outdoor Activity (connected to the readings)- *Color Crazy* from Project Wild	**VA Science (2018)** 3.4b
Writing Activity Record observations about camouflage during the outdoor activity.	**VA English (2023)** 3.LU (language usage–grammar & mechanics)

Differentiation

For the journaling activity, some students may draw and color examples of animals with camouflage and mimicry instead of writing in their journals. They can explain their examples to you.

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Ladders are differentiated for three reading levels.

Assessment	Vocabulary
Formative. During the engage activity, are students accessing prior knowledge to discuss why some animals are easy to find and some are not? Are they also discussing how these features can be an advantage? **Summative.** Color Crazy- Show photos of camouflage and mimicry. Can students differentiate between camouflage and mimicry when they see examples of animals in different habitats? Can students explain the adaptive advantages of these physical characteristics? Can students recognize/identify physical vs behavioral adaptations that help an animal survive in its habitat? Performance assessment: Ask students to design and construct a model of an optimal habitat for an animal's survival (you can use the toy animals). Students explain their model in writing and use science concepts to explain their model (one or more of these concepts: physical characteristics, behavioral characteristics, mimicry, camouflage, adaptation, survival, etc.)	**Adaptation, camouflage, mimicry, physical adaptations, behavioral adaptations (Review words:** habitat, survival, physical characteristics**)**

Hook/Engage

Outdoor activity: Looking for animal models (toys) hiding (or not) in various habitats

Journal Reflection: Which animals were easy to find? Why? Which animals were a challenge to find? Why?

Guided Lesson/Instructional Strategy

Outdoor activity: Students look for animal toys placed in several habitats (in the grass, in a tree, on the ground, in a shrub, etc). In their journals, they give ideas for why some animals were easy to find and some were a challenge to find.

Guided Reading: "Tricks" section of Nat Geo book, pp 4, 6, 8.
As we read, in your journal, record the important science concepts/words that you hear (Ex. camouflage, mimicry, predator, prey)
Ask: Based on our reading, how does **camouflage** help an animal survive in its environment? (pp.4-5)
How is **mimicry** different from camouflage? (pp.6-7)

Read aloud: *Looking for Animals*
As you read, help your students make the connection between animal coloration and how these physical characteristics demonstrate an animal's adaptation to its environment and help the animal survive in its habitat.
Ask: Are the physical character examples in this book examples of camouflage or mimicry? Explain your answer.

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Developed by Blandy Experimental Farm/UVA educators in partnership with Clarke Co., VA Public School

Teachers, 2022. Blandy lesson plan template adapted from K. Lison, Clarke Co. VA teacher.

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Outside: Find examples of physical adaptations or behaviors outside in the schoolyard. Record what you find in your journal. Discuss your findings. AND/OR Use collected natural materials to build a creature, thinking about how its coloration will help it survive in its habitat.

Writing/Journal Reflection:
Write a definition of camouflage and mimicry. Explain how these concepts are similar (both are examples of physical adaptations that help an animal survive in its habitat) and different.

Technology/Computer Science	Expected student products or learning objectives met -Mandatory: -Optional/preferred:
Reflection/Notes	**Supporting Resources**
	Animal camouflage coloring pages from Exploring Nature website www.exploringnature.com

Animal Adaptations Student Journal

Where did you find the animal?	Describe the habitat where you found the animal.
Why were you able to find some of the animals?	Why were some animals harder to find?

Reading Reflection: *Tricks, Traps, Tools*

During the reading, what words did you hear that described "tricks" that the animals use for camouflage?

Based on your observations and reading, how does camouflage help an animal?

How is mimicry different from camouflage?