Hide and EEEK! (3rd Grade)
Distance Learning Lesson

SYNOPSIS
Students will explore how an animal's characteristics can help them to survive in different habitats. Students will create their own insect or arachnid that has characteristics to survive in a particular environment. Students will also discuss what would happen to their insects/arachnids if the habitat changed.

NGSS STANDARD SUPPORTED
3-LS4-2: Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.] [Assessment Boundary: N/A.]

PHENOMENA
Animals often have characteristics that help them look like things in their environment.

MATERIALS
- Writing tool
- Notebook or paper
- Coloring materials
- Slideshow (make a copy of the slideshow to edit)

ESSENTIAL QUESTIONS
- How does the way an insect looks help it survive in a particular habitat?
- What happens to animals that rely on the way they look when their environment changes?

LESSON

Facilitator (Teacher/Parent) Does	Student Does	Questions to Move Thinking Forward
Engage Show students camouflage slideshow. For each of the example photos, ask students the following questions. • What do you notice and wonder about these animals? • How do you think these animals survive? Review some of the students' answers and prompt them with more questions to guide their thinking. If students are struggling, ask some of the questions in the Move Thinking Forward column to the right.	**Engage** Students will think about each question posed by the teacher and discuss their answers with a neighbor or small group. In their notebooks, students will write down observations about each of the animals shown. What do they notice, what do they wonder?	What are some similarities that can be seen between the animals shown? Differences? How might the way this animal looks help it to survive? What are some advantages to survival these animals have over others?
Explore 1 Facilitate the brainstorming of ideas about different types of habitats. Choose a few habitats to focus on (two or three) and write them on a whiteboard.	**Explore 1** Students will discuss their ideas with neighbors or in small groups, then share their thoughts with the class. Students can also write ideas in their notebooks.	What is the weather like in this habitat? What organisms do you think live here? What does the habitat look like?
Explain 1 As the students give answers, write the features (weather, climate, etc) of the habitat and the plants and animals that live in those habitats on the whiteboard.	**Explain 1** Students will discuss their ideas with neighbors or in small groups, then share their thoughts with the class. Students can also write ideas in their notebooks.	What do you think animals that live in this habitat would look like?

LESSON (continued)

Facilitator (Teacher/Parent) Does	Student Does	Questions to Move Thinking Forward
Explore 2 Inform students of the directions and expectations for the creation of the student's insects. Remind students to think back to the slideshow and how those animals' shapes, colors, and patterns helped them to survive in their habitats.	**Explore 2** Students will choose one of the habitats listed in the previous section. Using this choice, they will create their own insect or arachnid species that will be able to survive and hide in their chosen habitat. Students will draw and color their insect in their notebook. *Examples include choosing a plant to mimic, a dangerous animal to mimic, matching the surrounding colors and patterns, creating confusing patterns for predators.*	How did the animals in the slideshow survive? What were their shapes like? Patterns? Colors?
Explain 2 Help to guide students that are stuck or struggling with some of the questions in the Move Thinking Forward box.	**Explain 2** Students will present their insect to the class and explain the following: • Where does their insect live? • Why do they think their insect would be able to survive in this habitat? • How does the way their insect looks help it to survive?	How is it able to blend into its habitat? Can these habitats change? Will they stay the same forever?

LESSON (continued)

Facilitator (Teacher/Parent) Does	Student Does	Questions to Move Thinking Forward
Elaborate Ask the students: What are some ways that humans can change habitats? Ask the students: What human changes could happen in each specific habitat that they chose? *Examples could include cutting down trees for lumber, removal of habitat for construction (parking lots, businesses, etc), and grass that is not being watered turns from green to brown.* After students discuss, pick one habitat and tell them how that habitat was changed. (Choose an obvious change such as turning the habitat into a parking lot and business.) Ask the students: If their insects would be able to survive as well in this new, changed habitat? Which of their insects can survive in only one habitat? Which insects can survive in both? *Teacher note: Most insects would not be able to survive in these new habitats. Insects exhibiting warning mimicry and disruptive camouflage might survive well as their coloration is not as dependent on the actual habitat.*	**Elaborate** Students will discuss ways that humans can impact and change a habitat with a neighbor or small group. Then students will share ideas with the teacher. Students will answer and discuss if their insect would survive and which would not in the new habitats. In addition to the discussion, students should be writing down in their notebooks the answers to the questions and form an argument as to why or why not their insect would survive.	Does the habitat look the same? What is similar? Different? What would happen to the insects if the habitat changed? (Cause and Effect) Do you think that your insect would be able to survive this change? Why or why not?

MODIFICATIONS

Synchronous	Asynchronous	Independent Learning
Engage The teacher would engage students by screen sharing the slideshow of the different forms of camouflage/mimicry. As the teacher asks questions, students can respond in the chat section, or aloud with the whole group.	**Engage** Teachers can pre-record the slideshow with voice commentary on the slides. Students can watch the slideshow and respond with video via SeeSaw or other applications. *Students could also respond by uploading pictures of their notebooks.*	*If possible, students should discuss questions and reasoning with a family member or someone in the home about each section.* **Engage** Students will review the camouflage pictures independently and respond in the slideshow what they notice/wonder about each picture.
Explore 1/Explain 1 The teacher would share a chart of the habitats chosen by the students. As students respond with ideas of living organisms and environmental factors in each habitat, the teacher will fill in the chart.	**Explore 1/Explain 1** It would be easiest if the teacher chooses a single habitat for the students to respond to. Students will think about and respond by listing the living things and environmental conditions of that habitat. Teachers can compile student thoughts and place them into a chart for the students to reference. *Students could also respond by uploading pictures of their notebooks.*	**Explore 1/Explain 1** It would be easiest if the teacher chooses a single habitat for the students to respond to. Students will think about and create a document listing the living things and environmental conditions of that habitat.

MODIFICATIONS (continued)

Synchronous	Asynchronous	Independent Learning
Explore 2/Explain 2 Students will create an insect on their own and share it with the class over a video conference.	**Explore 2/Explain 2** The teacher can create a slideshow with recorded audio over the slideshow or use a video to explain instructions. Students will create an insect on their own and share it by adding their photo on a slide and presenting either with recorded audio or via video with applications like SeeSaw. *Students could also respond by uploading pictures of their notebooks.*	**Explore 2/Explain 2** Students will create an insect that uses the way it looks to survive in the chosen habitat. After creation students can submit a picture of the insect and a short document explaining why their insect would be able to survive in the habitat.
Elaborate Over a video conference, the teacher will introduce and discuss with the students how human impacts can change habitats. Students can share with the whole group how those human impacts will affect their insects. Will their insect survive? Why or why not?	**Elaborate** The teacher can use a slideshow with recorded audio or use a video to introduce how human impacts can change habitats. Students will respond by adding their responses directly into the slideshow or by responding via video with applications like SeeSaw. *Students could also respond by uploading pictures of their notebooks.*	**Elaborate** Students create and turn in a document explaining why or why not their insect would survive if its habitat changed due to human impact.

SUPPLEMENTAL SUPPORT

If your students are having issues understanding the concepts, try showing them these videos:

- Camouflage: Animal Hide & Seek - SciShow Kids
- Animal Tricksters! - SciShow Kids