#### **Practice B Teacher Instructions**

## In the Field: EJ the Naturalist

**Objective:** Each student will be able to recognize structures and functions, to identify how organisms survive in an environment.

- "I can explain how an animal's body helps it survive in their environment."
- Students actively read and reflect as conservationists to help a classmate make a descriptive investigation for protecting animals at a pond.
- Academic Terms: camouflage, countershading, predators,

# What is Happening?

Digital Student Journal Slides 3-4 Click slides to enlarge





**Description:** Phenomenon-based approach for any classroom setting. This attention-getter can be used as either a cooperative learning strategy for engagement or as an individual reading opportunity to activate prior knowledge.

There is no correct or uniform answer for these connections. However, students should be able to relate information from 3rd, 4th, and possibly 5th grade to these terms using examples they have either directly observed or learned about previously. Be sure to provide time for students to make observations about the image before moving on to the description on previous slides. Encourage full sentences in the written descriptions.

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## In the Field: EJ the Naturalist

Digital Student Journal Slide 5 - Click slides to enlarge

**Description:** Students help their classmate EJ with a descriptive field investigation about animals living in a pond, to help promote conservation.

Students observe a photo of the pond and its inhabitants and learn about the physical traits of the animals. They read a short passage about the Painted Lady Butterfly, to research how animals' body parts help them survive. The students use this information to make a poster to help answer the research question, "How do the animals in this pond survive here?"

Previous to 5th grade, students identified external structures and functions of different animals and how those structures helped them meet basic needs for survival. During the In the Field activity, students will apply the same concepts.

## In the Field: Observing

Digital Student Journal Slide 6 - Click slides to enlarge

Description: Students are introduced to the featured character and also read their activity instructions.



# In the Field: Observing

Digital Student Journal Slides 7 - Click slides to enlarge

Description: Students finish sentences with words from the term bank.

Answer Key

This butterfly's body is not camouflaged. It uses the spots on its back to scare away predators.

The mottled pattern (spotted) on the bat's back helps it blend in with the mouth of the cave.

The armadillo's body is dark gray. It blends in with the soil and pebbles.

# In the Field: Researching

Digital Student Journal Slides 8 - Click slides to enlarge

Slides 8-11 each feature an animal that lives in this pond ecosystem and describe how their unique structures function in ways that help them survive there. Students are prompted to explain how that feature helps the organism survive.

**Description:** Based on an adapted passage using resources from Nature Forward, students explain how countershading in red-tailed hawks helps this species survive.

#### Answer Key

The red tailed hawk's body is reddish brown on top and white on bottom. This type of camouflage is called countershading. It helps the animal blend in with the sky if you look at it from below, and the tree branches if you look at it from the side or above.

**Recurring Themes & Concepts Spotlight** 

5.5F Explain the relationship between the structure and function of organisms.

Organisms have developed many different structures that function in their survival. Some of the structures are designed to make the organism look more fierce or dangerous. The "eyespots" on a butterfly's wing fool predators into thinking it is a different, more dangerous organism.





## In the Field: Researching

Digital Student Journal Slide 9 - Click slides to enlarge

**Description:** Students read a short passage, then select a sentence that shows how a structure helps the Painted Lady Butterfly avoid predators.

#### **Answer Key**

These "eyespots" can make other animals think that the butterfly is a bigger animal, and run away.

#### In the Field: Researching

Digital Student Journal Slides 10 - Click slides to enlarge

**Description:** Students review and match the Structure and Function descriptions for the Nine-banded Armadillo that help explain how each featured structure supports a function that helps the species survive.

#### In the Field: EJ the Naturalist

Digital Student Journal Slide 11 - Click slides to enlarge

**Description:** Students read a short passage about Mexican Free-tailed Bats, then select specific structure terms that relate to functions that help them survive in their environment.

Answer Key

fur, wings, ears, claws

#### Pulling It Together

Digital Student Journal Slide 12-14 - Click slides to enlarge

**Description:** Students use the information they have learned from to answer the questions. They read a short passage and use the information to select an answer, and identify animals using structures to avoid predation.

Select the correct answer	
For the fact that the fact the	ngs help them fly if driving on a
Ude 12 STRUCTURE & FIRETON & 2023 MY TROOT	LLE - ALL MONTE RESERVED. 🔞

2. Whit	ch statements accurately describe animals using a structure to avoid predators in their environment?					
Sele	et THREE correct answers.					
	A channel catfish swimming in the open pond.					
	An American bullfrog sitting on a wet rock blending in.					
	A buff-bellied hummingbird eating nectar from a flower.					
	A timber rattlesnake shaking its rattle at a large speckled kingsnake who is backing off.					
	A Texas river cooter hiding from a common raccoon in its shell.					
	Submit					
lide 13	STRUCTURE & FUNCTION IS 2002 AND TRENS LLC- HAL BRAITS RESERVED.					

structions: Move one term		
How does the	stay safe from predators?	Get food?
Painted lady butterfly		
Mexican free-tailed bat		
Nine-banded armadillo		
Red-tailed hawk		
STRUCTURES	"evespots" countershading sticky b	
thin wings	hard armor large ears	proboscis
		Subr
		INCOME & FUNCTION OF THE AVAILABLE AND ADDRESS OF THE



100					
	I noticed some painted lady butterflies around the pond. I started looking for evidence of their prediators – spiders, birds, and bats. How does the butterfly avoid them? The passage below is a summary of the "taxes Field outle on painted lady butterflies.				
	Painted lody butterflies are common in North America. They live in open areas, like meedows and marshes These butterflies register, or tarelet long distinces to stay werm and find food. When they are categolians, they ead over 100 different kinds of plants. When butterflies, they mostly ead flower nectar using what is called their products.				
	Painted lady butterflies are brown, orange, and black. They have five large spots on their wings that look like eyes. These "eyespots" can make other animals think that the butterfly is a bigger animal, and run away.				
	Submit				

10	Research	Research Entry: Nine-banded Armadillo			
	A triend told me about how nine-banded armadilios in Texas are are mostly nocturnal. So, I did some research about them and discovered some interesting facts about them.				
and the second		STRUCTURE	FUNCTION		
TERM BAI	к	Armor-like skin that covers its back side, head, tail and outside of its legs.	Protection from predators		
		Spots or mottles on its back	Inflatable intestines		
		Strong legs to dig burrows	Blend in with the ground		
		Long, powerful claws on the middle toes of its front feet	Digging through the soil for insects.		
		Run away from predators	Help it float across rivers and ponds, or it can sink run along the bottom holding its breath.		
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