

Instinctual and Learned Behaviors

Teacher Facilitation Notes

In General . . .

- Project the slide deck in edit mode—do not show it as a slideshow.
- Hide the speaker notes before projecting. (View/Show Speaker Notes)
- Hide the filmstrip to the left. (View/Hide Filmstrip.)
- Hide the toolbar. (Click on the up arrow at the right end of the tool bar.)
- Call on students to read the various content shown on slides.

Materials Needed:

Engage: Which is Different?

Card Stock or Light-colored construction paper, 4 sheets

Sharpie^R or other permanent marker

Elaborate: Survival of the Fittest

Card stock, 7 sheets

Tape or other means to attach posters to wall

Other Materials

Student Recording Sheets

Pencils

Student Summative Evaluation

Science notebooks

Advanced Preparations

- Prepare the cards for the engage activity:
 - Use a marker to write BLINK in large letters on the front of a sheet of cardstock or construction paper.
 - On the back write a sentence such as, *I blink my eyes about 1,000 times an hour.*
 - On another sheet, write READ on the front and a sentence, such as *I like to read books about animals,* on the back.
 - On a third sheet, write BREATHE on the front and a sentence, such as *I have to take a breath about 22,000 times a day,* on the back.
 - On a fourth sheet, write SWEAT on the front and a sentence, such as, *I sweat when play baseball on a hot summer day,* on the back.
- For the elaboration, duplicate the behavior cards on cardstock. Cut the cards apart. If possible, duplicate the animal behavior posters on cardstock in color.

Instinctual and Learned Behaviors

Teacher Facilitation Notes, p. 2

Engage: Which is Different?

- Show the first slide in this section, ask the following questions, and discuss student answers.
 - What is an animal?
 - What is a physical trait?
 - What are some physical traits of the toucan you see here?
 - What is a behavior?
 - What might be some behaviors of the toucan pictured here?
- Call on four volunteers. Give each of the volunteers one of the human behavior cards.
- Ask the volunteers to come stand in front of the class holding up their cards so that the large word is visible to all students.
- Have each volunteer read their sentences to the class one at a time.
- Tell the students that three of the behaviors are alike in some way while one is different. Ask the class, *Which of these behaviors do you think is different from the others?* Have the students turn and talk to their neighbor or assigned partner to discuss their answers.
- Stand behind each student holding a behavior card and say, *If you think this behavior is different from the others, raise your hand.* Continue for all 4 volunteers.
- Stand behind the student with the BLINK card and ask, *Why do people blink?* Do the same for the other 3 volunteers.
- Tell them to think about the reasons people do these four things. Ask, *Now, which one do you think is different? Do you stand by your first answer or would you like to change your answer?* Stand behind each volunteer holding a card and ask students to raise their hands if they think this is the behavior that is different from the other 3.
- If necessary, guide the students to the realization that people have to learn to read but they are born knowing how to blink, breathe, and sweat.
- Continue with the cat, the bat, and the dolphin slides. (Optional: Have students mark their answers on the recording sheet before discussing each animal. Allow them to change their answers if necessary as you talk about each animal.)
- Call on students to summarize the behaviors that are different and explain why they differ.

Instinctual and Learned Behaviors

Teacher Facilitation Notes, p. 3

Explore: What is the Difference Between Knowing and Learning?

- Introduce the question for this part of the lesson, *What is the difference between knowing and learning?* Discuss students ideas.
- Tell students to think about human babies and animal babies. Ask and discuss the following questions:
 - Can human babies take care of themselves when they are first born?
 - Can some animal babies take care of themselves when they first hatch or are born?
 - What are instincts? (If students do not know the answer to this question, tell them to look for the answer as you go through this part of the lesson.)
- Read and discuss the slide about traits and behaviors. Make sure students understand that traits can be either physical or behavioral. Ask students to identify 2 or 3 physical traits they might have and 2 or 3 behavioral traits they have.
- Tell students that they are going to focus on the behavioral traits of organisms and how they help them survive in their environments.
- Read and discuss the two slides entitled *Knowing vs. Learning*.
- Read the first sentence on the video slide. Show the short video *They Just Know*. Read and discuss each question.
- Read and discuss each of the remaining slides dealing with instincts. Have students complete the recording sheet as you go through these slides.
- NOTE: The introduction for the student expectation for this lesson uses the term "organisms", not just "animals". A tree losing its leaves in winter and regrowing them in spring can be considered an instinctual behavioral trait. The tropisms listed on the plants slide are also instinctive behaviors. (However, they may also be called an adaptation of the plant.) Discuss this page, but do not hold the students responsible for memorizing the terms and their definitions.
- Read and discuss the slides about learned behavioral traits. Have students complete the recording sheet for this section of the lesson.

Explain: How do Behavioral Traits Help an Organism Survive?

- Read and discuss the discussion slides in this section of the lesson.
- Partner up the students. Let them work together to complete the data sheet.
- As students share their answers, fill in the tables on the lesson slideshow. Discuss as desired.

Instinctual and Learned Behaviors

Teacher Facilitation Notes, p. 5

Elaborate: Survival of the Fittest

- Place the 5 posters around the room.
- Give each student one of the animal behavior cards.
- Have students study the posters (discuss if desired) and then read their behavior cards. Instruct students to move and stand by the poster that best explains why the animal does the behavior listed on their card.
- Have students read their cards and see if class agrees with where they are standing. Allow them to stay next to any poster for which they can justify why they are there.

Evaluate: Show What You Know!


- Have students complete the quiz independently.
- Discuss as desired.

Instinctual and Learned Behaviors

Name: KEY

Quiz

1. Cows engage in many behaviors that we can observe. Some of the behaviors are inherited and some are learned. Which of the behaviors described below is most likely a learned behavior?
 - A** Approaching a feeding location when a farmer drives up with a bale of hay
 - B** Flicking its tail to chase away flies and other insects
 - C** Taking care of its calf, including providing milk for it
 - D** Gathering closely together to share warmth in cold weather

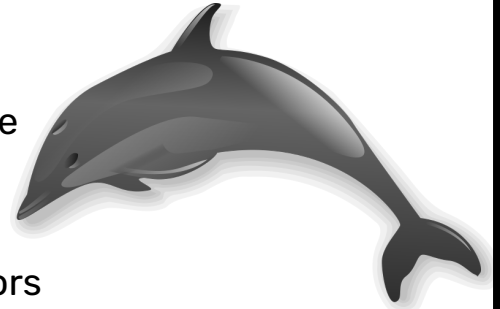
 2. Many birds build nests. How does building a nest help the bird survive in its environment? A nest helps the bird to—
 - F** hibernate in the winter
 - G** shelter its offspring
 - H** produce more feathers
 - J** sleep better at night
- 
3. Most animals have instinctual behavioral traits that help them survive. Which statements below best explain why newly hatched sea turtles need instinctual behaviors to survive? (Mark two answer choices.)
 - A** The newly hatched turtles must move very quickly because adult sea turtles may harm them.
 - B** Baby sea turtles are usually blind and cannot watch how their parents swim and catch food.
 - C** The baby turtles must move from the shore to the water on their own.
 - D** Adult sea turtles are not present, so the newly hatched turtles cannot learn from them.

Instinctual and Learned Behaviors

Name: KEY

Quiz

4. Amazon River dolphins live in the fresh waters of the Amazon River in South America. They usually live in groups of up to six dolphins. These are some things that the dolphins do in groups:



- Hunt together
- Take turns eating and watching for predators
- Make groups around their young to protect them
- Whistle and click to talk to one another

A student claims that living in groups helps Amazon River dolphins survive. Which evidence best supports the student's claim? The dolphins:

- F** can see each other
- G** are able to swim faster
- H** can play with each other
- J** are able to protect each other
5. Which behavior described below increases an animal's chance of survival in the wild?
- A** A bear balancing on a ball at a circus
- B** A dog chasing a frisbee thrown by its owner
- C** An elephant making loud noises with his trunk to scare predators
- D** A parrot repeating a sentence spoken by a nearby person
6. Which of these is an example of an instinctive behavior of an animal?
- F** A monarch butterfly migrating south
- G** A rabbit dunking a mini basketball in a net
- H** A dog barking when the doorbell rings
- J** A goat riding a skateboard

Instinctual and Learned Behaviors

Name: KEY

Quiz

Directions: Read the information and study the picture. Use what you read and observe to answer questions 7 and 8.

Snapping Turtles

Snapping turtles are omnivores that live near shallow ponds or streams. A snapping turtle has a hard shell and a very long tail. When threatened, the turtle will lunge forward and snap their jaws. Female snapping turtles lay their eggs in the dirt and then cover them with loose soil.



7. How does lunging forward and snapping its jaws help a snapping turtle survive in its environment?
- A** Snapping its jaws helps the turtle find food.
 - B** Lunging forward keeps the turtle moving.
 - C** Predators are scared away by the turtle's actions.
 - D** These behaviors help the turtle swim faster.
8. Why does a snapping turtle bury its eggs in the dirt? Mark three answers.
- F** To protect the eggs from predators
 - G** To keep the eggs moist
 - H** To hide the scent of the eggs
 - J** To provide food for the hatching turtles

Instinctual and Learned Behaviors

Name: KEY

Quiz

9. Use your knowledge of instinctual and learned behavioral traits to complete the Claim-Evidence-Reasoning organizer. Make your claim based on the question. Give evidence to support your claim and tell why your evidence supports your claim (reasoning).

Question	Claim
<p>Coyotes learn some of their behaviors as they move around in their environments. Which of the following behaviors is most likely learned by a coyote?</p> <ul style="list-style-type: none">A Running fastB Drinking waterC Avoiding cactus thornsD Sleeping during the day	<p>The correct answer is C-avoiding cactus thorns.</p>
Evidence	Reasoning
<p>The coyote learns to avoid cactus thorns after it touches them. The other behaviors are instincts that nobody taught the coyote to do.</p>	<p>Instinctual behaviors are behaviors the coyotes are born with. Coyotes learn things by interacting with their environments or watching other coyotes.</p>

10. Which of the following is a learned behavior that helps an organism survive in its environment?
- F** A stork building a nest
 - G** Monarch butterflies migrating south
 - H** A houseplant growing towards a sunny window
 - J** A young wolf watching other wolves to learn to hunt

Instinctual and Learned Behaviors

Name: _____

Engage: Which is Different?

Directions: As you read the four behaviors of each animal, think about how three behaviors are alike, but one is different. Put a checkmark in the blank in front of the behavior that is different in some way.

Cat

- ____ 1. I purr when my owner pets me.
- ____ 2. I groom myself by licking my paws to clean them.
- ____ 3. I run to the kitchen when I hear the sound of an electric can opener.
- ____ 4. I sharpen my claws by scratching on furniture and wood.

Bat

- ____ 1. I lick my fur to clean it.
- ____ 2. I am nocturnal—I only hunt at night.
- ____ 3. I hang upside down when I sleep.
- ____ 4. I start flying after watching my mother fly to catch insects.

Dolphin

- ____ 1. I make noises to communicate with other dolphins.
- ____ 2. I work with dolphins in my group to find food.
- ____ 3. I can jump up to 5 meters above the surface of the water.
- ____ 4. I strike the water with my tail when I am threatened.

What makes each of the behaviors you selected different from the other animal behaviors? _____

Instinctual and Learned Behaviors

Name: _____

Explore: What is the Difference Between Knowing and Learning?

Directions: Write one instinctive behavioral trait of each organism listed below.

1. Sea turtle _____

2. Spider _____

3. Black bear _____

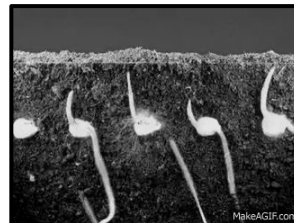
4. Canadian geese _____

Directions: Label each picture below. Use the terms *geotropism*, *hydrotropism*, *phototropism*, *thigmotropism*.

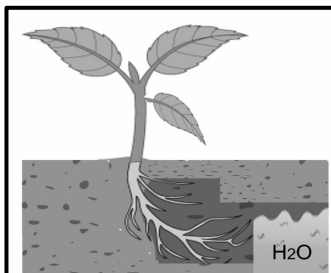
5.



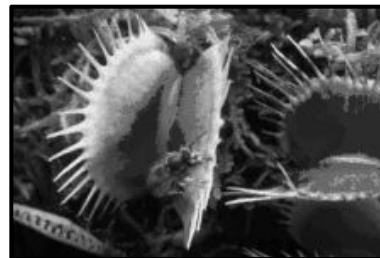
6.



7.



8.



Instinctual and Learned Behaviors

Name: _____

Explore: What is the Difference Between Knowing and Learning?

Directions: Write one learned behavioral trait of each animal below.

6. Chimps _____

7. Prairie dogs _____

8. Black bear _____

9. Ducklings _____

Directions: Humans also have instinctual and learned behavioral traits. List three instinctual behaviors humans have.

10. _____

11. _____

12. _____

Directions: List three behaviors you have learned.

13. _____

14. _____

15. _____

Instinctual and Learned Behaviors

Name: _____

Explain: How Do Behavioral Traits Help an Organism Survive?

Behavior	Instinct/Learned	How it Helps the Organism Survive
Many songbirds learn to sing by listening to other birds.		
Chimpanzees use tools to get food.		
Chipmunks hibernate during the cold winter months.		
Some birds and butterflies migrate south in the fall.		
Hummingbirds return to the same feeder every day to eat.		
When looking for food, eagles can soar for hours without landing.		
Owls are nocturnal, sleeping during the day and hunting at night.		
A dog shakes off water when it gets wet.		

Instinctual and Learned Behaviors

Name: _____

Elaborate: Survival of the Fittest!

As winter approaches, geese migrate southward to warmer climates.	A brown bear hibernates during the winter.	A bee gathers nectar to take back to its hive.
A crab digs a hole in the sand to hide from seagulls.	A male frigate bird puffs up its chest when it sees a female it likes.	A wasp stings when a person comes too near.
A mother bird teaches her babies to fly.	A caterpillar spins a cocoon.	A wolf stands perfectly still when it senses danger.
A salmon swims upstream to lay its eggs.	A female sea turtle digs holes in the sand to bury its eggs.	Some lizards have tails that break off easily so that they can escape predators.
A Snowy Egret will stand still in the water with its wings stretched out, because fish are attracted to the shade it makes.	Zebras gather in groups around baby zebras when they hear a lion's roar.	Mother orangutans care for their babies for eight years, protecting them and showing them where to find food.

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Elaborate: Survival of the Fittest!

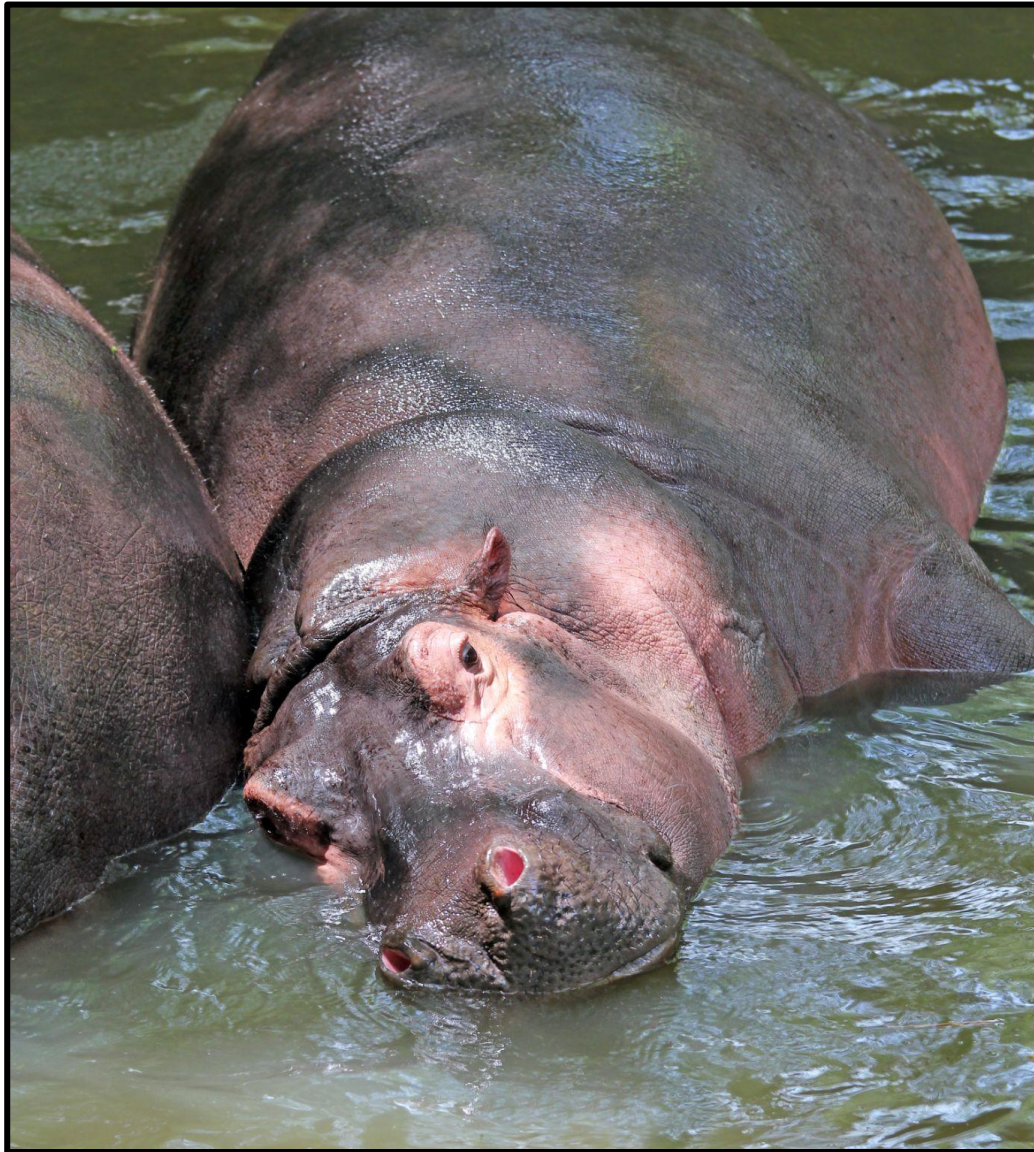
<p>A seagull that has been fed by people returns to the same beach for food.</p>	<p>A monkey uses a twig to dig in a termite mound.</p>	<p>A dog pants when its gets hot.</p>
<p>Killer whales travel to the surface of the water to breathe air.</p>	<p>Bears living near campsites tear open trash bags they may find there.</p>	<p>A bird sits on the eggs in its nest to keep them warm.</p>
<p>Sea lion pups swim at birth.</p>	<p>Newly hatched sea turtles crawl across the beach to get into the ocean waters.</p>	<p>Play fighting helps young bighorn sheep learn to fight off predators.</p>
<p>Hyenas work together to catch and bring down large animals and then share the food.</p>	<p>A baby kangaroo stays in its mother's pouch as she hunts for food.</p>	<p>Male and female dolphins take turns caring for their young.</p>
<p>A dog growls when a stranger comes near.</p>	<p>Orca whales hunt in packs to find more food.</p>	<p>A cat keeps itself clean by licking its fur all over its body.</p>

Instinctual and Learned Behaviors

Name: _____

Elaborate: Survival of the Fittest!

Carrying on Life Processes



Instinctual and Learned Behaviors

Name: _____

Elaborate: Survival of the Fittest!

Finding Food and Water



Instinctual and Learned Behaviors

Name: _____

Elaborate: Survival of the Fittest!

Protecting Itself



Instinctual and Learned Behaviors

Name: _____

Elaborate: Survival of the Fittest!

Attracting a Mate/ Reproduction



Instinctual and Learned Behaviors

Name: _____

Elaborate: Survival of the Fittest!

Caring for Offspring



Instinctual and Learned Behaviors

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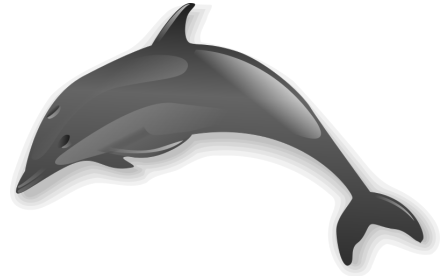


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