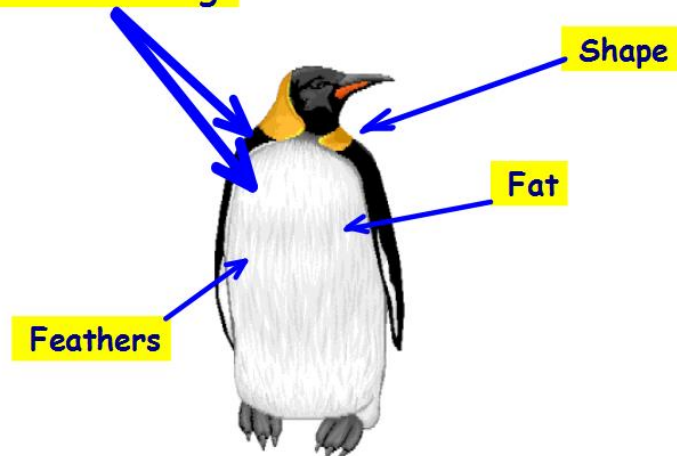


Wherever animals live they have to adapt to their environment. An Adaptation is a change that allows an organism to become better suited for it's environment. Animals who live in the **desert**, where it is very **dry** and **often hot**; and animals who live in the **Arctic**, where it is very **cold** and **bleak**, and **often dry**, are very well adapted to their harsh environments. If they were not, they would be unable to survive.



Let's think about a penguin and a camel. Look at the next few cards to find out more.

Countershading



Penguins have a thick layer of fat to keep them warm.



Penguins have fine downy feathers underneath their sleek waterproof feathers. The fluffy layer acts like an insulating duvet and the waterproof outer layer of oily feathers acts like a waterproof jacket.



Penguins sometimes seem clumsy on land, but their streamlined shape makes them acrobatic and graceful swimmers.



Camels can go without drinking for long periods by storing water in their specially adapted humps.

countershading

Penguins are black on their backs which makes them hard to be seen in the water by predators from above.



Penguins are white on their insides which make them hard to be seen in the water by predators from below.



Camels have leathery eyelids and long, silky eyelashes to help protect their eyes from the glare of the sun and the stinging sand.

Match the Adaptation



scales

bright colors

webbed feet

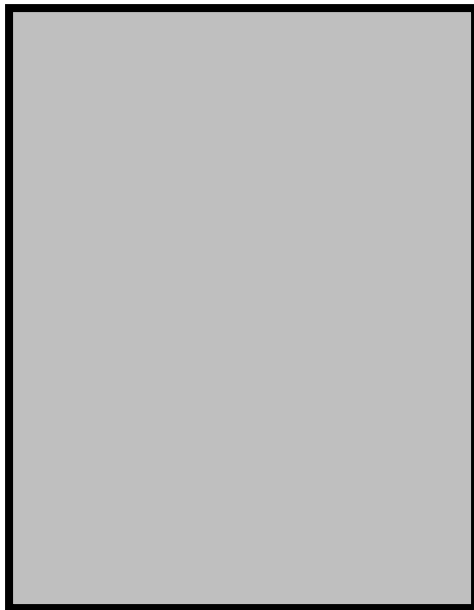
long bill

four toes

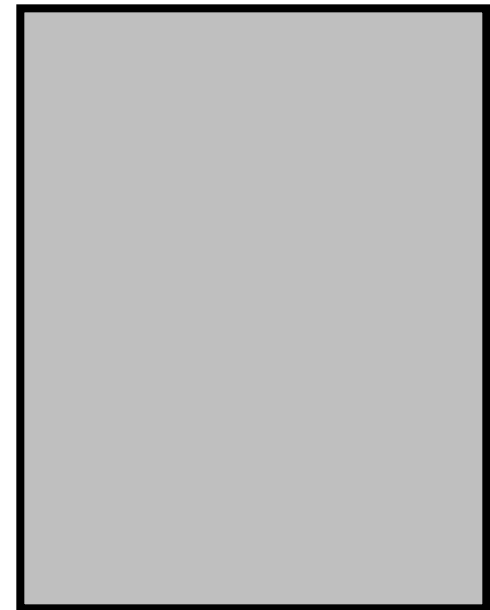
Explain how each adaptation helps the organism to survive.

This is the game board.

1. Place the cards in the center face down.
2. Each person pulls one card and places it in the green box.
3. The first person who can identify an adaptation wins.
For example: The stinger on the ?? is an adaptation used to protect the bee.
4. You must speak with the sentence stem below in order to win the hand.



Place
Cards
Here



The _____ on the _____ is an adaptation that allow the organisms to _____.

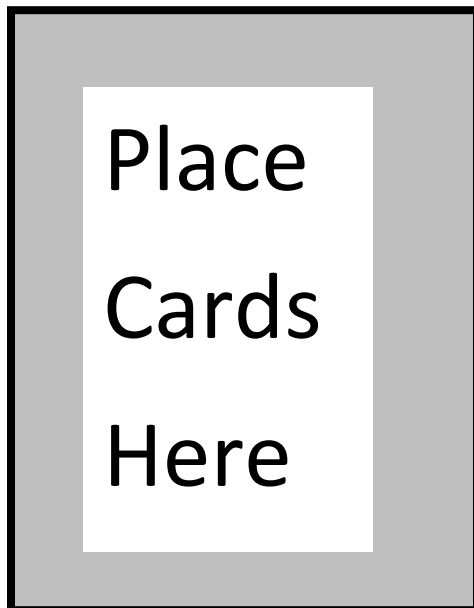
“Adaptation” Memory

1. Print out two sets of each card.
2. Mix the cards up and place them face down.
3. You can only pick up a match if you can describe one adaptation the organism has.
4. The person with the most matches wins.

Categories

Each group get a set of cards. The task is to see how many ways you can categorize the pictures based on similar adaptation. For example, I might put the bee and the cactus together because the cactus spine and the stinger are both adaptations that provide protection.

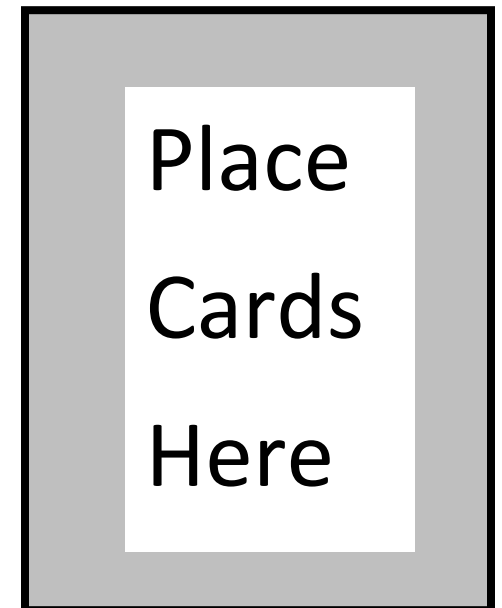
Obtain Food

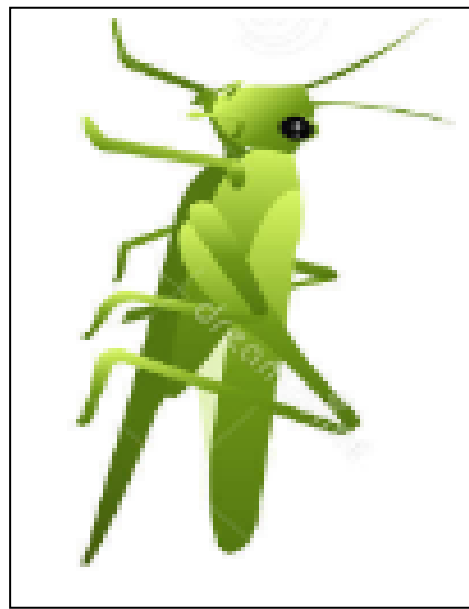


Provide Protection



Better Movement





Adaptations

Adaptations

Adaptations

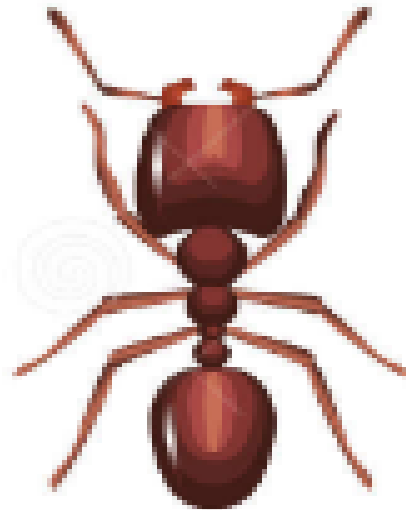
Adaptations

Adaptations

Adaptations

Adaptations

Adaptations



Adaptations

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Adaptations



Adaptation: Wings that look like flippers

How does this adaptation help me survive?

I think the wings that look like flippers help the penguin survive because



Adaptation: Flaps of featherless skin between their front and back legs

How does this adaptation help me survive?

I think the flaps of featherless skin between the bats front and back legs helps them survive because



Adaptation: Hooves with a soft, spongy, inner pad surrounded by a hard, outer rim

How does this adaptation help me survive?

I think the hooves help the ram survive because



Adaptation: Long, muscular neck and long, flexible tongue

How does this adaptation help me survive?

I think the long, flexible, muscular tongue helps the giraffe survive because



Adaptation: Nostrils (blowholes) located on the top of their heads

How does this adaptation help me survive?

I think the nostrils located on the top of the dolphin help it survive because



Adaptation: Long, powerful legs

How does this adaptation help me survive?

I think the long powerful legs help the cheetah survive because



Adaptation: Produces very little sweat and urine

How does this adaptation help me survive?

I think camels produce very little sweat and urine because this helps this survive because



Adaptation: Fur turns white during the cold snowy winter months

How does this adaptation help me survive?

I think the fox's white fur helps it survive during the winter months because



Camels feet are flat and splayed giving them a large surface area. These act like snowshoes, helping the camel to walk without sinking into the sand.



Camels have thick lips so that they can eat desert plants such as cacti.



Camels use their hump to store fat so that they do not have to eat or drink. They can go for days in the desert without eating or drinking.



Camels have a slit nose that they can open and close to keep the sand out and they have thick eye lashes to block out sand from the sand storms.

Student sheet

Look through the cards and pick an Animal that you would like to analyze its adaptations. Be prepared to name the adaptation and explain how you think it helps the organism survive.

Scenarios

1. You are in a zoo and a lion gets out of his cage.

The animal that I would choose is _____. The adaptation that I would take from is animal is its _____. The reason that I would take this adaptation is because the _____ this would help me survive because _____

2. You are swimming in the ocean and the alarm goes off because someone saw a shark in the water.

The animal that I would choose is _____. The adaptation that I would take from is animal is its _____. The reason that I would take this adaptation is because the _____ this would help me survive because _____

3. You are an ant in the park. A human arrives and begins stomping all of your family.

4. Your plane crashed in the forest. You are starving and need food. You look up and see fruit in the top of the tree.

5. You are in a field full of grass and flowers. All of a sudden, you hear animals growling all around you.
