Choose your own Adventure: wild adaptations!

INSTRUCTIONS:

Use the clues to find the animal that best fits each description. Once the students have found the correct answer, go find that animal in the Zoo. Below each stop are two questions to ask once they have arrived at the correct animal enclosure. Once they have answered the 2 questions, provide the next clue. Students have the question page and the adult leader has the answer page.

Stop 1

Clue:
One of these animals has lungs like us but can hold its breath underwater. The other breathes through gills its whole life. Which one has both lungs and gills?

Choices:
A. Blue-tongued Skink
B. Axolotl

Stop 2

Clue:
Each of these animals has a special way to heat their feet in cold weather to ensure they stay warm on ice. Which one do you think has a special arrangement where arterial blood heats the cold venous blood to keep the feet extra toasty in the winter?

Choices:
A. Arctic Wolf
B. Canada Lynx

Stop 3

Clue:
This animal travels long distances and uses strong muscles to move across forests and plains. Which animal is it?

Choices:
A. Mountain Goat
B. North American Elk (Wapiti)

Respiratory

Mini Discussion:
How does having both lungs and gills help in its watery environment?

How does having gills change the way an animal can explore its habitat?

Circulatory

Mini Discussion:
Why might the paws be the first parts of the body to get cold?

What else could keep an animals' feet or paws toasty warm in the wild? (fur, feathers, lifting feet, huddling, etc)

Muscular

Mini Discussion:
Why might migrating animals need very strong leg muscles?

What else might migratory animals need to help take in lots of oxygen for long treks?

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PAGE ONE ANSWERS

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Respiratory

Mini Discussion:
Helps it survive in changing environments, especially when oxygen gets low in the water.

They can stay underwater longer for added protection & for seeking out more food sources.

Circulatory

Mini Discussion:
They are furthest from the heart & touch cold surfaces.

Thicker Fur or feathers, lifting feet, huddling with other animals,

Muscular

Mini Discussion:
They walk very long distances and strong legs help them travel far without getting too tired.

A set of big, strong lungs

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PAGE TWO

Stop 4

Clue:
One of these animals chews its food twice with a four-chambered stomach. The other one has a stomach more like humans. Which one is a master recycler of plants?

Choices:
A. Markhor
B. KuneKune Pig

Stop 5

Clue:
One of these animals lives alone & hunts solo. The other communicates using howls & scent marking to stay in touch with its pack. Which one is the social communicator?

Choices:
A.Pallas' Cat
B. Dingo

Stop 6

Clue:
One of these birds uses sharp eyesight & one uses sharp hearing to primarily hunt. Which one has the keenest vision?

Choices:
A. Bald Eagle
B. Great Horned Owl

Digestive

Mini Discussion:
Why might an animal need a multi-chambered stomach?

How does chewing food twice help survive eating a diet of grasses?

Communication

Mini Discussion:
Why is communication important for animals that hunt in packs/groups?

How does howling help animals keep track of each other?

Nervous

Mini Discussion:
Why do you think diurnal (daytime) hunting birds need excellent eyesight?

Why would a nocturnal animal rely more on hearing to hunt?

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PAGE TWO ANSWERS

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Digestive

Mini Discussion:
Plants are tough & hard to digest! Extra chambers help break them down to get enough nutrients

It makes the plants softer & easier to digest.

Communication

Mini Discussion:
So they can communicate where to go and when to chase in a hunt.

Howling travels long distances (especially in cold weather), allowing all pack members to know where everyone is at all times.

Nervous

Mini Discussion:
They are flying high above their prey and need to spot them efficiently.

Darkness is tougher to see in (although most nocturnal animals have special night vision adaptations). Hearing becomes a more efficient sense than vision in low light.

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PAGE THREE

Stop 7

Clue:
One of these cats uses powerful hind legs to sprint through deep snow. Which animal's muscles are built for these strong leaps?

Choices:
A. Bobcat
B. Canada Lynx

Stop 8

Clue:
Both of these animals live in groups & communicate well with one another. Which one has a single designated "lookout" individual that warns of danger?

Choices:
A.Meerkat
B. Ring-tailed Lemur

Stop 9

Clue:
Both of these animals have fur. However, one of these has very little & stays primarily underground.

Choices:
A.Goeldi's Monkey
B. Naked Mole Rat

Skeletal/Muscular

Mini Discussion:
How do longer legs help a predator move through deep snow?

What could an animal do to hunt prey that is very quick & agile like rabbits?

Communication

Mini Discussion:
Why would animals living in wide open spaces need strong communication skills?

What's the advantage of a lookout member vs. everyone looking out for the group?

Integumentary

Mini Discussion:
How does having almost no fur affect how an animal stays cool, especially underground?

On the animal you chose, where do you notice the fur?

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Skeletal/Muscular

Mini Discussion:

Long legs keep the body above the snow making movement easier.

Sneak up,/ambush, be quiet, be faster

Communication

Mini Discussion:

There are fewer places to hide, so communication is crucial to survival.

While one individual is keeping watch, the others are free to eat & care for their young.

Integumentary*

Mini Discussion:

Less fur means the animal doesn't trap heat in warm underground tunnels

On the tail & on the whiskers

*The Integumentary system is the body's outer layer that acts as a protective barrier-skin, hair/fur, nails, glands