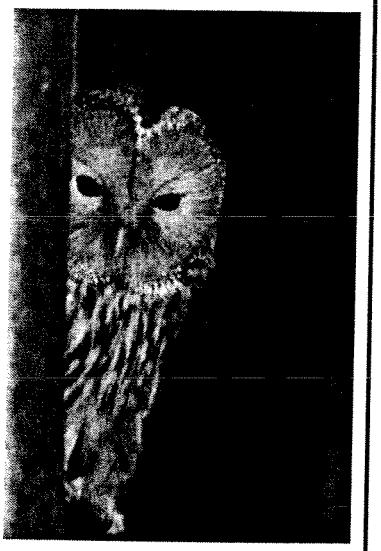
Name: _____

Rise and Shine! It's Nighttime!

by Guy Belleranti



Animals that sleep during the day and come out at night are called nocturnal.

For desert-dwelling animals, being active at night allows them to escape the heat of day and to conserve water. Many snakes and rodents are examples of desert animals that prefer the night.

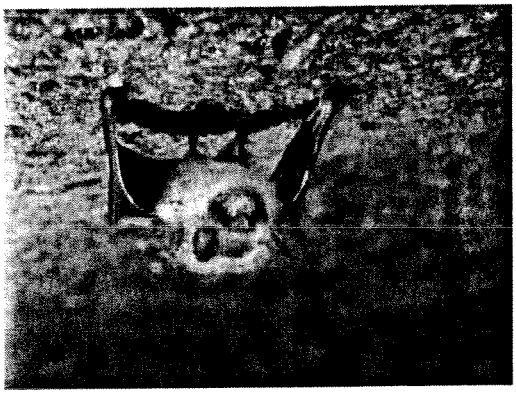
The darkness of night makes it easier for some animals to escape predators, especially if the animal is dark enough to blend into its surroundings. Some animals are always listening with their extra good hearing while others keep close watch with great night vision.

Then there's the hedgehog, a small nocturnal mammal that rolls up into a ball of spiny hairs when danger comes near. Because it is active only at night, it can usually wander around unseen. The skunk, another nocturnal animal, has a most smelly way to defend itself. Its fur is mostly black, which blends in with the darkness.

Of course, there are predators that are especially adapted for night hunting, so no prey animal is safe simply because it's nocturnal. Owls and certain species of cats are very effective nocturnal hunters because they have great night vision and excellent hearing. In addition to this, owls have softer feathers than most other birds so they can swoop silently down upon prey. Of course cats don't have feathers, but the soft pads on their feet allow them to quietly sneak up on small animals. Cats also use their whiskers to help feel their way in the dark.

Another predator that's well-known for its nocturnal behavior

is the insect-eating bat. You've probably heard the expression "blind as a bat." Many people are surprised to learn that most bats aren't really blind- they're just color blind. Instead of using their eyes to hunt for an insect dinner they use echolocation. What is echolocation? It works like this: The bat emits a very high-pitched sound. The sound is so high that people can't even hear it. However, the bat has specially adapted ears so it can hear these sounds just fine. When the sound hits an object it bounces, or echoes, back. From the sound of the echo the bat immediately knows the object's size and location. Its echolocation can also determine if an object is a yummy insect or something that can't be eaten like a plant or a tree.



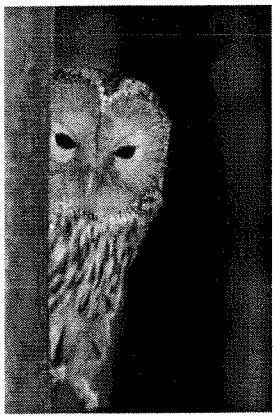
About the Author

Guy Belleranti works as a docent at Reid Park Zoo in Tucson, Arizona. The information in this article comes from his experiences working with animals and teaching others.

Name: _____

Rise and Shine! It's Nighttime!

by Guy Belleranti



1. According to the information in the article, why are many desert snakes and rodents nocturnal?

_____

_____

2. Fill in table below to show ways animals have adapted to survive at night. Use only information from the article. Some boxes have already been filled in.

	adaptation 1	adaptation 2	adaptation 3	adaptation 4
bat				
skunk		sprays a smelly chemical		
owl	excellent night vision			
cat				excellent hearing

3. What is echolocation?

   a. A way of making high-pitched sounds that bats use to communicate.
   b. A method of making high-pitched sounds that bats use to avoid being eaten.
   c. A high-pitched sound that helps bats fly after dark.
   d. The ability to make a high-pitched sound that bats use to locate things in the dark.

4. Reread the following sentence from the article.

   For desert dwelling animals, being active at night allows them to escape the heat of day and to conserve water.

   Which is the best definition for the underlined word?

   a. living or residing **b.** nighttime hunter
   c. heat-loving **d.** healthy

Name: _____

Camouflaged Creatures

by Guy Belleranti

In nature, predators and prey seem to play a game of hide-and-seek. Prey need to hide, so predators do not find them and eat them. Predators need to hide too, so smaller prey cannot see them approaching. Some animals have special colors or marks on their bodies that help them hide among trees, rocks, and grass. This blending is called camouflage.

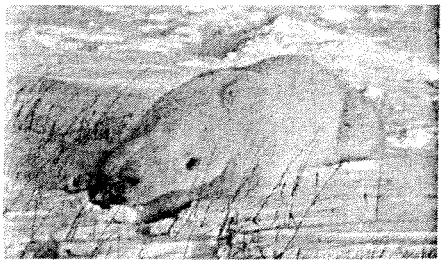
Can you see the green snake in this picture? The snake's shape and color help it hide among the green forest leaves.

The earth tone colors of deer and squirrels help them hide from predators among the browns of trees, bushes and soil. A brown squirrel can be difficult to see when it is scampering among brown autumn leaves. A brown deer can be overlooked when it is hiding between tree trunks. The deer and squirrel's special coloring help them hide from predators.

This owl sleeps during the day, so it does not want to be seen by other animals. Notice how its feather pattern and coloring match the tree trunk.

African lions have a tan body coloring. However, lions use it not to hide from predators, but to hide in savanna grasses while watching for prey. A lion can sneak up on prey without being seen more easily by blending into the grassy environment.

Another popular animal camouflage color is green. The green tree frogs of Australia blend in and hide from predators better because of their color. Green tree pythons and emerald boas, meanwhile, are more like lions, using their green color to blend in. When a likely meal (a rodent, bird or lizard) comes along these snakes strike quickly, catching the prey.



Is this polar bear camouflaged to protect itself from predators or to hunt prey?

The praying mantis takes things a step further. While its green to brown color helps it blend in with vegetation, the mantis also mimics the shape of a stem or leaf. The mantis uses these camouflage methods both to hide from predators like birds, frogs, snakes, spiders and bats, and to await prey such as insects (including other mantises!), spiders, hummingbirds, and small frogs and mice.

This praying mantis' body mimics its environment. It looks much like a leaf or twig. This type of blending is called mimicry.

Just as important as color camouflage and mimicry is pattern camouflage. Tiger stripes and leopard and jaguar spots are all patterns which help these cats hide among the plants and shadows when they search for prey.

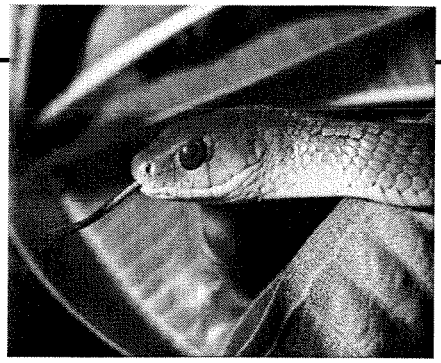
A tiger has vertical stripes that help to hide it among tall grass. This is pattern camouflage.

In nature, hide-and-seek is a game of life and death. Pattern and color camouflage, and mimicry, can give predators and prey a survival advantage. Can you think of any other animals that have camouflage?

About the Author

Guy Belleranti works as a docent at Reid Park Zoo in Tucson, Arizona.

Name: _____



Camouflaged Creatures

by Guy Belleranti

1. How does a lion's special coloring help it survive?

   a. It helps protect the lion from predators.
   b. It helps the lion sneak up on predators without being heard.
   c. It helps the lion hunt prey without being seen.
   d. It makes the lion completely invisible.

2. Explain how a praying mantis uses more than just color to blend into its surroundings.

   _____

   _____

3. How does camouflage help a polar bear become a better predator?

   a. It makes the polar bear more difficult to see in the woods.
   b. It makes the polar bear more difficult to see on rocky ledges.
   c. It makes the polar bear more difficult to see in a snowy environment.
   d. It makes the polar bear more difficult to see underwater.

4. Read the following sentence from the article and choose the best definition for the underlined words.

   The earth tone colors of deer and squirrels help them hide from predators.

   a. color of summer leaves
   b. color of the morning sky
   c. color of soil and ground
   d. color of the planet Earth

Challenge: Draw a picture of a scene in nature. Include several camouflaged animals in your picture.

Name ..... Date .....

TIME FOR KIDS
READING A DIAGRAM

It's an Insect!

There are more than a million different kinds of insects. Beetles, flies, bees, ants, mosquitoes, butterflies and grasshoppers are all insects.

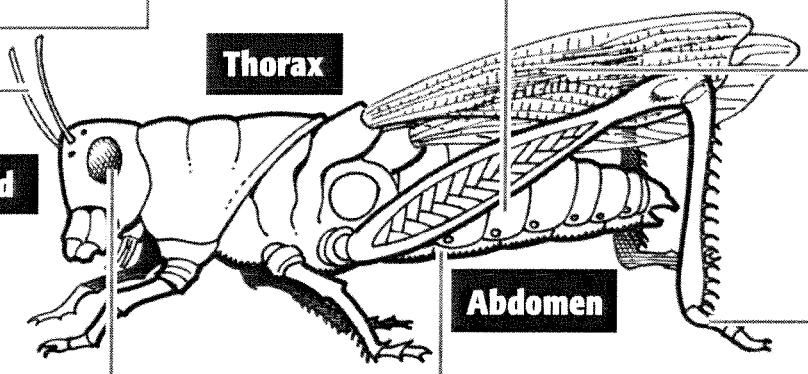
An insect's body has three sections: **head, thorax** and **abdomen.** Look at the grasshopper diagram to learn about features that many insects have. Then answer the questions.

Grasshopper

A pair of **antennas** is located between the insect's eyes. They help the insect to feel and smell what is nearby.

An insect breathes through tiny holes called **spiracles.**

A grasshopper's leathery **front wings** help protect its delicate **hind wings.**



An insect's two large **compound eyes** are made of hundreds of lenses. They are good for detecting movement.

A hard outer covering called an **exoskeleton** supports and protects an insect's body.

An insect has thee pairs of **legs.**

1. An insect's body has three main sections. What is the middle section called? _____

2. True or false: Insects breathe through their mouths. _____

3. Many insects do not have wings. How do they move from place to place?

_____

_____

4. How many legs does an insect have? _____

5. According to the diagram, what are an insect's compound eyes good for? Why might this be important for an insect?

_____

_____

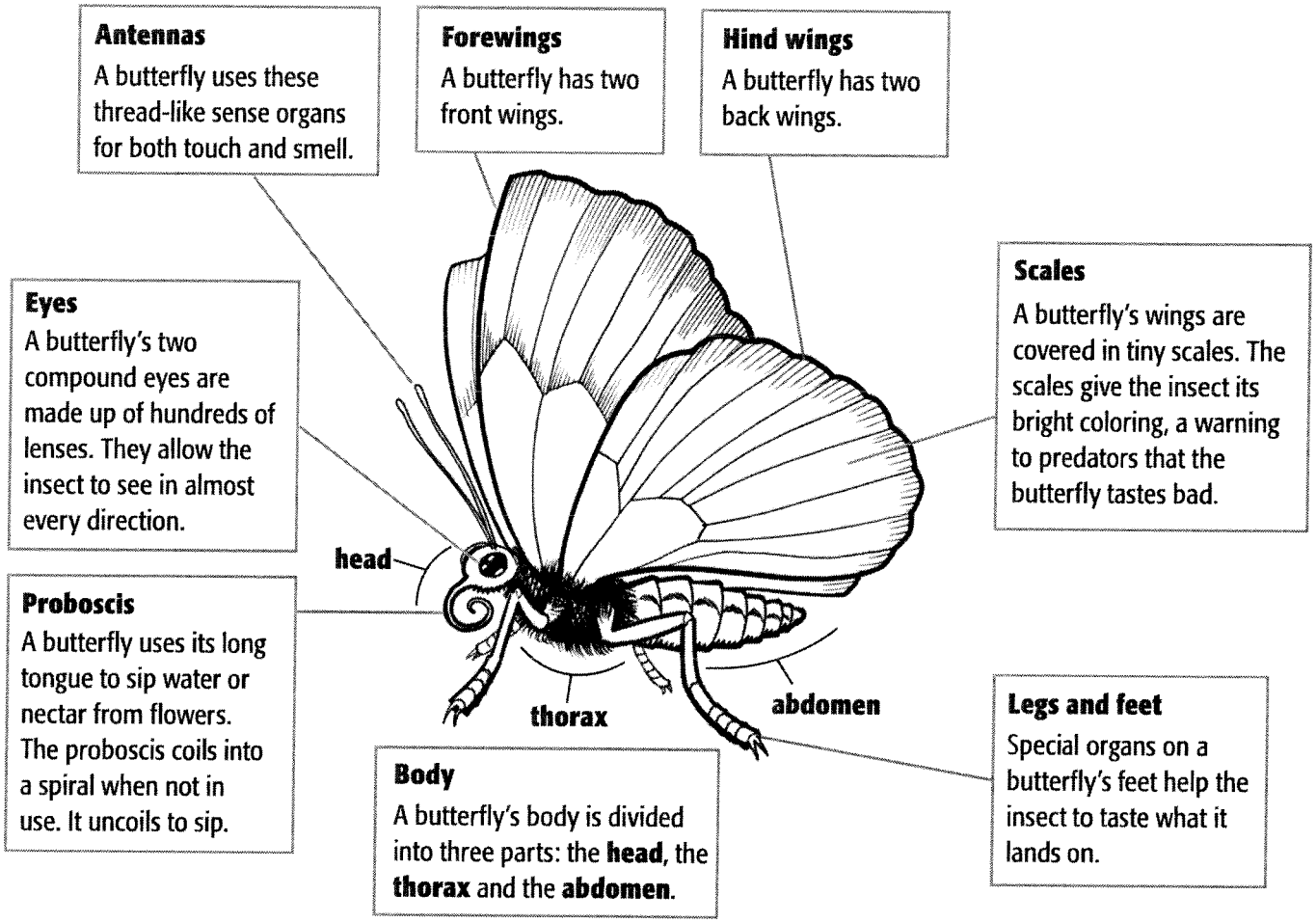
_____

Name ..... Date .....

TIME FOR KIDS
READING A DIAGRAM

A Butterfly's Body

There are nearly 18,000 different types of butterflies. The insects have special behaviors and physical features, called adaptations, that help them to survive. Study the diagram to learn more about these colorful creatures. Then answer the questions.



1. What does a butterfly use its antennas for? _____
2. Where are a butterfly's taste organs located? _____
3. What does a butterfly use to sip nectar and water? _____
4. True or false: A butterfly's proboscis is attached to its abdomen. _____
5. What is one adaptation that helps a butterfly stay safe from predators? _____

_____

_____

6. Which adaptation do you think is most important? Explain your choice. _____

_____

_____

