OMCA Science Sleuths Investigate:

Mysterious Predators

Oakland Museum of California
museumca.org

OMCA.

Read this before entering the Natural Sciences Gallery:

You are a Science Sleuth—a detective determined to solve nature's mysteries. The message below describes your mission:

Hey, Science Sleuths!

Last night, I watched a nature show. I learned some

animals are prey, and some animals are predators.

● **PREY**
are animals that get eaten
by other animals.

✳ **PREDATORS**
are the animals that
eat them.

I know that this rabbit didn't climb into the eagle's talons,

so what I want to know is:

HOW DO PREDATORS CATCH THEIR PREY?

Please help, Science Sleuths!

Sincerely,

Calvin, age 9

Help Calvin learn how predators catch their prey. Enter the Natural Sciences Gallery to begin.

Welcome to the Natural Sciences Gallery, Science Sleuth!

👣 Walk past the grizzly bear to the **Topographical Map of California**.

🔭 This map shows the locations of the seven real places depicted in the Gallery. Can you find all seven numbered locations on the map?

There are many different environments in California including deserts, mountains, forests, a reef, and more! Each environment is home to predator and prey animals.

🔍 WHO'S FIRST?

To find a stealthy predator that sneaks up on its prey, turn to page 4.

OR

To spot a predator with a bill that's easy to see, turn to page 6.

If you're looking for a predator that sneaks up on its prey...

From the **Topographical Map of California**, walk past the big metal tree.

You are now entering **Oakland**. Look up, Science Sleuth. Do you see the power lines and the houses in the hills? Turn left, and walk towards the tunnels. Do you see the case to the left of the tunnel?

Do you see a case on the left with purple flowers and a **brush rabbit**?

Take a closer look. Is the rabbit alone? Is it safe?

Look in the bush near the rabbit. Do you see two pointed ears and a bushy tail? Move around the case for a better look.

Do you see how the **gray fox** bends its legs to keep its head and body close to the ground? This fox moves slowly and crawls under branches instead of breaking them. Do you think the fox is making any noise?

How to Catch Prey #1:

How do foxes move to make sure that prey animals don't hear them?

Q _ _ E T _ Y

Hint: a sneaky person makes very little noise.

FUN FACT!   **Gray foxes** live in forests, where they can hide under brush and climb trees, but foxes can also adapt to live closer to humans.

WHO'S NEXT?

To track down a predator with a bill that's easy to see...

From the **Topographical Map of California**, walk past a sign that says "Welcome to Oakland."

Look at the big, metal tunnels on your left and right. These tunnels are called culverts, and they allow creeks to flow underground in Oakland.
Listen closely; can you hear water flowing?

Turn right and walk through the culvert. Walk past the **harbor seal**, and look for a case full of mud. It's the **Oakland Mudflats**!

Find a bird with a shrimp in its beak. This bird is called the **Long-billed Curlew**. Curlews are predators that eat worms, crabs, and shrimp. How many worms, crabs, and shrimp can you find in mud tunnels?

What do you notice about the size and shape of the tunnels and the size and shape of the curlew's bill?

How to Catch Prey #2:

Many animals dig tunnels to stay away from predators, but what body part helps the curlew catch them?

L __ N __   B __ L __ (two words)

Hint: remember the curlew's full name

FUN FACT!

Although the curlew's long bill stands out, you probably won't ever see a curlew on the beach. They normally avoid people.

○ WHO'S NEXT?

ILLUSTRATIONS: Jenny Keller

If you are looking for predators that can live near humans...

Walk to a green truck. Open a drawer between the headlights to see what happens when trucks and animals get too close on the road.

Look right. Do you see a wall full of animals?

Walk towards the animal wall in the **Urban Nature Lab**.

The animals on this wall can be found in a city, like Oakland.

ACTIVITY:

Find an animal on the wall that could be a predator. Write the name of the predator.

_____

Choose a part of the predator's body that helps it catch prey. Draw a picture of that body part.
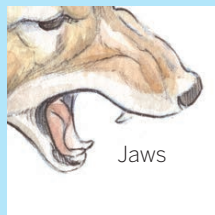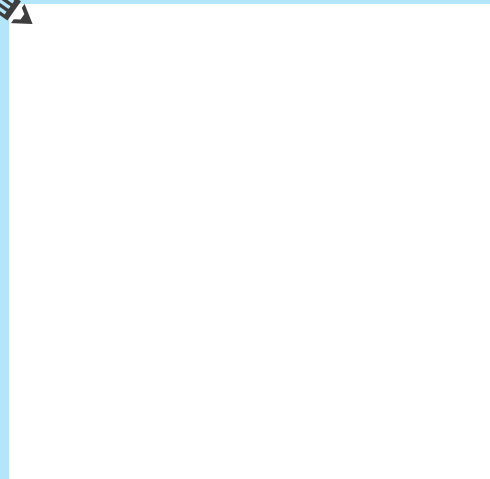
Examples:

Long Bill

Curlew

Jaws

Coyote

WHO'S NEXT?

Most predators hunt alone. To find predators that work together, go to page 10.

OR

To track down a predator with a waterproof coat, turn to page 12.

When in search of predators that work together...

Stand by the green truck. Walk towards a sign that says "Sutter Buttes." Can you hear the birds of the Buttes, Science Sleuth?

Turn left, and walk past a **Sandhill Crane**. Notice its long neck and the red spot on its head. Stop when you see a rocky outcrop. Can you see the animal with rings on its tail?

How many birds can you find around these rocks, Science Sleuth? What do you think the birds eat?

Look for two birds with rusty-red throats. They're **Cliff Swallows**. These swallows work together to catch insects out of the air. When one swallow finds a swarm of tasty insects, it calls to other cliff swallows to share the feast.

How to Catch Prey #3:

Instead of hunting alone, what do Cliff Swallows often use to catch their prey?

T E __ __   W __ R K (two words)

Hint: sports teams also use this to win games

FUN FACT! In addition to hunting together, Cliff Swallows also live in large groups— sometimes as many as 3,000 birds will nest together!

🔍 WHO'S NEXT?

Swallows catch unsuspecting insects as they fly through the air, but what happens when prey animals put up a fight? To see a dangerous prey animal, find the big sign that says Shasta, and turn to page 15.

To track down a predator with a waterproof coat...

Start from the green truck. Look for a picture of mountains and a sign that says **Sutter Buttes.**

Walk to the picture. Can you hear the birds of the **Buttes**?

There's much to explore in the Buttes, but we won't find the waterproof predator here. To continue, go around the picture to the opening of a lava tube. Walk into the opening, and crawl through the tunnel.

Once you're on the other side, keep the Shasta sign on your right and walk past a white pipe.

Continue to page 13

Can you see a furry predator with a frog in its mouth?

These two **river otters** are well-adapted, underwater predators.
Look at their paws. What is between their toes that helps them swim?
Look at the shape of their bodies.
>   Are their ears large or small?
>   Are their necks thick or thin?

Otters are streamlined, which means that their smooth shape lets them slip through the water to catch fast prey like fish and frogs!

How to Catch Prey #4:

What word describes an otter's shape and allows them to swim quickly through the water?

S T R _ _ _ L I _ _ D

Hint: this shape helps otters to move in straight "lines" through "streams"

FUN FACT!

Look at the otters' whiskers. Those long whiskers help the otters to feel for prey in murky water.

WHO'S NEXT?

Otters are predators that eat fish, but a different predator called a fisher does not eat fish.

To discover a dangerous prey animal and to find what fishers eat...

Walk around the **Shasta** sign into a valley between huge, granite peaks. You're in **Yosemite**! Find the bear trap in front of the cabin. Can you hear or see the bear?

Now, continue into Yosemite. Walk between three **black bears** and the **coyote**, and find two animals climbing one pine tree.

Take a closer look to find out who's who.

In this tree, we see a **fisher** and a **porcupine**. Which of these animals is being hunted, Science Sleuth? (Hint: Who was chased up the tree?)

Porcupine quills defend against predators. Look carefully at every part of the porcupine. Where are there the fewest quills?

The fisher knows the porcupine's weak spots. Since fishers are cautious to avoid quills, they are the only predators to regularly hunt porcupines.

How to Catch Prey #5:

In order to avoid quills, fishers need to be very … what?

C __ R E __ __ L

Hint: you always are this when you cross the street

FUN FACT!

Fishers are sometimes called "fisher cats" even though they don't hunt fish, and they're related to weasels, not cats. Weird!

🔍 **WHO'S NEXT?**

ILLUSTRATIONS: Jenny Keller

So far, you've observed predators of the Natural Sciences Gallery, and you discovered how they catch their prey. Now it's time to record what you learned and what you already knew about predators to write a note back to Calvin, age 9.

How do predators catch their prey?
Tell Calvin about 3 strategies or body parts that predators use to catch prey.
*Hint: you can look back in this booklet for help

Dear Calvin,

I know how predators catch their prey!

1.

2.

3.

Sincerely,

Congratulations, Science Sleuth! You've finished your mission and earned your medal!

To see even more predators in the Gallery, turn to page 17 for a bonus activity.

#1 Science Sleuth

There are many predators in the Gallery that are not in this booklet.
(There's a live snake and a predator with great white jaws!)

Find your own predator to observe.

1. Draw its picture, here:

2. Write one word about how your predator catches its prey, here:

BONUS!