

#### Incredible Ways Animals Sense the World

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### What's This? Expert Ears

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



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On a moonless night, an **owl** relies on its sharp hearing to track its prey. It can hear the faint rustling sounds of a mouse nibbling seeds or tunneling in the snow.

At first glance, you wouldn't think an owl has such excellent hearing: its ears are hidden under feathers on the sides of its head. In many species, like the boreal owl pictured, one ear sits higher than the other, so sounds arrive at each ear at a slightly different time and intensity. This helps the owl pinpoint where the sound is coming from, so it can hunt in complete darkness.

# What's This? Speaking with Scent

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



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Animals rely on their sense of smell for many reasons — to find food, avoid danger, and find their way. Some, like the **orchid bee**, use scents to communicate.

When male orchid bees sip nectar from flowers, they collect fragrant ingredients and store them in pockets in their back legs. This mixture becomes a custom "perfume" that the bee spreads to attract females in a mating display.

At the same time, the bee collects and spreads the flower's pollen. Specific species of orchids produce scents that attract specific orchid bees.

#### What's This? Life in the Dark

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



Photo by J.McGuire/AmphibiaWeb/CalPhoos

If you've ever tried to find your way in complete darkness, then you know that without light, eyes are useless. And it makes no difference what color things are, since you can't see them. That's why most animals that spend their lives in the dark, like this **olm**, are blind.

This long, thin salamander swims in underground streams. It relies on other senses to find its way: it has a sharp sense of smell, keen hearing, and can even detect electricity from other animals. It can also sense pressure changes caused by other animals moving in the water. Food is scarce here, so

olms are able to go without food for many years at a time.

# What's This? Seeing with Sound

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



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During the day, **swiftlets** hunt insects in the forests and fields across Southeast Asia. But at night, they nest inside pitch-black caves.

How do they fly in complete darkness? Like bats, these birds have the ability to echolocate — to "see" with sound. To find their way in the dark, they make two clicks and listen for the echo. They can tell how far away something is by how long it takes the sound to bounce back.

Other animals that can echolocate include dolphins, toothed whales, and shrews.

#### What's This? Sawfish

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



Photo by Holiday Point (CC BY-NC-SA 2.0 license)

#### This is the snout of a sawfish!

It's easy to see how this fish got its name: its long, flat, snout is rimmed with sharp points, like the end of a chain saw.

But this "blade" does more than cut — it also helps the **sawfish** track prey in murky waters. Its snout is covered with tiny sensors that detect electric fields produced by the fish's prey. As the sawfish swims, it waves its snout, scanning the water for shifts in electricity.

This ability, called electroreception, is found in a few other marine animals like electric eels and hammerhead sharks.



The body of a sawfish may look like a fish, but its long, flat snout sets it apart. Rimmed with razor-sharp points, this "saw" is a dangerous weapon for hunting prey and defending from predators. It can also be used to dig in sand looking for shellfish to eat. The sawfish's snout is covered with special sensory organs that detect electric signals produced by other animals. This ability, called electroreception, is like a "sixth sense" that helps the sawfish track prey, even in dark, muddy rivers and lagoons.

## What's This? Seeing in all Directions

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



Photo Courtesy of D.Blackwood/USGS

Sea scallops may seem like they're in their own little world — but these shellfish are keeping a close eye on the world around them. Up to 100 eyes, that is! The scallop's mantle — the thin body part that sticks out of the shell — is ringed with up to 100 tiny eyes.

Like our eyes, each one has a retina and lens to detect and focus light. Scallops can see in all directions, helping them guard against predators and scout places for food and safety.

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