

LEVELED BOOK • N

# Beyond the Five Senses



Written by John Rousselle

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A ground squirrel uses its senses to watch for danger.

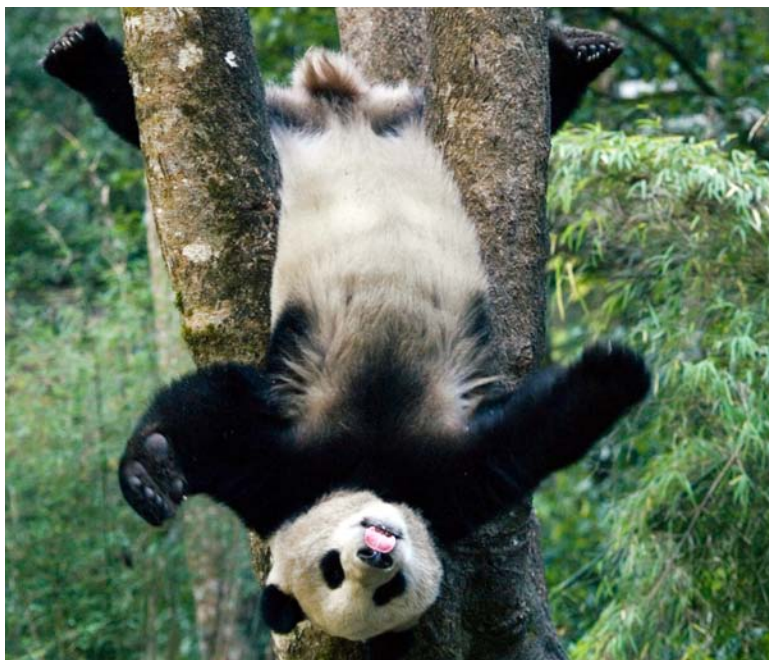
## **Introduction**

Animals use senses to find food and stay out of danger. Our senses tell us what is happening with our bodies and in the world around us.

You probably know about the five basic senses: hearing, sight, smell, touch, and taste. Did you know that animals can also have many other senses? Some of these senses are common to most animals. Others are rare and amazing.

## Body-Position Sense

Without looking, do you know where your left foot is right now? You can answer this question because your brain senses where your body parts are. Without this sense, an animal would not be able to move and do interesting things with its body.



A giant panda plays in a tree.

## Pain Sense

Pain might seem as though it's part of the sense of touch, but it isn't. People and other animals can feel pain even when nothing is touching them. Pain helps us by letting us know that we've been hurt. It can also warn us to stop or change what we are doing before we get hurt.



Grizzly bear cubs practice boxing with each other.





A cat balances on top of a row of fence posts.

## Sense of Balance

Humans and many other animals have tubes inside their ears that give them a sense of **balance**. Other senses, such as sight and knowing where your body parts are, make balancing easier. That is why balancing is more difficult when your eyes are closed or your leg is “asleep.”

## Temperature Sense

Sensing hot and cold is important for many animals. Some bats and snakes have special heat **sensors** that can help them find prey. A rattlesnake can “feel” the heat of a mouse’s body from over a foot away.



A rattlesnake has heat sensors between its eyes and nostrils.





A pug dog waits for its owner to come home.

## Time Sense

Scientists think humans have the best sense of time, but there's a chance that other animals sense it, too. For example, dogs and cats sometimes seem to sense when it's time for their owners to come home.



Bottlenose dolphins make high-pitched clicking noises to help them “see” underwater.

## Using Sounds to “See”

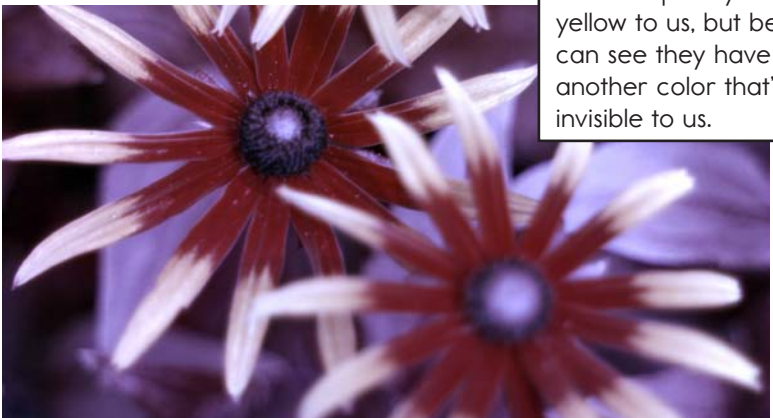
Some animals use sounds to “see” the things around them, even deep underwater or in the dark. By making sounds and listening to **echoes**, these animals can tell where things are. Some bats, dolphins, whales, and birds have this special sense.

## Bonus-Color Vision

Did you know that nature has more colors than the human eye can see? Some birds and insects can see those extra colors. Seeing extra colors helps these animals find food or attract mates.



These flower petals look completely yellow to us, but bees can see they have another color that's invisible to us.



## Whisker Sense

Whiskers on animals aren't just cute. Whiskers help animals to sense movement in the air or water around them. Whiskers can also help animals squeeze through small spaces or catch other animals with their mouths.



Sea lion whiskers are very sensitive.



Hammerhead sharks are good at sensing electric fields.

## Electric-Field Sense

Every animal's body gives off a weak **electric field**. Humans and most other animals can't sense these fields, but some animals that live in water can. Some sharks can find fish hiding in the sand on the ocean floor just by using this sense.



## Magnetic-Field Sense

The needle in a **compass** always points north because of Earth's **magnetic field**. Some animals have a kind of natural compass built into their bodies. These animals can always “feel” which way is north, so they can travel long distances without getting lost.



Loggerhead sea turtles always know which way is north.



Walking on a log uses sight, touch, balance, and body-position sense.

## Conclusion

There are many senses beyond hearing, sight, smell, touch, and taste. As you explore the world, think about the extra senses that animals, including you, use every day.

## Glossary

- balance** (*n.*) the ability to stay in a steady or stable position without falling (p. 7)
- compass** (*n.*) a tool with a magnetic needle that always points north, used for showing direction (p. 14)
- echoes** (*n.*) repetitions of sounds caused by sound waves bouncing off surfaces (p. 10)
- electric field** (*n.*) an area around something where an electric charge can be felt (p. 13)
- magnetic field** (*n.*) an area around a magnet or a moving electric charge where magnetic force can be felt (p. 14)
- sensors** (*n.*) bodily structures that sense and react to a signal or a change in conditions (p. 8)

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Front cover: A frog uses its body-position sense to hang from a leaf.

Back cover: A family of killer whales swims near the surface of the ocean.

Title page: A flamingo balances on one leg as it looks for food.

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