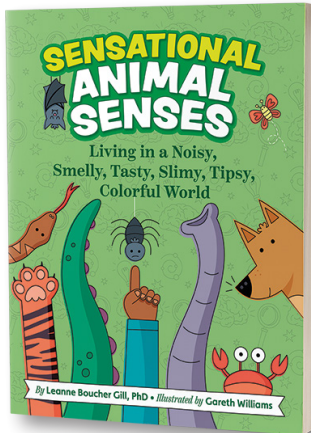




Sensational Animal Senses: Interview With the Author



Sensational Animal Senses: Living in a Noisy, Smelly, Tasty, Slimy, Tippy, Colorful World by Leanne Boucher Gill, PhD, and illustrated by Gareth Williams, explores the world of senses and perception in both human and non-human animals. Readers will delight in the wonders of our six senses — vision, hearing, touch, taste, smell, and balance, plus exotic senses that some non-human animals have like heat vision, magnetic senses, and bioelectricity.

Magination Press interviewed Dr. Boucher Gill about creating the book and her interest in how the brain works.

Magination Press: What inspired you to write this book?

Leanne Boucher Gill: The topic of sensation and perception has fascinated me since I first stepped in my college class on the subject. It's one of my favorite topics to teach and learn about! One of the ways to truly understand our world is to study how our perceptions are different (and the same) as other people and animals. Animals have some truly amazing capabilities, and I wanted to be able to share them with the world.

MP: Many of us are aware of five senses: vision, hearing, touch, taste, and smell. You add balance. Can you explain why you included balance and how it is a sense?

LBG: Sure. You're right — most people only think of our 5 senses (seeing, hearing, tasting, smelling, and touch), but they forget about our sixth sense — balance! Without our sense of balance, we would not be able to walk or even know which way is up. It's a sense in the traditional sense (ha!) in that we get information from our environment and respond to it. For example, we can sense gravity and our own movement though the world, even if we're not aware of it. Based on that information, we adjust the way we are sitting, standing, or moving so we don't fall. Our sense of balance is what lets us "feel" when the car that we've fallen asleep in has stopped at our destination too.

MP: You share that our brains both sense and perceive the world around us. Why was it important to explore the difference between sense and perception? Can you give an example of when your perception of something was different from someone else's?

LBG: Sensation and perception are different, but they often get confused which is why I wanted to make this distinction in the book. One way to explain the difference is that sensation is the way we get information about the world and perception is the way we interpret the world. Using face perception as an example, there are some people who cannot recognize (perceive) faces. This is a condition known as prosopagnosia. People with and without prosopagnosia process the same visual information from the environment — they each can see a person's eyes, nose, mouth, hair, etc. — but their perception is much different. While a person without this disorder can identify who those face parts belong to, a person with prosopagnosia cannot. The perception is different while the sensation is the same.

MP: You include some recurring features throughout the book. Please tell us how you hope readers will use them:

- IMAGINE THAT!
- DIY BRAIN SCIENCE!
- SENSATIONAL CAREERS!
- NOW THAT MAKES SENSE!

LBG: I love the IMAGINE THAT! feature because they are meant to be cool stand-alone facts or ideas. You can just open the book and read them and learn something neat! I also really love the DIY BRAIN SCIENCE! feature because I am a scientist at heart, and I think doing these experiments is fun and can really bring some of the concepts in the book alive for readers. The SENSATIONAL CAREERS! feature is there to let kids know that if they love animals, there are so many ways they can work with them. I think it's never too early for kids to think about what they want to do and that there are careers and hobbies involving animals that they may not have even thought about. The NOW THAT MAKES SENSE! feature is a wrap up of the chapter. Readers can glance at this before they start reading the chapter or read it afterwards to solidify what they're learned about.

MP: Do you have pets or other animals? Did you observe any when you were writing the book? Senses-wise, do you have a favorite animal?

LBG: I have a cat named Rocket, a bunch of saltwater fish, and we've had gerbils and bearded dragons in the past. Before I even wrote this book, I had always been interested in how animals behave — the weirder the better — and wondered why animals act in such strange ways. For example, why does my cat look spooked sometimes? Answer: because she can see shadows that I can't. How do fish know how to swim in schools? Answer: they sense the movement of the ocean around them. How do birds know where to fly in the summer and winter? Answer: they use all sorts of sensory clues, including magnetoreception — the ability to sense the Earth's gravitational pull — to find their way North and South. So many animals process the world differently than us humans and I think it's so cool to learn about them. Senses-wise, I think ocean animals are the neatest — lobsters can taste with their legs and sharks use electrical fields to help them find prey.

MP: Was there something that really surprised you when you were researching this book?

LBG: Yes! I learned that cats cannot taste sweet things and dolphins can only taste salt. I think learning about what animals can and can't taste is super interesting and tells us a lot about our own assumptions about what animals can or cannot perceive.

MP: Do you have a favorite sense or one that you would like to explore more?

LBG: Vision has always been my favorite. We know the most about the visual system and it's both complex and simple. For example, when we open our eyes, we see a very colorful world. But color doesn't exist in the world! It's our brain's interpretation of light that leads to us seeing in color.

MP: This is your third book for kids about how the brain works. You mention in your introduction that you first discovered sensation and perception in college. Why do you want to introduce these concepts and other information about the brain to kids?

LBG: Honestly, because it's fun! As kids we have so many questions about our personal experiences, like why can't we tickle ourselves or why does orange juice taste so bad after brushing your teeth. These are answerable questions once we think about how our brains process the world around us. And when we learn the answers, the brain doesn't seem like something we can't understand, and we want to learn more. I think our brains are incredible and I just want everyone to know that!