



Dog Sense

What the Nose Knows

We experience the world through our senses, and this is true also for our dogs. But the ways in which dogs' senses perceive the world are very different from ours.

Sight

In both dogs and people, the retinas of our eyes have two types of photoreceptors: rods and cones. Rods detect movement and provide the ability to see at night. Cones detect color and detail. Because dogs are hunters, their eyes have evolved to have more rods than our eyes do in order to enable them to see the movement of prey and to see at night. However, they do not have as many cones in their eyes as we do, so they cannot see with the detail or the range of colors that we can. Have you ever noticed that, when a yellow ball is motionless in the green grass, your dog might not see it? That's because it's not moving and the hues of those colors look similar to your dog. As soon as you throw that ball, even at night, he goes right after it!

Smell

What dogs' eyes may lack in acuity their noses more than make up for. They have 300 million olfactory receptors in their noses, making their sense of smell 10,000 to 100,000 more sensitive than ours. This means that a dog could potentially smell one rotten apple in two million barrels! But their superpower sense of smell doesn't stop there. When a dog inhales, he can split the airflow into two different paths, one for olfaction, or smelling, and the other for respiration, or breathing. In addition, the portion of his brain used for analyzing smell is, proportionally speaking, 40 times greater than that



of the human brain. And finally, when a dog exhales, the exiting air leaves through the slits in the side of the nose, thus not interrupting the new odors coming in on his next breath. So you can see that a dog's nose is highly evolved to suit his needs, because not only could he track his prey by their odor trails, but he could also smell the presence of dangerous predators.

Enriching Games for our Dogs

Knowing what we do about a dog's sense of sight and smell, how can we use this information to create games and activities that will enrich our dogs' lives? At least now you can understand why dogs enjoy playing games of fetch, as these games tap the specific strengths of their eyesight and their innate drive to chase prey.

How can we engage their noses, which will provide their brains with some mental gymnastics as well? Well, there is a sport called Nose Work that can be great fun for our dogs! In Nose Work, a treat is hidden in a cardboard box which is itself planted among other cardboard boxes. As the dog learns the object of the game, this target box can be hidden with increasing levels of difficulty among the other boxes.

If you'd like to teach your pooch a fun game called "Go find it!", in which he sniffs out a hidden treat, go to http://www.mywoofgang.com/archive_VTC_gamesToPlay.php. As always, though, include your parents when first teaching this new skill to your dog.



A behavior specialist and trainer living in southern NJ, Laura Garber, CPDT-KA, CC, FFCP, CBC, led behavior departments in animal shelters for over a decade. Her company, WoofGang,

LLC (www.myWoofGang.com), is committed to deepening the bonds between dogs and their people through positive training and behavior modification techniques, and it is these same topics that inspire her writing. You can contact her at laura@myWoofGang.com.