

狗狗真的是色盲吗？原来这才是狗眼中的世界

Do dogs see color? 6 fun facts about how your dog sees the world

有不少人误以为，狗狗的世界只有黑白两色。实际上，狗狗可以看到蓝色和黄色等颜色，虽然与人类相比它们的色觉非常有限。不过，与人类相比，狗狗的视觉也有一些优势，比如它们在黑暗中能看得更清楚。你知道狗是如何区分颜色的吗？一起来看看狗狗眼中的世界吧。



[Photo/Unsplash]

狗的视觉与人类的视觉有何区别

Your eyes pick up color using a type of cell called cones in your retina. The same is true for dogs, though our cones aren't exactly the same.

人类的眼睛通过视网膜的视锥细胞感知颜色，狗也是如此，但两者的视锥细胞并不完全相同。

Humans have three types of cones, "which enables us to see different shades of red, blue-violet, and green," says Alison Meindl, DVM, a veterinarian, and professor at Colorado State University.

科罗拉多州立大学教授、兽医学博士、兽医艾莉森·梅恩德称，人类有三种视锥细胞，“因

此我们能够看到不同深浅的红色、蓝紫色和绿色。”

Dogs have two types of cones that pick up blue-violet and yellow shades, says Lara Sypniewski, DVM, a professor of small animal medicine at Oklahoma State University.

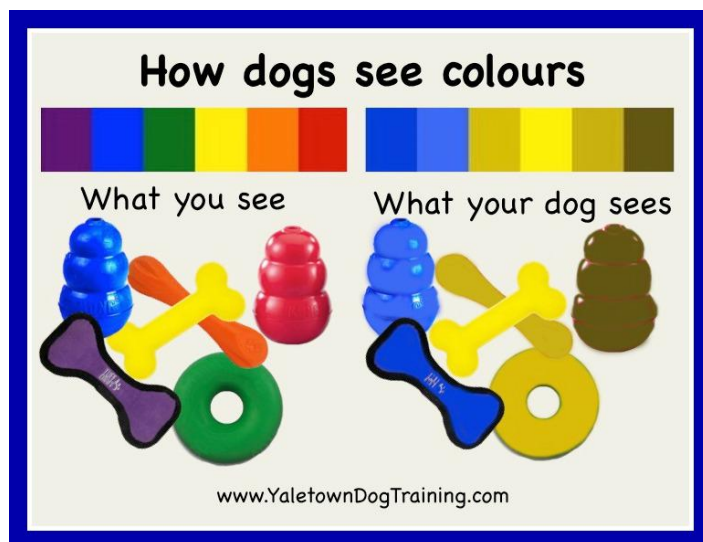
俄克拉何马州立大学小型动物医学教授、兽医临床医生拉腊·西普尼夫斯基称，狗有两种视锥细胞，可以分辨蓝紫色和黄色。

This means that dogs see in a similar way to humans who are red-green colorblind.

"They don't see red or green and they see everything in shades of blue and yellow," says Jay Neitz, PhD, a researcher and professor of ophthalmology at the University of Washington.

这意味着狗的视觉与红绿色盲的人相似。华盛顿大学眼科教授、研究员杰伊·内茨博士称，

“狗看不见红色或绿色，但能看到所有蓝黄色调的颜色。”



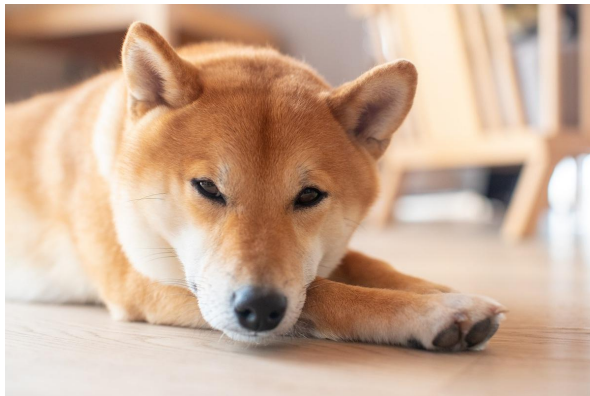
Humans may have the advantage in color vision, but dogs definitely have us beat in the realm of night vision. This is because dogs' eyes have more light-gathering power than ours, Neitz says.

人类在色觉方面可能有优势，但狗的夜视能力肯定比人类强。内茨说，这是因为狗的眼睛比

人的眼睛更聚光。

A dog's retina is largely composed of cells called rods, which can sense light, even in very low-light conditions, says Sypniewski.

西普尼夫斯基说，狗的视网膜主要由视杆细胞组成，即使在光线很弱的情况下，视杆细胞也能感知光线。



[Photo/Unsplash]

关于狗狗视力的冷知识

Dogs are especially good at sensing movement. "The increased number of rods in the dog's retina also increases their ability to detect motion," Sypniewski says. This ability can help them detect small prey like squirrels.

狗特别擅长感知运动。西普尼夫斯基说：“狗的视网膜中视杆细胞数量多，这使得它们观察运动的能力更强。”这种能力可以帮助它们发现像松鼠等小猎物。

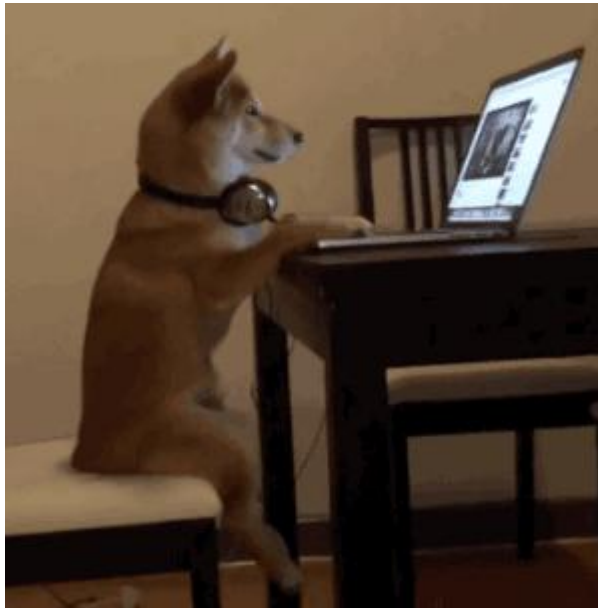
Dogs have a wider field of vision than humans. Dogs' eyes are set slightly farther apart than humans' eyes, so they can see further to the side in each direction.

狗的视野比人类更广。狗比人的眼间距稍远，因此它们可以在每个方向上看得更远。

Dogs have blurrier long-distance vision than humans. A human with perfect vision has 20/20 vision, while dogs have 20/65 to 20/85. This means that "a dog must be at 20 ft. to read a letter that a human with 20/20 vision would be able to read at 65

or 85 ft.," says Sypniewski.

狗的远距离视力比人类更模糊。拥有完美视力的人类有 20/20 的视力，而狗有 20/65 至 20/85 的视力。这意味着“狗必须在 20 英尺（约合 6 米）处才能看见一个拥有 20/20 视力的人类在 65 或 85 英尺处能看到的字”。



Dogs have trouble seeing things very close up. Dogs can see objects clearly if they're at least 13 to 20 inches away from their eyes, "but if the object is closer, the image may be blurry," Sypniewski says. Humans can see objects slightly closer — about 10 inches away from the eye.

狗很难近距离观察事物。“当物体距离眼睛至少 13 到 20 英寸（约 0.3 到 0.5 米）远时，狗狗能看清楚，”但如果物体更近，眼中的图像可能就会模糊不清。人类可以看到更近的物体，大约到 10 英寸（0.25 米）远。

Dogs may recognize you by your shape and motion. "If your dog recognizes you from a distance, it is not because it can see the details of your face like a human would, but rather because of your shape or the way you move," Neitz says.

狗可以通过身形和动作识人。内茨说：“如果你的狗能从远处认出你，那不是因为它能像人类一样看清楚你的脸，而是因为认出你的身形或移动方式。”

