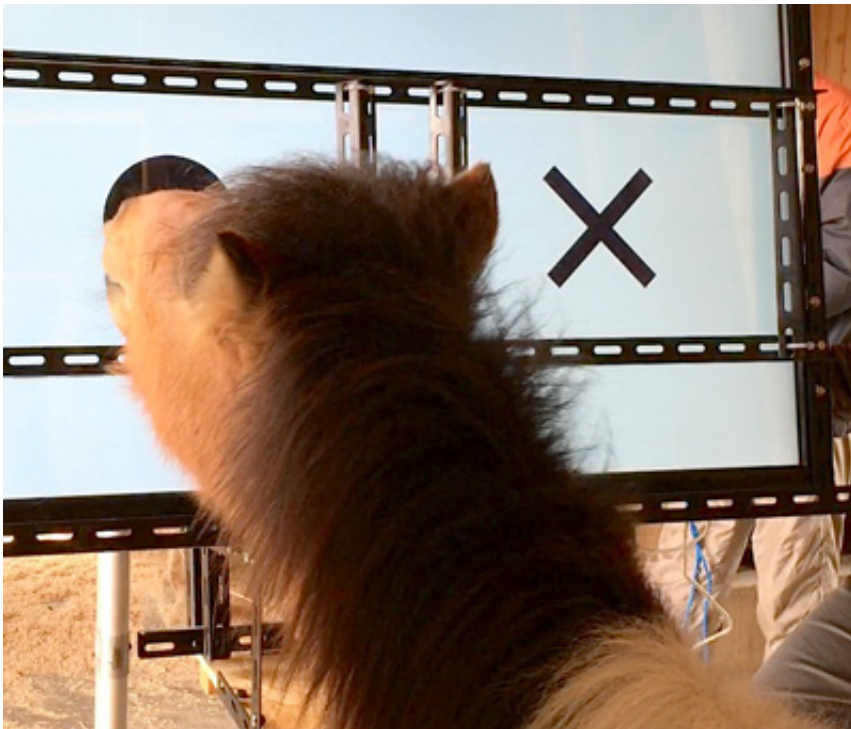


# A horse's eye view: does a pony see what we see?

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Researchers quiz horses to test their visual perception using a touchscreen

Ever wonder how animals see the world? New research suggests that animals, or mammals at least, see the world the same way humans do. In a study published in the Nov. 25th issue of *Biology Letters*, researchers from Japan and France report that the eye view of ponies, dolphins, chimps, and humans are surprisingly similar despite having evolved in different environments.

"Mammals have adapted to a variety of [natural environments](#), ranging from underwater to land to tree canopies," said lead author Masaki Tomonaga of Kyoto University. "They also rely on vision to varying extents. Humans, for instance, live on land and rely heavily on their sense of vision. On the other hand, other [mammals](#) like horses have evolved to have a wide visual field, but with less acuity than ours—we wanted to investigate what it was that other mammals were seeing."

In the study, the researchers used touchscreens to test the [visual perception](#) of three ponies: Ponyo, Nemo, and Thomas.

The ponies were shown two shapes on the touchscreen, one of which the researchers arbitrarily decided was correct. The ponies received a carrot piece as a reward when they tapped their muzzle on the "right" answer.

The researchers then compared the results with studies on dolphins, chimpanzees, and humans. Taken together, the studies implied that these four mammals thought the same sort of shapes were similar.

"It's remarkable that mammals, even with these differences in physical appearance and living environments, evolved to have the same sort of visual perception," Tomonaga said.

The next step for Tomonaga and his team would be to understand how these animals interpret what they saw through their eyes.

"Perception and cognition, that is, making use of sensory information to understand the world are separate processes. Ultimately, I think we can use this finding as a starting point to understand what goes on in the minds of mammals."

**More information:** Masaki Tomonaga et al. A horse's eye view: size and shape discrimination compared with other mammals, *Biology Letters*

(2015). [DOI: 10.1098/rsbl.2015.0701](https://doi.org/10.1098/rsbl.2015.0701)

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