

Dog cognition research continues at UWEC

[Matthew Baughman Leader-Telegram staff](#) on Oct 2, 2025



Honey, joined by his owners Evan Stemper and Bailee Higgins, takes part in cognitive tests that analyze dogs' abilities, memory and personality. [Staff photo by Matthew Baughman](#)

EAU CLAIRE — Although it may have been fun and games for Honey the golden retriever, research conducted by UW-Eau Claire students over the week has helped in cataloging behavior of “man’s best friend.”

In its third year of research, students took part in an annual behavior testing lab set up at emBARK, a dog training facility in Eau Claire. During each of the labs, students worked with dogs and their owners in order to build up data on cognition in domestic dogs.

On Wednesday, Evan Stemper and Bailee Higgins took 2-year-old Honey into the research space to learn a little more about her behaviors. For Stemper, it was a chance to be on the other side of the questionnaire, as he participated in the lab earlier in the week as one of the students conducting the tests.

“We all had to draft the proposals about what we would expect certain dogs and certain personality traits to exhibit — what we’d expect them to do,” he said. “Today, we’re going through different stages of development for our dogs, things like object permanence and so on and so forth. We’re going to get those results from this questionnaire that we filled out ahead of time, and then we’re going to be seeing what stages Honey is going to be in through the treats.

“I have a prediction for what she’s going to score. She’ll be a more pack-oriented dog for sure, but she’s kind of a lazy dog.”

“She has a very short attention span, so I’m curious,” Higgins added.

A lot of the research and testing conducted is influenced by child development, including the idea of “object permanence”, or the ability to understand that objects exist when they are out of sight. To do this, a single treat is placed in a bucket, and the dog is tasked with finding it either on their own or while given direction. This helps the students measure whether or not dogs are able to visualize the treat when it is hidden in front of them and if they respond to social cues.

Although it may seem like an easy task, sometimes results show that dogs have difficulty finding the treat and indicate they do not react to the disappearing object. Other times it may be because of certain behaviors that they are more interested in as as they run up to the students than finding the treat, which are all noted while the tests are proctored.

For Honey, many of the tests were a success and indicated she likely understood that the treats were hidden in buckets.

Liam Lamb, one of the students leading the test, said, “She was really good at following where the treat was placed if she could see where it was, which means she has good object permanence. But she wasn’t able to track any of the hidden placement tests, meaning she can’t track between objects and stuff like that.”

In addition to cognitive testing, the dogs receive a grade based on their personality attributes.

“She’s very people and dog oriented,” Stemper said. “She’s just a very sociable dog — she loves being around people, and she loves the attention she gets from people.

“Her highest result was that ‘pack and prey oriented’ rating, which is what I assumed it would be just from doing the study on Monday with other dogs and seeing how they behaved. The ones that had the high pack drive did the test more poorly, because they were so distracted by the other dogs.”

Jenn Smith, behavioral ecologist at UWEC, said, “As they get older their personality can shift, but for a lot of dogs, ‘You can’t teach an old dog new tricks,’ is what they say. You actually can, but some of that saying comes from the idea that some dogs are quite consistent in their personalities.”

With another year of gathering research, Smith said continual data helps to build a more complete picture in understanding dogs.

“There’s so much variability in how the dogs react,” she said, “whether it’s a hot day outside, a cold day, whether they’ve eaten recently or whether they smelled another dog five minutes ago before their test. There’s so much variability of what their day to day is that the larger data set really helps us to tease apart which of the aspects of the behavior that we see in the tests is reflecting true biological signals.

“The data are quite messy because the dogs are quite dynamic, so doing the long term allows general patterns despite all that noise.”