



SPIRIT

DOGNITION REPORT - APRIL 02, 2026



AN ACCOMPLISHED PROBLEM SOLVER WITH GREAT COMMUNICATION SKILLS, AN ACE HAS EVERYTHING THAT MAKES DOGS SPECIAL, AND A LITTLE MORE BESIDES.

Spirit is the dog with it all. An accomplished problem solver with great communication skills, Spirit has everything that makes dogs special, and a little more besides. The only downside to having a dog as gifted as Spirit is that sometimes he may be too smart for his own good. He may occasionally try to get away with things he shouldn't and then rely on his soulful gaze and an ingratiating nuzzle to win you over. There isn't much that escapes an Ace like Spirit, and you can feel lucky to have such a talented dog as part of your pack.



THE DOGNITION PROFILE

Usually, when you get test results, you see a score that means you either passed or failed. To compare your results to someone else, you see who got the higher score. This is why your dog didn't take a test. Instead, you played a series of games together - and when you play a game there is more than one way to win. Success often comes from playing to your strengths.

There has recently been a revolution in how we think about intelligence. The Dognition Profile is based on this cutting-edge field called cognitive science. Cognition is the study of how the mind works and draws on many scientific disciplines, from psychology to computer science to neuroscience.

By studying animals, cognitive scientists have made three important discoveries:

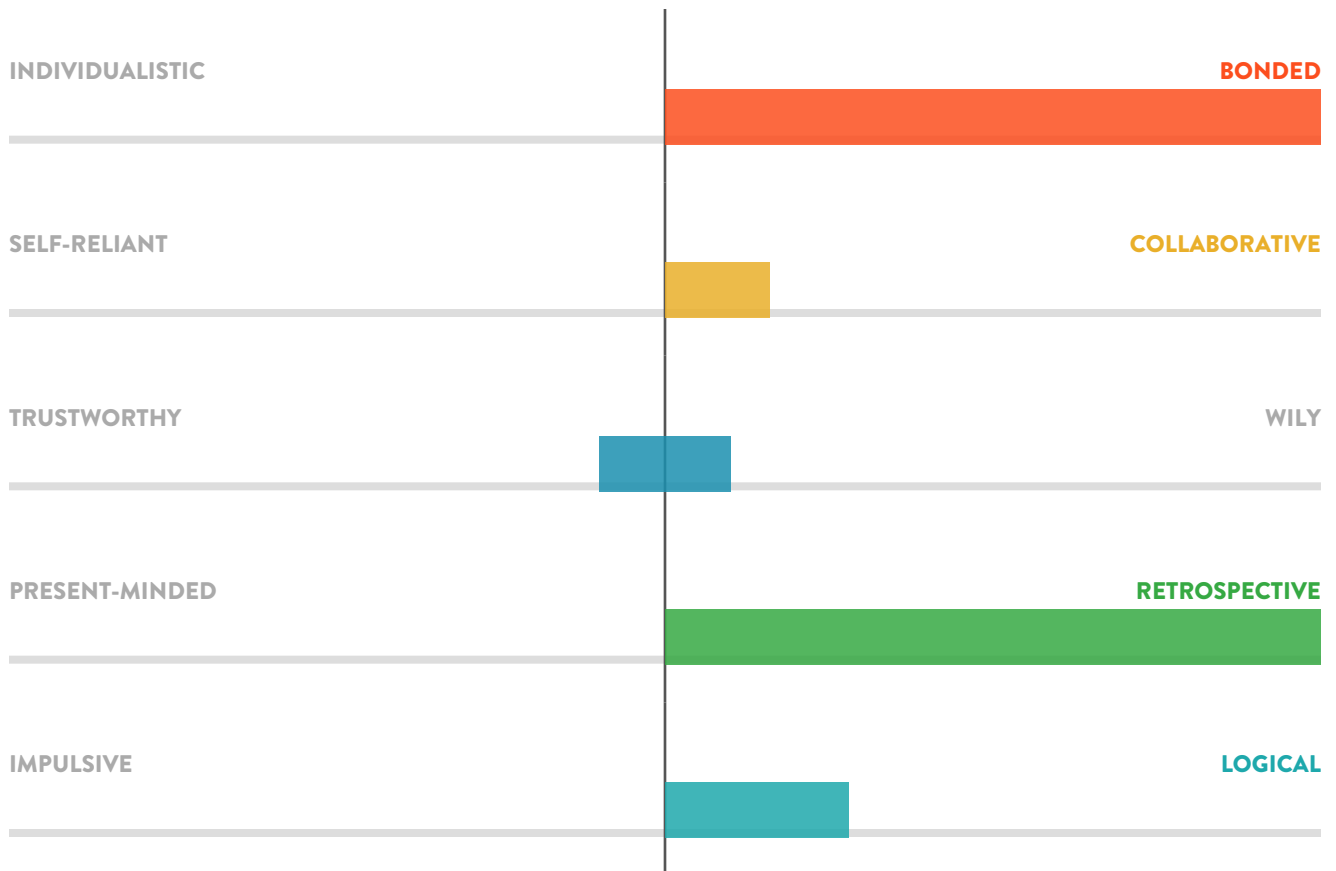
Animals use many types of cognition to survive (learning skills from others, remembering the location of food, inferring the solution to a new problem or deceiving others during competition).

Different animals rely on different cognitive strategies. Asking if a crow is more intelligent than a dolphin is like asking whether a hammer is a better tool than a saw. Each animal has strategies to solve a unique set of problems.

Just because an animal tends to use a certain strategy to solve specific problems doesn't mean he or she will always apply that strategy to all types of problems. Animals rely on a toolbox of strategies that depend on a variety of factors. Dognition gives you insight to the most significant tools that your dog will use on a daily basis to interact with you and the world.

Based on these findings, the Dognition Profile looks at five cognitive dimensions. Rather than counting correct and incorrect answers, the Dognition Profile identifies your dog's cognitive style, and the strategies he relies on to solve a variety of problems. Using this revolutionary new science, the Dognition Profile will give you an unprecedented window into the workings of Spirit's mind and reveal his particular genius.

COGNITIVE DIMENSION RESULTS



EMPATHY - Reading and responding to the emotions of others

COMMUNICATION - Using information from others to learn about the environment

CUNNING - Using information from others to avoid detection

MEMORY - Storing past experiences to make future choices

REASONING - Inferring the solution to new problems

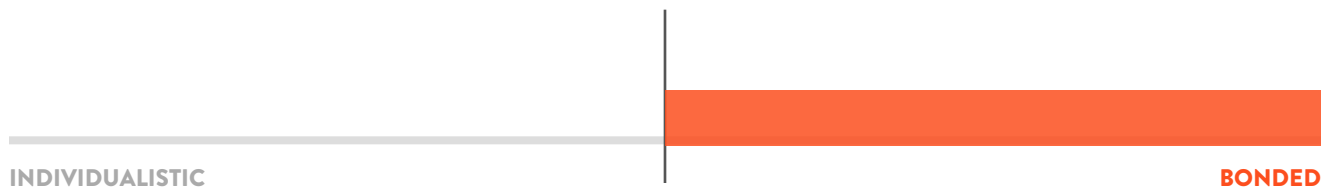
EMPATHY

Spirit's empathy scores were off the charts. Empathy is the ability to feel what someone else is feeling. Humans are extremely empathetic; it is one of our best qualities. Empathy is not something we are taught; it is present even in young children, growing and strengthening as we get older.

Researchers have recently suggested that other animals also have empathy, or at least a basic form of empathy. If this is true, dogs are an ideal place to look. Humans and dogs go back thousands of years - enough time for the bond between us to develop into something special.

If most dogs are bonded to their owners, Spirit absolutely adores you.

FIG.1



Playing and interacting with your dog like you did in the Dognition games increases your oxytocin, the hormone responsible for feelings of pleasure, bonding, and affection.



YAWN GAME

In this game, you yawned and recorded whether Spirit yawned in response. Yawning in dogs can be an indicator of stress, but we were measuring something different - social yawning. The rationale behind this game is that even as young children, we laugh when we see someone laughing, and we cry when we see someone in distress. Our ability to "catch" the emotions of others is called emotional contagion. A common form of emotional contagion is yawning. If you see, hear or even think about someone yawning, you will probably feel an irresistible urge to yawn.

Spirit did not yawn in response to your yawn, but this is not surprising. Although dogs are one of the few species besides humans that contagiously yawn, there is variation among dogs. Data from several research groups shows differing results, but our preliminary data shows that only 20% of dogs yawn contagiously.

Recent studies have shown that dogs only catch yawns from humans, not other dogs.



EYE CONTACT GAME

In this game, you timed how long Spirit held your eye contact. Before babies can hug or speak, they use eye gaze to bond with their mothers. Research with dogs has shown that a similar phenomenon may happen with owners and dogs. Owners whose dogs stared at them for longer had significant increases in the hormone oxytocin. Oxytocin, also known as the "hug hormone," is related to feelings of bonding, pleasure and affection.

Judging by the extraordinary length of time Spirit spent gazing soulfully into your eyes, you probably often find him staring at you for no reason. You might wonder if Spirit is trying to tell you something, like he is hungry, needs to go to the bathroom or has an opinion on what to do over the weekend. But Spirit may not want or need anything - he may be just hugging you with his eyes.

Dogs can even be better than aspirin. Children in a hospital reported that their pain was four times less when they played with a dog than when they spent the same time relaxing.

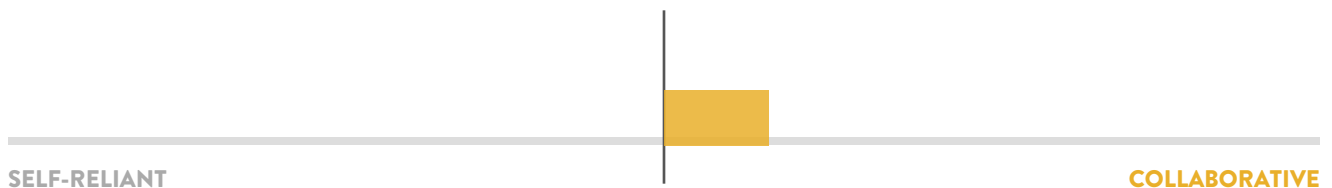


COMMUNICATION

Communication is the foundation of many relationships, including our relationship with dogs. It's easy to take for granted that our dogs seem to read us like a book, but this ability is rare in the animal kingdom. Of all the species that have been studied, dogs are the champions at using our communicative gestures. Even chimpanzees, who are one of our closest living relatives, do not rely on human gestures as much as dogs do. Instead, chimpanzees try to figure out these types of problems on their own. Dogs are more like human infants who start using gestures as they begin learning language.

It looks like Spirit tended to switch back and forth between collaborative and self-reliant strategies. Sometimes he followed your communicative gestures, but sometimes he chose to ignore them. This could be because Spirit either struggles to read your cues, or because there was a treat in both places and Spirit didn't feel the need to look to you for help.

FIG.2



ARM POINTING

Although the pointing game may have seemed simple, the skills it requires are quite specialized. Dogs are one of the only animals that rely on human gestures - but even among dogs there is variation. Some dogs are more like infants and rely heavily on our communicative gestures, while other dogs are more like chimpanzees and try to solve problems on their own without our help. Spirit seems to use a mixed strategy. Because Spirit could see food in both places, he didn't really need your help, but occasionally chose to follow your gestures anyway.

Did you know that, on average, dogs can start following a human point as young as 6 weeks old?



FOOT POINTING

Just like in the hand pointing game, Spirit thought he had better cover all bases by sometimes choosing the treat you pointed at and sometimes striking out on his own.

Spirit probably does not see you point with your foot very often, so this game was a way of seeing how flexibly Spirit can read new gestures. Giving animals a new version of a problem they have seen before is a common tactic used to reveal what strategy they are using to solve a problem.

By no means did Spirit do badly on this game; in fact, he developed quite a clever strategy. He developed a right or left side bias, meaning when he didn't know which side was correct, he went to one side every time. This is pretty clever, because 50% of the time he was correct.

Many dogs tend to ignore unintentional cues from humans. The most effective way to communicate is to call the dog's name, make eye contact, then point and look in the direction of the object.



CUNNING

Spirit scores as trustworthy in this game since he does not use your social information when deciding whether to take advantage of you. When you put the treat down in front of Spirit and said 'No,' you then presented him with different attentional states. In the first condition, you were watching Spirit directly. In the second condition you covered your eyes, and in the final condition you turned your back.

A wily dog would have waited until you could not see before they took the treat. In contrast, Spirit was more likely to take the treat when you were looking at him than if you had your back turned. This may seem a little audacious, but, in fact, it actually makes him trustworthy because he does not use your social information to deceive you.

FIG.3



When it comes to begging, dogs prefer to be sure you're paying attention. In one study, dogs preferred to beg from a person who was looking at them rather than someone wearing dark sunglasses.



MEMORY

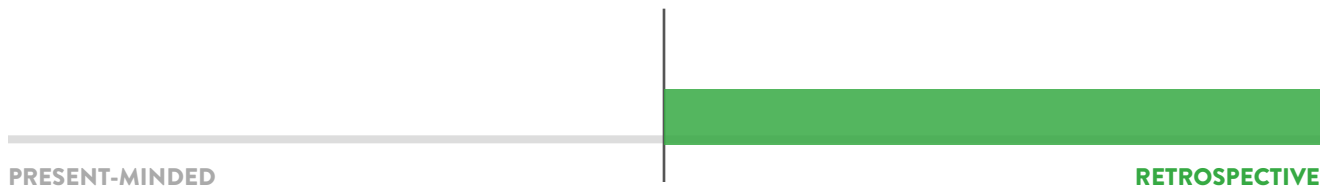
Spirit has an amazing working memory, which is a type of memory that allows your dog to keep information in mind for a few minutes and mentally manipulate it. This may sound simple, but working memory is crucial for any kind of problem-solving. In humans, working memory has been found to correlate with skills in learning, math, reading, and language. Researchers have even found some evidence that in children, working memory is more predictive of academic success than IQ.

In these memory games, Spirit had to understand that the treat continued to exist, even though it had disappeared from view. In the wild, this ability is essential. Animals have to keep track of mates, predators, and prey that might disappear momentarily behind a bush or a rock.

If Spirit is an avid fetch player, you've probably noticed that no stick or ball escapes for long. Spirit skillfully searching for an object that has briefly disappeared is a perfect example of him using his working memory to solve a problem.

For Spirit, out of sight is definitely not out of mind.

FIG.4



Most dogs can remember their mothers even if they haven't seen them for two years. However, they can't remember their brothers and sisters after a similar separation.



MEMORY VERSUS POINTING

In this game, Spirit saw you put the treat under one cup, but point to the other cup. Spirit preferred to rely on the information in his working memory rather than what you pointed to. Even though you gave Spirit misleading information, he remembered where the treat was and chose to ignore you. This shows an independent thinker; you should be aware that in other situations Spirit might not listen to you if he thinks you are wrong.

Despite being genetically similar, dogs and wolves make opposite choices in this game. This difference may be behind why we love dogs so much.



MEMORY VERSUS SMELL

Since dogs have such a keen sense of smell, you may have been surprised that after you switched the cups, Spirit used his memory over his sense of smell. He went to where he remembered seeing the treat hidden, rather than sniffing out where the treat was.

Because a dog's nose can sniff everything from narcotics to cancer, whenever we run a study where we hide a treat under one of two cups, the first question people always ask is, "Can't my dog just smell the food under the cup?" It was certainly our first question, but extensive research by half a dozen independent research groups has concluded that dogs do not rely on their sense of smell to find the food in these games.

If dogs were using smell, they would go directly to the cup with the hidden food. In fact, these studies found that dogs only choose the correct cup around half the time - which means they are guessing. Dogs do have an excellent sense of smell and can probably detect food if allowed to sniff both cups before choosing. But when you study their first choice, they cannot localize the food to a specific cup from a distance of six feet away.

One study found that to successfully track a person's direction of travel, tracking dogs need at least five sequential footsteps.



DELAYED CUP GAME

This game was a perfect demonstration of Spirit's excellent working memory. After you hid the treat Spirit had to retain the information for up to two and a half minutes before making a choice.

This skill comes in handy in the wild. Feral dogs tend to be endurance hunters, slowly wearing down their prey. During the chase, the prey may not always be in direct sight, and feral dogs have to remember where their prey was last seen and predict where they might reappear.

In these kinds of memory games, most cats quickly start to forget where an object is after only 10 seconds, while most dogs are still able to show success for up to 4 minutes.



REASONING

You can be very proud. Spirit just aced the most difficult games in the Assessment. Reasoning is the ability to solve a problem when you can't see the answer and have to imagine the solution. Unlike learning through trial and error, which doesn't necessarily require much understanding, reasoning requires that you truly understand the problem and the phenomena behind the problem.

A Sherlock Holmes among dogs, Spirit was able to solve the mystery by imagining different solutions and choosing the one that made the most sense. This leads to a lot of flexibility. He can solve a new version of a problem he has seen before, and spontaneously solve new problems he has never seen before. This is a sign of true genius.

FIG.5



Some studies show dogs are better at solving complex puzzles when humans are not around. When humans are around, dogs look to us for help rather than solving it themselves.



INFERENCE REASONING GAME

Congratulations - when playing the most difficult game in the most difficult dimension, Spirit's performance was masterful. When you showed Spirit the empty cup, you were providing indirect information on where the treat was - he had to make an inference that because that cup was empty, the treat must be in the other cup.

This ability to infer by exclusion is problematic for most dogs because they are often confused by conflicting social cues. By lifting up the empty cup, you were actually drawing attention to it, and some dogs prefer to choose this cup even though it was empty. The fact that Spirit was able to control this impulse shows an impressive ability to make inferences.



PHYSICAL REASONING GAME

Spirit did seem to understand the principle of solidity - that one solid object cannot pass through another - at least some of the time.

Although this might have seemed like a simple game, it was actually quite complicated. First, Spirit had to infer that you hid a treat (since Spirit didn't actually see you hide it). Then he had to understand enough of the physical world to infer that a piece of paper at an angle indicated that the treat was hidden behind it. It is impressive that Spirit figured out the answer as often as he did.

Spirit is quite the clever dog! Once again, when faced with a difficult decision during this game he consistently chose one side. Kudos to him for developing this unique strategy.

Even though many dogs may struggle with physical properties like gravity, this doesn't stop them from thoroughly enjoying a game of fetch.





NEXT STEPS

We hope you've enjoyed reading Spirit's Dognition Profile and gaining fresh perspective on how he sees the world!

You can fill your friends in on what you've discovered about Spirit very easily. Download and email or print Spirit's profile report any time from your portal.

Of course, these five cognitive dimensions are only part of the picture; the magic of your relationship with Spirit is how you spend your time together. To that end, a Dognition membership gives you on-going games and tips that will help provide even more insight into what makes Spirit tick and how to act on that information.

As a member, each month you'll receive:

- A new game that will shed light on another aspect of how Spirit thinks and sees the world.
- Tips and activities prepared for Spirit from canine training experts based on how Spirit sees the world.
- Exclusive offers from Dognition partners, including brands such as Kong and Purina ONE.
- New findings about how all dogs think and how Spirit's strategies compare.

At the same time, by contributing to Dognition you and Spirit are helping to build the world's knowledge about all dogs. This allows us to tackle fresh questions -- how do certain breeds think compared to others? To what extent do memory skills decline by age? Are female dogs any more empathic than male dogs? And many more!

What questions would you like answered? We'd love any feedback on that or anything else related to Dognition. Contact us any time at hello@dognition.com.

Woof!

The Dognition Team



Dognition

See the World Through Your Dog's Eyes

Visit **[Dognition.com](https://dognition.com)**