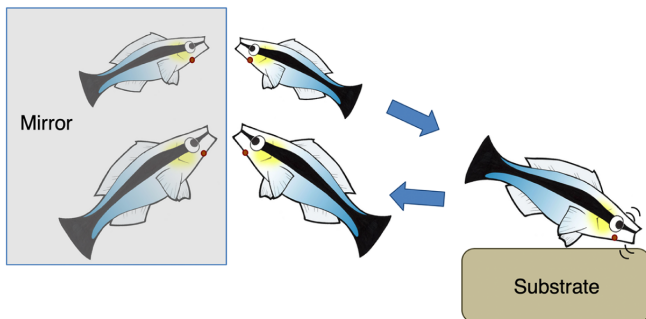


Can Fish Recognize Themselves in a Mirror? (CER)

<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000021>

The mirror self-recognition test (MSR) is a means of testing an animal's self-awareness. A scientist places a colored mark somewhere on an animal's body that can be seen in a mirror. If the animal looks at the mirror and then rubs at the mark, then that animal has self awareness. In other words, it recognizes itself in the mirror.

The cleaner wrasse is a type of fish that will clean unwanted parasites from other fish. Researchers wanted to know if this fish had self awareness, so they designed a self-awareness test for the fish. Though fish cannot touch their own body, scientists looked for behavior such as scraping their bodies on substrates.



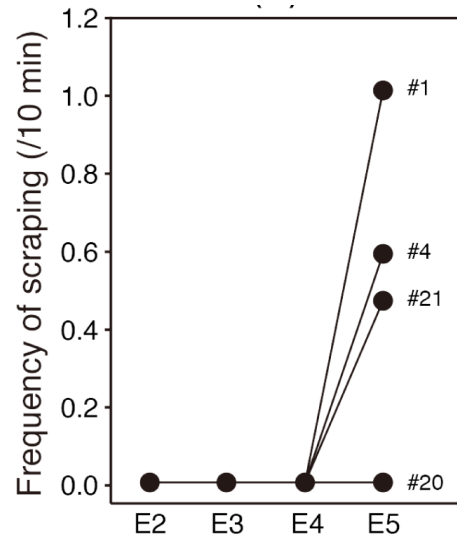
Scientists marked the throats of wrasse fish with brown color that could be viewed in the mirror. They observed the fish and recorded the frequency of scraping behavior.

They observed the fish under several conditions:

- E2 = control (no mark)
- E3 = transparent mark
- E4 = mark with no mirror
- E5 = visible mark, with mirror

Scientists also placed the mark directly on the mirror and did not observe any scraping behavior.

For the fish that were marked with and had a mirror (E5), they observed 37 separate instances of throat scraping during E5 (15 for fish #1, 16 for fish #4, 6 for fish #21)



1. What is the purpose of including a test where fish had a transparent mark?

2. What is the purpose of including a mark on the mirror but not on the fish?

3. Based on these tests, scientists could INFER the reason for the fish behavior of scraping on the substrate. What were the fish doing?

4. What overall CLAIM is being made in this study?

5. What EVIDENCE was presented to support the claim?

6. Complete this statement... If fish do have self awareness, then ... (REASONING).