

# ScienceNews

## Activity Guide for Students: What's Going On in the Animal Mind?

**Directions:** Some scientists who study animal behavior are interested in exploring whether nonhuman species are intelligent and self-aware. Read the *Science News* article, "[Fish can recognize themselves in photos, further evidence they may be self-aware](#)" before answering questions about the experimental design of the study described in the article. A version of this article, "Fish recognize themselves in photos," appears in the March 11, 2023 print issue.

As you answer the questions, think about how animal intelligence should be defined and whether self-awareness is indicative of animal intelligence.

### Animal intelligence

1. What do you think was the study's scientific question?
2. What do you think was the researchers' hypothesis?
3. What were the study's independent variables?
4. What were the study's dependent variables?
5. What were the study's results?
6. Describe an interaction you've had with an animal that suggests the animal is intelligent or self-aware. What questions does this interaction raise?
7. In your opinion, is self-awareness a requirement for animal intelligence? Explain your answer.

### **Article analysis**

For this segment, you will be assigned a group and a *Science News* article about a research study on nonhuman animal intelligence. As you read the article with your group, answer the following questions about the experimental design of the research study described in the article. The answers to these questions should be included in your poster.

1. What was the study's scientific question?
2. What was the study's hypothesis?
3. What were the study's independent variables?
4. What were the study's dependent variables?
5. What were the study's results?
6. Did the article clearly define an aspect of intelligence? If so, how did the writer define that aspect of intelligence? If the writer did not give a definition, define an aspect of intelligence based on the article.
7. What evidence from the article supports that the study is investigating an aspect of intelligence?
8. Why do you think the article implied or clearly defined an aspect of animal intelligence in the way that it did?
9. How might our experiences affect how we define intelligence? Why does this matter?

10. How might knowledge of a species affect how we define intelligence?

11. Should the definition of intelligence be different from species to species? Why or why not?

12. Write a working definition of intelligence.

### **Poster production**

After your group answers the questions about your assigned *Science News* article, work together to create a poster. This poster should describe the experimental design of your assigned research article, define intelligence, describe how personal experiences might shape how intelligence is defined and identify why the definition of intelligence might differ depending on species.

### **Extension: poster presentations**

If your teacher offers an extension, you can present your poster during a future class.



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