

## ***Studying Elephant Communication***

hhmi | **BioInteractive**

Interactive Video  
Student Worksheet

### **INTRODUCTION**

You will watch a short video that explores whether elephants can detect, interpret, and respond to signals delivered by underground vibrations. This video provides an example of how experiments are designed to test a hypothesis and how individuals can communicate information to others.

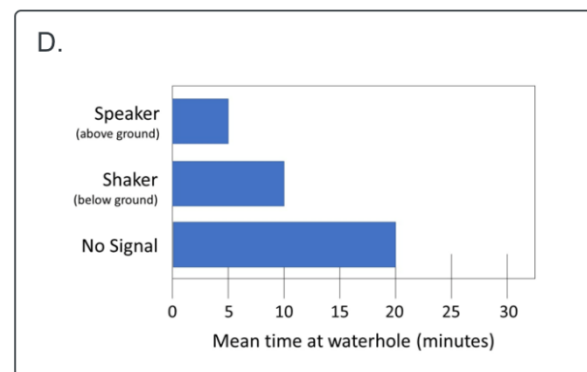
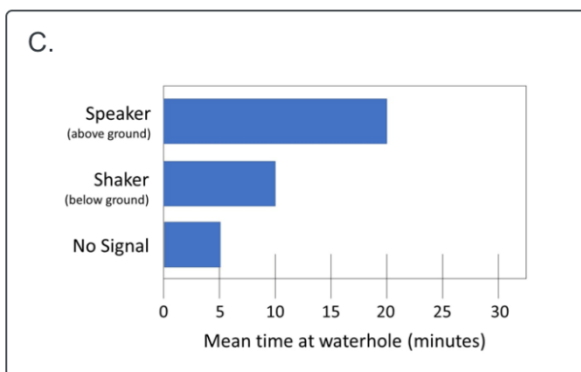
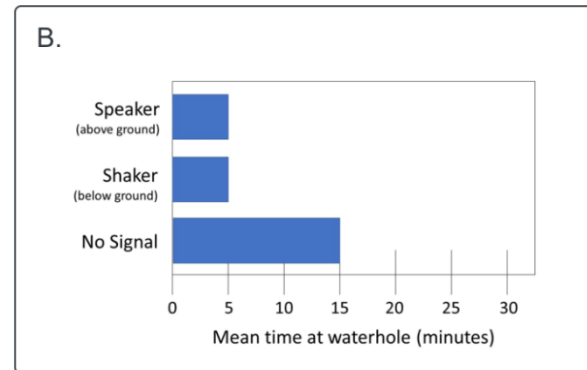
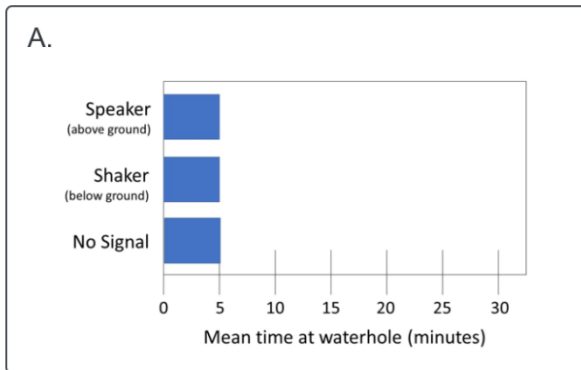
### **PROCEDURE**

Play the interactive video [Studying Elephant Communication](#). At various points, the video will pause and ask you to think about the content. You will not be able to continue watching the video until you have answered and saved your response to the prompt. You can record your answers in this worksheet or as directed by your instructor.

As you answer the prompts, keep in mind that some questions do not have a “right answer.” You will have the opportunity to revisit your responses at the end of the video.

1. List at least three examples of ways in which animals of the same species communicate with one another.
2. In a few sentences, describe how you would design an experiment to determine whether elephants can detect and interpret the calls of other elephants through the ground.
3. What do you conclude from these results?
4. So far, O’Connell tested the elephants’ response to a sound traveling above the ground. Which other condition is she likely to test next as part of her experiment?
5. Predict what will happen when the shaker is turned on if elephants communicate using only sound traveling through the air and not the ground.

6. Which of the following graphs best describes the results of the experiment? Justify your answer with a few sentences.



7. What do you conclude from the results of this experiment?

8. What is a plausible explanation for why elephants responded differently to ground and air signals?

9. How could you test the hypothesis that elephants interpreted the ground signal as being farther away than the air signal?

10. Communication requires several components:

- a signal with information
- transmission of the signal
- receipt of the signal
- interpretation of the information within the signal

Provide an example of each of these components from the study.