



# Octopus Mystery

## Virtual Classroom Extension

### **Objective**

This activity is designed to help your at-home student(s) recognize themselves as scientists and think critically about problem-solving. The goal is to help students practice critical thinking and scientific argumentation skills. As with all lessons provided, please feel free to adapt them according to your students' abilities. Take these ideas, make them your own and your at-home students will have a greater chance at success.

### **Materials**

Paper, writing utensils, computer or tablet with internet access.

### **Procedures**

1. Start by watching the video about octopus enrichment.  
(<https://resourcelibrary.clemetzoo.com/Area/21>). Discuss with your students what they learned about octopuses in this video. You can have them make a list or discuss it with them verbally.
2. Read the following story to your students:

Craig set out from the dock in his small fishing boat. He had just purchased a new crab trap. The crab trap looked like a wire cage, with two openings on either end to allow the crabs to get in. Once the crabs entered the trap, they usually were unable to find the openings again to get back out.

Craig cruised for about 15 minutes before finding a peaceful spot to drop his trap. He baited the trap with fresh pieces of fish, made sure that the trap was securely tied to the line, and tossed the trap into the water. The trap sank about 50 feet before resting on the rocky bottom. Now all that was left was to wait. Craig sat back with his favorite book and a glass of lemonade to bide the time while he waited.

About an hour and a half later, he set the book aside and went over to the crab trap line. He hauled up the trap, thinking about the delicious crab leg dinner he would have that evening. When the trap emerged from the water, a wave of disappointment washed over him. The trap was empty. Did the trap break? As he examined the trap, he realized that there was no damage to it. In fact, he saw two empty crab shells resting in

the bottom of the trap. He frowned in annoyance at the remains of what was supposed to be his dinner. Clearly something had gotten to the crabs before he did. He was willing to bet his boat that it was an octopus.

Craig sighed and set the trap aside. He would just have to try again somewhere else. Preferably someplace without a resident octopus.

3. Discuss the following questions with your students:
  - a. Why do you think Craig believed that the crabs in the trap were eaten by an octopus?
  - b. What do you know about octopuses that would support this hypothesis?
4. Tell your students to write the story from the perspective of the octopus. The story should explain how the octopus ate the crabs in the trap without damaging the trap. Make sure the students use what they know about octopuses as evidence to create a realistic argument of what happened. For more information about octopuses, students can do an internet search or visit <https://resourcelibrary.clemetzoo.com/Animal/49>.
5. Once the story is complete, ask your students to read their stories out loud. Discuss what they thought the octopus might have done to get the crab from the trap. Some questions to ask your students may include the following:
  - a. Is your story the only explanation for how the octopus got the crab? Are there other ways the octopus could have done it?
  - b. Could other animals have been able to get at the crabs without breaking the trap? If so, what other animal may have been responsible and how might it have gotten the crabs from the trap?

### ***Ohio's Learning Standards***

<b>Science Content Standards</b>
Grade 3 Life Science Topic: Behavior, Growth and Changes <b>3.LS.2:</b> Individuals of the same kind of organism differ in their inherited traits. These differences give some individuals an advantage in surviving and/or reproducing.

<b>English Language Arts Content Standards</b>
Grade 4 Writing Standards: Text Types and Purposes <b>W.4.3:</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.