

# Under the Dock: Exploring the Fouling Community

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**Overview.** In this up-close and hands-on investigation, students will explore the thriving community of fouling organisms that live beneath the dock at Cannon's Point. In small teams, students will observe and identify a diverse array of organisms in the fouling community.

## Learning Framework.

Linking Georgia Standards of Excellence S3L1 S4L1 S7L4	Primary Learning Goals. <ul style="list-style-type: none"><li>• Observe and identify differing organisms in the fouling community.</li><li>• Explain the role of the fouling community in an ecosystem.</li></ul>
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## Materials.

- Bucket for initial sample collection (1)
- Large white enamel pan (1)
- Putty knife (1)
- Tweezers (1 per team)
- Glass specimen dish (1 per team)
- Magnifying glasses (1 per team)
- Dissecting microscopes and/or Dino-Lite digital microscope
- Fouling Community Survey (1 per student or team)
- Fouling Community Identification Guide (1 per team of students)

## Background Information.

*What is a fouling community?*

Fouling communities are communities of organisms that grow on solid surfaces such as sides of docks, pilings, and piers. These organisms are described as “fouling” as they often colonize on and cause damage to boats, piers, and bridges. However, while unwanted at times, fouling organisms contribute to a healthy coastal ecosystem as filter feeders (i.e., increase water clarity) and a food source for other organisms.

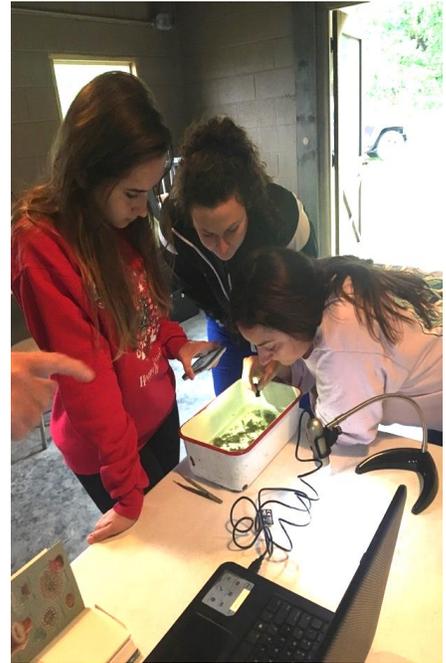
*What types of fouling organisms might you see at Cannon's Point?*

Students are likely to observe an amazing variety of fouling organisms such as barnacles, sea anemones, sea squirts, tunicates, and isopods.



### Student Field Experiences.

1. Introduce students to the idea of a fouling community its role in an ecosystem.
2. Take students to the dock on Lawrence Creek to collect a sample of the fouling community with a bucket, white enamel plan, and the putty knife.
3. Have one person reach under the dock and use the putty knife to pry off a batch of organisms into the white bucket filled with water from Lawrence Creek. This is the only sample needed for students.
4. Fill the white enamel pan halfway with water from Lawrence Creek and return to the lab.
5. Transfer the sample from the bucket to the white enamel pan for observation.
6. For each team, transfer a small sample of the fouling community and water to a glass specimen dish.
7. Challenge students to observe and identify at least six organisms using the Fouling Community Identification Guide. Students should record their findings in the attached “Fouling Community Survey” and also identify their favorite fouling organism. \*Note that the Dino-Lite digital microscope is a great way to feature and capture a photo of your favorite fouling organisms.
8. Have teams post and share their observations as well as reflect on (a) the diversity of organisms in a fouling community and their role in an ecosystem, and (b) and their favorite part of this experience.
9. Return the organisms to Lawrence Creek.

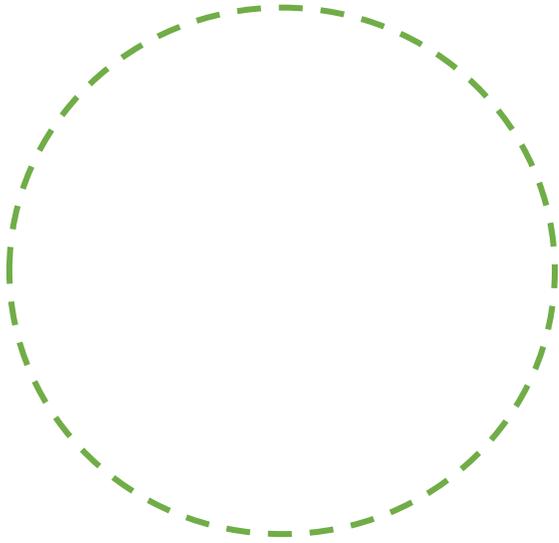


# Under the Dock: Fouling Community Survey

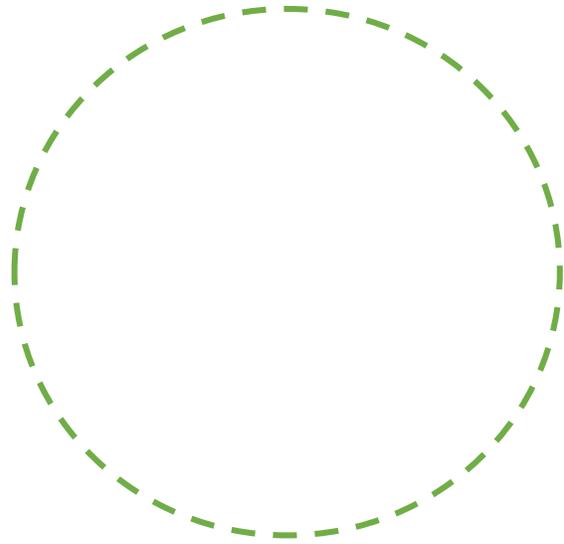
Name(s):

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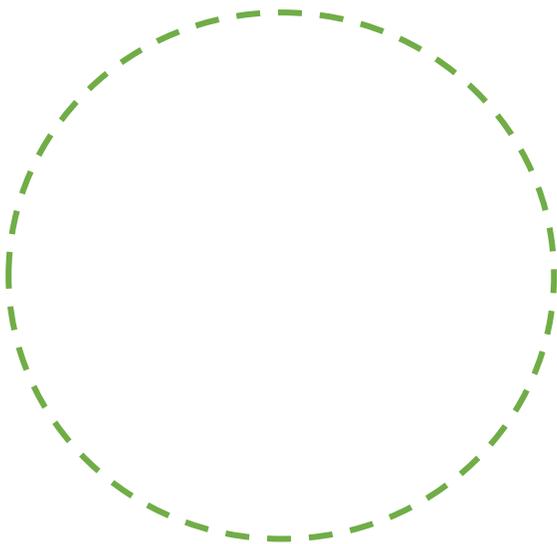
Sketch at least eight of your favorite fouling organisms and identify each using the guide provided.



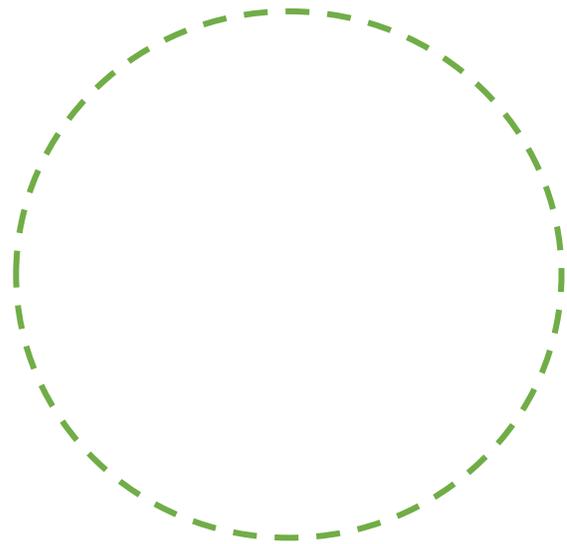
I am a \_\_\_\_\_



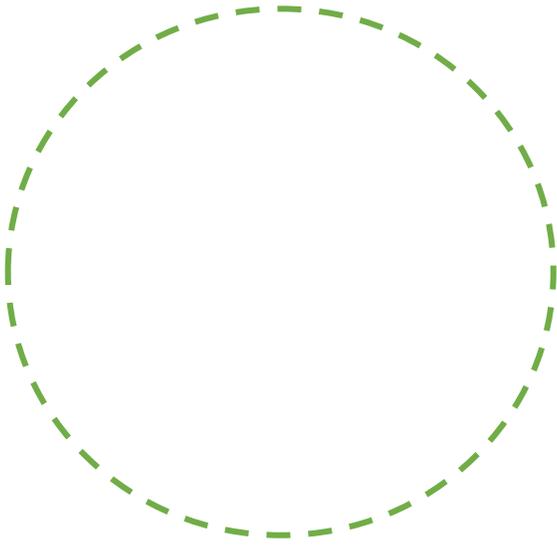
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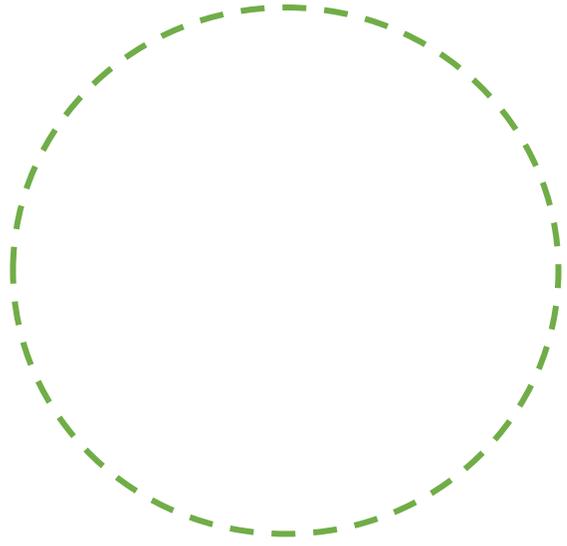
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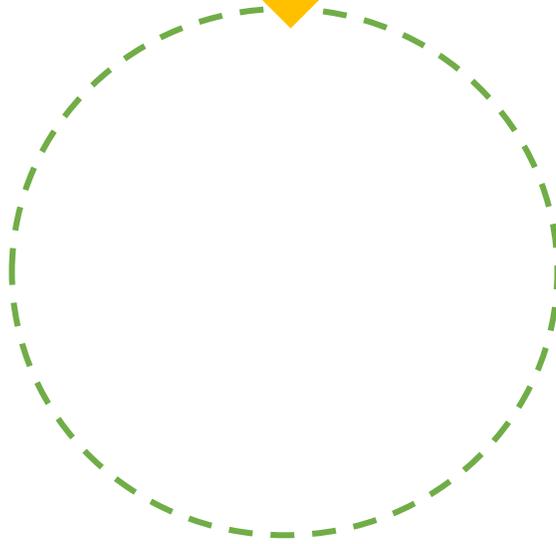


I am a \_\_\_\_\_



I am a \_\_\_\_\_

My Favorite Fouling Organism Is



I am a \_\_\_\_\_

**Reflection.**

What do you notice about the fouling community?