

LETTER FOR FOSS MIDDLE SCHOOL COURSES

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Hello Students, Teachers, and Families,

To facilitate science teaching and learning during school closures, the FOSS team has provided additional Home/School Connections on the FOSS website <https://www.fossweb.com>. Students and families gain access to resources on FOSSweb through the class pages set up by the teacher. The teachers can leave notes on the class pages for students. Students can read those notes with assignment instructions from the teacher when they sign in to FOSSweb. Note that teachers may, instead, send FOSSweb assignments to students through other established parent communication apps or emails.

The new Home/School Connections for each course are active investigations that can be conducted at home (inside or outdoors), online readings, or online multimedia experiences including research. Most of these activities are part of the existing course that the students are learning, now formatted for students to access at home.

The teacher will decide which of the suggested activities are appropriate for students based on the classroom science experiences students have had through the year. Please refer to the teacher's communications home for specific expectations for assignments. The teacher may assign *FOSS Science Resources* readings, videos, and multimedia from investigations in the module or course.

For Students and Families: To sign in to FOSSweb, use the student user name and password provided by your teacher. Here's a short video to get you started on FOSSweb.

For Student Sign in Video: <https://youtu.be/Fcfjbt7Li2k>

For FOSSweb help: <https://www.fossweb.com/student-parent-help>

Preview the **Course Summary** from the Student Page. The **Module Overview** is available to download as a PDF. The first few pages of the Overview will help to set the context for the Home/School Connections.

For Teachers: For help in setting up and using Class Pages, use the Walk-through Videos on FOSSweb: <https://www.fossweb.com/fossweb-walkthrough-videos>

Visit the Home/School Connection for each module or course you teach, select the specific assignments that will be most relevant to your students at this point in instruction. Communicate with families about which content you are assigning through the Class Pages Notes on FOSSweb or through any other established parent communication channel your school has in place.

Tech support on FOSSweb: <https://www.fossweb.com/contact-us#jotform>

Together we will continue to make progress in science teaching and learning during school closures. Now, more than ever, we appreciate the role that science plays in our lives, and how important it is for citizens of all ages to understand and act based on scientific evidence

Sincerely, The FOSS Team at the Lawrence Hall of Science

FOSS Populations and Ecosystems, Home/School Connections, Families version COVID-19 School Closure Instructional Opportunities—March 17, 2020

NOTE: For all online research projects, we suggest that students use our [Internet Disclaimer](#) to help guide their independent evaluation of digital sources.

Survey local plants

Students can collect and sort leaf samples to answer this question.

- *How many different kinds of plants grow in your study site?*

You will need a large zip bag space to organize your collection.

- a. **Identify a study area.** It could be your backyard or a small green area near your house.

Predict how many different kinds of plants will be found.

- b. **Collect samples.** Try to collect only one leaf or sprig sample from each different kind of plant in the site.

- c. **Sort collection.** After 10 minutes of collecting, organize leaf samples by making a pile for each kind of plant (so put samples you think are from the same plant together).

- d. Revisit the study question by counting how many different kinds of plants were collected.

- e. Answer the following questions about your study site:

- Which plants are most abundant?
- Which plants are rare?
- Which plants are most important to this ecosystem? Why?

Consider humans in food webs

Have students draw a diagram or write a paper describing how humans interact in a food web. Students should consider the different roles of a hunter-gatherer human population, compared to a modern, industrialized human population.

Students should give examples of feeding relationships in which they are acting as primary consumers, secondary consumers, tertiary consumers, and so on. Then, students should consider these questions.

- *What is the highest level of consumer that humans occupy?*
- *What does it mean for humans to eat “lower on the food chain”?*
- *Where does your food come from?*

Explore Mono Lake

Students can learn more about Mono Lake, which they study extensively in this course, by viewing additional Mono Lake videos:

[Mono Lake: Mono Lake Through the Seasons](#)

[Mono Lake: Outdoor Education in the Mono Basin](#)

[Mono Lake: The Public Trust Doctrine](#)

[Mono Lake: Science and Restoration in the Mono Basin](#)

[Mono Lake: Science and Restoration in the Mono Basin \(Extended\)](#)

Track Seasonal Changes

Students can use nature journaling to track seasonal changes in their region. They can access instructions through the FOSSweb multimedia link “EX: [Nature’s Notebook](#)” and write up a report of their findings at the end of the closure.

Join [Roots and Shoots](#)

Students can join the youth network founded by Dr. Jane Goodall. They can access the site through the FOSSweb multimedia link “EX: Roots and Shoots” and clicking on “For Youth.” Students can explore a variety of ways to get connected and take action on the topics of social justice, pollution, climate change, and more.

Create “missing” and “wanted” posters

Students can research endangered and invasive species. Students might consider local or global examples.

Missing posters. Students choose a species that is in danger of extinction.

- Basic information: name, range, habitat, food, predators, etc.
- What has caused your species to become endangered?
- Identify human efforts to solve the problem.

Wanted posters. Students choose an invasive species.

- Basic information: name, range, habitat, food, predators, etc.
- What has caused your species to become invasive?
- Identify human efforts to solve the problem.

Research careers

Have students research science and engineering careers related to the content in this course, using the [Science and Engineering Careers Database](#) on FOSSweb. The database includes information about various careers and features diverse scientists.

Photo challenges

Students can take photos to answer one of the challenges below and create their own website, social media collection, or share the files with their teacher/classmates.

- [Sorting Out Life Photo Challenge](#)

Can you sort out the different elements of an ecosystem where you live?

Take a picture that represents one of the following: individual, population, community, ecosystem, or an abiotic factor.

- Decomposers Photo Challenge

Decomposers are organisms that are an essential part of any ecosystem. Take pictures that show something decomposing.

- Adaptations Photo Challenge

Adapting allows organisms to survive in certain environments. Photograph an organism and identify an adaptation.

How does this adaptation help the organism survive in its environment?

- Human Effects Photo Challenge

How have humans affected different environments?

What evidence do you see of changes because of human interaction?