

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 Electromagnetic Force, Home/School Families, Teacher version COVID-19 School Closure Instructional Opportunities—March 19, 2020

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

Develop Force Problems. Students can invent force problems based on real-life situations similar to the notebook sheets *Forces on Carts A and B*. Students should select a different scene and characters. The problems should have answers such as “The object will move to the left (or right)” or “The object will not move,” or perhaps something more complex. Students can trade their problems via email or text. After the problem has been solved by others, the original author can post the answer along with their intent and thinking.

Test Force in Online Simulation. Students can experiment with net force, motion, and friction using an online simulation, “[Force and Motion: Basics](#).”

Make a compass. Students can make a compass using a sewing needle, magnet, plastic-foam chip, and cup of water. They should rub the needle in only one direction several times with the magnet, then stick the needle into the foam chip. They can anchor the chip in the center of a cup of water using thread and a paper clip.

Dissect Electronics. Students can take apart old, broken toys, doorbells, and speakers to check for electromagnets and generators. NOTE: This should only be done with adult supervision and when power sources are disconnected. The casing can be removed to reveal internal parts and wiring, but the internal components should NOT be dissected further to avoid possible injury.

Research Careers. Students can research science and engineering careers related to the content in the course, using the [Science and Engineering Careers Database](#) on FOSSweb. Students can pick a scientist or career from Engineering, Technology, or Physical Science and then complete a report on the person or career. Students with access to a smartphone could video themselves reporting as if it were a news segment.

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.

- [Electronic Components Photo Challenge](#)
What's inside your electronic device?

Take pictures of the electronic components inside broken or discarded electronic devices.

Safety note: Be sure to follow safety rules during electronic dissections, and get permission from an adult before you begin your electronic dissection! The casing can be removed to reveal internal parts and wiring, but the internal components should NOT be dissected further to avoid possible injury.