

LETTER FOR EARTH AND SUN MODULE

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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 module or course are active investigations that can be conducted at home (inside or outdoors), online readings, or online multimedia experiences including research. For elementary grades, there are also math problems related to the science. Most of these activities are part of the existing module or 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 **Module/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

HOME/SCHOOL CONNECTION—WEEK 1, A

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Investigation 1: The Sun

Focus Question: How are shadows made?

Find out more about shadows and have fun making shadow images!

Materials:

- Darkened room
- Flashlight
- Interesting objects to make shadows
- Your hands
- Science notebook
- Computer with Internet access

Instructions:

1. Collect some interesting objects in your home that you think will make interesting shadows.
2. Place the objects one at a time in front of the flashlight beam.
What does the shadow look like?
Be sure to rotate the object in front of the beam as the shadow may change depending on how the light is shining on it.
3. Record your observations in your notebook. You should include a picture of the object and then drawings of the shadow that you created.
4. Write a description under your shadow drawing to explain why the shadow looks like it does.
5. Do an Internet search on “hand shadow puppets.”
6. Try to make the shadow puppets at home.
7. Record your shadow puppets in your notebook.
What is the shadow (rabbit, dog, etc.)?
How did you need to hold your hands to create the shadow?
Why does the shadow
look like the puppet you were making?

HOME/SCHOOL CONNECTION—WEEK 1, B

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Investigation 2: Planetary Systems

Focus Question: Are there moons orbiting other planets in our solar system?

Research the other seven planets in our solar system and identify which planets have their own moons and how many each planet has.

Materials:

- Computer with Internet access

Instructions:

1. Do an Internet search of the planets in our solar system. A good site to start with is NASA (www.nasa.gov).
2. Create a chart that details the following information:
 - a. Name of the planet
 - b. Does this planet have its own moon(s)?
 - c. How many moons does the planet have?

HOME/SCHOOL CONNECTION—WEEK 1, C

Investigation 2: Planetary Systems

Focus Question: How has space exploration progressed over time?

Find out when humans first explored space first-hand. How has that changed over time?

Instructions:

1. Do an Internet search on space exploration. What are the mile-stones in space exploration?
2. Create a time line that includes major events in space exploration.
3. Choose one of these major events and do more research on the topic.
4. Choose a way to present information on this event such as a written report, a PowerPoint presentation, creating a model (e.g., the Space Shuttle), or create a stop-action movie.

HOME/SCHOOL CONNECTION—WEEK 1, D

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Investigation 3: Earth's Atmosphere

Focus Question: How does the weather at your home change over time?

Track the weather at your home and look for patterns over time.

Materials:

- Computer with Internet access
- Science notebook
- Camera

Instructions:

1. Track the weather at your home every day.
 - a. Use the Internet to find the weather forecast for your area. Some good ones to access are Weather Underground (www.wunderground.com) or The Weather Channel (www.weather.com).
 - b. Record the weather forecasted for your area in your notebook. Through the course of the day, check the weather to see how accurate the forecast was.
 - c. Record the weather you experience each day. If there was precipitation (rain, snow, sleet), record how much fell. Record temperature, sky cover (sunny, partly cloudy, cloudy, etc.) and take pictures to add to your notebook.
2. Look for patterns in the weather you experience. See if you can predict the weather for the next day after following the weather pattern in your area for a few days.
3. Research what the weather is typically like in your area at this time of year. Compare your research to the actual weather you are experiencing. If there are major differences, why do you think that happened?
4. How does the weather you experience differ from weather in other parts of the world during the same time period?