

FOSS ENERGY MODULE—WEEK 2

.....

Hello Students, Teachers, and Families,

FOSS students and families gain access to resources on FOSSweb through the class pages set up by the teacher (<https://www.fossweb.com>). Login using the user name and password provided by your teacher, and click on a module. You will have access to the **Home/School Connection** for that module as well as digital resources—online readings, videos, and multimedia experiences. To facilitate science teaching and learning during school closures, the FOSS team has provided **additional** Home/School Connections that engage students with firsthand experiences at home. Look for new downloadable activities every other Friday.

For teachers and students who have not registered for FOSSweb, you can use a direct link to get to the **Home/School Connection Center** from the home page without logging in. Select the appropriate module from the scope and sequence download the Home/School Connection and Math Extensions. Access is limited to the Home/School Connection Center for non registered users.

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>

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

You can add Manage your Class pages and add notes for the students. If your district does not have access, use the access code FOSSK8CVHS, valid through May 2020. For self-registered teachers only, enter this code from the green “Activate Your Access Code” button on the upper right corner of your Teacher page.

For District-registered Teachers: Your students automatically have access to the student pages on FOSSweb. You can add Manage your Class pages and add notes for the students. Content for rostered schools and districts is enabled and assigned during the onboarding process. If your students do not have access to eBooks, please contact your District IT Administrator or your Curriculum Coordinator.

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

.....

Investigation 2: The Force of Magnetism

Focus question: How strong are magnets used at home?

Materials:

- Common household magnets

Suggested procedure:

- Collect any magnets you have at home and compare the strength of each.
- What items are attracted to the magnets? Can you attract more than one item to the magnet?
- Compare two magnets and what is attracted to them. Are there any differences? Why do you think?
- Make a drawing and label the system you used to test the magnet strength.

Read the interactive e-Book article “When Magnet Meets Magnet”

In your notebook, respond to the questions at the end of the reading, Thinking about Magnetic Interactions.

HOME/SCHOOL CONNECTION—WEEK 1, B

.....

Investigation 2: The Force of Magnetism

Focus question: What outdoor materials stick to magnets?

Materials:

- Common household magnets

Suggested procedure:

- Take some of your magnets and go outside.
- Test things right outside your front door, your building, and/or house.
- Test what human-made objects and natural objects stick to your magnet.
- Make a list in your notebook and record your results.
- Were you surprised by any of the objects you tested?

Did you notice any patterns?

Check out FOSSweb Multimedia

“Kitchen Magnets”

“Magnetic Poles”

“Magnetic Poles Quiz”

HOME/SCHOOL CONNECTION—WEEK 1, C

.....

Investigation 2: The Force of Magnetism

Make a compass

You can make a simple compass by turning a sewing needle into a permanent magnet. Here's how to do it.

Materials:

- 1 Steel sewing needle
- 1 Permanent magnet
- 1 Steel paper slip
- 1 Piece of plastic foam or cork
- 1 1/2 liter container or cup
- Water
- Thread



What to do:

1. Tie one end of the thread to the paper clip
2. Tie the other end of the thread around the piece of plastic foam or cork
3. Using a permanent magnet, rub the sewing needle several times in one direction. Now the needle has two poles, just like every magnet.
4. Push the needle through the piece of plastic foam or cork
5. Put the needle-and paper clip system in the center of the container of water.

Which way is north?

The needle will float in the cup of water and rotate to line up with Earth's magnetic field.

The needed is a compass?

The paper clip acts as an anchor so that the needle can freely rotate and won't get stuck on the side of the container.

Read the interactive e-Book article "Make a Magnetic Compass".

Check out this Streaming Video: All about Magnets

Check out on FOSSweb Streaming Video, All about Magnets

Chapter 1, Introduction

Chapter 2, How to magnets work?

Chapter 3, What is a magnetic field?