

FOSS® AT HOME

PLANTS AND ANIMALS

The FOSS® (Full Option Science System™) program offers a number of ways to get parents involved in their child's science education. Included here are short descriptions of several ways to bridge from classroom to home.

Letter to Parents. The letter to parents can be sent home at the start of a new science module. The letter describes what children will be learning and ways that parents can enrich the science-learning experience.

FOSS Science Resources. *FOSS Science Resources* is a series of original books developed to accompany and enrich the FOSS modules. The books for grades 1–2 are written in an expository format that presents factual information in a clear and concise manner. The books are designed around instructional photographs that directly relate to the text, calling attention to particular details, suggesting comparisons, and directing students to think critically about the images.

Here are some suggestions for using *FOSS Science Resources* at home.

- **Expository Readings.** The expository readings provide excellent opportunities for students and parents to discuss the science content students are learning in the module. Specific articles include *What Do Plants Need?*, *What Do Animals Need?*, *Plants and Animals around the World*, and *Animal Teeth*.
- **“Review” Questions.** Students can read the article as a class and then read it again at home with their family members. Once students have reviewed the article, they can answer the “Review” questions at home on the science notebook sheet or in their science notebooks. You might consider this strategy after students read *The Story of Wheat* and *How Seeds Travel*.

LETTER TO PARENTS

Cut here and glue on school letterhead before making copies.

SCIENCE NEWS

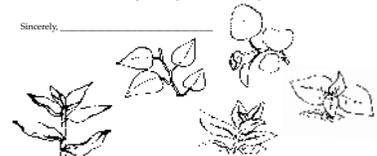
Dear Parents,

Our class is beginning a scientific study of plants and animals. We will be investigating several ways to propagate new plants, including growing plants from seed (wheat, eye grass, and alfalfa, a legume); bulbs (onions and garlic); stems (white potatoes and cuttings from various plants); and roots (carrots and radishes). The scientific thinking processes children will be using in their investigations include observing properties and structures of plants; communicating discoveries orally, in writing, and through drawing; comparing the development of plants over time; and organizing their findings in order to draw conclusions about how different plants reproduce. We will be making a terrarium and comparing the needs of plants and animals. We will be looking at features of different plants and animals and studying how those features help the plants and animals live in different environments. In addition, we will learn how animals use different teeth to bite, cut, and chew their food. I hope you will encourage your child to share his or her growing knowledge of plants and animals at home, and perhaps engage in a few plant-growing activities at home as well.

If your child has specific plant allergies, please let me know so I can plan accordingly.

We will root cuttings in a couple of weeks. If you have one or more plants that you could donate to the science program at that time, I would appreciate it. I could use Swedish ivy, English ivy, coleus, spartan, or Wandering Jew plants. Thanks. We're looking forward to lots of fun and lots of learning as we explore a world full of plants and animals!

Sincerely,

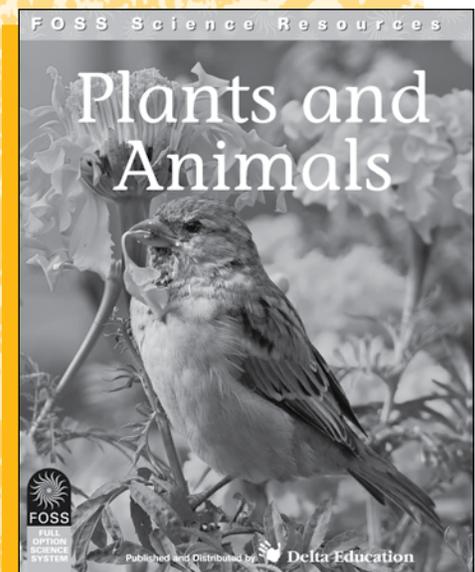


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Investigation 1: Grass and Grain Seeds
No. 1 – Teacher Sheet

No. 1 – Teacher Sheet





Name _____ Date _____

HOME/SCHOOL CONNECTION INVESTIGATION 1: GRASS AND GRAIN SEEDS

Wheat, corn, barley, rice, and oats are grass plants that are staple sources of nutrition for cultures around the world. The abundant seeds of these plants are the group of foods we call grains. You may have examples of grains in your kitchen, perhaps as whole grains of rice or a tortilla made from flour. Here are some places where another grain, corn, might be found in your kitchen.

| | | | | |
|-------------|-------------|---------|-------|------------|
| tortillas | cereal | bread | flour | muffins |
| frozen corn | canned corn | popcorn | grits | cornstarch |

Have your child look for examples of grains in your home. He or she can list the examples or bring in a small labeled sample for a class display.

| | | |
|-------|------|--------|
| Wheat | Corn | |
| Rice | Oats | Barley |

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No. 13—Teacher Sheet

Name _____ Date _____

MATH EXTENSION B INVESTIGATION 1: GRASS AND GRAIN SEEDS

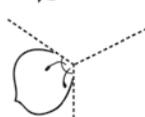
Many flowers and leaves look the same on both sides, like this.



1. Color in the half leaf and half flower.
2. Copy the pattern on the other side to make a whole flower or leaf. Color it.



3. Try a three-part pattern!



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No. 6—Teacher Sheet

NOTE: All student sheets, including the Letter to Parents and Home/School Connections, are available in FOSS Teacher Guides and online at www.fossweb.com. They are also available in Spanish. See For Parents and Teachers: Home/School Connection on page 4 of this folio.

Science Notebook Sheets. Throughout the module, students complete various recording and response sheets. Students should bring the sheets and/or their science notebooks home for families to review and discuss. For example, science notebook sheet number 6, *Stem Cuttings*, is a good opportunity for students to explain and review with parents how new plants can grow from the stems of mature plants.

Home/School Connections. Home/School Connections are activities developed specifically for the whole family to enjoy at home. For example, in Investigation 1 (Teacher sheet number 13), students and their families can find several uses of grains in their home, whether it be whole grains of rice or a tortilla made from flour. Students can list the examples they find or bring in a labeled sample or two for a class display of grains.

Interdisciplinary Extensions. Each investigation has suggestions for art, language, math, social studies, and science extensions. These are good family activities. For example, after Investigation 4 students and their families can grow a plant by placing a sweet potato in water. Use three toothpicks to suspend a sweet potato so the bottom half is submerged in a container of water. The sweet potato will develop into a luxuriant houseplant. They might also do the *Math Extensions* at home.

FOSSweb (www.fossweb.com). FOSSweb is an interactive website where families can find instructional activities and interactive simulations specifically designed for each FOSS module.

Hello parents and teachers:

Download a copy of the Plants and Animals Module Home/School Connection PDF in English or in Spanish. To view or print the Home/School Connection PDF, you must have the Adobe Acrobat Reader plug-in. Acrobat Reader is available free at <http://www.adobe.com>.

Inside the PDF you'll find:

Letter to Parents

Each FOSS module includes a letter to parents to tell you what your child will be doing in the investigations at school and to share ways that you can develop your child's scientific interests at home.

Home/School Connections

There are many ways to extend your child's science experiences at home and to have fun together. We have developed a Home/School Connection for four investigations in the **Plants and Animals Module**. These require little or no materials from home.

Investigation 1: Grass and Grain Seeds—Search out grains at home!
 Investigation 2: Stems—plant stems at the market!
 Investigation 3: Terrariums—Make a bottle terrarium!
 Investigation 4: Bulbs and Roots—Finish the story of Henry's bright idea!

NOTE: Pages 3 and 4 of this folio can be photocopied and sent home for parents to read. Those pages provide information on the resources for students and their families on FOSSweb.

FOSSWEB (WWW.FOSSWEB.COM)

The FOSS program maintains a resource-rich website for students and their families and friends. To explore the resources available for the **Plants and Animals Module**, first enter www.fossweb.com in your browser.

The FOSS website requires plug-ins for your browser. We recommend that you click the “Test Your Browser” link at the bottom of the home page before you begin to ensure your computer has the minimum requirements.

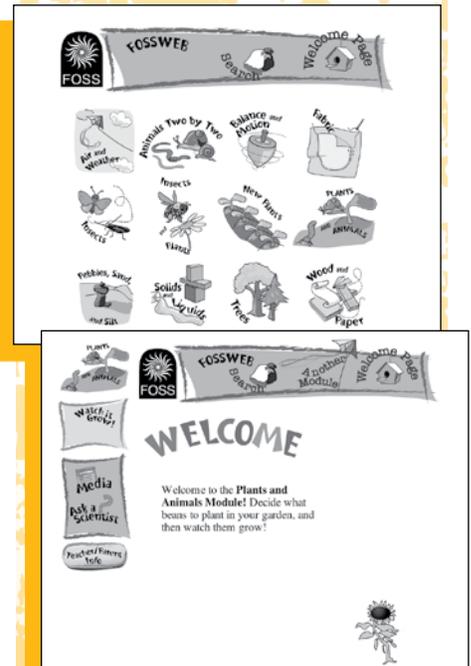
Click the grades K–2 icon to get a menu that links to each of the K–2 modules. There you can choose **Plants and Animals** and travel to a wealth of information and activities specific to this module.

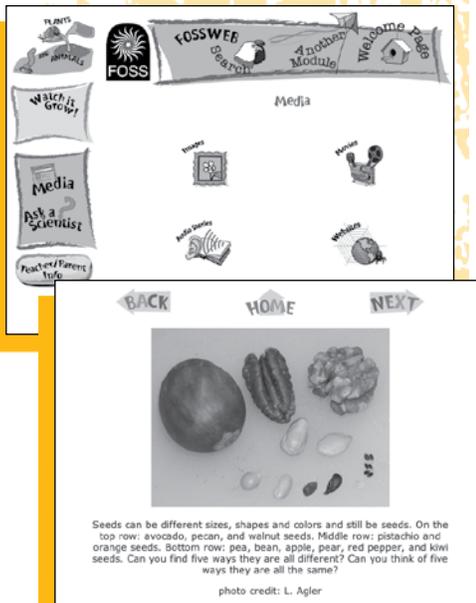
ACTIVITIES

In the **Plants and Animals Module**, you’ll find an activity called Watch It Grow! Students decide which seeds they want to watch grow. Do this activity after children have had experience growing several kinds of plants. Before starting the activity, you might ask,

- *What pattern do you notice?*
- *What did we use to start the plants (e.g. seeds, roots, stems, etc.)?*
- *How long did it take the different plants to grow?*

If necessary, review the different plants children have grown and which plants came from seeds, bulbs, and so forth. At the computer, have children decide on five different plants to grow. Discuss how each plant gets started, from a root, seed, or bulb. For the first trial, you might grow all five plants; for future trials, you might grow two of one kind of plant, three of another, and so on. Once you have selected the five plants, click Go to the Garden and watch the time-lapse version of what happens to the plants over several days and weeks. After several weeks, children can compare the roots, stems, leaves, flowers, and seeds of the different plants. If you click one of the words at the top of the window, you can learn more about the different plant parts. To reset the activity, click Back to Store in the window that appears after several weeks of growth.





MEDIA

The Media section includes a rich list of resources that can extend and enrich the concepts learned in the **Plants and Animals Module**. Here is where you will find images, movies, audio stories, and websites.

IMAGES AND MOVIES

The Images and Movies sections include pictures and movies that can enhance the concepts learned in the **Plants and Animals Module**. For example, you can view images of different seeds. Each image includes questions that you can use to stimulate discussion.

AUDIO STORIES

This section contains audio recordings of the *FOSS Science Resources* book for the **Plants and Animals Module**.

WEBSITES

The Websites section includes links to sites that can extend and enrich children's experiences with the **Plants and Animals Module**.

TEACHER/PARENT INFO SECTION

VOCABULARY

In the Vocabulary section, you will find the glossary words and definitions used in the **Plants and Animals Module**. They are provided in English and Spanish.

TEACHER RESOURCES: RESOURCE DATABASE

This section includes an annotated list of books and videos recommended for the **Plants and Animals Module**. You should be able to find many of these titles at your local library.

FOR PARENTS AND TEACHERS: HOME/SCHOOL CONNECTION

The For Parents and Teachers section includes the Home/School Connection that describes ways for families to do science together. For example, in Investigation 3 (Teacher sheet number 15), students and their family members make a simple terrarium from a 2-liter plastic bottle. Students can use the terrarium to continue the growth of their stem cuttings at home, or they can grow their own plants from seeds, potatoes, or yard transplants. Look in this section for other resources included in a downloadable PDF file, including a general letter introducing the module and math extensions that relate to the science investigations.

