

# Collecting and Examining Life Unit Teacher Masters: Table of Contents

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Dear Families,

Our class is beginning the Science Companion<sup>®</sup> Collecting and Examining Life Unit. This unit of study builds on the children's natural curiosity by increasing their awareness of living things in the world around them. As children observe and compare a variety of animals, plants, and fungi, they deepen their understanding of what makes something alive and of the similarities and differences among living things.

During the Collecting and Examining Life Unit, the children will:

- Explore the natural environment around the school for signs of living things.
- Establish and maintain classroom habitats for brine shrimp, snails, crickets, and fish.
- Compare the ways animals move, breathe, eat, and use their senses.
- Study the structure and function of different plant parts.
- Experiment with seed dispersal and the conditions necessary for sprouting and growth.
- Grow mold and observe its development.

In addition to the work your child will do in class, you and your child can explore this rich topic together at home in the following ways:

- Visit the library and search for books about living things to read together and share with the class. There are book suggestions on the Science Companion web site. This web site also features a list of recommended web sites about living things. The address is: **www.sciencecompanion.com**
- Work together on the Family Link activities that are sent home from time to time. Your child may also want to repeat and vary some of the activities we do in class, as well as explain what they discovered and learned. Try to encourage their independent experimentation at home.

Making sense of the living world is a satisfying and engaging process for children and adults. Hopefully, you will share some of your child's enthusiasm, thereby learning with them while helping them explore.

Sincerely,

# Fall Wild Walk

## Finding Signs of Living Things

1. Tell the children to look for signs of living things. For example:
  - Can they find signs of what animals have eaten? Can they find signs of animals' homes? What other signs of animals can they find?
  - What lives under the rocks or logs? After looking, make sure that you or the children replace the rock or log as it was.

**+ SAFETY NOTE:** If your local environment contains poisonous snakes, you should kick rocks or logs before looking under them, or use a sturdy stick to push them up.

- What plants (trees, bushes, grasses, cacti) or funguses (mushrooms, etc.) can the children find? Do they see any leaves? Seeds or nuts? Fruits or berries?

**+ SAFETY NOTE:** Any children or adults who touch wild berries or mushrooms should clean their hands with disposable wipes or damp paper towels.

2. Take notes about what children find for later discussion. Also take photographs. Collect and label appropriate items to bring back to the classroom for the Science Center.

## Collecting Leaves for Lesson 11

1. Ask the children to collect a variety of shapes, sizes, and colors.
2. Encourage the children to collect leaves that are still soft and flexible, rather than dry and crumbly.
3. Have children put the leaves they find into the group's plastic bag.

# Fall Wild Walk

## Collecting Soil for Lesson 4

1. Direct the children to a place that has shaded, moist soil, such as under a leaf pile or under a rotten log. They are going to collect some of the rich, moist soil that's so attractive to small soil animals.
2. Carry one or two plastic containers (e.g., a yogurt cup) for collecting your group's soil. Using a permanent marker, label the container with the soil source location.
3. Let the children dig up the soil and leaves with trowels or plastic spoons, and put it into the container.

## Taking a Sock Walk for Lesson 13

1. Direct the children to a particularly weedy area with a variety of weeds. Have them each put a large, old sock over one of their shoes.
2. Instruct the children to walk through the weedy area, and to swish their feet and socks through the plants.

**+** **SAFETY NOTE:** If you are in an area where ticks might be present, carefully examine each child to make sure that no ticks have hopped aboard.

3. Carry paper bags for each child, labeled with the child's name. When the children have collected several weedy seeds on the socks, place the socks in the paper bags.

# Class Book Page

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**Scientist:** \_\_\_\_\_



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# Zoo Clues

## Sheet 1

What animal lives... \_\_\_\_\_

in water? \_\_\_\_\_

in trees? \_\_\_\_\_

under ground? \_\_\_\_\_

in caves? \_\_\_\_\_

What animal eats...

leaves or fruit? \_\_\_\_\_

meat? \_\_\_\_\_

insects? \_\_\_\_\_

fish? \_\_\_\_\_

What animal has...

a long nose? \_\_\_\_\_

a short nose? \_\_\_\_\_

a long tongue? \_\_\_\_\_

eyes on the front of its head? \_\_\_\_\_

eyes on the side of its head? \_\_\_\_\_

# Zoo Clues

## Sheet 2

What animal...

swims?

---

slithers?

---

hops?

---

walks?

---

flies?

---

swings?

---

What animal has...

6 legs?

---

4 legs?

---

2 legs?

---

0 legs?

---

very short legs?

---

very long legs?

---

legs longer than you are tall?

---

# Food Seeds

Try to find the skin, pulp, seeds, and stem for each of your fruits.

Tally the number of seeds for each fruit:

apple	green bean	corn cob	strawberry

1. Which fruit had the greatest number of seeds? \_\_\_\_\_
2. Which fruit had the least number of seeds? \_\_\_\_\_
3. Which fruit had the largest seeds? \_\_\_\_\_
4. Which fruit had the smallest seeds? \_\_\_\_\_
5. Which fruit's seeds were outside the fruit's skin? \_\_\_\_\_

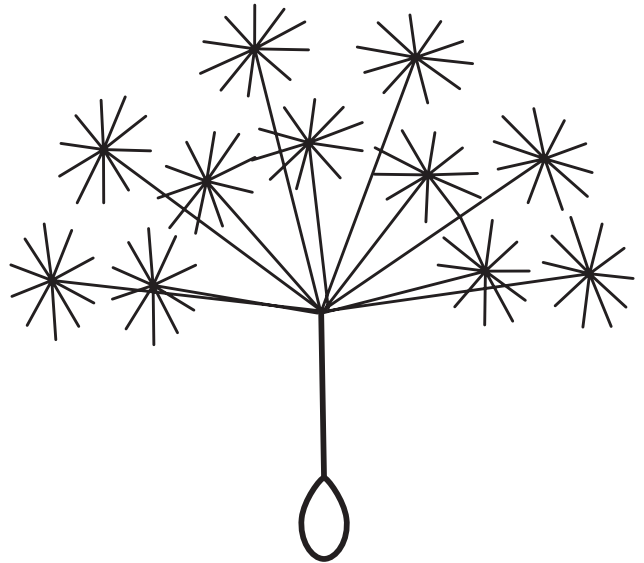


# Dynamic Dispersers

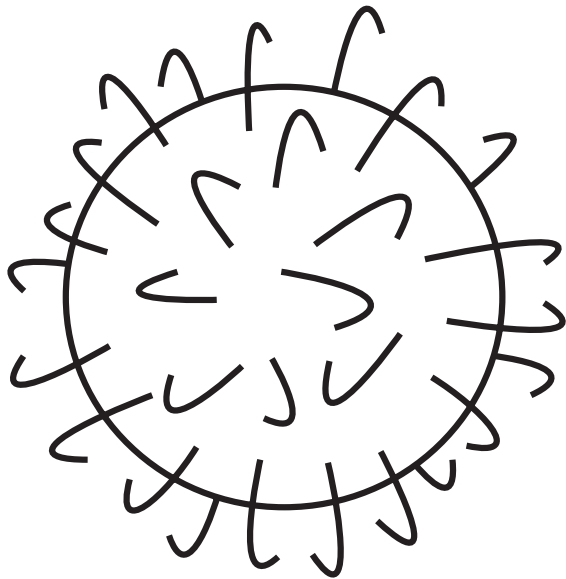
Seed a:



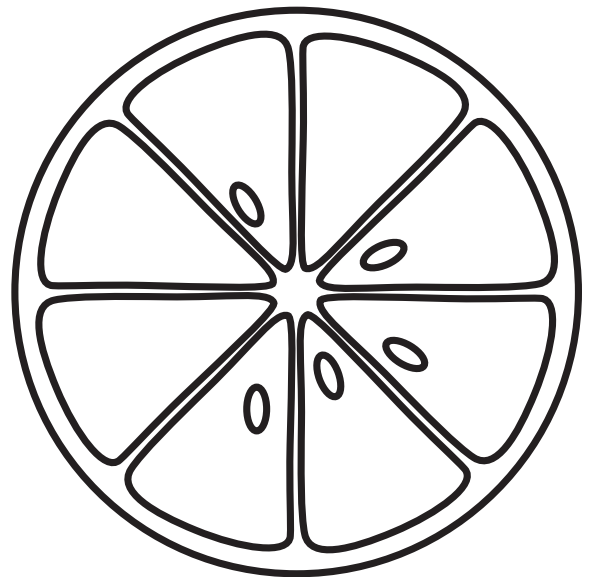
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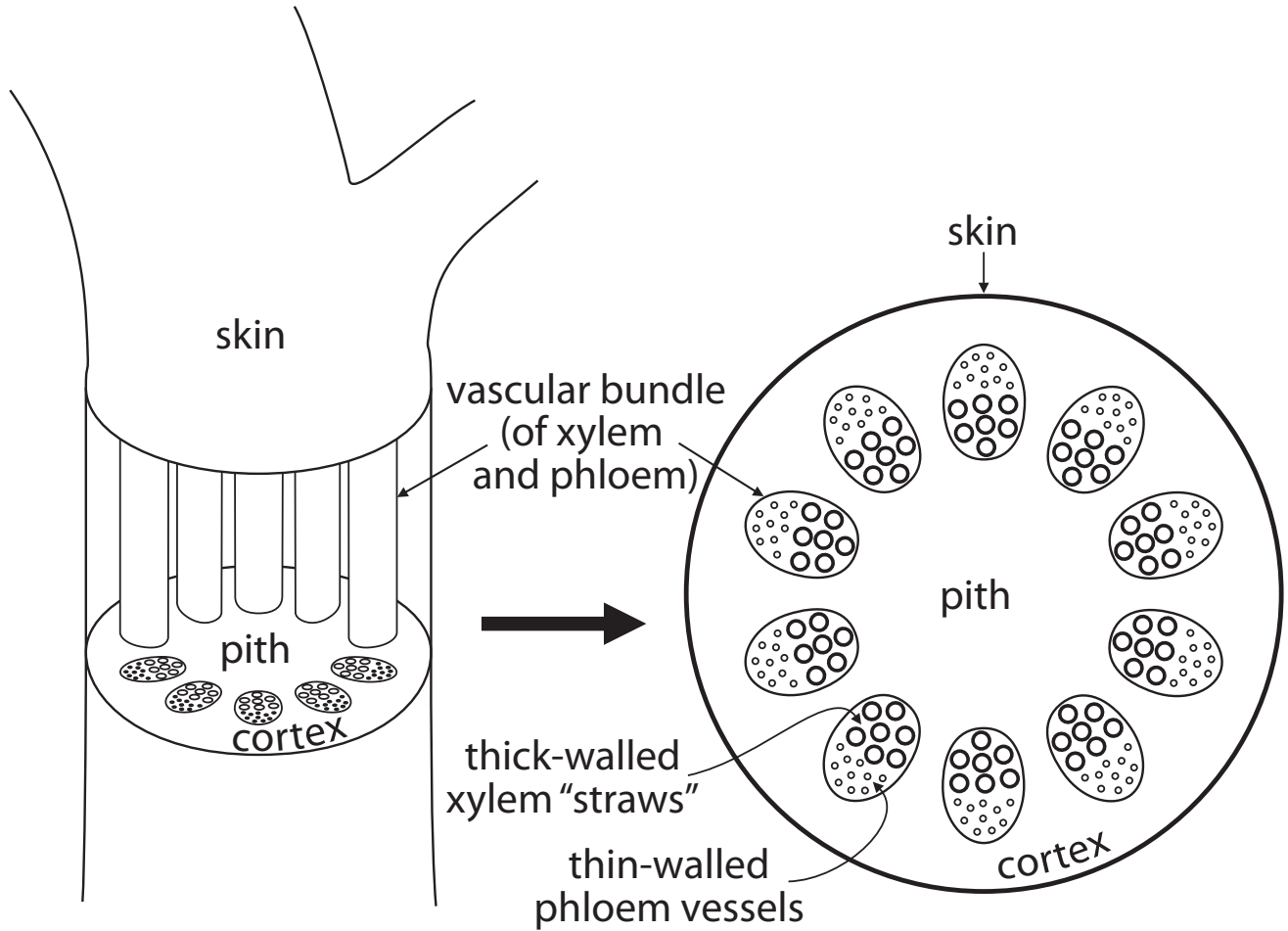
Seed c:



Seed d:



# Diagram of a Stem



Stem

Cross-section of Stem

# Spring Wild Walk

## Observing and Documenting the Spring Environment

1. Invite the children to search for and observe any signs of life in the spring environment. Remind them that they need to:
  - Choose at least one sign of life to study carefully.
  - Make notes and drawings about it. (These will be used to make the *Spring Nature Book*.)
2. While the children are working, walk around and see if they are having trouble deciding how to record the “sign of life” they have chosen. You might give the children ideas about the kinds of things they may record. For example, you might ask:
  - Where did you find it?
  - What else was nearby?
  - Give lots of details, such as shape, size, color, smell, and feel.
  - Were there lots of it, or did it seem rare?
  - How did you know it was a living thing or sign of life?
  - Why was it interesting to you?

## Observing and Collecting Flowers for Lesson 18

1. Ask children to collect spring flowers or tree blossoms. Have them work in groups so that they don't over-collect from the same plant.
2. Adults can help by doing the following:
  - Use clippers to snip flowers and blossoms from branches or stems. Don't tear parts off the plants.
  - Place flowers in a resealable plastic bag and seal them shut with some air remaining in the bag.
  - Label the bag with the name of the plant, if known, and whether the flowers came from a tree, a shrub, or from an annual or herbaceous plant.

# Bio Bingo

	<b>Free</b>	

# Observation Sheet

I looked at \_\_\_\_\_ .

Here is a picture of what I saw.



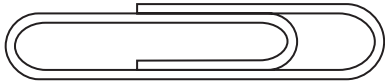
I noticed:

# Measuring Small Things



I measured:

a paperclip



length: \_\_\_\_\_ cm

width: \_\_\_\_\_ cm



length: \_\_\_\_\_ cm

width: \_\_\_\_\_ cm



length: \_\_\_\_\_ cm

width: \_\_\_\_\_ cm



length: \_\_\_\_\_ cm

width: \_\_\_\_\_ cm

# Using Balances and Scales

1. I have two vegetables. One is a(n) \_\_\_\_\_  
and the other is a(n) \_\_\_\_\_.

2. Which vegetable **feels** heavier? \_\_\_\_\_.

3. My balance looks like this one: (circle one)



Draw a picture of your vegetables in the balance pans.

4. Which vegetable is heavier? \_\_\_\_\_

5. The balloon weighs            more less            than the marble.

(circle one)

6. Are larger objects always heavier than smaller ones? \_\_\_\_\_

7. My pencil weighs about \_\_\_\_\_ grams.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Family Link with Science

# Empty Bottles

Our class can use your empty, clear plastic, 2-liter bottles. We will use them in one of our science lessons. Please send in rinsed bottles.

Thank you!



Name: \_\_\_\_\_ Date: \_\_\_\_\_

Family Link with Science

# Empty Bottles

Our class can use your empty, clear plastic, 2-liter bottles. We will use them in one of our science lessons. Please send in rinsed bottles.

Thank you!



Name: \_\_\_\_\_

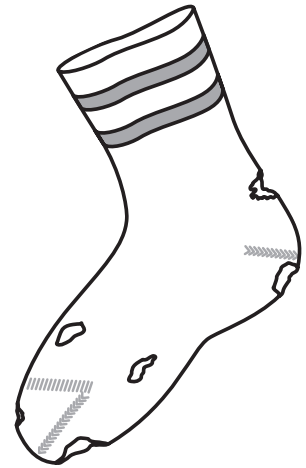
Date: \_\_\_\_\_

## Family Link with Science

# Old Socks

During our next science lesson we will be taking a walk through some weedy areas. In order to collect weed seeds, we need the children to bring from home some clean, worn-out socks that are ready to be tossed out. If possible, we need **adult** socks, so they will fit over the children's shoes.

Have your child bring the socks to class in a bag with his or her name on it. Make sure there are no holes in the bag.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

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Have your child bring the socks to class in a bag with his or her name on it. Make sure there are no holes in the bag.



Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Family Link with Science

# Garden Snails

We will be studying snails in science class, and we need you to help us collect some!

1. Look on the ground for their silvery tracks. If the tracks are still slimy, you might be able to follow them to an active snail.
2. Look under rocks, leaves, flower pots, and in other dark, damp places for snails' resting places.
3. Put the snails you collect in a clean, dry, covered container, such as a:
  - Shoebox
  - Cottage cheese or yogurt container covered with netting (You could use a cut-up nylon stocking.)
4. If you want to feed the snails, give them lettuce, celery, fresh leaves, or corn meal.
5. Bring the snails to school!

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Family Link with Science

# Kitchen Seeds

We are studying seeds in science class.

Please find several kinds of seeds in your kitchen, such as:

- whole spices (peppercorns, dill seed, cardamom . . .)
- **dry** beans (lentils and other beans . . .)
- whole grains (popcorn, barley, brown rice . . .)
- fresh fruit seeds (peach pits, watermelon seeds . . .)
- fresh vegetable seeds (seeds from sweet peppers, tomatoes . . .)

Put each kind of seed into separate plastic wrap or bags.

Label each with the name of the seed and your name.

Bring your seeds to school.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Family Link with Science

# Mold Food

During our next science lesson we will attempt to grow mold.

Mold requires food to grow.

Please bring a piece of bread or cheese to class by \_\_\_\_\_.

Any flavor will do.



Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Family Link with Science

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Mold requires food to grow.

Please bring a piece of bread or cheese to class by \_\_\_\_\_.

Any flavor will do.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Family Link with Science

# Looking for Mold

We learned in science class that mold is a living thing called a fungus. It is not a plant or an animal.

When and where does mold grow? Try and find examples of mold and draw or describe them below.