Life Lab Science
Preview Sampler

Third Grade Edition

An Introduction
to the
Life Lab Science Curriculum

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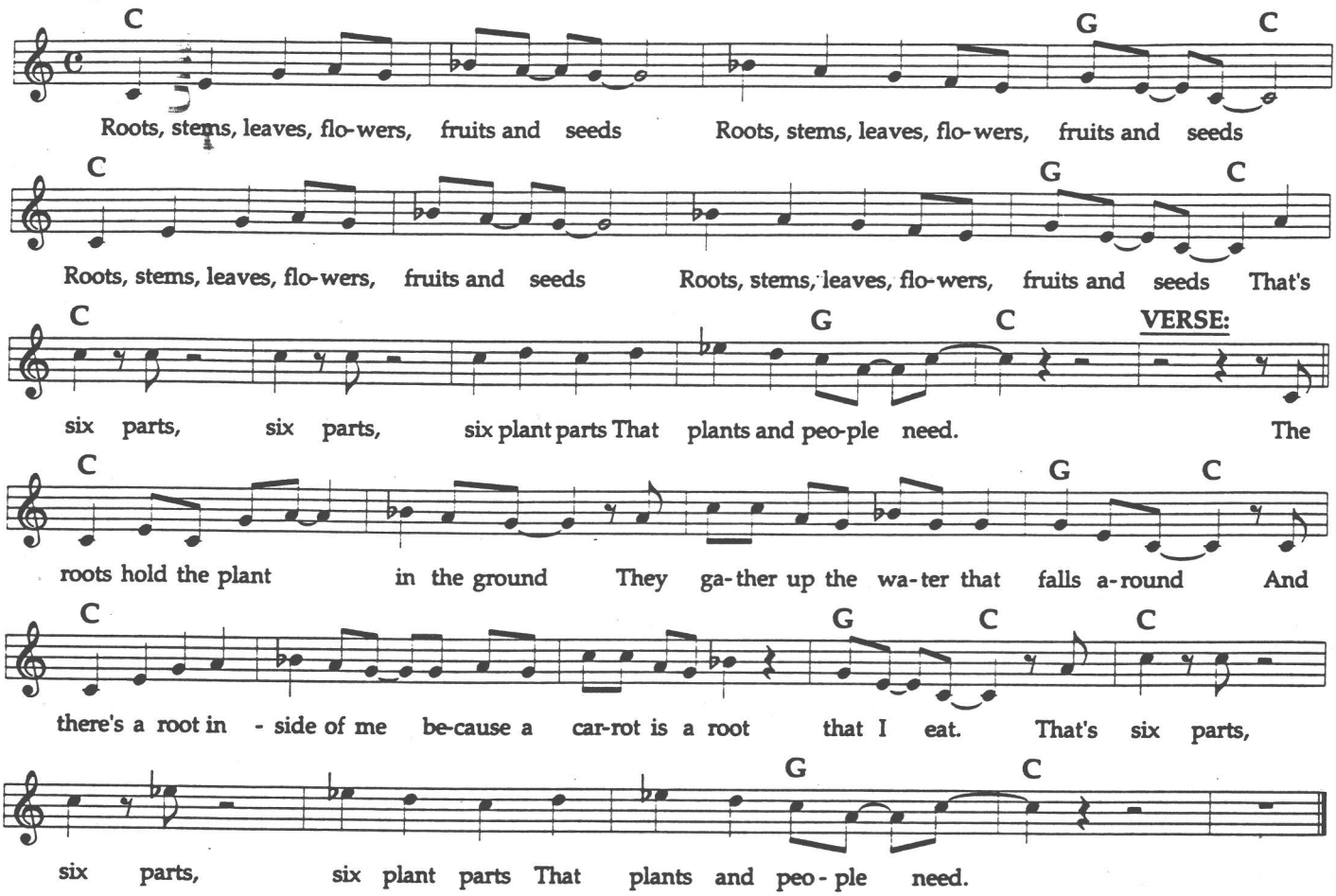
CHORUS:

Written by Steve Van Zandt



A stem is an elevator growing up from the ground
The water goes up and the sugar back down
And there's a stem inside of me
Because celery is a stem that I eat.

The leaves are the kitchens where the food is done
They breathe the air and catch rays from the sun.
And there's a leaf inside of me
Because lettuce is a leaf that I eat.

CHORUS

The flowers are dressed so colorfully
They hold the pollen and attract the bees
And there's a flower inside of me
Because cauliflower is a flower that I eat.

The fruit gets ripe, then it falls on down
It holds the seeds and feeds the ground.
And there's a fruit inside of me
Because an apple is a fruit that I eat.

The seeds get buried in the earth
And the cycle starts again with a new plant's birth
And there are seeds inside of me
Because sunflower is a seed that I eat.

Now you know what this whole world needs,
It's roots, stems, leaves, flowers, fruits, and seeds.
There's six plant parts inside of me
Because a garden salad is what I eat.

CHORUS

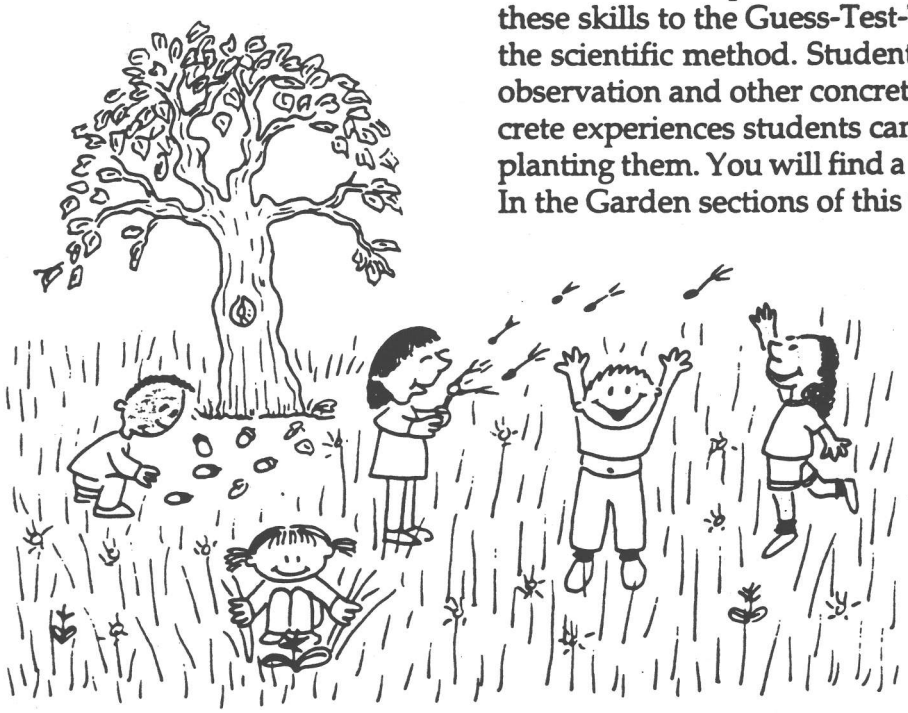
Music can be found on BSSB tape accompanying this curriculum

Seeds

A seed is a promise of a full-grown plant, a small suitcase with a great memory, a package of concentrated energy, a mysterious object waiting for the right conditions to develop. For students, seeds are objects of wonder that they can collect, dissect, and investigate. Some students may still believe that plants are not alive because they do not move. As these children plant seeds and watch them grow, they begin to refine their understanding not only of seeds but also of the characteristics of living things.

The exploration of seeds is an excellent introduction to this year's science theme: structure-function. By gathering, examining, and germinating seeds, your students discover how the structure of a seed is related to its function—the creation of new plants. They explore, too, the structure of each part of the seed and investigate its function. They discover how each of these parts relates to the way a seed grows into a plant. They also observe how the external parts of the seed protect the embryo and aid in the dispersal of the seed. And they discover that the embryo itself contains everything needed for a new plant to develop.

The first unit emphasized observation skills. Now students apply these skills to the Guess-Test-Tell process, a simplified version of the scientific method. Students learn to base their hypotheses on observation and other concrete experiences. Two of the most concrete experiences students can have with seeds are collecting and planting them. You will find a variety of fall gardening ideas in the In the Garden sections of this unit.



Student Goals

Theme: Students observe how the structures of living things are suited to the functions they perform.

Science Explorations: Students explore the relationship between the structures of seeds and their functions—germination and dispersal.

Process Skills: Students practice making predictions and recording observations.

Science Concepts

In this unit, students explore Life, Earth, and Physical science concepts as they investigate seeds.

Life Science: Seeds are produced by plants, and, under the right conditions, develop into plants.

Earth Science: Certain climatic conditions are needed for seeds to germinate.

Physical Science: A seed's structure determines its means of movement and the speed at which it disperses.

Unit Activity	Description	Process Skills	Instructional Model			Science Concepts				Related Subjects
			PRE-ASSESS.	EXPLORATION & CHALLENGE	APPLICATION & REFLECTION	LIFE	EARTH	PHYSICAL	STS	
Seed Hunt	In this preassessment activity, students collect seeds from plants.	Observing, Communicating	✓			✓				Art, Math
Seed Detectives	Students explore the mystery of seed growth by examining seed parts.	Observing, Comparing		✓		✓		✓		Art
Shoots and Roots	Students use the Guess-Test-Tell process to investigate seed germination.	Observing, Predicting		✓		✓				Math, Language Arts
Hitchhiker Seeds	Students compare seeds that "hitch-hike" on fur with those that disperse in other ways. Then they design their own hitchhiking seeds.	Recording data, Modeling		✓		✓		✓		Language Arts, Art
The Life of a Seed	In this postassessment activity, students plant seeds and create a story about how a seed becomes a plant.	Communicating, Applying			✓	✓	✓		✓	Language Arts, Art

Unit Planner

Activity	Time	Special Arrangements	Literature Links
Seed Hunt	Part 1: 30 min Part 2: 45 min	Send home Parent Letter; remind students to bring seeds.	Jennings, *Seeds and Seedlings*
Seed Detectives	40 min	Soak seeds ahead of time.	Lobel, "The Garden" from *Frog and Toad Together*
Shoots and Roots	Part 1: 40 min Part 2: 20 min Part 3: 20 min	Soak seeds ahead of time; build seed growth chambers.	Suzuki, *Looking at Plants*
Hitchhiker Seeds	Part 1: 20 min Part 2: 20 min Part 3: 20 min	Collect seeds in a weedy area the day before.	Lauber, *Seeds Pop! Stick! Glide!*
The Life of a Seed	Part 1: 30 min Part 2: 20 min	Have ready either garden space or soil and pots; have on hand seed from packets and the seed collection.	Jaspersohn, *How the Forest Grew*

Life Lab Videodisc

Find out ways to incorporate the Life Lab Videodisc into this unit by turning to Section 3.2-Seeds in the *Videodisc Guide.*

Life Lab Center

Turn the Life Lab Center into a place where students can observe and experiment with seeds. Provide a variety of seeds, a scale, a water tub or bowl, hand lenses, and measuring instruments for students to use independently throughout the unit. You may also wish to include the following activities in the Center:

- Display pictures of seeds that people use for food. Challenge the class to add to the exhibit.
- Create an exhibit of seeds students collect during this unit. Seeds may be displayed in egg cartons or taped to posterboard. Be sure that each is labeled.
- Display a few seed riddles on a bulletin board for students to solve. Illustrate the riddles and decorate the borders with seeds and question marks. Encourage students to make up their own riddles and display them in the Center. *Examples:* What kind of seed pops up at the movies? (Popcorn) What seed sails the ocean blue? (Navy bean)

Garden Activities

- Gather seeds and save them in envelopes for spring planting. See the Appendix for information on collecting seeds, and *Gardening Know-How for the '90s,* p. 36, for information on storing seeds.
- Plant a cover crop ("green manure") or cool-season crops. See *Gardening Know-How for the '90s,* pp. 168–179, for information on cover crops and suggested hardy or semi-hardy crops.
- Build cold frames or other heat-conserving growing environments for plants. See *Gardening Know-How for the '90s,* pp. 43–46.

Recommended Literature

Story Books

Cooney, Barbara. *Miss Rumphius*. New York: Viking, 1982. Great Aunt Alice Rumphius was once a little girl who loved the sea, longed to visit faraway places, and wanted to do something to make the world more beautiful—which she did by planting lupine flowers.

Howe, John. *Jack and the Beanstalk*. Boston: Little, 1989. This traditional fairy tale tells of Jack and his magic beans.

Lobel, Arnold. "The Garden" from *Frog and Toad Together*. New York: Harper, 1971. Toad plants a garden and tries many ways to get his seeds to grow including singing, reading, and yelling.

Selsam, Millicent E. *Seeds and More Seeds*. New York: Harper, 1959. A young boy sets up experiments to see what grows. When his seeds germinate, he compares the resulting plants to each other.

Williams, Vera B. *Cherries and Cherry Pits*. New York: Greenwillow, 1986. A young city girl draws pictures and writes stories about cherries and cherry pits.

Reference Books

Bates, Jeffrey. *Seeds to Plants*. New York: Gloucester, 1991. This reference book about plants and seeds includes a variety of projects for students.

Burnie, David. *Plant*. New York: Knopf, 1988. This photo essay exploring the world of plants makes a good reference book. *Tree*, another title in the series, may also be of help in identifying seeds and trees.

Coldrey, Jennifer. *Strawberry*. New York: Silver Burdett, 1989. The life cycle of the strawberry is traced through text and photographs.

Jaspersohn, William. *How the Forest Grew*. New York: Greenwillow, 1980. Here is an account of the gradual transformation of a cleared farm field into a dense forest.

Jennings, Terry. *Seeds and Seedlings*. Chicago: Children's, 1989. The book details the kinds of seeds produced by different kinds of plants and how they spread and germinate.

Lauber, Patricia. *Seeds Pop! Stick! Glide!* New York: Crown, 1981. Students will appreciate the rich variety of seeds detailed in this book's black-and-white photos. The book describes some of the many different ways seeds travel and disperse.

Mitgutsch, Ali. *From Seed to Pear*. Minneapolis, MN: Carolrhoda, 1981. After germinating, a pear seed grows and produces a fruit-bearing tree.

Newton, James. *A Forest Is Reborn*. New York: Crowell, 1982. This is a story of how a forest recovers from fire, and includes a discussion of the natural dispersal of seeds.

Overbeck, Cynthia. *How Seeds Travel*. Minneapolis, MN: Lerner, 1982. Here is an account of how seeds are dispersed and how plants reproduce.

Suzuki, David. *Looking at Plants*. Toronto: Warner, 1985. The text examines the characteristics, growth, and care of plants. It also provides ideas for experiments involving plants.

Some of these books may be available in Spanish-language editions. Check with your local bookstore for Spanish titles currently in print and available by special order.

Date:_____

Dear Parent or Guardian:

During the next few weeks, we will be studying seeds as part of our Life Lab Science Program. We will be exploring the parts of a seed, how seeds travel, and the ways seeds grow into plants. Here are a few ways that you can enhance your child's investigation of seeds:

- Support your child's efforts to collect seeds for our seed collection. Look for seeds that are still in their "traveling form"—that is, seeds that are still inside a fruit or pod, or seeds that are attached to fluff or wings. We will need the seeds by _____.
- At mealtime, challenge your child to identify all the seeds in the meal.
- Plant seeds with your child and watch the seeds grow. Discuss the changes you observe as the seed germinates and grows into a plant.

We would also like to invite you to join us for a lesson. We will be doing several hands-on projects. Your help will be valuable in making them a success. Please let me know if we can count on you by returning the form below.

Thank you for your help.

Sincerely,

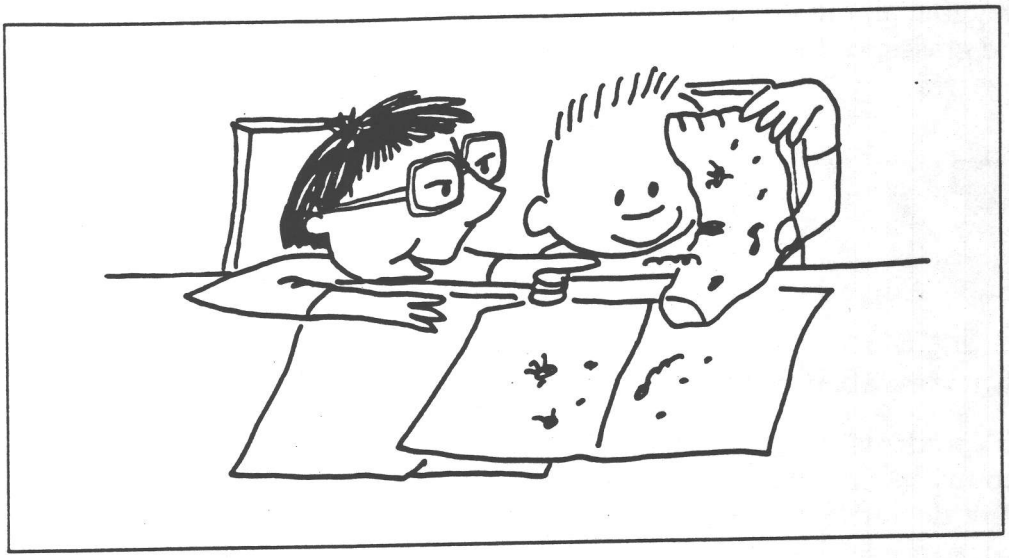
Name_____Phone_____

___Yes. I would like to help in the classroom. Please call me.

___No. I can't help, but please keep me informed.

Hitchhiker Seeds

Students compare seeds that "hitchhike" on fur with those that disperse in other ways. Then they design their own hitchhiking seeds.



Indoor and Outdoor

Time
Part 1: 20 minutes
Part 2: 20 minutes
Part 3: 20 minutes

Related Subjects
Language Arts
Art

Process Skills
Recording data
Modeling

Materials
For the Class:
- ball (kick ball or soccer ball)

For Each Group of 4:
- old fuzzy sock
- piece of newspaper
- transparent tape
- 2 seeds from the seed collection

For Each Student:
- hand lens
- bean seed
- 13-cm (5-inch) length of fine wire
- non-sticky seed from the seed collection
- Lab Book, pp. 31-32

Outcome
Students relate the structure of a seed to the ways it is dispersed.

For the Teacher
Plants germinate in the cracks of sidewalks, along the side of busy highways, and in vacant lots. How do they get to these and other locations? As students explore how seeds travel, they investigate the relationship between the structure of a seed and the way it is dispersed.

Students also consider why seeds travel. They come to realize that if seeds are not dispersed, they are likely to be shaded from the light or squeezed out by other plants. The class also studies how various seeds travel. Students learn that some seeds like the maple have wings that let them fly in the wind. Others, like the coconut, have a structure that allows them to float. Students discover that many grass and shrub seeds have hooks, barbs, or sticky substances that attach to and later fall off the fur or the feathers of animals. Each of these structures allows a seed be moved to a place where it can germinate, grow into a plant, and produce its own seeds.

Preparation

The day before doing this activity, divide the class into groups of 4 and send 1 student from each group to a weedy area near school. Have each these students wear a fuzzy sock over one shoe. If you do not have an area with lots of weeds near school grounds, collect hitchhiker seeds for students. The best way to do so is by dragging an old blanket or rug over a weed- and grass-covered field. Be sure to find a tick-free area.

Getting Started

Elicit ideas about why and how seeds move.

Ask students to brainstorm answers in small groups before sharing them with the class. **Why do seeds move? How do they move?** Compare a seed to a ball. Hold a ball up high in the air. **What will happen if I let go of this ball?** After students respond, drop the ball. **Can the ball move on its own?** Discuss how some force is needed to move the ball. Place a seed with wings on your hand. **Can the seed move on its own?** Blow the seed out of your hand. **What caused it to move?** Brainstorm other ways seeds can be moved from place to place. Write all suggestions on the chalkboard.

Part 1

Action

1. Distribute hand lenses to students and direct them to pp. 31-32 of the Lab Book.

2. Divide the class into groups of 4. Give each group 2 differently shaped seeds from the class seed collection. Allow groups time to consider how each of their seeds might travel. Then ask each group to test its ideas. (Be sure to set limits on throwing seeds and other inappropriate behavior.) Ask students to record their ideas on their lab sheets.

Assessment

Ask groups to share their ideas with the class.

What ideas did you have? How did you test those ideas? What did you learn from the test?

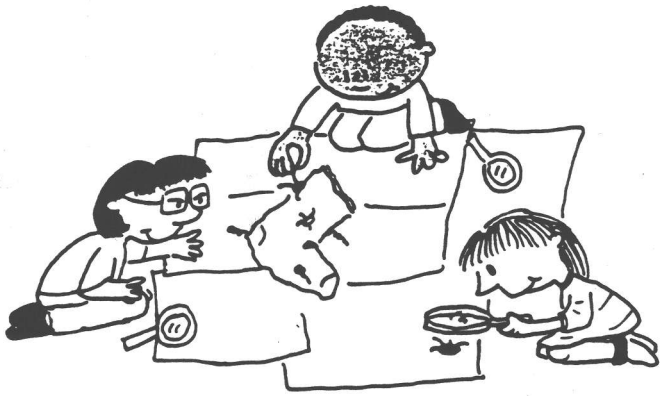
Part 2

Action

1. Give each group a seedy sock, several non-hitchhiker seeds, and a piece of newspaper to put under the sock. (If the class is using a blanket, seat students around the blanket so that each group has a section to inspect.)

2. Ask students to carefully extract hitchhiker seeds and then use their hand lenses to examine the "sticky" parts of the seed.

3. Urge students to compare hitchhiker seeds with non-hitchhiker seeds as they complete their lab sheets.

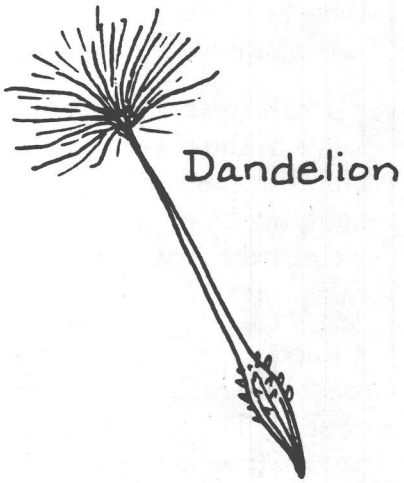


Assessment

Encourage groups to share their findings with the class.

How are hitchhikers like non-hitchhikers? How are the two kinds of seeds different?

Burr



Dandelion

Part 3

Action

1. Distribute wire, tape, and bean seeds to each group. Challenge students to create a case or attachment for their bean seed that will allow the seed to hitchhike. (Allow them to use other materials as well, if they wish to do so.)

2. Encourage students to test their seed cases or attachments by sticking them on the sock or the blanket. Display the socks or the blanket in the Life Lab Center.

Assessment

Discuss how the structure of a seed helps it move.

Why do seeds need to travel? Give some examples of how their weight and/or shape helps some seeds travel. Help students identify how burrs, dandelions, and tree seeds travel. **How did the seeds stick to the sock? What else could seeds hitchhike on?** (animal fur or feathers) Add new ideas to the What-We-Know-about-Seeds List.

Digging Deeper

• Have students further investigate the seeds they collected on their seed hunt. How can these seeds be moved? How does their structure make movement easier?

• Investigate the means by which various items in the classroom are attached to walls, tables, paper, and so on (tape, tacks, velcro, nails, hooks, clips, glue). Compare how much weight these various devices or substances can support.

• Encourage students to sort their hitchhiker seeds and categorize them by plant or by type of seed. They might also count the seeds in each of their categories and make a pie graph of the various types of hitchhiker seeds.

• Ask students to read in the newsletter *(The Life Lab Beat)* about the invention of velcro.

Teacher Reflections

• Did students understand the purpose of such dispersal mechanisms as wings, stickiness, weight, and shape?

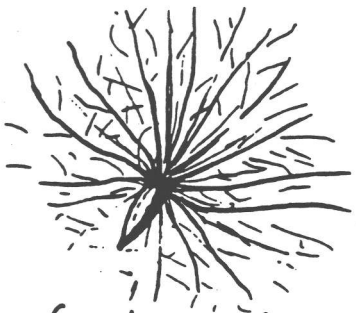
• Did students use their observations of hitchhiker seeds in designing their own models?

In the Garden

Planting cover crops (or "green manure") is not only a good seed-sowing activity, but will also protect and enrich the soil. For mild climates, large-seeded cover crops like fava beans or bell beans can complement class efforts to germinate seeds. In colder areas, grasses, such as rye or wheat, may be a better choice because they germinate at low temperatures. If not all of your crops have been harvested yet, you can plant cover crops in just the bare areas. For more information on the hows and the whys of cover cropping, see Gardening Know-How for the '90s, *pp. 168–175.*

Burr

fruits with fishhooks



fruits with parachutes

fruits with wings

Maple

Assessment Checklist

Seeds

Use the following scale (or one of your own) in order to monitor your students' understanding and skill development as you teach this unit. Space is provided for you to record your own outcomes and/or anecdotal information.

1	2	3	4	5
Does not understand the concept or cannot use the skill.		Has partial understanding of the concept or partial ability to use the skill.		Has solid grasp of the concept or skill.

Expected Outcomes

A. Student makes predictions based on prior observations and learning (process skill).
Seed Hunt, Seed Detectives, Shoots and Roots

B. Student makes increasingly detailed observations about seeds in drawing, writing, and discussions (process skill).
All activities

C. Student demonstrates knowledge of the conditions seeds need to germinate (content).
Shoots and Roots, The Life of a Seed

D. Student can describe ways a seed's structure affects how it disperses (theme).
Hitchhiker Seeds, The Life of a Seed

E. Student actively discusses results and shares ideas with partner/team (cooperative learning).
All activities

Seeds

Student Name	Outcomes						Notes
	A	B	C	D	E	F	

The Life Lab Scope and Sequence—A Full Program of Life, Earth, and Physical Sciences

The **Life Lab Science** Scope and Sequence demonstrates that Life, Earth, and Physical science concepts are integrated in a systems approach to science. As the garden grows and changes throughout the seasons, it provides a natural laboratory for studying how the science disciplines are interrelated. You will also discover numerous opportunities for integrating science with math, language arts, and social studies.

Life Lab Science	Grade 3	How Things Work	Scope and Sequence		
	Theme Connections	**Life Science**	**Earth Science**	**Physical Science**	**Process Skills**
Overview	**Structure-Function:** There are many different kinds of structures in the natural world. An object can be examined, described, and classified as a whole or by its parts. Structures are made up of smaller parts. Each part contributes to the way the whole structure works.	Living things have parts that help them survive on Earth. All living things live in habitats that provide for their basic needs. A habitat is a place in the environment that is made up of different parts. It is a structure.	Climate and soil are key parts of the environment. The type of soil and climatic conditions influence what living things can exist in any habitat.	The world is made up of material we call matter. Matter has properties. We can describe it according to its properties. Forces act on matter and cause motion.	Experimenting—Students experiment using controls as a way to test their predictions via the Guess-Test-Tell approach. Recording data—Students record data from their experiments, readings, and observations. Communicating—Students expand their communication skills by writing and presenting results, by doing team projects, and by individual reflection.
Sensory Explorations	**Structure-Function:** The garden is a structure with many different parts. It is a physical home, or habitat, for many different kinds of living things.	People use their senses to perceive the world. All things are made up of smaller structures that can be observed and studied. A garden is a kind of habitat that is home to many different living things.	Soil, water, and climate affect which plants grow in the garden and how well they grow.	Matter has observable properties that we can define and record. We use our senses to observe these properties.	Record sensory observations through drawing and writing. Work in teams to discuss observations and share ideas. Practice group decision-making.

Life Lab Science	Grade 3	How Things Work	Scope and Sequence		
	Theme Connections	**Life Science**	**Earth Science**	**Physical Science**	**Process Skills**
Seeds	**Structure-Function:** A seed is a structure. It is made up of different parts. Seeds can be grouped according to their characteristics.	Seeds are produced by plants. Seeds are structures that enable plants to produce new plants. Seeds have certain requirements for germination; under the right conditions seeds develop into plants. The parts of the seed function so the seed can grow into a plant.	Seeds require certain weather conditions to germinate.	The structure of seeds affects how they can move. Different kinds of seeds travel in different kinds of ways; we can describe the motion and speed of moving seeds.	Record observations through drawing and writing. Practice making predictions. Use Guess-Test-Tell to test a question. Work in teams to discuss and record results, ideas, and questions.
Soil	**Structure-Function:** Soil has a structure. The parts that make up a soil contribute to its characteristics. The characteristics of a soil influence how well plants grow in it. Soil is a key part of many habitats.	Living things need resources from the environment in order to sustain life and grow. Most plants need soil to grow. Living things exist in the habitats where the things and the conditions they need to survive are found. Plants grow differently in different soils.	Soil has a structure; it is a natural resource that must be used with care. There are many different types of soil. Many of the particles that make up soil are broken-down bits of rock.	Soil is one kind of matter. Soil has properties that we can observe and describe. Soil is classified by texture as sand, silt, or clay. Matter is the name we give to all stuff in our physical world.	Set up and monitor experiments. Record information from experiments. Work in teams to observe, collect data, and make reports.
Weather and Climate	**Structure-Function:** There are different kinds of weather. Weather patterns make up the climate of different regions. Climate is the average condition of the weather at a place over a period of time.	Living things need resources from the environment in order to sustain life and grow. Climate (temperature, rainfall, drought, frost, etc.) influences which living things can survive in a habitat.	There are different kinds of weather. Weather changes all the time. Weather affects living things. Climate is the daily and seasonal weather that a particular region experiences over a period of time.	We can measure changes in rainfall, temperature, and wind.	Set up and monitor experiments. Record measurements. Record results in graphs and charts. Interpret and present recorded data.

Life Lab Science	Grade 3	How Things Work	Scope and Sequence		
	Theme Connections	**Life Science**	**Earth Science**	**Physical Science**	**Process Skills**
Tools	**Structure-Function:** A garden tool is a type of machine. Different garden tools have different structures. A tool/machine can be examined by looking at its parts. The parts perform certain functions.	Our bodies have parts that serve as tools for performing certain functions.	The characteristics of a soil determine what tools are best used to work that soil.	Machines are made of parts that move. Simple machines, such as the lever or wedge, are made of one part. More complex machines are made of combinations of simple machines. Machines make tasks easier by changing the amount of force necessary to do work. Tools do work.	Set up and monitor experiments. Record observations in graphs and charts. Work in teams to develop and present inventions.
Plants	**Structure-Function:** Plants are structures. Most plants have similar parts, such as roots, stems, and leaves. Each part has a function that contributes to the operation and survival of the plant as a whole. Plants live in habitats and help make habitats suitable for other living things.	Plant parts perform functions that help the plant survive within the environment. Plants have particular tissues, organs, and organ systems that perform specific life functions, and react to light, water, and other stimuli. Plants have characteristics that distinguish them from other living and nonliving things.	Soil is part of a plant's habitat. Plants have certain parts usually found in the soil. Plants use these parts to get water and nutrients from the soil.	Plants are affected by conditions of the physical environment, such as temperature and amount of moisture.	Set up experiments using a control. Monitor experiments and record data over time. Synthesize experimental data and communicate results.

	Theme Connections	Life Science	Earth Science	Physical Science	Process Skills
Garden Animals	**Structure-Function:** Animals are structures. Animals have different body parts. Each part has a function that contributes to the operation and survival of the animal as a whole. Animals live in habitats that provide for their needs.	Animal parts perform functions that help the animal survive within the environment. Animals have particular tissues, organs, and organ systems that perform specific life functions. Animals have characteristics that distinguish them from other living and nonliving things.	Some animals have parts that allow them to live and move in the soil. They change the soil by living there.	We can describe and categorize the motion of moving objects. Sounds are made by vibrations. Recognizing the sources and understanding the meaning of sounds in our environment is very important for survival.	Design and monitor an experiment with a control. Set up ways to record and report information as a team.
Habitats	**Structure-Function:** A habitat is made up of different parts. Soil, plants, animals, and climate help shape the habitat of a particular organism. The parts of a habitat function to support the organisms in that habitat. We can describe a habitat according to its characteristics.	Every living thing lives in a habitat that meets its basic needs for survival. Living things in a particular habitat interact with other living things in many ways, depending on each other for food, shelter, and protection. Humans must protect habitats so that the living things in them can survive.	Habitats contain natural resources. Soil is one natural resource. It is a key component of many kinds of habitats. Climate has a key role in determining the characteristics of a habitat.	The physical structure of a habitat determines its environmental conditions, such as temperature and the amount of light and shadow.	Synthesize and apply knowledge using problem-solving, recording, and communication skills.

Life Lab Science

How Things Work

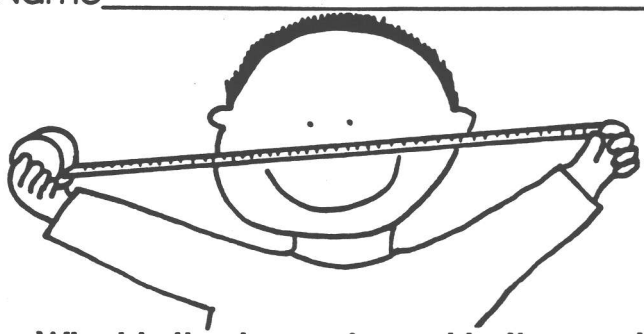
Developed by Life Lab Science Program

VIDEODISCOVERY®

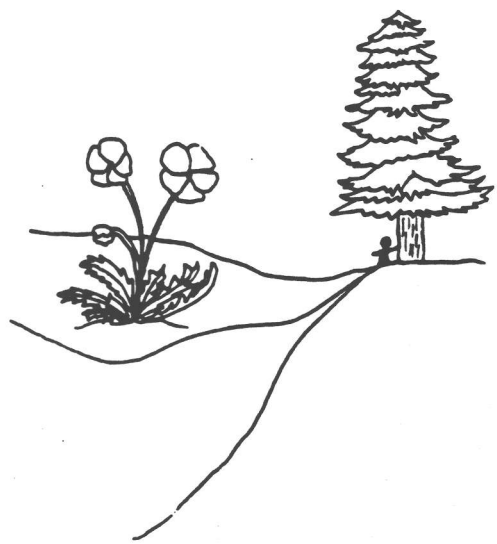
Seeds

Preassessment

Name_____Date_____



What is the largest seed in the world?



Which is bigger: a poppyseed or a seed from a Giant Sequoia tree?

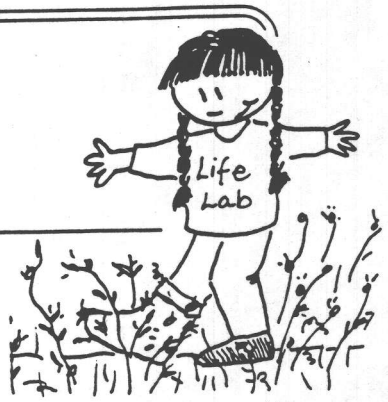
What I know about seeds:_____

_____

_____

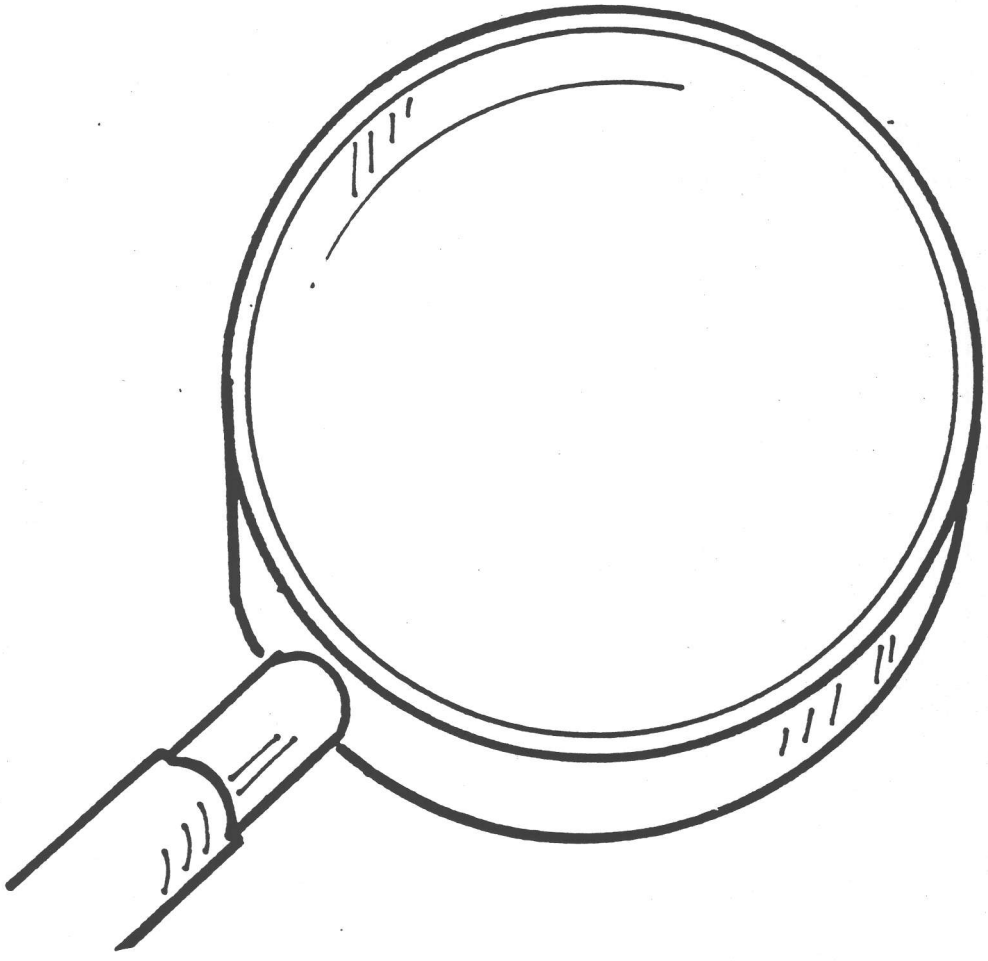
_____

Hitchhiker Seeds



Name_____ Date_____

1. Draw the seed you studied under a hand lens. Be sure to name the seed. Label the part of the seed that helps it travel.



2. What would happen if all seeds dropped directly below the plant they grew on?

_____

_____

_____

Questions I have about seeds:

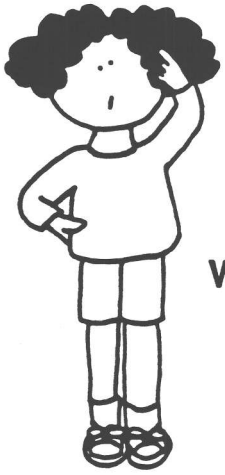
_____

_____

_____

_____

How far can seeds travel in the air?



What do seeds have to do with velcro?

3. What are two differences between seeds that stick to the sock or blanket and seeds that don't stick?

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_____

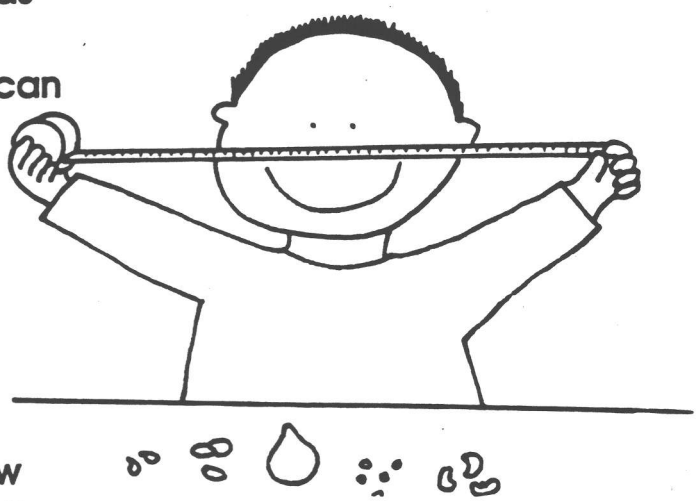
_____

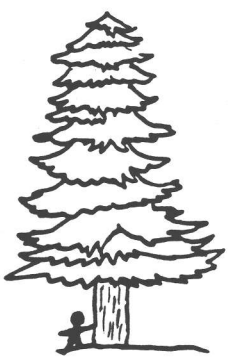
4. Look at the hitchhiker seed under a hand lens. Draw what the sticky part looks like.

Seeds Postassessment

Name_____Date_____

The "coconut of the sea" tree has seeds that can weigh over 23 kilograms (40 pounds) and yet can float hundreds of miles.





The Giant Sequoia tree can grow to 100 meters (300 feet) tall. But it starts as a tiny seeds that weighs 4 mg (1/6000th of an ounce).

What I learned about seeds:

_____

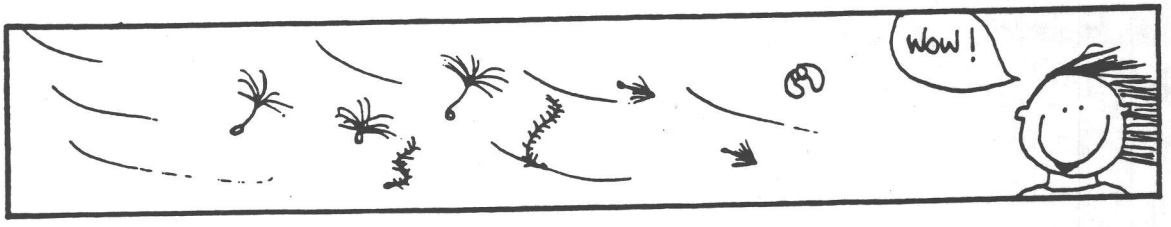
_____

_____

_____

_____

Questions I still have about seeds:



There are records of seeds traveling up to 50 kilometers (32 miles) on very strong winds.

The person who invented velcro got the idea from hitchhiker seeds.

The Life Lab BEAT

FOCUS ON SEEDS

The Adventures of the Seed Pod Pals

A Skit

Characters:
K. ABLE, TV ANNOUNCER

P. SEED

OTHER SEEDS

The Setting:
A school garden with trees and garden plants.

K. ABLE: "Welcome to WPOD news. We are reporting live from the garden. After waiting for weeks, it looks like today may be the day for our big story. (Suddenly the wind blows and leaves start to fall. Seed pods begin to rattle.)

K. ABLE (in an excited voice): "This is the moment we have been waiting for!"

(At this moment the seeds arrive. They skid and jump into the garden. They come to a stop near K. ABLE.)

K. ABLE (excited, turns to one seed): "Excuse me! Can you tell our viewers your name?"

SEED: "Sure, my name is P. Seed."

K. ABLE: "P. Seed, can you tell us what brings you here?"

SEED: "As you know, seeds are very important. We contain baby plants that are covered by a seed coat. By the way, how do you like my coat?"

K. ABLE: "It's very nice. But can you tell us how you got here?"

SEED: "That's easy. My pals and I were inside a dry pod. We had to wait and wait until the conditions were right. Seeds are very good at waiting, you know."

K. ABLE: "Can you tell us about those conditions?"

SEED: "Sure. The wind needed to blow. It had to blow hard enough to rattle our pod and shake us loose. Our pod popped open and here we are."

K. ABLE: "Do all seeds arrive that way?"

SEED: "Oh no. My friend Dandy Lion gets to fly on the wind and parachute down. Another friend, Coco Nut, sometimes floats to a new home. Seeds can travel in lots of different ways."

K. ABLE: "That's amazing, P. Seed. What happens next?"

SEED: "My pals and I will stay right here and wait again. Why don't you check back with us later and see for yourself?"

K. ABLE: "Thank you, P. Seed. This is an exciting day in the garden. That's it for today. Please join us later for our next report."

(Months later. It is spring.)

K. ABLE: "Hello, this is K. ABLE from WPOD. We are joining the seed pod pals back in the garden. Last time we saw them, they had just arrived from their pod. Now let's see where their adventure has taken them."

(K. ABLE looks around.) "Hmm. I don't see them." (Pokes in the dead leaves.)

SEED: "Ouch!" (K. ABLE brushes away the dead leaves.) "Be careful!"

K. ABLE: "Hello. Maybe you can help me. I'm here to interview the seed pod pals. Have you seen them?"

SEED: "That's us! I guess you don't recognize us. We've had more adventures since you were last here!"

K. ABLE: "What happened?"

SEED: "It was amazing! First the fall leaves started to cover us. Then bits of soil. Before you knew it, we were covered up. Winter came. It was cold in the soil. Then it started to rain."

K. ABLE (excited): "What happened when you got wet?"

SEED: "My pals and I started to get bigger and bigger. We thought we would burst!"

K. ABLE (more excited than before): "Then what? Was it still cold?"

SEED: "Oh no. It was getting warmer. The sun must have been warming the soil. You know how nice it feels in the warm sun . . ."

K. ABLE (interrupts): "But tell us what happened next?"

SEED: "You remember my lovely seed coat? Well, I soaked up so much water that I split it! Then, roots began to grow. And I felt myself pushing my way out of the soil and here I am. A seedling! Watch it! My leaves are starting to uncurl. Who knows what will happen next!"

K. ABLE: "Who knows is right!" (Turns toward audience) "Thank you for joining us for this special report. Join us again for the next seed pod pals adventure!"

THE END

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