

Section 3: Session Guides

Session 1: Sunflower House	pg 60-74
Session 2: Jack's Garden	pg 75-90
Session 3: Compost Stew	pg 91-104
Session 4: The Ugly Vegetables	pg 105-132
Session 5: Plantzilla	pg 133-148
Session 6: The Tree Farmer	pg 149-192

Session 1: Sunflower House

Program Outline

- A. Gathering Activity: KWL Sheet Flowering Plants and Seeds (10 min.)
- B. Welcome, Introductions, Icebreaker (15 min.)
- C. Reading: **Sunflower House** (15 min.)
- D. Hands-on Horticulture activity: Making seed tapes (15 min.)
- E. Wrap up (5 min.)

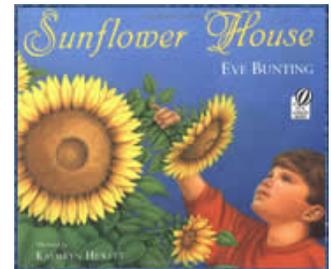
Extra Advance Preparations:

Plant some sunflower seeds in clear plastic cups about 7-10 days before Session 1.

Supplies:

- Sign-in sheets
- Name tags
- **KWL Sheet** for Session 1
- Dried sunflower heads, sunflower seed, clear plastic cups with planted sunflower seeds.
- Clipboards
- Pencils, markers, crayons
- Ball of yarn
- Dry erase board and dry erase markers
- Copy of **Sunflower House** storybook
- Disposable tablecloths or cut garbage bags for work tables
- Newsprint or other biodegradable paper
- Ruler and pencil
- Plastic, zip-top style sandwich bags
- Scissors
- Toothpick
- All-purpose flour*
- Spoons
- Small bowls for putting flour in center of table
- Water*
- Seeds
- Trash bags
- Hand whisk broom and dustpan
- Copies of take-home sheet 1 (**Where I Live and Play: Seeds and Flowers**)
- Copies of **Grow On!** for Session 1

* Or use nontoxic "school glue" to attach each seed to the tape



Sunflower House by Eve Bunting, illustrated by Kathryn Hewitt

Voyager Books, Harcourt
Brace & Company ©1996,
ISBN-13: 978-0152019525

In this beautifully illustrated storybook, a boy sows seeds in a circle, plays with friends inside the circle of sunflowers, then collects the seeds for next year.

Themes: Life cycles of plants, sharing, imagination, seed sowing and seed harvesting, seasons of the garden.

BIG Idea: Plants grow from seeds and seeds come from flowers.

Reading vocabulary

sow
guaranteed
mammoth
tinged
bulging

A. Gathering Activity: KWL Sheet – Flowering Plants & Seeds (10 minutes)

Have one volunteer at the sign-in table to greet participants and parents, and help fill out name tags. Place the sunflower heads, loose seeds, and cups with sprouted seeds on the work table. Have participants work on the **Session 1** KWL sheet. Ask children to fill out the first two sections by either drawing or writing about the sunflower seeds, flower heads, and sprouted seeds that are on the table. Have them fill in the sections labeled “What I Know” and “What I Want to Learn.” Allow children about 10 minutes to work. Ask prompting questions as they work, such as “Where do plants come from?”, “What do you wonder about the plants you see there?”, etc. If the children are not yet writing, have volunteers assist by taking dictation. (See Using KWL Sheets instructions in MG SPROUTS Project Guide for additional information.)

B. Welcome, Introductions, Icebreaker (15 minutes)

Welcome to MG SPROUTS. Take a moment to introduce yourself and the other volunteers to parents and participants. We are all volunteers who love horticulture and gardening and who love to teach others about growing things. Spend a few minutes talking about the activities you have planned for the next 6 sessions.

Let’s learn about each other! Gather the participants in a circle. Begin by holding the ball of yarn and telling the group your name and something about you while holding on to the end of the yarn. Toss the ball to one of the participants across the circle. They catch the ball and pinch the yarn between their fingers. As they tell their name and something that they like, they toss the ball of yarn to someone else, still holding onto the pinched piece of yarn. Continue until everyone is holding on to the yarn. Explain that even though we are unique individuals (cite some of the responses shared), we are all connected. Reverse the process. As the yarn gets collected and the ball gets rolled back up, ask the participants to help recall the names and responses of others in the group.

Let’s talk about code of conduct! After introductions, teach the group to focus their attention on the speaker. A good attention-getting technique to use with this group is “Give me five.” Many children already in school may be familiar with this method. The leader/speaker holds his outstretched hand in the air and says in a clear voice “Give me five.” Explain to the participants that when the leader gives the “Give me five” verbal request and hand sign, they are to:

- stop what they are doing
- put their hand in the air
- eyes on speaker
- be still and be quiet
- listen

Once all participants have complied with your request, you can thank them, put your hand down, and begin speaking. Explain that it is important to know why we have rules. We have rules for three reasons:

- To help keep us safe
- To help us get along and work together
- To help us learn

When we can do all of these things, we can have fun and learn together.

The Three B’s Use the dry erase board to write the following headers across the top: **Be Respectful, Be Responsible, Be Safe.** Ask the children to share some examples of what each might mean and write the examples under each. Take about 2-3 minutes on each.

Be Respectful	Be Responsible	Be Safe
nice	follow directions	keep hands and feet to yourself
sharing	clean up after your self	follow directions
kind to others		

Summarize the rules and ask for their cooperation in following the rules. Keep alert for helpfulness, generosity, kindness, and other good things participants do and say. Acknowledge their positive behavior; this builds positive relationships.

C. Reading Aloud: Sunflower House (15 minutes)

Story Summary: A boy plants sunflower seeds in a circle and the seeds grow into a place of imagination and fun for the boy, his dog, and the boy’s friends. After a wonderful season of playing among the towering sunflowers, they notice the bright yellow flowers fading to brown and tumbling down. Try as they might to prop them up, they realize that there are seeds in the center that they can save for next year’s sunflower house.

Introduce the book and set the stage for what’s going to happen in the book. Set the stage for listening by asking an “I wonder” statement based on the cover illustration or title. Perhaps something like “I wonder how you make a house out of sunflowers.” Read the title and author’s name. Encourage the children to comment and predict what will happen in the story.

Read the book aloud, pausing briefly along the way to discuss the book with the group. Conclude the reading with a short discussion about the book. Try to guide the discussion so participants connect the BIG Idea (Plants come from seeds and seeds come from flowers) with the storybook. Some questions you might ask to spur discussion are:

- *What did the boy plant to grow the sunflowers?* *Right, plants come from seeds!*
- *What kind of seeds do you plant to grow sunflowers?* *Sunflower seeds! Different kinds of seeds grow different plants!*
- *What did the boy do to help the seeds grow?* Discuss participant answers, and make sure to include watering, spacing, and seed depth.
- *Where do seeds come from?* Remind students that the flowers contained seeds, and the boy in the story saved them to plant next year.

D. Hands-on Horticulture: Making Seed Tapes (15 minutes)

Hands-on Horticulture: Making Seed Tapes	
<i>Each week at SPROUTS we will do a hands on horticulture project that is related to our story and the BIG Idea for the session. Today’s BIG Idea is that plants grow from seeds and seeds come from flowers. You’ll see that making a seed tape is a clever way to sow, or plant, just the right number of seeds at just the right spacing.</i>	
MATERIALS	
<ul style="list-style-type: none"> • Newsprint or other biodegradable paper • Ruler and pencil • Plastic, zip-top style sandwich bags • Scissors • Toothpick • All-purpose flour* • Spoons • Small bowls for putting flour in center of table • Water* • Seeds 	
<i>*You can also use a drop of non-toxic “school glue” to attach each seed to the tape.</i>	
1. Prepare the “glue.”	<p><i>(Have children gather around a table)</i></p> <p><i>Do you remember how the boy in the Sunflower House story sowed his seeds? We’re going to make a seed “tape” that will help us plant our seeds in our garden. This helps us make sure we plant the seeds with enough room to grow and develop.</i></p> <p><i>To make a seed tape, we need “glue” for our seeds to stick to the seed tape. We’ll make a kind of glue that won’t prevent our seeds from germinating. Did you know that germinating means the same thing as the word sprouting?</i></p>

Continued: preparing the glue	<p>(place small bowls of flour in the center of each table for children to work from) <i>Everyone needs a plastic bag (hold up plastic zip-type sandwich bag). Now, use your spoon to put 2 tablespoons of flour into your bag. Now, let's add a small amount of water. (Help children add 1 spoonful of water at a time)</i></p> <p><i>Close the bag and knead the flour and water. Does anyone need a little more water? We want this to look like glue. (Be conservative in adding water. You need a consistency like thick gravy. If you add too much water, add more flour to get desired consistency. If it is too thin, it will run out too fast and make a mess. Set bag aside.) Okay, let's set aside our glue for a minute so that we can prepare the tape.</i></p>
2. Prepare the "tape."	<p><i>To make a seed tape, we need something that we can fasten the seeds to, but that will easily break down into our garden soil. Can you help me make strips from this paper? (Have children cut the paper into strips that are one-inch wide.)</i></p>
3. Determine seed spacing. (Use Cosmos seed package as an example)	<p><i>How close should we plant our seeds? Remember, the seeds will sprout or germinate where we glue them to the paper. Let's read our seed packages to see how close we should space the seeds. (Read the seed packages to determine the spacing between seeds for planting. (Save seed packages for Session 2.))</i></p> <p><i>Now, let's use our ruler and pencil to mark where the seeds should go. Make an "X" on the paper strips, starting a few inches from the end, at the spacing specified for what you are planning to grow.)</i></p> <p><i>Cosmos, for example, is sown one inch apart, so we would make an "X" every inch on the paper strip.</i></p> <p><i>(Hint: If you are working with several types of seeds, it is helpful to write the seed name on the end of the paper strip.)</i></p>
4. Put glue on the tape.	<p><i>Now that we know where our seeds go, let's glue them in place. We're going to put a drop of glue on each "X." (Carefully snip a tiny corner off of the bag of flour and water mixture. With slight pressure, drop a tiny amount of "glue" onto each "X" on the paper tapes. Use enough to cover the seed, but be careful to not use too much. Have children help as much as they are able. If children have motor skills to do so, let everyone fix their own tape. If not, volunteers should assist younger children with this step.)</i></p>

5. Put seeds in the glue.	<i>Before our glue dries, let's put a seed in place. Carefully drop a seed into each drop of glue. (Use the pencil to coax the seeds out of their envelopes and drop one seed onto each "X".) Use a toothpick to press the seeds into the flour "glue." We'll leave the tapes to dry while we go on to the next activity. Have kids help with clean up, then wrap up or have volunteers designated to clean up and prepare items for take home while another volunteer leads wrap up section.</i>
6. Allow seed tapes to dry.	Within two hours, you should be able to loosely roll up seed tapes and place in sandwich bags. If working with a particularly young group, you may opt to pre-fold the paper tapes before adhering seeds so that seeds are not knocked off at this last step.
7. Plant the seeds. (This will be covered in Grow On!)	<i>When the time is right and we have a good place prepared to plant our seeds, here's what you will want to do: take the seed tapes out to the garden or planter box. Lay the tape over moist, prepared soil surface. Larger seeds, like peas and beans, need to be covered with additional soil. Water in, just like you would when planting other seeds. Keep seeds moist during the germination period. In a few days, you should be able to see SPROUTS!</i>

Modifications and Tips

TIME AND/OR ABILITY: LESS
<p>Seed Tape:</p> <p>For younger children:</p> <ul style="list-style-type: none"> • Make and use a seed tape template that shows students where to cut, and where to place each seed. • Instead of each child mixing up "paste," make one bag per table. Volunteers can call individual students up to help measure, and the bags can be passed around in table groups to knead. • Pour "paste" into a small cup and use paint brushes to put paste onto x pre-marked for each seed.
TIME AND/OR ABILITY: MORE
<p>Advanced Activity: If participants seem to be readily understanding other concepts related to planting seeds, add this activity/discussion to enhance content learning.</p> <p>The seed tape activity asks you to teach that seed spacing is important. For older children, expand this to explain why plants shouldn't be planted too close together (compete for soil water and nutrients, and diseases spread more easily) or too far away (doesn't use space wisely). This can be accomplished through a quick discussion during the activity or with a physical demonstration.</p>
<p>Seed Spacing Activity</p> <ul style="list-style-type: none"> • Divide participants into three equal groups and have one group stand shoulder to shoulder. • Have one group stand far enough apart that they when they spread their arms out, there is just a tiny bit of space between them the next person's outstretched hands. • Have the last group stand far enough apart that when they spread their arms out there are several feet in between them and the next person's outstretched hands. • Tell students that plants need nutrients and water from the soil, and there is often a limited supply. Ask what will happen in the group that is close together? In the far apart group? In the medium group? Guide students to the correct answers and discuss. • Have students imagine that one of them in each group was sick. How likely would it be in the group close together that somebody else would get sick? In the other groups? What might this tell us about how diseases in plants can be affected by plant spacing? Guide students to the correct answers and discuss.

E. Wrap Up (5 Minutes)

Wrap up the session with a quick summary of the day's activities. The discussion might go something like this: *The BIG Idea this week is that plants grow from seeds and seeds come from flowers.* (Hold up a KWL Sheet.) *We started our Sprouts session today with something called a KWL sheet. This first section helps us to organize what we already know about a subject. This week it was flowers and seeds. In the second part where the W is, it also helps us start thinking of some things we would like to know more about. Can anyone share some of the things they wondered about seeds and flowers? Next week, we will record something we learned about seeds and flowers here where the L is on the last part of the sheet. We will do this each week of SPROUTS.*

Take a moment to explain what a garden or nature journal is. (Hold up a sample **My SPROUTS Journal**.) *A journal is a place that people record things. Some people write in a travel journal about places they visit, or they might record experiences in a hunting and fishing journal. A garden journal is something we use to write down observations about gardening and growing plants. They might include things like the weather, what plants they planted, when they planted them, how the plants grew, and so on. (Hold up a copy of the **Where I Live and Play** take-home journal sheet.) In between our SPROUTS sessions, take some time to observe and record things that interest you. You may write, draw pictures or both. Bring them back to the next session, and we can talk about them. We will be using the KWL Sheets and the take-home sheets to build our own Journal. We will put them all together at the last session to show what we have learned about with SPROUTS. The finished journal will include extra pages so you can use the journal again and again to record your observations, even after SPROUTS is over. Would anyone like to share something they learned about flowers and seeds today? Or something they really liked? Did you like the yarn game where we learned about each other? Finally, we made our own seed tape that we can plant at home to grow flowers.*

Next week we will talk about Jack's Garden

Children go home with: **My SPROUTS Journal** take-home sheet 1 (**Where I Live and Play: Seeds and Flowers**), **Grow On!** for Session 1 and seed tapes rolled up in a bag or plastic cup.

Session 1 Notes:

Review

Next week

For follow up

Name _____

What I already know

K

Flowering Plants and Seeds
Session 1

What I want to know more about

W

What I learned at SPROUTS



Grow On!

Newsletter for MG SPROUTS Families Session One: Sunflower House



*I had a lot of fun today at MG SPROUTS!
I am looking forward to coming to the next session*

I have some journal sheets to work on before then. I can look in our garden for ideas to draw and write about!

Dear _____:

Today I learned all about seeds! We read a book about making a sunflower house. The boy and his friends played in the house all summer long. But when the fall came, the sunflowers were so heavy with seeds that they fell over! So the boy and his friends had fun making faces in the sunflower seed heads and seeds ended up EVERYWHERE!

We learned a little bit about how to grow seeds, too! We made a seed tape so that we can plant seeds at home and give them enough room to grow.

Our Master Gardener leaders told us to bring home the seed tape to plant in our garden. I need to prepare a spot in the garden by pulling back any mulch so that I see the bare ground. Then, I lay the paper tape on the ground with the seeds on top. I sprinkle a little bit of earth around the edges of the paper tape and up to the seeds, and put some mulch (like pine straw) over the top. Then, I need to water the seeds gently. I need to lightly water every day to keep the seeds moist until they sprout.

I had so much fun making seed tapes and learning about sunflowers today, and I have a Where I Live and Play journal page to work on and bring back to the next SPROUTS session to share. Thanks for taking me to MG SPROUTS!

Love,

_____ (name)

Sowing Seeds

A number of plants, particularly vegetables, annuals, and herbs, can be grown from seed. There are several advantages to propagating plants from seed. Seeds are relatively inexpensive, allowing the home gardener to get many plants for the price of a few transplants. Additionally, selection of transplants or plant materials available for sale can be limited to just a few varieties. Growing plants from seed allows the gardener many choices for the home garden.

The process of growing more plants from seed is known as sexual propagation. Seed or sexual propagation is dependent upon the genetic combination of male and female parts of the flower and is a result of pollination. Pollen from male anthers is combined with the egg in the female ovary, and seed is produced. Seeds described as "open pollinated" result from random pollination that occurs from wind or insect activity. They may appear to look like the parent plant, but they actually have minor differences that are referred to as "variability."

Just like people, seeds produce plants that resemble the parent but are genetically different. Seeds referred to as "F1 hybrids" are the result of controlled, known crosses of plants that produce the same results each time. These hybrids often have characteristics that make them a unique or superior plant, such as increased vigor, disease resistance, flavor, flower color, or uniform growth. Hybrid seed may cost more than open-pollinated types. If you save the seeds of hybrid plants, the resulting plants may have some similarities to the hybrid parents, but appearance and growth is usually different. Therefore, if you desire the features of the hybrid plant, purchase and plant new seed each year.

Excerpted from UGA Extension Publication Starting Plants From Seed for the Home Gardener (B 1432) available at <http://tinyurl.com/StartingSeedAtHome>



Horticulture Activities for Kids

- • • • •
- *Some Easy-to-Grow*
- *Plants from Seed*
- Sunflower (*Helianthus* sp.)
- Cosmos (*Cosmos bipinnatus*)
- Marigold (*Tagetes* sp.)
- Zinnia (*Zinnia elegans*)
- Gomphrena (*Gomphrena* sp.)
- Purple Hyacinth Bean Vine (*Lablab purpurea*)
- Moonflower Vine (*Ipomoea alba*)
- • • • •

What is UGA Extension?

UGA Extension extends lifelong learning to the people of Georgia through unbiased, research-based education in agriculture, the environment, communities, youth and families.

UGA Extension helps Georgians become healthier, more productive, financially independent and environmentally responsible. Extension agents stay in touch with issues relevant to people in local communities through county Extension offices.

UGA Extension is a county, state and federal funded organization supported by specialists in the College of Agricultural and Environmental Sciences and the College of Family and Consumer Sciences.

Parents: Please return the Where I Live and Play: Seeds and Flowers journal sheet with your child at the next MG SPROUTS Session. Here are some ideas for journaling activities to use at home to help your child begin the process of inquiry. Scientific inquiry involves making observations, asking questions, sorting, comparing, counting, describing, making predictions and using all of these activities in building awareness of the world. Please bring completed journal sheets along to the next SPROUTS session for group activity sharing or to be placed in the My SPROUTS Journal binder.



My SPROUTS Journal

More ideas...



What shape would you choose to sow your seeds if you could plant them any way you wanted?

What would your flower house look like?

Can you plant other flowers and seeds in your garden? What kinds would you choose?

What kinds of games can you play in the garden?

If your child enjoyed Sunflower House, may we suggest:
From Seed to Plant by Gail Gibbons.
ISBN-13: 978-0823410255



The University of Georgia, Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. UGA Extension offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability.

The University of Georgia is committed to principles of equal opportunity and affirmative action.

Name _____



SESSION 1

Where I Live and Play: Seeds and Flowers

*Record some observations about a flower that you see, or draw a picture.
Here are some things to think about:*

What color is it?

Are all of the parts of the flower the same color?

How long has it been blooming?

Are there insects visiting it?

Do you think someone planted it there?

Can you see any seeds?



Activity
 MG SPROUTS

Date

Location

Educator

Program Participation Sign-in Sheet

UGA Cooperative Extension endeavors to obtain information from individuals with whom we work to assure that we are offering our educational programs, assistance, and materials to all people without regard to race, ethnicity, national origin, color, sex, sexual orientation, religion, age, disability, or veteran status. Thank you

	<i>(W-White, B-Black or African American, A-Asian, N-American Indian or Alaska Native, P-Native Hawaiian or other Pacific Islander, H-Hispanic or Latino)</i>	Gender		Racial Demographic					Ethnicity
		M	F	W	B	A	N	P	H
	Name								
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									

Session 2: Jack's Garden

Program Outline

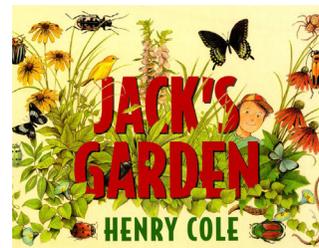
- A. Gathering Activity KWL Sheet - Living Things (10 min.)
- B. Welcome back (5 min.)
- C. Reading **Jack's Garden** (15 min.)
- D. Hands-on Horticulture activities: Watering Bottle (10 min.) and Plant Labels (15 min.)
- E. Wrap up (5 min.)

Extra Advance Preparations:

Sow a variety of seeds in one container ahead of time. Sow at least 4 weeks prior to this session. (The idea is to show differences in leaf shapes.) Prepunch holes in the water bottle lids.

Supplies:

- Sign-in sheets
- Name tags
- **KWL Sheet** from Session 1 & new **KWL Sheet** for Session 2
- Insect photos or specimens in an opaque box
- Pencils, markers, crayons
- Copy of **Jack's Garden** storybook
- Disposable tablecloths or cut garbage bags for work tables
- Hammer
- Construction paper
- Labels
- Nail or awl for piercing plastic lids
- Wide-mouth, 20-oz, heavy plastic beverage bottle (i.e., sports drink or fruit juice bottle) for each participant, rinsed and empty
- Block of wood
- A mixture of plant tags and materials, including purchased and home-made
- A pot that contains a mixture of unlabeled seedlings: mixture of monocot, (corn, grass) and dicot (zinnia, tomato, carrot)
- Potted plant with a plant tag
- Permanent marker or pencil (Sharpies, grease pencils, #2 pencils, etc.)
- Mixture of materials to use in making plant tags. Materials to consider are craft sticks, recycled window blind slats, rocks, clothespins, tags cut from recycled plastics such as milk jugs, yogurt containers. Participants should be able to write on them.)
- Trash bags
- Hand whisk broom and dustpan
- **My SPROUTS Journal** folder or notebook
- Copies of take-home sheet 2 (**Where I Live and Play: Insects and Other Living Things**)
- Copies of **Grow On!** for Session 2



Jack's Garden by Henry Cole

Harper Collins Children's Books, ©1995, ISBN: 978-0688152833. "This is the garden that Jack planted..." Based on the familiar rhyme story about the house that Jack built, this beautifully illustrated book follows Jack through the building of a garden.

Themes: Soil, weather, insects, life cycles, interdependence of living things.

BIG Idea: Plants grow in a natural and complex world filled with diversity.

Reading Vocabulary

sprouted
seedlings
blossomed

A. Gathering Activity: KWL Sheet – Living Things (15 minutes)

Have one volunteer at the sign-in table to greet participants and parents, and help fill out name tags. Have the volunteer collect any journal sheets as participants check in. Hand out the KWL sheets saved from the last session on sunflowers, returning each sheet to its respective owner. Have participants take a few minutes to finish the final section, “L-learned.” When they have completed that section, collect those sheets and give them the new sheet for Session 2. At each table, have some insect photos or specimens in an opaque box. Open the box when the participants begin working on the K & W sections of Session 2 sheet. Allow children about 10 minutes to work. Encourage wonder and curiosity. Ask prompting questions as they work, such as *What do you wonder about the insects (or other items) you see there?* If the children are not yet writing, have volunteers assist by taking dictation or encourage the children to draw pictures.

B. Welcome Back (5 minutes)

Welcome back to MG Sprouts. Take a moment to introduce yourself and the other volunteers again to parents and participants. Discuss last week’s book and activities. *Last week, we talked about Sunflower House.* Hold up a take-home sheet and ask if anyone found interesting things to write on their take-home sheet about seeds and flowers. Talk about this week’s book, **Jack’s Garden**, and group activities.

Keep alert for helpfulness, generosity, kindness, and other good things participants do and say. Use their names often as you acknowledge their responses to questions and discussion. Hearing their own name in a positive way in the group setting helps the child establish belonging and encourages good group behaviors.

C. Reading Aloud: Jack’s Garden (15 minutes)

Story Summary: This is the garden that Jack built. Introduce the book and set the stage for what’s going to happen in the book. Set the stage for listening by asking an “I wonder” statement based on the cover illustration. Start introducing the BIG Idea concept by pointing out all of the different creatures and plants on the cover. Read the title and author’s name. Encourage the children to comment and predict what will happen in the story. The text is fairly short, so take time to pause and point out the seasons, the weather, and compare back to last week’s book which helps participants make connections to what they already know.

Read the book aloud pausing briefly along the way to discuss the book with the group. Conclude the reading with a short discussion about the book. Some questions you might ask to spur discussion are:

- *What were the things that the plants in Jack’s garden needed to grow?*
- *What kinds of things were in the soil in Jack’s garden?*
- *What did Jack plant in his garden?*
- *How did the seeds in Jack’s garden get watered?*
- *What kinds of creatures lived in Jack’s garden?*
- *What might happen next in Jack’s garden?*

D. Hands-on Horticulture: Watering Bottles and Plant Tags (20 minutes)

Hands-On Horticulture: Making Watering Bottles 10 minutes

Remember from last week that plants come from seeds and seeds come from flowers? The seeds and plants in Jack’s garden were watered by the rain, but rain doesn’t always fall where and when the plants need it. Sometimes we need to provide our seeds and plants with a gentle supply of water, so we are going to make our own watering bottles. We will use recycled drink bottles, keeping trash out of the landfill and using our resources wisely.

MATERIALS

- Hammer
- Nail or awl for piercing plastic lids
- Wide-mouth, 20-oz, heavy plastic beverage bottle (i.e., sports drink or fruit juice bottle) for each participant, rinsed and empty
- Block of wood

BEFORE session: Prepare the lids.	Remove the lid from the bottle. Place lid upside down on a block of wood or other surface that won't be damaged. Use the hammer and nail to perforate the lid of the beverage bottle. Put at least 10-12 holes in the lid, spread evenly over the lid.
	Give each child a bottle and its perforated lid.
IN SESSION	
1. Prepare a label.	<i>We are going to cut a piece of paper that will wrap around the bottle with enough overlap to glue or tape together. Our table leaders can help us mark where we should cut the paper for our label. Then we will use crayons to put our name and maybe a bit of decoration on the label for our bottle. Finally, we will attach the label to a bottle with tape or glue.</i>
2. Fill bottle.	Assist each child with filling his/her bottle with just enough water for the planned activity. Don't fill the bottles.
3. Replace cap.	Assist participants with replacing the cap on each bottle. Demonstrate sprinkling plants or seedlings with the bottles. <i>Here's how we will use our bottle to water our plants. We want to be careful not to squeeze water all over since we are guests using this room and we would like to be invited back. Use over a spare plastic lid, box, or trash can to collect drips.</i>

Hands-On Horticulture: Making Plant Tags 10 minutes

Plant tags are an important part of sowing seeds and planting new plants. Remember that word "sow" from last session? "Sow" means to plant seeds. We will be planting several things in the coming units, so we want to make a ready supply of plant labels to be used in future sessions.

MATERIALS

- Seed packages from Session 1
- A mixture of plant tags and materials, including purchased and home-made
- A pot that contains a mixture of unlabeled seedlings (sow seeds ahead of time to show differences in leaf shapes)
- Potted plant with a plant tag
- Permanent marker or pencil (Sharpies, grease pencils, #2 pencils, etc.)
- Mixture of materials to use in making plant tags (should be able to write on them)

Activity Discussion

Our BIG Idea for this session is that plants grow in a world that is full of diversity. Diversity means different. Do you remember all of the different things that lived in Jack's garden? (Birds, bees, butterflies, beetles, spiders, worms, etc.) What about the plants? Jack had a lot of different plants in his garden, didn't he? He sowed seeds in his garden, and the seeds grew into many different plants. Can you count how many different kinds of plants Jack grew in his garden? (Turn to the next-to-last page that reads "And this is the garden that Jack planted." Have children count the different plants. Talk about what they see. Have them describe the seedlings.)

	<i>Do you think you would know which ones are which when they are little tiny seedlings? (Show the children a pot that contains a mixture of unlabeled seedlings OR turn to the page in Jack's Garden that says "These are the seedlings that sprouted with the rain that wet the seeds that fell on the soil that made up the garden that Jack planted." Ask the children if they know which seedlings are tomatoes or carrots or coreopsis or poppy or sunflower, etc.)</i>
1. Information to include on a plant tag	<i>When we work with plants, it is important to keep track of what they are and when we planted them. Remember the part in Jack's Garden when he planted the seeds and put the seed packages on sticks to use as plant tags? That's not a bad idea but sometimes you might need to make your own tag. (Hold up some potted plants with tags.)</i>
	<i>What else might we want to write on our plant tags? I like to remember the DATE that I planted the seeds. This helps me know how long I should wait to see the baby seedlings. If the seedlings don't show up within a week or so, I know there might be a problem. I might need to replant those seeds.</i>
	<i>If I plant more than one kind of seed or more than one kind of the same seed, I want to remember the NAME of each. I like to grow zinnias. I want to keep the yellow ones together, and put the red ones in a different part of my garden. Using a plant tag helps me keep track of which ones are yellow and which ones are red. I'd make a tag that read "Zinnia – RED" or "Zinnia – YELLOW."</i>
	<i>In our sessions together, there are lots of you. We want to keep track of who planted what, so putting YOUR NAME on plant labels is important, too!</i>
2. Hold up or put on a table some samples of different kinds of plant tags. <ul style="list-style-type: none"> • pre-made ceramic markers for common plants, such as popular herbs and vegetables • metal tags 	<i>We can use all kinds of things to label our plants. (Hold up sample plant tags.) We can use plastic, metal, wood. Can you think of some other things?</i>
	<i>Some types of plant tags work better, depending on what we are doing. For example, if I sow a bunch of different tomatoes and peppers in the springtime, getting ready for the vegetable garden, I might sow the seeds in one flat. I might forget which is which -- that would be a REAL problem if some of those peppers were HOT peppers! We might use a skinny tag (hold up a classic plastic plant tag) so that we can insert several tags in a small space, like a seed flat.</i>
	<i>When we work in the garden, we might use the tags that come with the plants that we buy (hold up a commercially-printed plant tag) to mark where things are planted in the garden and remember what the plants are. We might buy some fancy tags that we see at the garden center.</i>

<p>3. Plant tags can be simple and homemade</p> <ul style="list-style-type: none"> • ice cream sticks or tongue depressors • window blinds • recycled lids • jar lids on a stick • painted rocks • old spoons 	<p><i>You don't have to spend money for plant tags. They can be made of simple, low- or no-cost materials. Ice cream sticks make great plant tags, especially the wide paddle ones we use to eat a cup of ice cream! I might have an old window blind at my house. These are great for making into a plant tag. I can use my permanent magic marker and write on the plastic the name of my plant.</i></p>
	<p><i>Sometimes, I have the space in my garden to use painted rocks as plant labels. I might paint the letters on a rock or brick and place it next to the plant or where it is planted.</i></p>
	<p><i>We want to make sure that our plant labels are water-proof. They'll get wet when we water our plants, and we don't want our labels to wash off or fall apart.</i></p>
	<p><i>We're going to be planting lots of things together. So, we want to practice making some plant labels so that we can keep track of what we grow. Let's make some plant tags.</i></p>
	<p><i>First, choose a material to use for your plant label. (Let children choose from several different materials. Offer popsicle sticks, sections of window blinds, pre-cut pieces of plastic containers, jar lids, etc. Make sure there are no sharp edges.)</i></p>
<p>4. Make first one for last session</p>	<p><i>Choose something to write with, either a pencil or a permanent marker.</i></p> <p><i>On the back of your label, write your name. (First name is fine unless there are duplicates.)</i></p> <p><i>On the front of the label, write COSMOS.</i></p> <p><i>We made seed tapes for these last time. Did you plant them yet? If you did, write down the date when you planted them.</i></p> <p><i>Look! You've made a plant label! Great job!</i></p>
<p>5. Make a second one for next session</p>	<p><i>Choose another label.</i></p> <p><i>On the back of your label, write your name.</i></p> <p><i>On the front of the label, write GARLIC. We'll plant these at a later session, so let's put the date of _____ on the label.</i></p> <p><i>Great job! You've got your label ready for next time! Let's put them in our supply box for when we get back together again.</i></p>
<p>6. Clean up</p>	

Modifications and Tips	
TIME AND/OR ABILITY	LESS
Making Plant Tags	<p>Young students may:</p> <ul style="list-style-type: none"> • Draw a picture of each plant instead of writing the word. Make sure the plant label is large enough to accommodate a child's picture. • Draw a picture on a printed "seed label" template • Need much wider seed labels to accommodate their larger and less precise handwriting. • Need reminders about using permanent markers and/or something to protect clothing or other surface.
TIME AND/OR ABILITY	MORE
Watering Bottles	<p>Advanced: For advanced students take a moment to teach/demonstrate how to know you have watered an appropriate amount. For example, <i>In an outdoor potted plant, water just until water begins to come out the bottom; or If you pick up the soil and squeeze it, the soil should form a ball; if water seeps through your fingers, it is too wet, if the soil ball crumbles, it is too dry.</i></p>

E. Wrap Up (5 minutes)

Wrap up the session with a quick summary of the day's activities. The discussion might go something like this: *Today we finished our KWL sheet about seeds and sunflowers. Does anyone want to share something from their Sunflower Seeds KWL sheet or their journal take-home sheet on seeds and flowers? (Briefly discuss.) Today we started a new KWL sheet about insects and living things we might find in the garden. Then we talked about how plants grow in a world that is full of diversity. Who remembers what diversity means? Different, right?. We read **Jack's Garden**. Remember in Jack's garden that there were many different plants, insects and birds. Does anyone remember the names of some of those different plants? (Buttercup, Dianthus, Poppy, Purple Coneflower.) What about the insects in Jack's garden? (Green June Beetle, Sulfur Butterfly, 7-spotted Ladybird Beetle)*

Next week, we will finish up our KWL sheet about insects and start a new one. We made our own water bottles and plant tags today, too. Take a moment to remind them about their journal take-home sheets. Ask participants to share where they might look for insects or other living things. Ask them to make observations about what they see and record them on the take-home sheet. They may bring them back to the next session to share with the group and add to their journal. Remind them that they may write, draw pictures or both, and they can fill out the KWL section with what they learned in the SPROUTS session and at home afterward. Encourage participants to use the extra pages to record anything they see growing in gardens or in the places they visit.

Next week we will talk about Compost Stew.

Children go home with: **My SPROUTS Journal** take-home sheet 2 (**Where I Live and Play: Insects and Other Living Things**), **Grow On!** for Session 2.

Session 2 Notes:

Review

Next week

For follow up

Name _____

What I already know

Living Things from the Garden
Session 2

K

What I want to know more about

W

What I learned at SPROUTS

L

Grow On!

Newsletter for MG SPROUTS Families

Session Two: Jack's Garden



*I had a lot of fun today at MG SPROUTS!
I am looking forward to coming to the next session*

I have some journal sheets to work on before then. I can look in our garden for ideas. I can draw and write about what I see and share it at the next SPROUTS session.

Dear _____:

Today I learned all about Jack's Garden! Jack had a beautiful garden where he planted lots of things. He had a cat and lots of good critters lived in the soil, like earthworms. When the rain came and watered in the seeds, all of the little sprouts came up! The sprouts grew into plants that flowered. Lots of living things visit the garden, including the insects that get nectar from the flowers and birds that like the insects. There is a lot that goes on in the garden!

We made plant labels today. It's important to know what we planted and where we planted it. Since we will soon be planting seeds and working with plants, we made plant labels so that we would be ready.

Our Master Gardener leaders told us that the garden is a very exciting place to be, and I believe them! There are so many critters to see and watch and learn about.

Thanks for taking me to SPROUTS!

Love,

_____ (name)

Living Things in the Garden



The garden is an ecosystem in itself. When healthy, each organism, whether plant or animal, has a specific role to play. Gardeners can easily spot some pollinators in the garden, those critters that contribute to the productivity of crops as well as to the survival and reproduction of native plants. In order for pollinators to survive and flourish, they require the following things:

- Food, shelter, water;
- Living space;
- A place to reproduce undisturbed; and
- Nesting materials.

These things can usually be found when the natural environment is undisturbed.

Home gardeners and landscapers can create pollinator-friendly gardens to preserve native pollinator populations and enjoy the beauty and interest they provide. If you are interested in creating a butterfly garden, expand that idea to include other native pollinators as well. It is important to think beyond butterflies to provide favorable environments for our many other native pollinators. Some tips for creating pollinator-friendly habitat include:

- Plant a wide variety of nectar- and pollen-rich flowers.
- Use local native plants when possible.
- Include a variety of flowers that bloom throughout the season.
- Provide food sources and over-wintering places for eggs and larva.
- Provide water.
- Avoid using pesticides, herbicides, insecticides and fungicides.
- Provide sites and materials for nesting and over-wintering.

For additional information, read the full publication, Beyond Butterflies: Gardening for Native Pollinators (B 1349), found online at <http://extension.uga.edu/publications/detail.cfm?number=B1349>



Horticulture Activities for Kids

Plants for Pollinators

- Milkweeds (Asclepias sp.)
- Purple Coneflower (Echinacea purpurea)
- Goldenrod (Solidago sp.)
- Carolina Jessamine (Gelsemium sempervirens)
- Salvia (Salvia sp.)
- Black eyed Susan (Rudbeckia sp.)
- Joe Pye Weed (Eupatorium sp.)
- Aster (Aster sp.)
- Mountain Mint (Pycnanthemum sp.)
- Dill
- Fennel
- Mint
- Oregano
- Abelia (Abelia x grandiflora)
- Sweet Pepperbush (Clethra alnifolia)
- Red Buckeye (Aesculus pavia)
- Cosmos (Cosmos sulphureus)

Parents: Here are some additional ideas for discussion and journaling activities to use at home to help your child begin the process of inquiry. Scientific inquiry involves making observations, asking questions, sorting, comparing, counting, describing, making predictions and using all of these activities in building awareness of the world. Please return the *Where I Live and Play: Insects and Other Living Things* sheet with your child at the next SPROUTS Session. We often use these for group activity sharing and they will be placed in the My SPROUTS Journal binder at the final session, along with new sheets for future use after SPROUTS is complete.

My SPROUTS Journal ideas...

What do you see in your garden soil?

Draw pictures or make a list of all the living things you see in your garden.

Imagine a garden without birds and insects. What might happen?



How do you become a Master Gardener?

The Master Gardener program in Georgia is a volunteer training program designed to help University of Georgia Cooperative Extension staff transfer research-based information about gardening and related subjects to the public by training home gardeners. Master Gardener Extension Volunteers are active in many Georgia counties.

Georgia residents may have the opportunity to become a Georgia Master Gardener Extension Volunteer in their home county. Classes usually form either in the spring or fall.

Applications are generally available 1-4 months before the start of the training class.

Upon acceptance into the program, volunteers will be required to complete a 40-hour (usually once or twice a week) classroom training. Participants take a mid-term exam and will be required to pass a final exam on the material covered.

Master Gardener Extension Volunteer trainees will be required to complete a background check, attend all training classes and programs, and volunteer 50 hours within twelve months after graduation.

For more information contact your local county Extension agent. To connect to the Cooperative Extension office in your county call 1-800-ask-uga1.

If your child enjoyed Jack's Garden, may we suggest:

Where Butterflies Grow by Joanne Ryder
ISBN-13: 978-0140558586

The University of Georgia, Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. UGA Extension offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability.

The University of Georgia is committed to principles of equal opportunity and affirmative action.

Name _____

Where I Live and Play: Insects and Other Living Things



SESSION 2

Record some observations about an insect or other living thing that you see, or draw a picture. Here are some things to think about:

What do you think it is?

Are there wings on it?

How many legs does it have?

What color is it?

Does it have antennae?

Can you see its mouth?



Activity

 MG SPROUTS

Date

Location

Educator

Program Participation Sign-in Sheet

UGA Cooperative Extension endeavors to obtain information from individuals with whom we work to assure that we are offering our educational programs, assistance, and materials to all people without regard to race, ethnicity, national origin, color, sex, sexual orientation, religion, age, disability, or veteran status. Thank you

#	<i>(W-White, B-Black or African American, A-Asian, N-American Indian or Alaska Native, P-Native Hawaiian or other Pacific Islander, H-Hispanic or Latino)</i>	Gender		Racial Demographic					Ethnicity
		M	F	W	B	A	N	P	H
Name									
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									

Session 3: Compost Stew

Program Outline

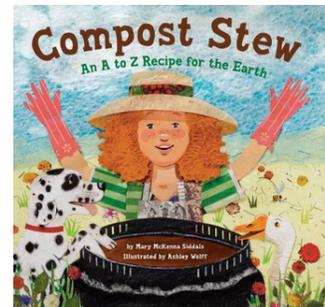
- A. Gathering Activity: KWL Sheet What's in Compost? KWL (20 min.)
- B. Welcome back (5 min.)
- C. Reading: **Compost Stew** (15 min.)
- D. Hands-on Horticulture activity: Making Soil (15 min.)
- E. Wrap-up (5 min.)

Extra Advance Preparations:

Collect a good sample of mostly-rotted compost with some identifiable components, such as egg shells, apple cores, fruit rinds, peanut shells, etc. Kids of all ages get particularly excited about compost that contains a healthy population of living creatures, such as flies, grubs, snails, earwigs, sowbugs, beetles, earthworms, maggots, or centipedes.

Supplies:

- Sign-in sheets
- Nametags
- Compost in a clear container (composted plant product, not manure or other composted animal waste, used for 2 activities)
- **KWL Sheet** from Session 2 & new **KWL Sheet** for Session 3
- Crayons, pencils, or markers
- **Compost Stew** storybook
- Several large, shallow bowls or pans, such as a disposable roasting or cake pan
- Garden soil
- Clear plastic container
- Perlite or vermiculite
- Peat moss
- Measuring cups
- Plastic trowels
- Disposable cake pans with clear lids
- Magnifying glasses
- Clear zip-top food storage bag for each child (gallon size)
- Marker
- Trash bags
- Hand whisk broom and dustpan
- Copies of take-home sheet 3 **Where I Live and Play: Soil**
- Copies of **Grow On!** for Session 3
- **What's in the Bin?** Activity Sheet



Compost Stew

by Mary McKenna Siddals,
illustrated by Ashley Wolff .
Tricycle Press; © 2010. ISBN-
13: 978-1582463162

From the inside cover: *From eggshells to wiggly worms, this delightful recipe in bouncy verse features items--some familiar and some not so--that are fit for the home compost bin and will nourish Mother Earth.*

Themes: recycling,
composting.

BIG Idea: Gardeners can help the earth by composting to make good soil for plants to grow in.

Reading vocabulary

stew
rot
clod
recipe

A. Gathering Activity: KWL Sheet – What’s in the Compost? (20 minutes)

Have one volunteer at the sign-in table to greet participants and parents, and help fill out name tags. Have the volunteer collect any journal sheets as participants check in. Hand out the KWL sheets saved from Session 2 on insects and have participants take a few minutes to finish the final section, “L-learned.” When they have completed that section, collect those sheets and give them the new sheet for Session 3. Then, place a clear container of plant-based compost at each table or group (crystal-clear recycled plastic salad boxes work really well). Have **What’s in the Compost?** KWL sheets available for each child, and one set of compost ingredients cards for each group or table. Have a volunteer assigned to each group to help guide the participants. Using the clear box of compost, ask them to look at the compost and imagine what the original materials that went into the compost might have been. Ask them to write and/or draw those on their worksheet. If you don’t have a source of compost with a variety of organisms in it, cards available in the SPROUTS Resources section may be used for ideas. (Usually any kind of living creatures in the compost will inspire a lot of inquiry and discussion, so allow extra time if your compost is teeming.)

B. Welcome back (5 minutes)

Welcome back to MG SPROUTS! Discuss last week’s book and activities. *Last week, we read about Jack’s Garden and talked about diversity in the natural world.* Hold up a SPROUTS Journal page **Where I Live and Play: Insects and Other Living Things** and ask if anyone found interesting things to write about in the take-home sheets for their journal. Talk about this week’s book, **Compost Stew**, and this week’s hands-on activities. Remind participants that they will have a new journal page to work on between sessions and ask them to collect a handful of soil in a sandwich bag to bring next week to compare.

C. Reading Aloud: Compost Stew (15 minutes)

Summary: Children brew a stew of compost using a recipe that includes A-to-Z ingredients. Read the title and author’s name. Ask some engaging questions. What is compost? What is a recipe? Encourage the children to comment and predict what will happen in the story. Using the dry erase board, select a few of the vocabulary words to discuss. Ask participants to listen for them in the story and respond when they hear them.

Read the book aloud, pausing briefly along the way to discuss the book with the group. Be sure to include the author’s note adjacent to the title page and the chef’s note at the end of the story. Conclude the reading with a short discussion about the book. Some questions you might ask to spur discussion are:

- *What are some of the items that went into the compost stew?*
- *What will happen to the items or ingredients that are in the compost?*
- *How does composting help our planet?*

D. Hands-On Horticulture: Making Good Soil (15 minutes)

Hands-On Horticulture: Making Good Soil

*Our BIG Idea this week is that plants grow in soil and gardeners can help the earth by composting to make good soil for plants to grow in. Our book, **Compost Stew**, tells us about lots of things that can be composted, or broken down, and added back to our garden soil. When we add compost to our garden soil, several good things happen. Plants need soil that is rich in nutrients and that also holds a reasonable amount of water. Plant roots need oxygen so that they do not suffocate. Today, we’re going to make some good soil for growing plants.*

MATERIALS

- Several large, shallow bowls or pans, such as a disposable roasting or cake pan
- garden soil
- compost (composted plant product, not manure or other composted animal waste)
- perlite or vermiculite
- peat moss
- measuring cups
- spoons
- clear zip-top food storage bag for each child (gallon size is best)

<p>Preparation:</p> <ul style="list-style-type: none"> • Open bags of product and pour each into its own bowl or pan. • Provide each child with a measuring cup or scoop and a bag. 	<p><i>Our story this week told us about all kinds of things we can recycle to create compost. What kinds of things do you have at your house that could be composted?</i></p> <p><i>What do we use compost for? (Talk about uses and benefits of compost.)</i></p>
<p>1. Start with regular garden soil.</p>	<p><i>Let's look at some soil from my garden (pick up the pan of soil and use spoons to stir and pick through). What do you see in the soil? (Talk about any critters that you see, pieces of leaf litter or sticks, rocks, etc.) Can you describe the soil? Is it rough or soft? Is it all the same size?</i></p>
<p>2. Examine compost sample.</p>	<p><i>(Pick up the pan of compost and use spoons to stir and pick through). What do you see in the compost? (talk about any critters that you see, pieces of leaf litter or sticks, rocks, etc.) Can you describe the compost? Is it rough or soft? Is it all the same size?</i></p>
<p>3. What happens when we add compost to soil?</p>	<p><i>We know that compost is good for our environment because it turns trash into treasure. Compost provides a little bit of nutrients to our plants. It improves the soil texture and its ability to hold onto moisture and nutrients. It also helps loosen a heavy soil so that plant roots can grow. We add compost back to our garden soils to help our plants.</i></p>
<p>4. Let's make our own potting soil.</p>	<p><i>We can make some gardening soil for growing plants. A good mix contains some soil, some compost, and some other ingredients that help make sure the mix drains well enough to keep roots healthy, but that can also hold onto and provide nutrients to the plants.</i></p>
<p>5. Give everyone a bag. Add soil and compost.</p>	<p><i>We'll start with a bag. (Give each child a zip-top bag.) Let's write our names on our bag. (Use marker to label bags, then help children open the bags.) Then, we'll each get a scoop of soil and put it in our bag. (Use cups to scoop soil into each bag.) Next, we'll add a scoop of compost. (Repeat with cups to add compost to each child's bag.)</i></p>
<p>6. Add perlite for drainage.</p>	<p><i>For our soil to drain well, we need to add something that will help keep the soil mix light and have lots of air pockets. We are going to use perlite. This is a material that helps our mixes drain. Perlite is actually a type of rock that is heated at very high temperatures to the point that it pops into these little white balls. We can get the balls in small and large sizes, depending on what we are trying to do. Potting soil needs a larger size. Let's get a scoop of perlite and add it to our bag of potting soil. (Use cups to scoop soil into each bag).</i></p>
<p>7. Add peat moss.</p>	<p><i>Last, we are going to add peat moss to our potting soil. This gives us volume without a lot of extra weight. Roots find it easy to grow through the peat moss, and it will hold some water. (You can demonstrate how much water a peat pellet will absorb or wet some peat moss and squeeze a handful over a bowl.) It doesn't hold a lot of nutrients for the plants, so it works well when combined with these other ingredients.</i></p>

8. Mix it up.	<i>We have all of our soil ingredients in the bag. Let's seal the bag and mix it up. (Help the children seal the zip-top bags, then squeeze and shake to mix up the ingredients. When done mixing, open the bags and touch the mix, talking about it.) What does our potting soil look like? Do you think plants will like to grow in this mix?</i>
9. Clean Up	<i>We're going to seal our bags and save our potting soil for another activity. Can you help me tidy our work area? (Re-seal the bags and collect for next activity. Have children collect cups and spoons and stack neatly.)</i>

Modifications and Tips	
TIME AND/OR ABILITY	LESS
Making Good Soil	<ul style="list-style-type: none"> • Prepare the potting mix ahead of time and let students scoop some into bags that they have labeled with their name. • Instead of children scooping materials, have them form a line and allow volunteers to add ingredients to the bag.
TIME AND/OR ABILITY	MORE
	Talk about what might happen if you added different quantities of ingredients. Ask participants to predict what might happen to the plants grown in different mixes.

E. Wrap-up (5 minutes)

Wrap up the session with a quick summary of the day's activities. The discussion might go something like this: *Today we finished our KWL sheet about insects. Did anyone find insects at home? (Briefly discuss.) Who can tell me what plants grow in? Yes, soil. So, the first part of our BIG Idea this session is that plants grow in soil. Remember in **Jack's Garden** we saw the drawing of the beautiful soil and the worms and other things that live in the soil? The second part of our BIG Idea is that gardeners can help the earth by composting to make good soil for plants to grow in. We looked at compost and started a new KWL sheet about compost. What did you find the most interesting about the compost we looked at today? Then, we read our book about composting and all of the ingredients that went into the recipe for compost stew. Does anyone remember the ingredients? Who can tell me how composting helps the earth? (Briefly discuss.) We made our own soil for plants today. Why did we do that? Remind them about their journal take-home sheets. Ask participants to share where they might find some soil to observe and record on their sheet. Ask them to collect a sandwich bag of soil and bring it to the next session to share with the group and compare.*

Next week we will talk about The Ugly Vegetables

Children go home with: **My SPROUTS Journal** take-home sheet 3 (**Where I Live and Play: Soil**), Copies of **Grow On!** for session 3, and **What's in the Bin Activity Sheet**.

Session 3 Notes:

Review

Next week

For follow up

Name _____

What I already know



What's in the Compost?
Session 3

What I want to know more about



What I learned at SPROUTS



Grow On!



Newsletter for MG SPROUTS Families Session Three: Compost Stew

Dear _____:

Today I learned all about compost stew! I learned about all the things we can put in a compost pile rather than in our garbage. This is good for the earth, since we can add compost to our garden and plants. Even earthworms like compost! I bet they especially like _____.

We learned how to make a potting soil for growing plants. Good soil needs to provide nutrients to plants, hold a reasonable amount of water, but let the plants roots have the oxygen and space they need to grow.

We made potting soil. It was fun to mix and stir all the dirt together. Perlite looks like popcorn, but it helps the potting soil to drain.

Thanks for taking me to SPROUTS!

Love,

_____ (name)

I had a lot of fun today at MG SPROUTS! I am looking forward to coming to the next session

We are learning about recycling and reusing. Can we find and bring an empty 2L plastic bottle and a smaller 20oz juice bottle for next session?

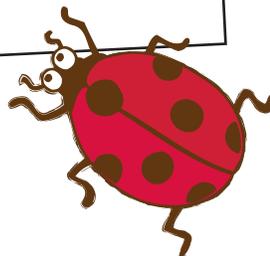
I have some journal sheets to work on before then. I can look in our garden for ideas to draw and write about!

Composting

Soils can often be improved and made more productive by simply mixing organic matter with them. For many years, the most popular source of organic matter for soil improvement has been well-rotted farm manure, which is now less available, especially for the urban gardener. Today's gardeners should be aware of cheaper and more readily available sources of organic residues. These include plant materials from their own homes and yards, such as grass clippings, scraps of vegetable materials, small twigs, and especially fall leaves. To become useable soil amendments, these materials should undergo a degree of decomposition brought about by certain bacteria and fungi (microbes).

The process by which gardeners convert organic matter for use is called composting, and the useable material is referred to as compost. The practice of applying materials such as compost, leaves, or grass clippings to the soil surface to modify soil temperature and moisture, and control weeds and soil erosion is called mulching.

For more information about how to compost, see UGA Cooperative Extension Publication, Composting and Mulching (C816), available online at <http://extension.uga.edu/publications/detail.cfm?number=C816>



Horticulture Activities for Kids

Tips for Maintaining a Septic System

- Have the tank inspected and pumped periodically, ideally every three to seven years.
- Do not drive or park over the tank or drainfield.
- Do not use sinks or toilets as trashcans.
- Garbage disposals increase the need for routine pumping.
- Consider the septic system in the landscape design.
- Use water wisely.
- Do not use additives.

Excerpted from UGA Extension Publication *A Beginner's Guide to Septic Systems* (B1421) available online at <http://tinyurl.com/septicforbeginners>

Parents: Here are some additional ideas for discussion and journaling activities to use at home to help your child begin the process of inquiry. Scientific inquiry involves making observations, asking questions, sorting, comparing, counting, describing, making predictions and using all of these activities in building awareness of the world. Please return the *Where I Live and Play: Soil* sheet with your child at the next SPROUTS Session. We often use these for group activity sharing and they will be placed in the My SPROUTS Journal binder at the final session, along with new sheets for future use after SPROUTS is complete.

My SPROUTS Journal ideas...

What kinds of things could you get from the kitchen and put in a compost pile?

What kinds of things could you compost from your yard or garden?

How would you use compost in your gardens?

Draw a picture of all the living organisms in the soil. How do they relate?



About Georgia 4-H

Georgia 4-H is a world in which youth and adults learn, grow, and work together as catalysts for positive change!

The mission of Georgia 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. This mission is accomplished through "hands-on" learning experiences, focused on agricultural and environmental issues; agriculture awareness; leadership; communication skills; foods and nutrition; health; energy conservation; and citizenship.

Exploring and discovering, encouraging and challenging, that's what Georgia 4-H is all about. As a program of the University of Georgia College of Agricultural and Environmental Sciences Cooperative Extension System, 4-H is part of the nationwide Extension network.

4-H'ers are known for sharing their research-based knowledge and technology with people where they live and work. 4-H combines federal, state, and local expertise and resources.

In Georgia, Extension faculty members based on the campus of the University of Georgia and in most Georgia counties work directly with adult and teen volunteer leaders to implement the 4-H program at the local level. For more information about Georgia 4-H, contact your local county Extension Office or the Georgia State 4-H Office.



*If your child enjoyed Compost Stew,
may we suggest:*

Yucky Worms: Read and Wonder
by Vivian French ISBN-13: 978-0763658175

The University of Georgia, Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. UGA Extension offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability.

The University of Georgia is committed to principles of equal opportunity and affirmative action.

Name _____

Where I Live and Play: Soil



SESSION 3

Record some observations about the soil, or draw a picture.

Here are some things to think about:

What color is the soil?

Is the soil wet or dry?

Are there puddles?

Can you scoop it?

Is it sticky or sandy?

Do you see any living things in it?

What kinds of plants are growing in the soil?



Activity
 MG SPROUTS

Date

Location

Educator

Program Participation Sign-in Sheet

UGA Cooperative Extension endeavors to obtain information from individuals with whom we work to assure that we are offering our educational programs, assistance, and materials to all people without regard to race, ethnicity, national origin, color, sex, sexual orientation, religion, age, disability, or veteran status. Thank you

	<i>(W-White, B-Black or African American, A-Asian, N-American Indian or Alaska Native, P-Native Hawaiian or other Pacific Islander, H-Hispanic or Latino)</i>	Gender		Racial Demographic					Ethnicity
		M	F	W	B	A	N	P	H
	Name								
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									

Session 4: The Ugly Vegetables



Program Outline

- A. Gathering Activity: KWL Sheet Incredible Vegetables (10 min.)
- B. Welcome Back (5 min.)
- C. Reading: ***The Ugly Vegetables*** (15 min.)
- D. Hands-on Horticulture Activity: Growing Garlic (15 min.)
- E. Memory Game (10 min.)
- F. Wrap up: (5 min.)

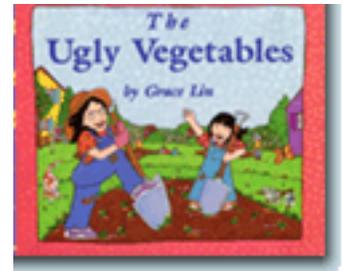
Extra Advance Preparations:

Grow garlic out approximately one month in advance, if possible.

Bring some interesting vegetables for gathering activity. Perhaps you can find some that the children may not be familiar with: bitter melon, jicama, ginger, kohlrabi, nopales. Try to find some that are different parts of the plant: roots, leaves, fruit, and seeds.

Supplies:

- Sign-in sheets
- Name tags
- ***The Ugly Vegetables*** storybook
- Chinese vegetable word cards
- Clipboards
- Pencils, markers, crayons
- ***KWL Sheet*** from Session 3 & new ***KWL Sheet*** for Session 4
- Assorted interesting vegetables
- Garlic-several whole heads
- 2 liter plastic bottle (with top half cut off and holes punched in the bottom)
- Potting soil made during Session 3
- Ruler or other tool to measure inches (note: you can mark inches on a plastic spoon with a permanent marker)
- Watering bottle made in Session 2 (optional)
- Recycled plastic lid or other place to catch drainage water
- Food storage bag for transport home
- Trash bags
- Hand whisk broom and dustpan
- ***Vegetable Memory Game*** cards, at least 1 set per two participants (print on opaque paper)
- ***My SPROUTS Journal*** folder or notebook
- Copies of ***Grow On!*** for Session 4
- Copies of take home sheet 4 (***Where I Live and Play: Vegetables & Fruits***)
- Copies of _____'s ***Favorite Vegetable Recipe Sheet*** (optional)



The Ugly Vegetables by Grace Lin . Charlesbridge: © 2001; 32 pages. ISBN-13: 978-1570914911

A girl and her mother plant a garden. To the little girl, the neighbors' flowers seem much better than their plain green vegetables. Only after the neighbors come to share her mother's delicious vegetable soup does the girl gain an appreciation for the "ugly vegetables" from her garden.

Themes: Diversity, sharing, identity, community.

BIG Idea: Through gardens we can express creativity, culture and promote sharing.

Reading vocabulary

wriggle

recipe

aroma

cai

A. Gathering Activity: KWL Sheet – Incredible Vegetables (10 minutes)

Have one volunteer at the sign-in table to greet participants and parents, and help fill out name tags. Have the volunteer collect any journal sheets as participants check in. Hand out the KWL sheets saved from the last session on compost and have participants take a few minutes to finish the final section, “L-learned.” When they have completed that section, collect those sheets and give them the new sheet for Session 4. At each table, have some different vegetables in an opaque or covered tray. Open the box when the participants begin working on the K & W sections of Session 4 KWL sheet. Allow children about 10 minutes to work. Ask prompting questions as they work, such as *Have you ever seen or eaten this?*, *What part of the plant do you think it is?* or, *What do you wonder about the _____?* If the children are not yet writing, have volunteers assist by taking dictation or encourage children to draw.

B. Welcome back (5 minutes)

Welcome back to MG SPROUTS. Take a moment to discuss last week’s book and activities. *Last week, we read Compost Stew and talked about soil. We looked at compost and made our own potting soil. Hold up a **My SPROUTS Journal** and ask if anyone found interesting things to write on their take-home sheet. Did anyone bring some soil from home? Is it different? How so? Talk about this week’s book, **The Ugly Vegetables**, and group activities. Today we are going to plant something we can eat, either now or later.*

C. Reading Aloud: The Ugly Vegetables (15 minutes)

Introduce the book and set the stage for what’s going to happen in the book. There are supplemental cards in this package that the participants can hold up to help build engagement during the reading. During the reading, repeat the Chinese words several times and encourage the children to say the names aloud with you while the child with the card holds it up for all to see. Conclude the reading with a short discussion about the book. Some questions you might ask to spur discussion are:

- *Have you ever helped someone else to plant a garden? What did you plant?*
- *The little girl’s garden looked like grass when it started growing. What did the neighbor’s garden look like?*
- *What kinds of vegetables were they growing in the little girl’s garden? Have you ever eaten something right from the garden? Did you like it? Have you ever shared something from a neighbor’s garden?*
- *Has your family ever shared a special food or recipe with your friends or neighbors?*

D. Hands-on Horticulture: Growing Garlic (15 minutes)

Hands-On Horticulture: Growing Garlic	
<i>We are going to plant something that we can eat, now or later.</i>	
MATERIALS <ul style="list-style-type: none"> • Garlic word card • Garlic-several whole heads • 2 liter plastic bottle with top half cut off and holes punched in the bottom • Potting soil made during Session 3 • Ruler or other tool to measure inches (note: you can mark inches on a plastic spoon with a permanent marker) • Watering bottles made in Session 2 (optional) • Recycled plastic lid or other place to catch drainage water 	
Have a participant hold up the garlic word card.	<i>Garlic is one of the world’s oldest cultivated crops. Garlic was found in the tomb of the Egyptian King Tutankhamun, who lived about 3000 years ago, and it is also mentioned in ancient Greek, Egyptian, Indian and Chinese writings. The Chinese word for garlic is da suan. Garlic is one of the oldest plants to be widely used as a medicine, and it is used for flavoring in food preparation in many parts of the world. Can you think of a favorite food that has garlic in it? Even though garlic isn’t mentioned by name in The Ugly Vegetables, garlic and ginger are the most common fresh ingredients for seasoning Chinese dishes.</i>

Hold up a whole head of garlic.	<i>What part of the plant is it? (Modified stem) The whole thing is called a head of garlic. Ask them to be thinking about which end might grow up and which end might grow down.</i>
Hold up a clove.	<i>These pieces are called cloves and each of them will grow a new garlic plant.</i>
Bring out soil mix from last session.	Instruct children to add water to make the potting soil moist. Individually: Mix water in bags. As a group: Combine all soil mix in a large plastic bin. Add water and stir until moist during the activity or when they get home.
Fill the container.	Have each child fill the container 2/3 full with potting soil. Have them measure and mark spots 3 inches apart in the potting soil.
Separate the garlic bulb into cloves.	<i>Which end do you think will grow up and which end will grow down? Show them a whole clove and point out where the roots come from and where the shoot emerges from.</i>
Plant the cloves.	Have them place a clove, pointed end up, at each spot they have marked. Have them measure 1 inch up from the top of the potting soil, and mark it with a line. Then they will add more potting soil until it reaches the line.
Caring for the garlic at home.	Tell them that they should place the container in a very sunny spot and keep the soil moist. <i>What do you think will happen to the cloves? You will want to water and fertilize your new plants. If you take care of the garlic plant for about 9 months, you will have a whole new garlic bulb.</i> Slip the pot down into a food storage bag and close the top to prevent spillage during the transport home.

E. Memory Game (10 minutes)

Mix up the cards and lay them in rows, face down. Player one turns over any two cards. If the two cards match, he or she gets to keep them. If they don't match, the player turns them back over. The game is over when all the cards have been matched. The player with the most matches wins. The game cards may be shuffled and the game repeated.

F. Wrap-up (5 minutes)

Wrap up the session with a quick summary of the day's activities. *Today, we finished our KWL sheet about compost. Did anyone bring soil from home to compare today? (Briefly discuss.) In **The Ugly Vegetables**, we read about a little girl, Grace, and her mother who had a garden where they grew Chinese vegetables. Our BIG Idea this session is that through growing plants and gardening, we can express creativity, culture and promote sharing. How did Grace and her mommy share their culture? Yes, by growing vegetables that were Chinese and then making food to share. What did the neighbors bring over to share? Have any of you ever shared something you grew or made with a friend or neighbor?*

We talked about garlic and started our own garlic plants in the potting soil that we made last week. Take a moment to remind them about their journal take-home sheets for this week, and suggest that they visit a garden where vegetables are being grown or a store where vegetables are sold. Ask them to record their observations on the sheet and bring them back to the next session to share with the group and add to their journal. Remind them that they may write, draw pictures, or both and add anything they find to the Learned section of the KWL sheet. They can also use the extra pages to record about anything they see growing in gardens or in the places they visit.

If you choose to send home the Favorite Vegetable Recipe Sheet, mention that you would like to have those back at the next session to have time to make copies. *Do you remember that we talked about what a recipe was last week when we read **Compost Stew**? How about Grace's family recipe for soup? Does anyone remember what ingredients went into the soup? Do you have a favorite recipe for a vegetable dish? Will you share it with us like Grace's mommy shared hers? We are making a recipe book for our SPROUTS group and we will share our favorite vegetable recipes and put them all together. Bring yours back next session and we will copy them and make a booklet of recipes for each of us.*

Next week we will talk about Plantzilla.

Children go home with: Planted garlic, copies of **Grow On!** for Session 4, copies of **Where I Live and Play: Vegetables & Fruits** Journal Sheet, Copies of _____'s **Favorite Vegetable Recipe Sheet** (optional)

Session Notes:

Review

Next week

For follow up

Name _____

What I already know

K

Incredible Vegetables
Session 4

What I want to know more about

W

What I learned at SPROUTS

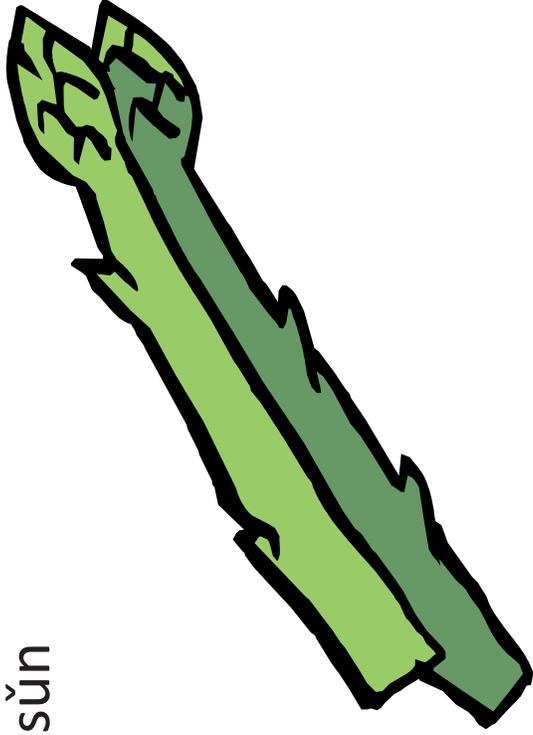
L

dà suàn



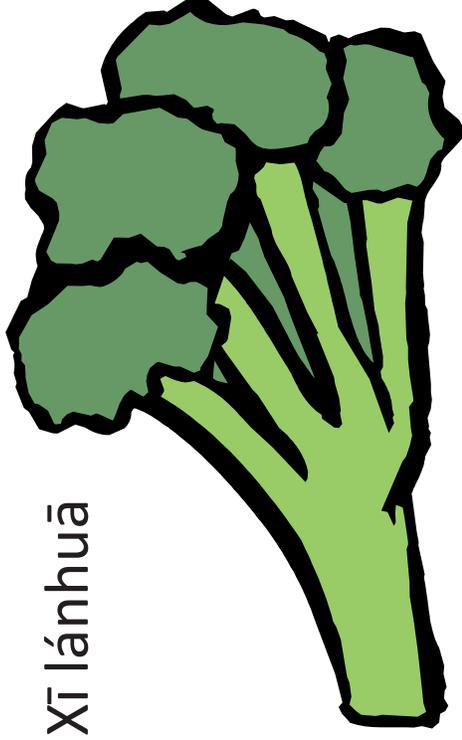
garlic bulb

Lúsūn



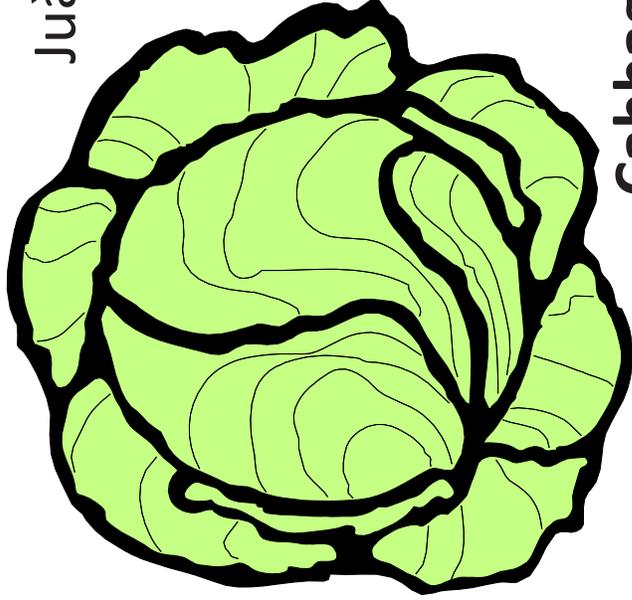
Asparagus

Xī lánhuā



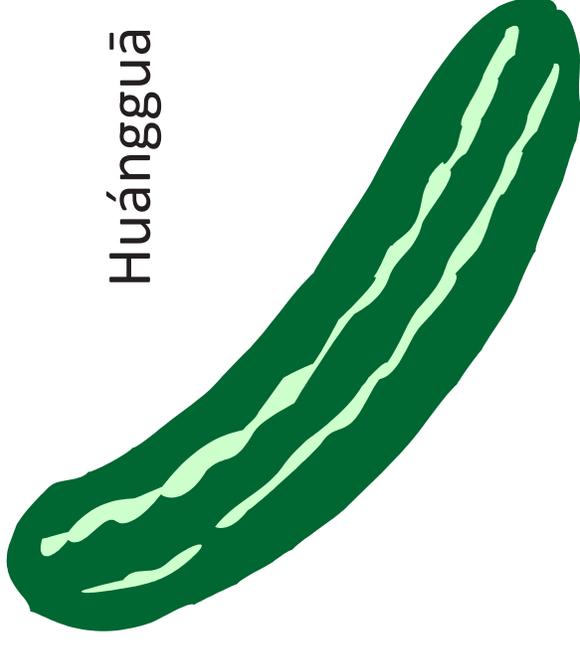
Broccoli

Juǎnxīncài



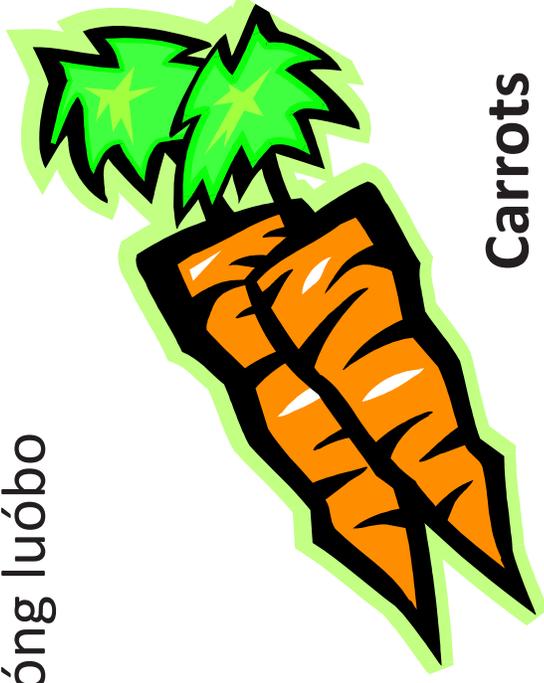
Cabbage

Huángguā



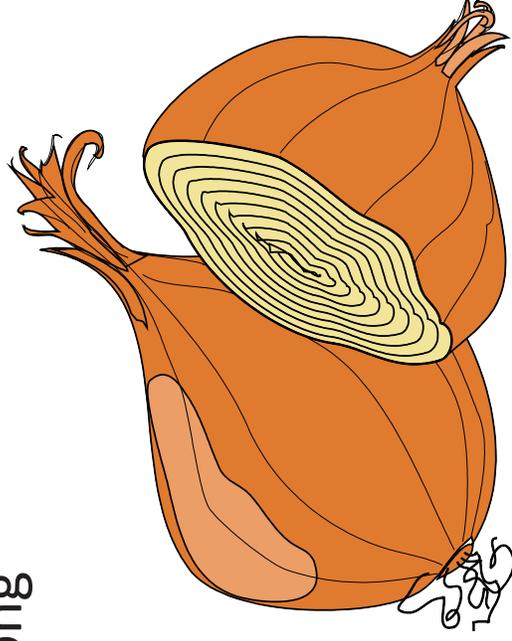
Cucumber

Hóng luóbo



Carrots

Cōng



Onions



Qíncài

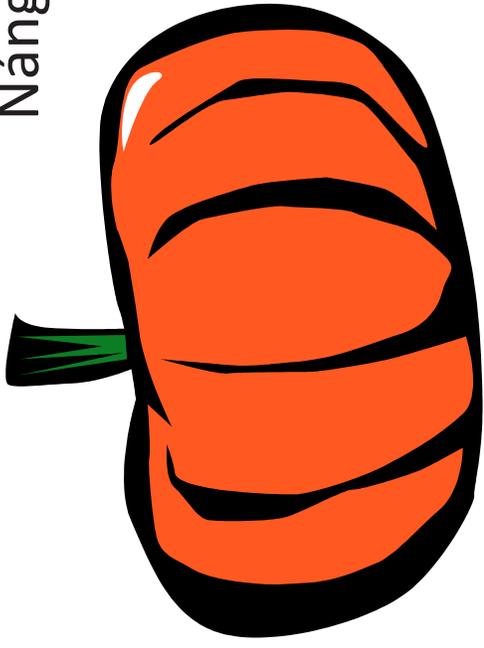
Celery

Làjiāo



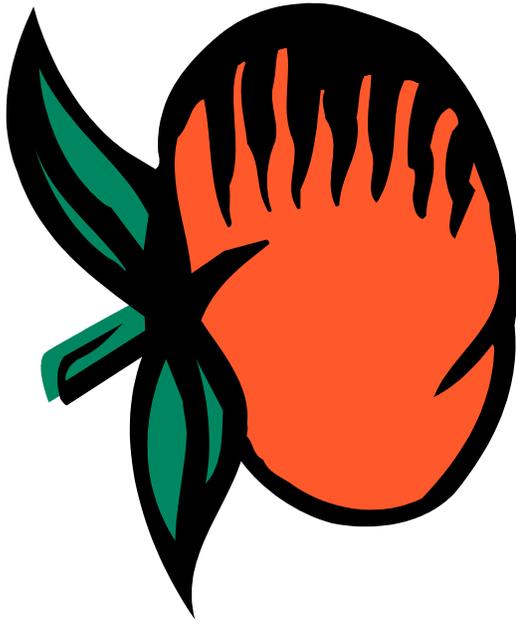
Peppers

Nánguā



Pumpkin

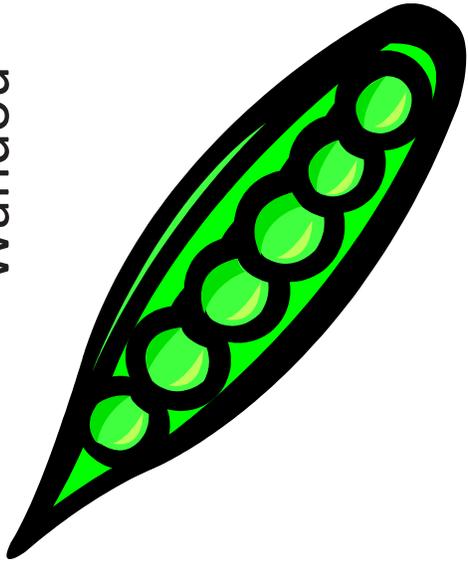
Fānqié



Tomato

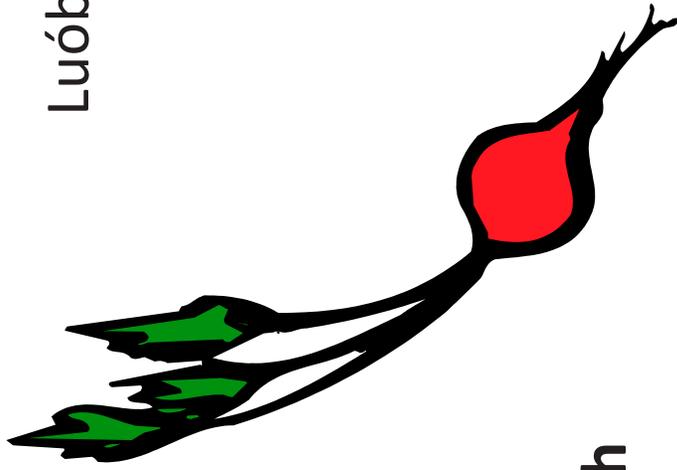
MG SPROUTS Memory Game Card 3 (Print 2 copies per set on heavy or opaque paper and cut on dotted lines)

Wāndòu



Peas

Luóbo



Radish



MG SPROUTS Memory Game Card 1 (Print 2 copies per set on heavy or opaque paper and cut on dotted lines)





MG SPROUTS Memory Game **Card 2** (Print 2 copies per set on heavy or opaque paper and cut on dotted lines)



MG SPROUTS Memory Game **Card 3** (Print 2 copies per set on heavy or opaque paper and cut on dotted lines)



Name _____

Where I Live and Play: Vegetables and Fruits

My 
SPROUTS
Journal

SESSION 4

Record some observations about some vegetables that you see at a store or farmer's market, or growing in a garden. Here are some things to think about:

What color is the vegetable?

How big is the vegetable?

What kind of vegetable is it?

What parts do you think are eaten?

If you see the vegetables growing in a garden, think about these things:

What do the leaves look like?

How big do you think the plant will grow?

Grow On!



Newsletter for MG SPROUTS Families Session Four: The Ugly Vegetables

*I had a lot of fun today at MG SPROUTS!
I am looking forward to coming to the next session*

I have some journal sheets to work on before then. I can look in our garden for ideas to draw and write about!

Dear _____:

Today I learned all about special vegetables and flowers! Grace learned all about planting seeds, growing and harvesting vegetables, and she made new friends in her neighborhood by sharing what she and her mother knew and grew.

We learned a little bit about gardening, too! I planted some garlic, and I will need to take care of it. I am bringing it home in a plastic bag that is like a greenhouse, a place to help it grow.

Our Master Gardener leaders told us that it will soon begin to sprout. We can take care of it like a house plant. Every couple of days, I should give it a drink of water. They told us enough water to keep the soil moist. If I stick my finger in the potting soil, it should feel damp and a few pieces of peat moss should stick to my finger.

Master Gardeners also told us we can plant the garlic in our vegetable garden. Garlic is usually planted outside in the fall. It forms roots in the fall and will sprout leaves in the spring. The bulbs, formed underground, are usually ready in mid-summer.

Thanks for taking me to SPROUTS!

Love,

_____ (name)

Garlic Calendar

FALL – Order garlic bulbs from garden supply companies. Separate into cloves, choosing the largest and fullest for planting. Smaller cloves can be used for cooking. Prepare your planting bed according to soil test recommendations, incorporating several inches of organic matter into the soil. Plant the clove, pointed end up, by pushing two to three inches into the ground and spacing four inches between cloves. Cover over with soil, and mulch with straw or other material. Water in, keep weeded, and wait!

WINTER – Garlic is forming roots in the late fall.

SPRING – As soil temperatures begin to warm, the garlic cloves will sprout, pushing up leaves through the soil. Remember to keep the bed weeded and watered as the garlic leaves grow. If you start to see flower scapes appear, snap those off, leaving the leaves in place to keep growing.

SUMMER – As the plants mature, they will begin to turn yellow and brown, looking like they are dying. This is a signal that the garlic is ready (its bulbs are underground!). When you see three to four leaves per plant beginning to turn, pull or dig the garlic from the ground, shaking off any excess soil. Allow the garlic to dry for several days by laying it on window screens or a picnic table in the sun, out of rain or other moisture. Once the garlic bulbs have cured, they can be stored in a cool dry place. Use for cooking.

More information is available in the UGA Extension Publication Garlic Production for the Gardener (C 854)

<http://extension.uga.edu/publications/detail.cfm?number=C854>



Horticulture Activities for Kids

Modeling Healthy Eating Behaviors

Eat a Variety of Foods: Encourage your family to stay healthy by eating a variety of foods.

You can play a large role in helping your family maintain a healthy lifestyle. By demonstrating healthy behaviors for your children, you can encourage them to follow your positive example. Young children learn about the world by watching adults they trust. Children imitate their parents' behaviors both during play and in their own lives.

You can help your child learn to eat a variety of foods by selecting items from several food groups to complete your own meals. Try to include foods of differing colors on your plate. Talk to your child about the variety of colors and foods groups from which you are eating.

Your child is always watching you, making it important for you to model healthy eating habits. Let your child see you eating breakfast, drinking water, eating a variety of foods, stopping when you're full, and being physically active.

Excerpted from Eat Healthy Be Active (C 1037-18) Available for download at http://extension.uga.edu/publications/files/pdf/C%201037-18_1.PDF

UGA Extension Family and Consumer Sciences

UGA Extension provides resources for parents, other family and household members, caregivers, and other individuals promoting the positive development and safety of school-age and adolescent youth, consumer economic issues and financial planning, and healthy home environments.

UGA Extension helps families thrive with information for professionals and adults on fostering healthy couple relationships, positive parent-child relationships, and the care of aging adults.

When people become educated about financial management, they become empowered to live a better life. Extension's basic financial literacy programs are designed to help consumers plan spending to meet needs, wants and goals today and in the future.

We provide users with information about water and energy conservation, reducing waste, buying or renting a home, and improving the indoor environment by reducing pollutants like mold, radon, lead, and volatile organic compounds. These resources allow families and individuals to create healthy, safe, and sustainable homes and improve their quality of life.

<http://extension.uga.edu/family/>



Parents: here are some ideas for journaling activities to use at home to help your child begin the process of inquiry. Please bring any completed journal sheets along to the next MG Sprouts session to be placed in the My SPROUTS Journal binder.

My SPROUTS Journal ideas...

What unusual vegetables have you seen at the super-market or farmer's market?

What vegetables or fruits would you like to taste?

What vegetable or fruit would you try to send into space to see how it grows?

If your child enjoyed *The Ugly Vegetables*, may we suggest:
The Vegetables We Eat by Gail Gibbons,
ISBN-13: 978-0823421534



The University of Georgia, Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. UGA Extension offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability.

The University of Georgia is committed to principles of equal opportunity and affirmative action.



Activity
 MG SPROUTS

Date

Location

Educator

Program Participation Sign-in Sheet

UGA Cooperative Extension endeavors to obtain information from individuals with whom we work to assure that we are offering our educational programs, assistance, and materials to all people without regard to race, ethnicity, national origin, color, sex, sexual orientation, religion, age, disability, or veteran status. Thank you

#	<i>(W-White, B-Black or African American, A-Asian, N-American Indian or Alaska Native, P-Native Hawaiian or other Pacific Islander, H-Hispanic or Latino)</i>	Gender		Racial Demographic					Ethnicity
		M	F	W	B	A	N	P	H
Name									
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									

Session 5: Plantzilla

Program Outline

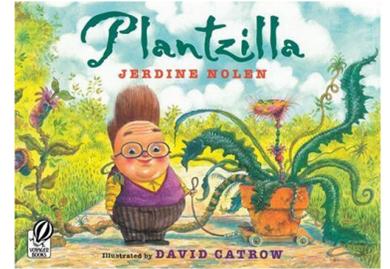
- A. Gathering Activity: KWL Sheet Indoor Plants (10 min.)
- B. Hands-on Horticulture activity: Making a Garden Pet (20 min.)
- C. Reading *Plantzilla* (15 min.)
- D. Postcard to Mr. Lester (10 min.)
- E. Wrap up (5 min.)

Extra Advance Preparations:

Collect and cut bottles. Make arrangements to borrow some interesting potted indoor plants from MGEVs. If possible, try to find a Venus fly trap or other carnivorous plants for participants to observe with the KWL sheet.

Supplies:

- Sign-in sheets
- Name tags
- **KWL Sheet** from Session 4 & new **KWL Sheet** for Session 5
- Table covers
- Pencils, crayons, and/or markers
- 1 personal-sized recycled beverage bottle (20 oz.), clear plastic, with lid on. (Milk jugs with handle left on and hole cut in them also work, or you can just have participants create faces on the sides of a standard pot.)
- Scissors
- Glue (school glue or low-temperature hot glue)
- Assorted craft supplies: wiggly eyes, pipe cleaners, pompoms, feathers, etc.
- Construction paper
- Pencils
- Scissors
- Markers
- Awl, punch, or sharp knife
- Potting soil
- Pothos plant cuttings (or similar, easy-to-root house plant)
- Plastic spoons
- Watering bottles
- Food storage bags and twist ties
- Trash bags
- Hand whisk broom and dustpan
- **Postcard to Mr. Lester** sheet
- Copies of **Grow On!** for Session 5,
- Copies of take-home journal sheet 5 (**Where I Live and Play: Indoor Plants**)



Plantzilla by Jerdine Nolen, illustrated by David Catrow. Silver Whistle, © 2002. 32 pages. ISBN-13: 978-0152053925

Mortimer Henryson loves Plantzilla, the plant he's been taking care of all year in his third-grade classroom. He loves him so much, he takes him home for summer vacation. What could go wrong with a . . . plant? But life in the Henryson household soon takes a strange turn. A pot roast disappears, then steaks from the grill--and where has Mrs. Henryson's prize Chihuahua gone? -Goodreads

Themes: Humor, responsibility, caring for living things.

BIG Idea: Caring for plants and other living things is engaging and an enjoyable experience.

Reading vocabulary

plant food
symbiotic
metamorphosis
commotion

A. Gathering Activity: KWL Sheet – Indoor Plants (10–15 minutes)

Have one volunteer at the sign in table to greet participants and hand out name tags. Have a volunteer collect Favorite Vegetable Recipe Sheets and any journal sheets as participants check in. Hand out the KWL sheets saved from the last session on vegetables and have participants take a few minutes to finish the final section, “L-learned.” When they have completed that section, collect those sheets and give them the new sheet for Session 5. At each table, have some indoor plant specimens in an opaque box or covered tray. Open the box when the participants begin working on the K & W sections of Session 5 sheet. Allow children about 10 minutes to work. Ask prompting questions as they work, such as “Where do you think these potted plants grow in nature?”, “Are there buildings you visit that have plants growing in them? Why might those plants be growing there? Who takes care of them?”, If the children are not yet writing, have volunteers assist by taking dictation and encourage children to draw pictures to illustrate.

B. Hands-on Horticulture: Making a Plant Pet (20 minutes)

Hands-On Horticulture: Making a Plant Pet	
We will make a fun plant pet from a recycled beverage bottle.	
<p>MATERIALS</p> <ul style="list-style-type: none"> • 1 personal-sized recycled beverage bottle (20 oz.), clear plastic, with lid on • Scissors • Glue (school glue or low-temperature hot glue) • Assorted craft supplies, like wiggly eyes, pipe cleaners, pompoms, feathers, rocks, glitter, etc. • Construction paper • Pencils • Scissors • Markers • Awl, punch, or sharp knife • Potting soil • Pothos plant cuttings (or similar, easy-to-root house plant) • Plastic spoons • Watering bottles • Food storage bags and twist ties 	
<p>DIRECTIONS</p> <p>Note: Adult leaders need to cut the bottles prior to participants decorating them as some sort of “critter”. Craft or school glue is easiest for doing this activity, but needs a little time to dry before children fill the bottles with potting soil and sow seeds. Low-temperature “hot glue” will set faster and be stronger, but needs to be used with care and oversight. The hands-on activity will start first, then the reading will happen while the glue is drying.</p>	
Prepare the bottles prior to Session 5	<p>Rinse any plastic bottles that have beverage residue in them. Allow bottles to dry, and replace the cap. Remove any labels.</p> <p>Lay the bottle on its side and hold in place on a solid surface. Using a knife, awl, or punch, puncture the side panel of the beverage bottle, then use the scissors to cut a rectangle in the side of the bottle. This will be the opening for the planter. Make sure that you do not cut so much that the integrity of the bottle is compromised.</p>

<p>Create a garden pet.</p>	<p><i>In today's story we are going to learn about a boy named Mortimer. His plant is named Plantzilla, and it is rather like a pet. So we're going to make our own plant pet! (Show a completed plant pet.)</i></p> <p><i>Let's first decorate the bottle like a "critter." You can choose to create an insect or animal, or some other pretend garden pet. Does everyone have a plastic bottle?</i></p>
<p>Let's create the face.</p>	<p><i>We'll first create a face on the end of the bottle with the lid. Trace the lid on a piece of construction paper and cut out the circle with your scissors. Next, we'll glue the circle of paper to the lid. Choose some wiggly eyes and glue them onto the paper. Use your markers to finish the face.</i></p>
<p>Decorate the body</p> <ul style="list-style-type: none"> • Pipe cleaners as antennae or tails • Colorful feathers • Construction paper shapes • Stones or large beans (4 per pet) to keep it from rolling 	<p><i>Now, let's add details to our pet. Does your pet need wings? How about antennae? Feet? Stripes? Scales? (Depending upon the pet chosen, details can be added to the body. Children will need help adhering the pieces. Use the glue gun to glue large bean seeds or rocks as "feet" to stabilize bottle and keep it from rolling.)</i></p>
<p>Let the glue dry.</p>	<p><i>We need to let the glue dry on our pets, so let's go over to our reading spot to read our story. (Set the critter aside to dry.)</i></p>
<p>Fill with soil.</p>	<p><i>Now that the glue on our pets is dry, let's plant our pets. We need soil in the body of the pet. We'll use our cups as scoops and get some potting soil to fill the body cavity (bottle) with potting soil. We want to leave 1" of space from the cut opening of the bottle.</i></p>
<p>Plant the pet.</p>	<p><i>We're going to stick cuttings of a houseplant that we know as pothos into our plant pet. This plant roots very easily – see these bumps on the stem near the leaves? (Hold up a section of stem and show the root initials.) Those are root initials and they will grow quickly into new roots. You'll be able to see these roots growing through the side of your plant pet.</i></p> <p><i>Everyone should have three cuttings like this (hold up a pothos cutting) and their spoon. Use the handle of the spoon to make a hole for the cutting, then stick the stem of the cutting into the soil. You want to have the leaves at the soil surface. Use your watering bottle to moisten the soil. (Repeat until everyone has three cuttings stuck in their plant pet.)</i></p> <p><i>What are you going to name your pet? (discussion)</i></p>
<p>Caring for the pet.</p>	<p><i>Each day, you will want to check to see if your plant pet is moist. Remember how we check to see if the soil is moist? We'll gently touch the soil and see if it is damp and sticks to our fingers. Water when it is dry, and be careful not to overwater. The pothos should start forming roots in a week or so. In a few more weeks, new leaves should start appearing! In time, you will be able to make even more cuttings from your plant pet! (Place plant pets inside food storage bags for transporting home.)</i></p>

C. Reading Aloud: *Plantzilla* (15 minutes)

(Note: this book may be difficult to read without some practice prior to the read-aloud. The letter fonts give good clues as to the character voice, but may be hard to read upside down. Two copies of the book may be helpful so that the illustrations of one can be displayed as the other is read aloud.)

Summary: An adorable boy brings home the classroom plant for the summer and strange things begin to happen as his attachment to the plant grows. Introduce the book and set the stage for what's going to happen in the book. Read the book aloud, pausing briefly along the way to discuss the book with the group and point out the action in the illustrations. Conclude the reading with a short discussion about the book. Some questions you might ask to spur discussion are:

- *Who is Mortimer?*
- *Where was Mr. Lester staying on his vacation?*
- *Did you notice how this story was told?*
- *Do you ever write letters?*
- *What do you think happened to Grollier the chihuahua?*
- *Why did Mom want to send Plantzilla back?*
- *Have you ever brought a pet home from school to care for?*
- *What happened at the end of the story?*

D. Wrap Up & Postcard to Mr. Lester (5 minutes)

(Note: Allow more time and skip the postcard activity if you are using carnivorous plants with the KWL sheet.) Remind the participants about how the characters in *Plantzilla* communicated by writing letters. Have the children name write the name of their plant pet and write or draw a pretend postcard to Mr. Lester about it and how they will care for it. If you run short of time, have the participants take the activity sheet and complete it at home.)

Wrap up

Wrap up the session with a quick summary of the day's activities. The discussion might go something like this: *Today, we finished our KWL sheet about vegetables. Did anyone visit a place where vegetables are grown or sold? Did you record it on your take-home journal sheet? We started a new KWL sheet to get us thinking about plants that we might grow indoors. Have any of you ever been to a place where they grow a lot of plants indoors? (You can mention conservatories, greenhouses, shopping malls, home with a sunroom or sunny window, etc.) In our story, we read all about Plantzilla and how Mortimer cared for him, almost like a pet. Then we made our own plant pet. We wrote a postcard to Mr. Lester about our plant pet. Take a moment to remind them about their journal take-home sheets. Ask participants to share where they might look for indoor plants to make observations about for their sheet. Ask them to record them on the sheet and bring them back to the next session to share with the group and add to their journal.*

Next week we will talk about The Tree Farmer.

Children go home with: Plant pet, ***Postcard to Mr. Lester, Where I Live and Play: Indoor Plants*** take-home journal sheet, ***Grow On!*** for Session 5

Session Notes:

Review

Next week

For follow up

Name _____

What I already know

K

Plants That Grow Indoors
Session 5

What I want to know more about

W

What I learned at SPROUTS

L

Write a postcard to Mr. Lester, the science teacher and describe your plant pet. Draw a picture on the back

POST CARD

PLACE
STAMP
HERE

Samuel G. Lester

c/o

Plantinonium Holiday Aloha Resort

Honolulu, Hawaii

Grow On!



Newsletter for MG SPROUTS Families

Session Five: Plantzilla

*I had a lot of fun today at MG SPROUTS!
I am looking forward to coming to the next session*

I have some journal sheets to work on before then. I can look in our garden for ideas to draw and write about!

Dear _____:

Today I learned all about Mortimer's plant named Plantzilla! Plantzilla was like a pet. Mortimer adopted him for the summer and brought him home. Weird things started happening around Mortimer's house. Mortimer's dog, Grollier, disappeared and Mrs. Henryson thought Plantzilla ate Grollier!! Silly mommy! Mortimer took good care of Plantzilla, feeding him and giving him water. In the end, everybody loved Plantzilla!

We made our own plant pet today! My plant pet is named _____. I will need to take care of it. I am bringing it home in a plastic bag, just to be careful.

Our Master Gardener leaders told us to bring home our plant pet and place it in a bright spot with indirect light. Tomorrow, I need to open the bag and take out the container. Every couple of days, I need to give it a drink of water. I need to keep the potting soil moist.

The pothos should root in a week or so. In a few more weeks, new leaves should start appearing! In time, I will be able to make even more cuttings from my plant pet!

Thanks for taking me to SPROUTS!

Love,

_____ (name)

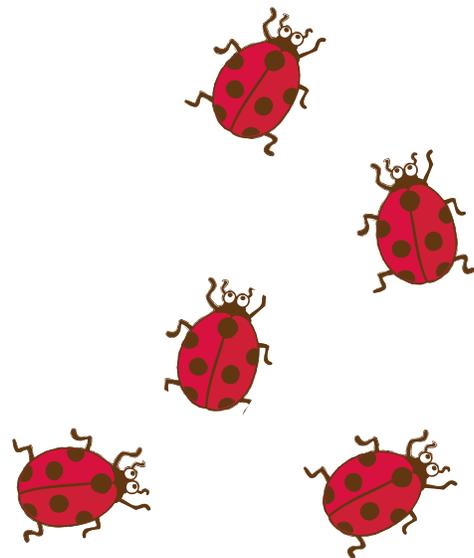
Interior Plants

Interior plants are an ideal way to create attractive and restful settings while enhancing our sense of well-being. In addition, houseplants can be a satisfying hobby and can help purify the air in our homes. Indoor plants not only convert carbon dioxide to oxygen, but they also trap and absorb many pollutants. Many of these chemical compounds, which are released into our air through a process called "off-gassing," come from everyday items present in our homes and offices. To be a successful indoor gardener, you need to understand how the interior environment affects plant growth and how cultivation differs from growing plants outdoors.

For more information about growing house plants, see UGA Cooperative Extension Publication, **Growing Indoor Plants with Success** (B 1318), available online at <http://extension.uga.edu/publications/detail.cfm?number=B1318>



Horticulture Activities for Kids



Interior Plants for Low Light Areas

- Chinese Evergreen (*Aglaonema modestum*)
 - Cast Iron Plant (*Aspidistra elatior*)
 - Bamboo Palm (*Chamaedorea erumpens*)
 - Japanese Aralia (*Fatsia japonica*)
 - Philodendron Pertusum (*Monstera deliciosa*)
 - Fiddle-Leaf Philodendron (*Philodendron bipennifolium*)
 - Gold-Banded Sansevieria (*Sansevieria trifasciata 'Laurentii'*)
 - Nephthytis (*Syngonium podophyllum*)
- Excerpted from *Growing Indoor Plants with Success* (B 1318),
• <http://extension.uga.edu/publications/detail.cfm?number=B1318>

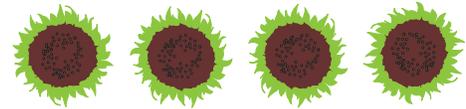
Please return the *Where I Live and Play* journal sheet with your child at the next *SPROUTS* session.

The University of Georgia College of Agricultural and Environmental Sciences

Agricultural and environmental sciences are only as important as the food you eat, the clothes you wear, and the water and air around you. To improve the quality and guard the safety of life's necessities, the University of Georgia College of Agricultural and Environmental Sciences has gathered world-renowned scientists and exceptional students.

The CAES is one of the oldest and among the best U.S. colleges of agriculture. In its classrooms, its Agricultural Experiment Stations and its state-wide network of Cooperative Extension offices, the faculty and staff of the CAES are dedicated to discovering, teaching and delivering the science required for healthy living to flourish in Georgia.

<http://www.caes.uga.edu/>



My SPROUTS Journal ideas...

Do you have a favorite house plant at home or in your classroom at school? What does it look like?

How might you tell if your favorite plant was happy and healthy? What if it were sick?

How would you measure your favorite plant's growth?

How does your favorite plant make you happy?

If your child enjoyed
Plantzilla, may we suggest:

The Gardener by Sarah Stewart
ISBN-13: 978-0312367497



The University of Georgia, Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. UGA Extension offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability.

The University of Georgia is committed to principles of equal opportunity and affirmative action.

Name _____



SESSION 5

Where I Live and Play: Indoor Plants

Record some observations about a plant growing indoors or draw a picture. Here are some things to think about:

How old do you think it might be?

Does it have flowers?

Who takes care of it?

Do you think it gets moved around?



Activity
 MG SPROUTS

Date

Location

Educator

Program Participation Sign-in Sheet

UGA Cooperative Extension endeavors to obtain information from individuals with whom we work to assure that we are offering our educational programs, assistance, and materials to all people without regard to race, ethnicity, national origin, color, sex, sexual orientation, religion, age, disability, or veteran status. Thank you

#	<i>(W-White, B-Black or African American, A-Asian, N-American Indian or Alaska Native, P-Native Hawaiian or other Pacific Islander, H-Hispanic or Latino)</i>	Gender		Racial Demographic					Ethnicity
		M	F	W	B	A	N	P	H
Name									
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									

Session 6: The Tree Farmer

Program Outline

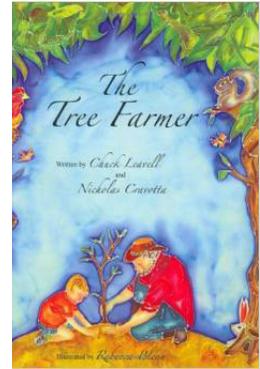
- A. Gathering Activity: Make a Gardening Calendar (20 min.)
- B. Reading: *The Tree Farmer* (15 min.)
- C. Hands-on Horticulture activity: Plant an acorn or seedling (10 min.)
- D. Discussion, wrap up and pass out certificates(15 min.)

Extra Advance Preparations:

Gather acorns for planting or order tree seedlings. (Wait until the majority of acorns are falling from the tree, and then gather a supply of them. However, you should not wait too long to collect acorns as they will begin to dry as soon as they hit the ground.)

Supplies:

- Sign-in sheets
- Session 5 KWL Sheet
- Name tags
- Table covers
- **My SPROUTS Monthly Calendar** sheet, 12 for each child
- Construction paper (12" x 18" size works well)
- Markers, crayons and pencils
- Gardening catalogs and magazines
- Means of fastening calendar together, such as a clear plastic report cover (sliding bar style will work well), a stapler, brass brads and hole punch, etc.
- Acorns (1 for each child)
- Potting soil
- Measuring spoons
- 4-6" flower pots (1 for each child)
- Plant tag
- Watering bottles
- Plastic food storage bags and twist ties
- Trash bags, hand whisk broom and dustpan
- KWL Sheets from Session 1-5
- Journal sheets (*Where I Live and Play* & any other)
- **My SPROUTS Journal**
- Copies of **Grow On!** for Session 6
- **MG SPROUTS Certificates**



The Tree Farmer by Chuck Leavell and Nicholas Cravotta, illustrated by Rebecca Bleau. 32 pages. Evergreen Arts; © 2010. ISBN-13: 978-061535520

A grandfather who owns a tree farm takes his grandson on a magical journey through the forest, where trees become musical instruments, books, a baby's crib and more. The story explains the vital role that trees play in our lives, providing us with the wood for our homes, furniture and other products- -and mankind's responsibility to protect and care for them. -Amazon.com

Themes: Value of forests and trees in our lives, connecting our role as stewards of natural resources.

BIG Idea: We can influence the health of the environment through our own gardens.

Reading Vocabulary

responsible
consider
steward
marvelous

A. Gathering Activity: Making a Gardening Calendar (15 minutes)

Have one volunteer at the sign-in table to greet participants and parents, and help fill out name tags. Have the volunteer collect any journal sheets as participants check in. Hand out the KWL sheets saved from Session 5: Indoor Plants and have participants take a few minutes to finish the final section, “L-learned.” When they have completed that section, collect those sheets and have a volunteer arrange the participants’ sheets into the **My SPROUTS Journal**.

While journals are being assembled, participants will make a garden calendar. Lay the full sheet of 12 x 18 paper vertically (portrait layout) and fold in half. Have participants decorate the top half with markers, crayons, and pictures cut and pasted from magazines or garden catalogs. The printed calendar pages are stacked in order and stapled or fastened with brads to the bottom half of the paper.

B. Reading Aloud: The Tree Farmer (15 minutes)

Introduce the book and set the stage for what’s going to happen in the book. Ask an “I wonder” statement based on the cover illustration. Read the title and author’s name. Encourage the children to comment and predict what will happen in the story.

Read the book aloud, pausing briefly along the way to discuss the book with the group. Conclude the reading with a short discussion about the book. Some questions you might ask to spur discussion are:

- *Where was the story set?*
- *What are some of the things that the trees do for us?*
- *Why did the farmer cut the trees down?*
- *What are some things that would be made from the cut trees?*
- *What you think the word “steward” means?*

C. Hands-on Horticulture: Planting an Acorn

The Tree Farmer tells the story of responsibility for the land and caring for the trees so that the benefits of the land and trees continue. We will plant an acorn, an act of stewardship.

MATERIALS

- Acorns (1 for each child)
- Potting soil
- Measuring spoons
- 4-6” flower pots (1 for each child)
- Plant tag
- Watering bottles
- Plastic food storage bags and twist ties

Discuss stewardship activities mentioned in *The Tree Farmer* and connect to our own gardening activities.

In our story, Grandfather lives on a farm. What does he grow on his farm? (Trees) Do you remember what Grandfather said he is responsible for? (Planting, trimming, protecting from insects and fire, keeping nature in balance for other plants and animals) Does he ever cut down the trees? (Yes, for particular uses, such as making furniture, musical instruments, paper, etc.)

Grandfather calls himself a “steward of this land.” Do you remember what a steward is? A steward is someone who responsibly takes care of something he or she has been trusted with. Grandfather goes on to tell us that we have to respect and love our trees and plants, our gardens. If we do not carefully tend our plants and gardens, we could destroy the earth and the animals that call it home.

	<p><i>Do any of you live on a farm? Do you have to live on a farm to be a steward? (No) Our yards and gardens are kind of like Grandfather's farm. Our gardens are entrusted to us to care for them. Our gardens are part of our community. They can make our community a pretty place, they can be a habitat for other animals, and they can even grow food for us. Can you think of other gardens in our community? (Discuss places where they see plants and landscapes or farms.)</i></p> <p><i>When we take care of our gardens and yards, we are helping to take care of the earth. The way we prune and plant affects the air that we breathe, the quality of our oceans, streams, and lakes.</i></p> <p><i>When we take care of our yards and gardens in a responsible way, we are acting for the common good and are demonstrating good stewardship of the earth.</i></p>
Let's plant a tree!	<p><i>Remember what Grandfather did first with trees? He had to plant them! We're going to plant a tree today!</i></p> <p>(Hold up an acorn) <i>Do you know what this is? It is the seed of an oak tree. Let's fill our pots with potting soil. Remember to use your spoon to measure the space at the top of your pot.</i></p>
	<p><i>Now, get an acorn and push it down into the soil in the center of your pot. We want it to be 2 inches deep. We can use our spoon handle again to make sure that we have planted it deep enough.</i></p> <p><i>Gently firm the potting soil over the seed. Water gently with your watering bottle. Create a plant tag and label for the acorns that were sown. Place pots in a plastic food storage bag and secure neck of bag with a twist tie. Send home with Grow On! newsletter that contains additional details for caring for the seedling as it emerges.</i></p>
Clean up and put away.	

D. Program Wrap-up

After materials are cleaned up, gather children together. Explain that this is the last Sprouts session. *We are so proud of all that we have learned and accomplished together here in MG SPROUTS. We started out learning about seeds and flowers in the book **Sunflower House**. We learned about diversity - with different plants and insects in **Jack's Garden**. We talked about how composting makes soil and helps the earth when we read **Compost Stew**. Remember when we learned how gardening can bring people together with Grace and her mother in **The Ugly Vegetables**? We even learned a little about Chinese vegetables, too. We laughed at the pictures of Mortimer and Grollier in **Plantzilla** and found out how interesting growing plants can be. Finally, we learned about being stewards of the land with Grandfather in the **The Tree Farmer**. We did a lot with our hands, too! We made soil and planted seeds. We created plant tags, made plant pets, and water bottles to water them. Now, we are growing those plant pets, seeds from seed tapes, and garlic from cloves. We made beautiful calendars and garden journals describing what we've seen and learned. There are more pages in the **My SPROUTS Journal** so that you can keep observing and recording. Now, we have a special certificate for you to recognize your efforts! (Give each child his/her personalized certificate.) Call each child up to shake their hand and others can clap.*

Children go home with: **MG SPROUTS Certificate**, planted acorn or seedling, watering bottle, **My SPROUTS Journal**, **Grow On!** and **My SPROUTS Monthly Calendar**.

Session Notes:

Review

My
SPROUTS
Garden
Calendar



January



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

February



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

March



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

April



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

May



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

June



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Look for “good” garden insects
like ladybugs and spiders



July



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday



Pick vegetables to keep more coming

August



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

September



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Plant fall vegetables like lettuce and broccoli

October



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday



Water newly-planted trees and shrubs regularly

November



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

December



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday



Horticulture Activities for Kids

Certificate of Completion

awarded to

on this _____ day of _____



Grow On!



Newsletter for MG SPROUTS Families

Session Six: The Tree Farmer

Dear _____:

Today I learned all about Grandfather and his tree farm! Grandfather took very good care of his trees so that they would grow strong. Sometimes he had to trim them. Sometimes he had to give them some water. He protected those trees from insects and fire. Grandfather explained how those trees were made into furniture, musical instruments, paper, and all kinds of things that we use, and that they helped keep our air and water clean.

We learned that we can be good stewards, just like Grandfather. By taking good care of our lawns and gardens, we can take care of our earth and air and water, too. We made a calendar to help us remember when to do certain gardening tasks. Our yards and gardens help make our community a nice place to live. We got to plant an acorn, too!

Our Master Gardener leaders told us to bring home our acorn. It's in a plastic pot with a clear bag around it. We should remove the bag and place the pot outside in a cool spot with indirect light. Every couple of days, I need to give it a drink of water, just enough to keep the potting soil moist. In a few weeks, the acorn will germinate! As it grows, I can plant it in the yard (but I better make sure I have enough room for it first!)

Thanks for taking me to SPROUTS!

Love,

_____ (name)

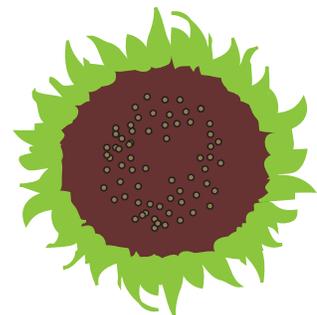
I had a lot of fun today at MG SPROUTS! This was our last session. Maybe I can find a friend who will want to go to SPROUTS the next time it is offered!

Red Oak Trees

Northern Red Oak is a deciduous tree with medium texture and a medium to fast growth rate. It develops a rounded crown with age. Leaves are alternate, oval or obovate, up to 8.5 inches long and 6 inches wide, with seven to 11 lobes. They are lustrous green above and yellow-green below. Fall color is usually yellow-brown but may be russet-red.

Landscape Uses: Northern Red Oak is used as a large specimen shade tree. It transplants readily because of a negligible taproot. It needs acidic, sandy loam, well-drained soils and full sun for best development. Northern Red Oak tolerates dry conditions and urban sites.

For more information about Northern red oaks, see UGA Cooperative Extension Publication, Native Plants for Georgia Part I: Trees, Shrubs and Woody Vines (B 987), available online at <http://extension.uga.edu/publications/detail.cfm?number=B987#RedOak>



Horticulture Activities for Kids

UGA Extension Publications

Each edition of the MG Sprouts Grow On! newsletter has featured publications from UGA Extension on a variety of topics. You can browse through and download over 800 free publications or order one of our popular For Sale publications, including the *So Easy to Preserve* cookbook and the *Turfgrass Management* mobile application.

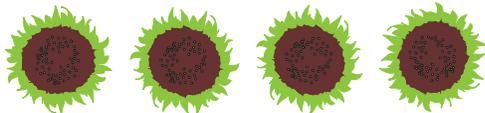
<http://extension.uga.edu/publications/>

My SPROUTS Journal ideas...

Do you have a favorite tree at home or in your neighborhood? What does it look like?

What kinds of animals use the oak tree for food?

What does your family do to take good care of your garden or lawn?



*If your child enjoyed
The Tree Farmer, may we suggest:*

Leaf Man by Lois Ehlert
ISBN-13: 978-0152053048

UGA Cooperative Extension in Your County

We have enjoyed having your child participate in the MG SPROUTS program. We hope this is just the beginning of a lifelong enjoyment of wonder and learning for your child.

Your county government's support of UGA Extension makes programs like MG Sprouts, 4-H, Walk Georgia, and many others possible in our county. Without UGA Extension volunteers like Master Gardeners, we would not be able to offer the range of educational programs that we do. Their support is invaluable to our community.

Any time our office can be of assistance to you or your family, whether you have questions about water quality, lawns and gardens, or you just want to meet your county Extension agent, e-mail us, call us, or drop by.



Our office is located at:



The University of Georgia, Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. UGA Extension offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability.

The University of Georgia is committed to principles of equal opportunity and affirmative action.

My SPROUTS Journal



NAME _____



Name _____

Where I Live and Play: Trees

*Record some observations about a tree that you see or draw a picture.
Here are some things to think about:*

Do you think a person planted it or did it just grow there from a fallen seed?

How old do you think it might be?

How wide and tall are the branches?

How wide is the trunk?

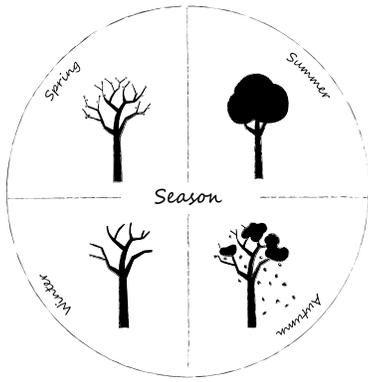
Are there animals living in it?

Do you think the needles or leaves stay on it all year round?

What kinds of seeds are on or under it?

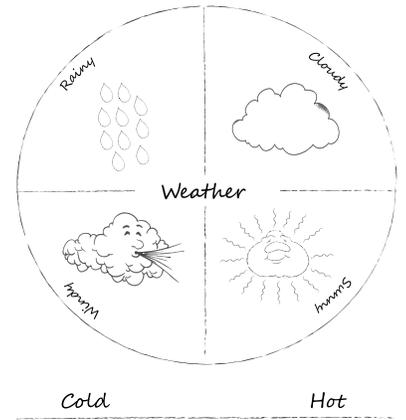
What does the bark look like?

Does it have flowers?



My SPROUTS Journal

This is where I write
about the things I see.



Today's date is _____.

I am at _____.

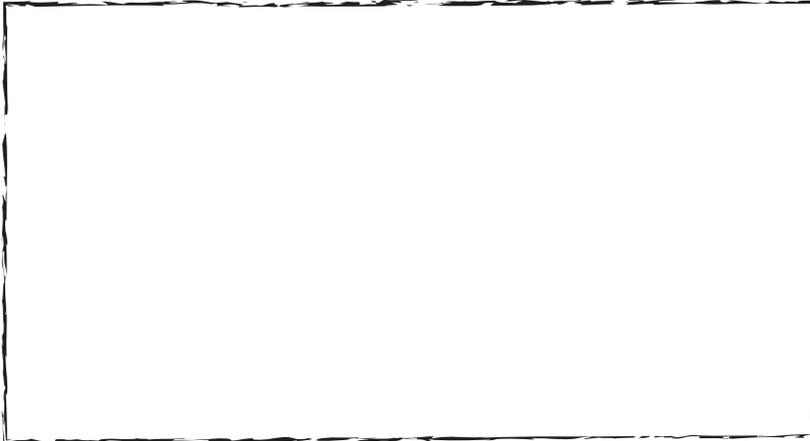
These are the things I see today.

These are things I want to know more about.

Where I Learn: The UGA Extension Office



Visit the UGA Extension office located at:



Follow Up

Bring your My SPROUTS Journal to the UGA Extension Office above to show us what you have learned after SPROUTS.



Activity
 MG SPROUTS

Date

Location

Educator

Program Participation Sign-in Sheet

UGA Cooperative Extension endeavors to obtain information from individuals with whom we work to assure that we are offering our educational programs, assistance, and materials to all people without regard to race, ethnicity, national origin, color, sex, sexual orientation, religion, age, disability, or veteran status. Thank you

	<i>(W-White, B-Black or African American, A-Asian, N-American Indian or Alaska Native, P-Native Hawaiian or other Pacific Islander, H-Hispanic or Latino)</i>	Gender		Racial Demographic					Ethnicity
		M	F	W	B	A	N	P	H
	Name								
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									

