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	
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.	
MATERIALS • 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 **You can also use a drop of non-toxic "school glue" to attach each seed to the tape.*	
1. Prepare the "glue."	*(Have children gather around a table)* *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.*
	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?

Continued: preparing the glue	(place small bowls of flour in the center of each table for children to work from) *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)
	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.*
2. Prepare the "tape."	*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.)
3. Determine seed spacing. (Use Cosmos seed package as an example)	*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.)***
	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.)
	Cosmos, for example, is sown one inch apart, so we would make an "X" every inch on the paper strip.
	(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.)
4. Put glue on the tape.	*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.)

5. Put seeds in the glue.	*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.
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!***)	*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!*

Modifications and Tips

TIME AND/OR ABILITY: LESS

Seed Tape:

For younger children:

- 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

Advanced Activity: If participants seem to be readily understanding other concepts related to planting seeds, add this activity/discussion to enhance content learning.

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.

Seed Spacing Activity

- 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