Sunflower Stations

Suggested Grade Level: K-2

Time: 2 sessions of 1 – 1 ½ hours each

Subject: Science, Language Arts, Math

Overview: This lesson includes 8 cross-curricular hands-on centers for students to rotate through in small groups. Over the next 2 days, each student will visit 4 different stations centered on sunflowers. They should be implemented after the students have had initial, whole-group instruction on sunflowers and have some background information (life cycle, parts, and basic facts).

Objectives:

1. Plant sunflower seeds in recycled milk cartons.
2. Create sunflower-themed crafts using various materials.
3. Complete a Sunflower Growth Cycle activity.
4. Create a Sunflower Directed Drawing.
5. Use different measurement tools to measure sunflower models.
6. Investigate a real sunflower head.
7. Complete a writing activity using sunflower facts.

Background Information:

Sunflowers are a type of plant grown for their seeds or for decoration. They grow all over the world and are native to the United States and Kansas. They get their name from their ability to always face the sun. Sunflowers are huge – most common sunflowers can grow to 12 feet tall, and some giant varieties can be up to 30 feet tall. Like most plants, sunflowers have seeds, roots, a stem, leaves, and a flower (Kansas Wildflowers). Inside a sunflower seed is a baby plant, called an embryo. The hard shell of the seed protects the baby plant until it is ready to grow. Then, the seed sprouts. This process is called germination. Plants need soil, water, air, and sunlight to germinate. As the plant gets bigger and stronger, it grows flower buds. The flower buds bloom into big sunflowers with lots of seeds in the center. When these seeds dry out, they fall onto the ground, where they can grow into a flower again (Kansas Foundation). The seeds can also be harvested to make sunflower oil or eaten as a snack. You've probably seen someone eating them if you've ever been to a baseball game!

Kansas Industry Information:

You might have heard someone call Kansas the "Sunflower State" or noticed the big

yellow flower on our state flag. This is because sunflowers are the state flower of Kansas! These large, bright flowers are grown all over the state. In fact, sunflowers can be found in every county in Kansas! While they are sometimes used as decorations, they are often grown for their seeds. Sunflower seeds can be turned into oil for cooking or made into snacks for humans and birds (Kansas Farm).

Materials:

Station 1: Plant a Seed

Per student

- Sunflower seeds
- Potting soil
- Recycled lunch milk carton
- Pieces of construction paper
- Tape
- Colored pencils
- Crayons

Station 2: Parts of a Sunflower

Per student

- 9 x 12 light blue construction paper
- 2-3 yellow cupcake liners
- Green and brown construction paper
- Brown shredded paper
- A handful of sunflower seeds
- Glue
- Scissors
- Pencil
- Part labels (seeds, roots, stem, leaves, flower)

Station 3: Growth Cycle

Per student or group

- iPad or computer access
- Headphones
- Glue
- Scissors
- Colored pencils
- Pencil
- 4x18 strip of white construction paper
- Large sunflower pattern on 8 ½ x 11 white cardstock with a dotted cut line on it
- Reference chart with words: Seed, Seedling, Young Plant, Bud, Flowering, Seeds Fall

Station 4: Sunflower Directed Drawing

Per student

- Markers
- Pencil

- 12x18 white construction paper
- iPad or computer access
- Headphones

Station 5: Measurement

Per group

- Common sunflower (12 ft. high) drawn on bulletin board paper and laid on the floor
- At least 150 linking cubes
- Markers
- Boxes of large paper clips
- At least 50 tongue depressors
- Any other items that can be used for measuring
- Recording sheet
- Pencils

Station 6: Sunflower Craft

Per student

- Large yellow paper plate
- A handful of sunflower seeds
- Green tongue depressor
- Green construction paper
- Pencil
- Glue
- Scissors

Station 7: Sunflower Heads

Per student or group

- Real sunflower head OR half-circle pieces of green floral foam with sunflower seeds embedded in it
- tweezers
- collection cups

Station 8: Sunflower Facts

Per student

- Scissors
- Glue
- pencils
- Yellow, green, and brown construction paper
- Petal patterns
- Circle pattern
- Various sunflower books (see Supporting Resources)

Instructional Format:

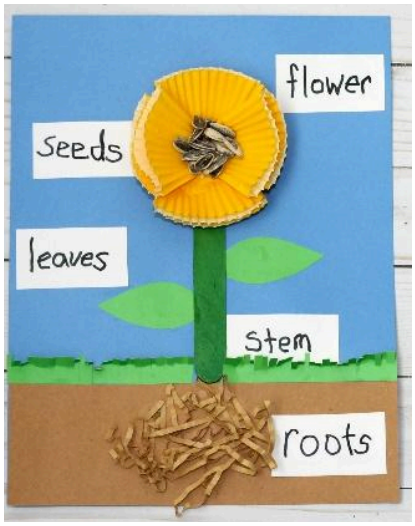
1. Review Background Information and Kansas Connections
2. Prepare for the lesson ahead of time
3. Conduct an engagement exercise

4. Complete the activities
5. Conduct assessment exercise (optional)

Engagement:
Before teaching this lesson, ask the class what they know about sunflowers to gauge their understanding. Read the Background Information and Kansas Connections sections out loud if students need a refresher. Then, play this short video. Boxlapse: Growing Sunflower Time Lapse https://www.youtube.com/watch?v=x5mHzwEOpp4. If the vocabulary words (listed in the Vocabulary section below) have not already been discussed in a previous lesson, take some time to go over them now.

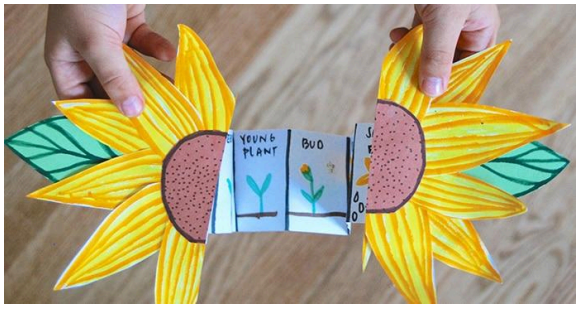
Procedures:
1. Prepare each station by setting out materials (and step-by-step instructions, if needed) in advance. Some stations will require extra preparation:

- Station 2: Create a model of a sunflower using the picture below as an example. Glue brown and green construction paper strips to the blue background paper to create the sky and ground. Glue the leaf shapes to the back of the tongue depressor, then glue the folded and cut cupcake liners to the front of the depressor. Glue the sunflower to the background. Then, glue the shredded paper to the strip of brown construction paper. Finally, glue the sunflower seeds and labels down. Create more labels for each part of the plant, enough for each student/group.



- Station 3: Prepare a large sunflower pattern. You can find a few on the internet if you do not want to make it yourself (some listed in Supporting Resources). Cut out the shapes, then glue the petals and leaves to the back of the head. Cut the flower in half. Then, use the Sunflower Growth Cycle poster to draw and label the growth cycle stages on each section of the folded white strip. Glue the ends of the white strip to the back of each flower half. Copy the pattern you used onto cardstock for students to color and cut out. Make sure to have the 4x18 white

construction paper strips already folded into 6 sections. Optional: Make this Sunflower Growth Cycle poster visible for students https://ksagclassroom.org/supporting-resources/sunflower-growth/ and provide step-by-step instructions.



- Station 5: Prepare a piece of 12 ft long bulletin board paper and draw (or paint) a large sunflower on the paper. Place the paper on the floor by the station.
- Station 6: Prepare the yellow paper plate by drawing the “notches” on the back of the plate for the students to cut out.
- Station 7: If possible, get a real sunflower head. If that is not possible, prepare a floral foam half-circle that has sunflower seeds sticking out of it as a model head.
- Station 8: Create shape patterns out of cardboard or cardstock for students to trace. Make one petal pattern, one leaf pattern, and one circle pattern for the middle.

2. Split students into 4 small groups and explain each station. Students will rotate through 4 centers each day. (The centers are not sequential, so any 4 can be done on any day.)

Station 1: Plant a Seed

1. Students will wrap a piece of white construction paper around a clean, recycled milk container from lunch and crease the corners.
2. Then, students will draw/color sunflower pictures on small pieces of construction paper and tape them onto the milk container.
3. Then they will fill the milk container half full with soil and plant 1-2 sunflower seeds.
4. Finally, students will sprinkle their plants with water.

Station 2: Parts of a Sunflower

1. Students will replicate the teacher’s model above (sunflower only, no labels).
2. After students create the sunflower, they will glue the labels onto the project.

Station 3: Growth Cycle

1. Students will listen to Learning Explorer: From Seed to Sunflower by Dr. Gerald Legg https://www.youtube.com/watch?v=jkO5zm6QqOE on an iPad or computer.

2. Then, students will complete the growth cycle project by replicating the teacher's example above.

Station 4: Sunflower Directed Drawing

1. Students will watch this directed drawing video on their iPads or computers and follow along. Art for Kids Hub: How To Draw A Sunflower https://www.youtube.com/watch?v=i_pQWFkZJrc
2. Students will draw onto 12x18 white construction paper with a pencil and then use markers to color the sunflower in.
3. Remind students to pause the video whenever they need to as they follow the directions.

Station 5: Measurement

1. When students get to this center, they will measure the sunflower with random items (like markers, large paper clips, linking cubes, tongue depressors, etc).
2. If desired, create a recording sheet for students to fill in the amount of each item needed to measure the sunflower from the bottom to the top.

Station 6: Sunflower Craft

1. First, students will cut triangular notches out of a yellow paper plate.
2. Then, they will glue the leaves (patterns to cut out or freeform) onto the tongue depressor, and glue the tongue depressor under the plate.
3. Finally, students will glue the seeds onto the plate and let them dry.

Station 7: Sunflower Heads

1. Students will use tweezers to remove the seeds and put them in collection cups.

2. If a floral foam head is used, students can push the seeds back in at the end of center time so the head is ready for the next group.

Station 8: Sunflower Facts

1. Students will use the patterns to trace shapes onto the green, yellow, and brown paper. Then, they will cut out their shapes. Assist any students who may need help with scissors.
2. Students will use the sunflower books as resources for finding sunflower facts. Have students write one fact per petal.
3. Finally, students will glue the pieces to the sheet of background construction paper.

Vocabulary:

- **sunflower:** a tall plant with a big, round yellow flower that turns to face the sun.
- **seed:** a tiny piece of a plant that can grow into a new plant.
- **plant:** a living thing that grows in soil. Plants have roots, a stem, leaves, and sometimes flowers.
- **leaves:** turn sunlight into food for plants. Most leaves are flat and green, growing from the stem.
- **stem:** the tall part of the plant that holds it up.
- **flower:** colorful parts of some plants that make seeds and fruits.
- **roots:** grow under the ground. Roots hold a plant in place and help it get food from the soil.
- **shoot:** the part of a plant that is above the ground. The stem, leaves, buds, flowers, and seeds or fruits.
- **seedling:** a very young plant.
- **bud:** the part of a plant that eventually grows into a flower.
- **soil:** dirt that plants can grow in.
- **water:** plants need water to stay alive and grow, just like humans and animals.
- **sunlight**: light and warmth that comes from the sun. Plants need sunlight to live.

Kansas Standards:

Next Generation Science Standards:

Kindergarten

From Molecules to Organisms: Structures and Processes

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

Earth's Systems

K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

1st Grade

From Molecules to Organisms: Structures and Processes

1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.

2nd Grade

Ecosystems: Interactions, Energy, and Dynamics
2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
Biological Evolution: Unity and Diversity
2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.

English Language Arts
Kindergarten
Reading: Informational
Range of Reading and Text Complexity
RI.K.13 Actively engage in individual or group readings of informational text with purpose and understanding.
Writing
Text Types and Purposes
W.K.2 Use a combination of drawing, dictating and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
Language in Writing
W.K.10 Demonstrate command of the conventions of standard English grammar and usage when writing.
W.K.11 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
Speaking and Listening
Comprehension and Collaboration
SL.K.1 Participate in collaborative conversations with diverse partners about topics and texts with peers and adults in small and larger groups to expand language comprehension.
1st Grade
Reading: Informational
Key Ideas and Details
RI.1.1 Ask and answer questions about key details in a text.
Range of Reading and Text Complexity
RI.1.13 With prompting and support, read and comprehend high-quality informational text of appropriate quantitative and qualitative complexity for first grade.
Writing/Language in Writing
W.1.10 Demonstrate command of the conventions of standard English grammar and usage when writing.
W.1.11 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
Speaking and Listening
Comprehension and Collaboration
SL.1.1 Participate in collaborative conversations with diverse partners about topics and texts with peers and adults in small and large groups to expand language comprehension.
SL.1.2 Ask and answer questions about key details in a text read aloud, information presented orally or through media.
SL.1.3 Ask and answer questions about what a speaker says to gather additional information or clarify what is not understood.
2nd Grade
Writing/Language in Writing
W.2.10 Demonstrate command of the conventions of standard English grammar and usage when writing.
W.2.11 Demonstrate command of the conventions of standard English capitalization, punctuation and spelling when writing.

Speaking and Listening
Comprehension and Collaboration
SL.2.1 Participate in collaborative conversations with diverse partners about topics and texts with peers and adults in small and larger groups to expand language comprehension.
SL.2.2 Recount or describe key ideas or details from a text read aloud, information presented orally or through media.
SL.2.3 Ask and answer questions about what a speaker says to clarify comprehension, gather additional information or deepen understanding of a topic or issue.

Mathematics

1st Grade
Measurement and Data
1.MD.2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.
2nd Grade
Measurement and Data
2.MD.2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

National Agricultural Literacy Standards:

Agriculture and the Environment

- Describe how farmers/ranchers use land to grow crops and support livestock (T1.K-2 a.)
- Describe the importance of soil and water in raising crops and livestock (T1.K-2 b.)

Plants and Animals for Food, Fiber, and Energy

- Explain how farmers/ranchers work with the lifecycle of plants and animals (planting/breeding) to harvest a crop (T2.K-2 a.)
- Identify examples of feed/food products eaten by animals and people (T2.K-2 c.)
- Identify the importance of natural resources (e.g., sun, soil, water, minerals) in farming (T2.K-2 e.)

Culture, Society, Economy, and Geography

- Identify plants and animals grown or raised locally that are used for food, clothing, shelter, and landscapes (T5.K-2 d.)

Supporting Resources:

"Backyard Sunflower" book by Elizabeth King
https://www.amazon.com/Backyard-Sunflower-Elizabeth-King/dp/0525450823

"From Seed to Sunflower" book by Gerald Legg
https://www.amazon.com/Seed-Sunflower-Lifecycles-Gerald-Scrace/dp/0531153347

"From Seed to Sunflower" book by Mari Schuh
https://www.amazon.com/Seed-Sunflower-Start-Finish-Second/dp/1512413011/ref=tmm_pap_swatch_0

"Life Cycle of a Sunflower" book by Angela Royston
https://www.amazon.com/Sunflower-Life-Cycle/dp/1575726998

"Max Plants a Seed" book by Kerry Dinmont
https://www.amazon.com/Max-Plants-Seed-Sunflower-Learning/dp/1503820343

“Rosa’s Big Sunflower Experiment” book by Jessica Spanyol
https://www.amazon.com/Rosas-Big-Sunflower-Experiment-Workshop/dp/178628555X

“Sunflower Life Cycles” lesson by Sue Cook
https://www.agclassroom.org/matrix/lesson/175/

“A Sunflower’s Life” book by Nancy Dickmann
https://www.amazon.com/Sunflowers-Life-Watch-Grow/dp/1432941534

“A Sunflower’s Life Cycle” book by Mary R. Dunn
https://www.amazon.com/Sunflowers-Life-Cycle-Explore-Cycles/dp/1515770567/ref=tmm_pap_swatch_0

9 Free Printable Sunflower Templates
https://www.cassiesmallwood.com/9-free-printable-sunflower-templates/

Career Information: Sunflower Farmer
Farmers often grow lots of different types of crops on their farms. Many farmers choose to grow sunflowers to sell the flowers and seeds. Sunflower farmers help produce cooking oil, snacks, and birdseed – all things we use all the time.
Check out these sunflower farmers!

- Grinter Farms: http://kansastravel.org/lawrence/grinterssunflowerfarm.htm
- Peterson Brothers: https://www.youtube.com/watch?v=fnBntnBNmhY

Assessment: These activities do not need to be formally assessed; however, teachers could assign point values to the Parts of a Sunflower Plant, the Life Cycles Project, and the Facts Project. Teachers should be looking for opportunities to enrich learning as they walk around and observe the students at work in the centers.

Author: Nancy Smith, edited by Marissa Cook, KFAC intern, Secondary Education at Kansas State University.

References:

Kansas Farm Food Connection. (n.d.). *Why Kansas is the Sunflower State*. Retrieved June 9th, 2026
https://kansasfarmfoodconnection.org/spotlights/why-kansas-is-the-sunflower-state

Kansas Foundation for Agriculture in the Classroom. *Sunflower Growth Cycle.*
https://ksagclassroom.org/supporting-resources/sunflower-growth/

Kansas Wildflowers & Grasses. (n.d.). *Common sunflower*. Retrieved June 9th, 2026, from https://kswildflower.org/plants/helianthus-annuus