



RUTABAGA™

Education



Garden-based Science, Nature, and Nutrition
Curriculum for Young Global Citizens

First and Second Grade
Spring Season

By Kaitlin Mitchell

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Garden-based Science, Nature, and Nutrition Curriculum for Young Global Citizens

First and Second Grade Lesson Plans

How this Works!

This resource allows teachers AND parents the opportunity to incorporate garden-based science, nature, and nutrition instruction into their educational curriculum. The goal has been to create impactful, **minimal prep**, lesson plans that could be utilized by garden teachers, classroom teachers, parent volunteers, or parents who homeschool, etcetera.

The lessons build upon themselves from week to week within a season and from season to season. (Ideally, fall through spring.) When combined with other grades in the Rutabaga Education Series, scaffolded lesson content repeats, builds, and then reinforces from year to year.

Teachers and parents can teach the majority of the lesson content without having a physical garden. This benefits schools and homes that may not have a garden area or inclement weather that makes it difficult for instruction outdoors. The “Garden Activity” and “Extension Activity” sections are extra activities that complement each lesson’s core theme.* They are there for teachers or parents who choose to use them.

Lessons are organized as follows:

- ★ = Main Lesson
- 🍷 = Garden Activity
- ✓ = Extension Activity (Picture Book, Art, Mindful Moment, Etcetera)



*Rutabaga Education Curriculum ties in Next Generation Science Standards, Math, and Language Arts Common Core Standards, and Nutrition.

Spring Season (First and Second Grade)



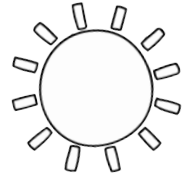
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The First and Second Grade Spring Lessons are packed with grade-appropriate life science. Lessons begin focusing on the relationships between animals and plants in the garden. Activities then gear to introduce children to various seasonally appropriate plants that reinforce the idea of biodiversity and interdependence.

The Picture Books listed have been chosen with care to accompany the lessons. You may, however, already have books that tie into the lesson themes. Prior to starting the season, I recommend looking for what already exists in your public/ school library or personal collection, and then use the books below to supplement as needed.

Spring	Lesson Plans	Picture Books that Reinforce Instruction	Page #
1	Pollinators and Sticky Stigmas	<u>What if There Were No Bees? A Book About the Grassland Ecosystem</u> by Suzanne Slade	1
2	Monarchs, Milkweed, and Mimicry	<u>Monarch and Milkweed</u> by Helen Frost	7
3	Ladybugs	<u>A Ladybug's Life</u> by John Himmelman or <u>It's a Good Thing There Are Ladybugs</u> by Joanne Mattern	13
4	Ant Activity	<u>On Beyond Bugs: All About Insects</u> by Trish Rabe	17
5	Sunflowers Follow the Sun	<u>Sunflower House</u> by Eve Bunting	21
6	Flower Power	<u>Among the Flowers</u> by David M. Schwartz or <u>The Reason for a Flower</u> by Ruth Heller	27
7	Succulents and Plant Propagation	<u>Cactus Hotel</u> by Brenda C. Guiberson	31
8	All About Aloe	<u>Why or Why Are Deserts so Dry</u> by Trish Rabe	35
9	Wildflower Seed Balls	<u>If You Plant a Seed</u> by Kadir Nelson	39
10	Three Sisters and a Corny Celebration!	<u>The Three Sisters Garden</u> by Sandy Baker	43

Week 5 (Spring) – Sunflowers Follow the Sun



Prep/Materials

- Have a World or United States map that contains a compass to point out directionality (North, South, East, and West). (One is included at the end of the lesson.)
- Provide Sunflower Seeds (for planting), small pots, hand shovels, and soil.
- Prepare spray bottles, filled and ready to go, for watering the seeds.
- Have popsicle sticks or blue tape to label your pots.
- (Optional) Bring sunflower seeds for eating and/or sun butter for the kids to try.
- (Optional) Make copies of the Sunflower Coloring Page included on Page 26. Also bring popcorn kernels, extra seeds, or coffee beans for the kids to glue in the center of the sunflower.

★ **Introduction - Sunflowers (2 - 3 minutes)**

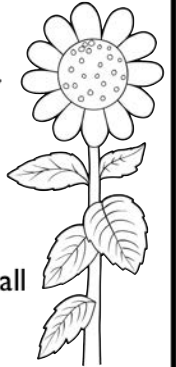
- Explain to the kids that as they get closer to summer, the days begin to get longer. That means more hours of sunlight.
- Further share that they will be planting a particular flower today that gets its name from the sun. Ask, “Can anyone guess what kind of flower I am referring to?” (Sunflowers!)
- Share that sunflowers are unique for many reasons; one of them is their likeness to the sun. It makes them a symbol of brightness and warmth.
- Sunflowers also make great gifts! They are not only known as “happy” flowers, but the gift of sunflowers symbolizes loyalty and adoration.

★ **Sunflower Phototropism (2 - 3 minutes)**

- Show the kids a map and point out the compass. Explain that we use four main cardinal directions North, South, East, and West to describe a location or help travel from one place to another.
- Now use the map to explain that every day, the sun rises in the East and sets in the West.
- Continue to detail that not only do sunflowers look like the sun, but they track the sun as it moves throughout the day. This is a phenomenon (nature magic) that is called **Phototropism**.
- Further detail that every morning, the head of a young sunflower faces East and waits for the sun to rise. Throughout the day, it tracks the sun and faces West when the sun is setting. During the night, sunflowers shift back to the East to get ready for another day!

★ Sunflower Snack (3 - 5 minutes)

- Explain that sunflowers are also grown for their edible seeds, which are high in Vitamin E, which is good for our skin, our blood, and is an antioxidant.
- Further explain that the seeds can be harvested and eaten raw or roasted for a snack. The seeds also can be processed to make sunflower oil, which is often used for cooking.
- Share the sunflower seeds that you brought for a snack. (There are many varieties, including Dill Pickle and Ranch, if you want to get fancy.)
- (Optional) Bring in sun butter, and have the kids spread it on crackers or celery sticks. (You can make another “ants on a log” variation by adding raisins, dried cranberries, or dried blueberries).



★ Planting Sunflowers (3 - 5 minutes)

- Have your spray bottles, soil, hand trowels (shovels), sunflower seeds (for planting), small pots, and popsicle sticks (or something to label pots) ready to go.
- Show the sunflower seed packets and describe how tall their sunflower could grow to be.
- Further, explain to the kids that information on how to plant is on the packet. For those that can read, ask how deep a sunflower seed should be planted? (Generally one inch.)
- Have each student fill one pot with soil to approximately a half inch from the top. Have kids create a one-inch hole in their soil. Kids can use their pinky finger to measure (approximately their second knuckle on their pinky finger).
- Each child should then push **ONE** seed down into the soil. Label the pot (or popsicle stick) with each child’s name. Water the potted seed well with a spray bottle.
- Find a spot where the seeds will get plenty of sun. Remind the kids that seeds need two (2) things in order to germinate, moisture and warmth. You will also have more success with your seeds if you find a location where they will not need to be moved.
- (Optional) Once sunflowers have sprouted, have children observe young buds at different times of the day. Kids could take pictures, draw observations, and/or keep a journal.

🍅 Garden Activity (5-10 minutes)

- How are the Warm Season Crops and flowers doing? Do new seeds need to be planted? Is there a space for your sunflower plant once it has grown?
- Check the tomato seedlings. When stems are 10 inches tall, you can transplant them to a larger pot, garden bed, or into the ground.

✓ Closing Activity (5 minutes)

- Read the book, Sunflower House, by Eve Bunting. (A Rutabaga Education favorite!)
- (Optional) While reading, have kids glue in popcorn kernels, extra seeds, or coffee beans in the center of the flower.

✓ Sunflower Side Bends (2 - 3 minutes)

- Invite the kids to stand, with their feet wide.
- Encourage them to breathe in (inhale) and reach their arms up overhead.
- Tell them to reach up tall, but fan out their hands like the head of a sunflower.
- Now model how you would imagine the sun traveling across the sky and remind the kids that the head of a sunflower likes to follow the sun. (Phototropism)
- With arms and hands overhead, have the kids curve their bodies to the side.
- Now, have them curve their bodies to the other side.
- Continue these side bends a few times until the kids are ready to transition to a new activity.



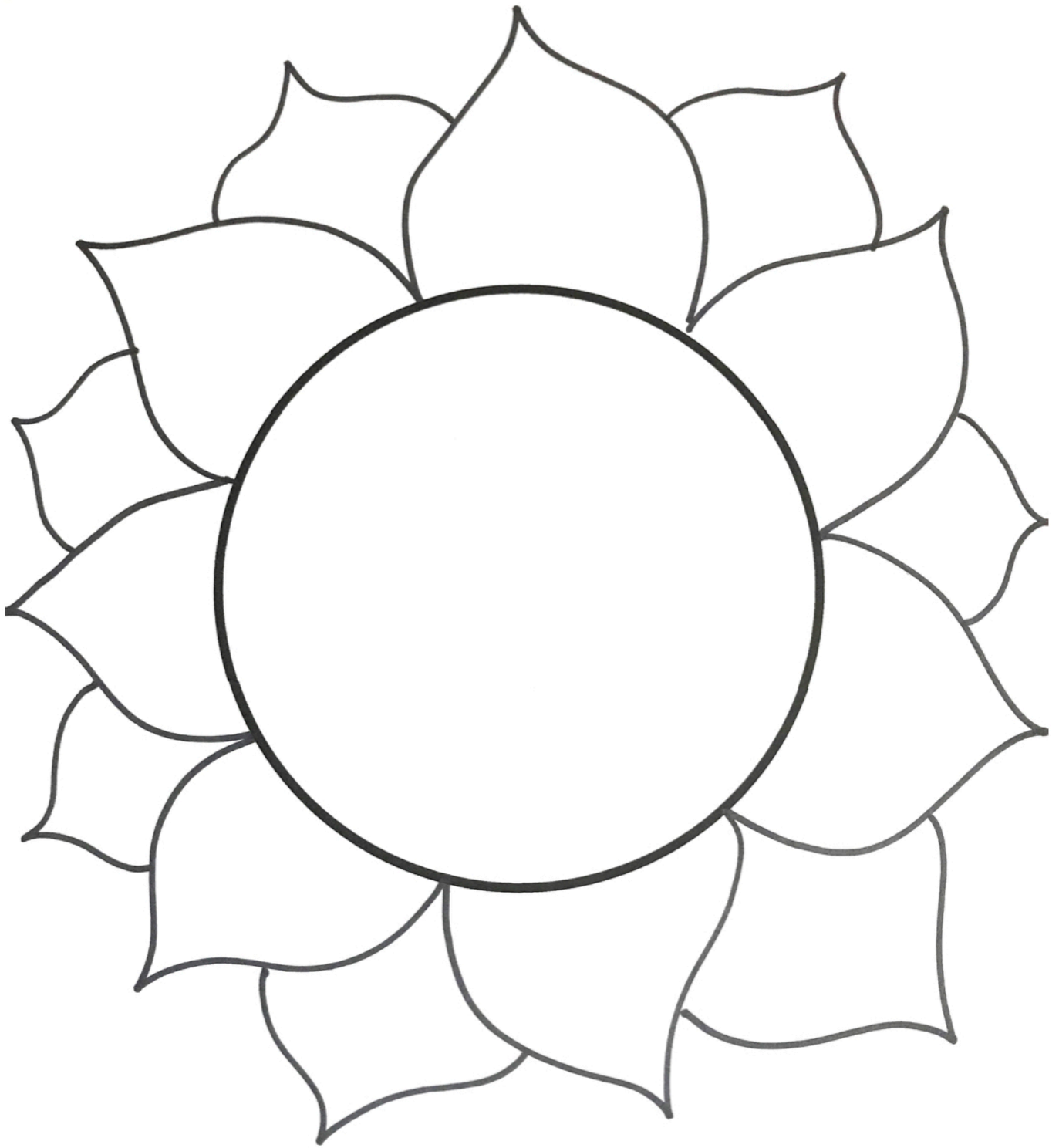
Sunflowers not only resemble the sun, but they are also known to symbolize loyalty and adoration.



Some varieties of sunflowers can grow to be ten feet tall! These solar loving flowers are also so cool to observe as they follow the sun's path across the sky. This phenomenon is called Phototropism.



Use a map to explain the concept of the four main cardinal directions, North, South, East, and West.





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“Follow me on social media to see how gardening with children is making an impact within my home and community. Simply click on the links below!”

~ *Kaitlin Mitchell*



**Rutabaga Education Curriculum
is also in print and available for purchase!**



**Clear Quality Images and
Printed on 14 pt Cardstock!!**

We also offer published hard copies of the Rutabaga Education Curriculum. Each page is printed on durable semi-gloss 14 pt card stock (16 pt covers) for outdoor use. Books are also wire-o spiral-bound, which makes them easy to hold and for making clean copies.

**For more information, visit us at
rutabagaeducation.com.**