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The Sunflower Forest: An Educator's Resource Guide

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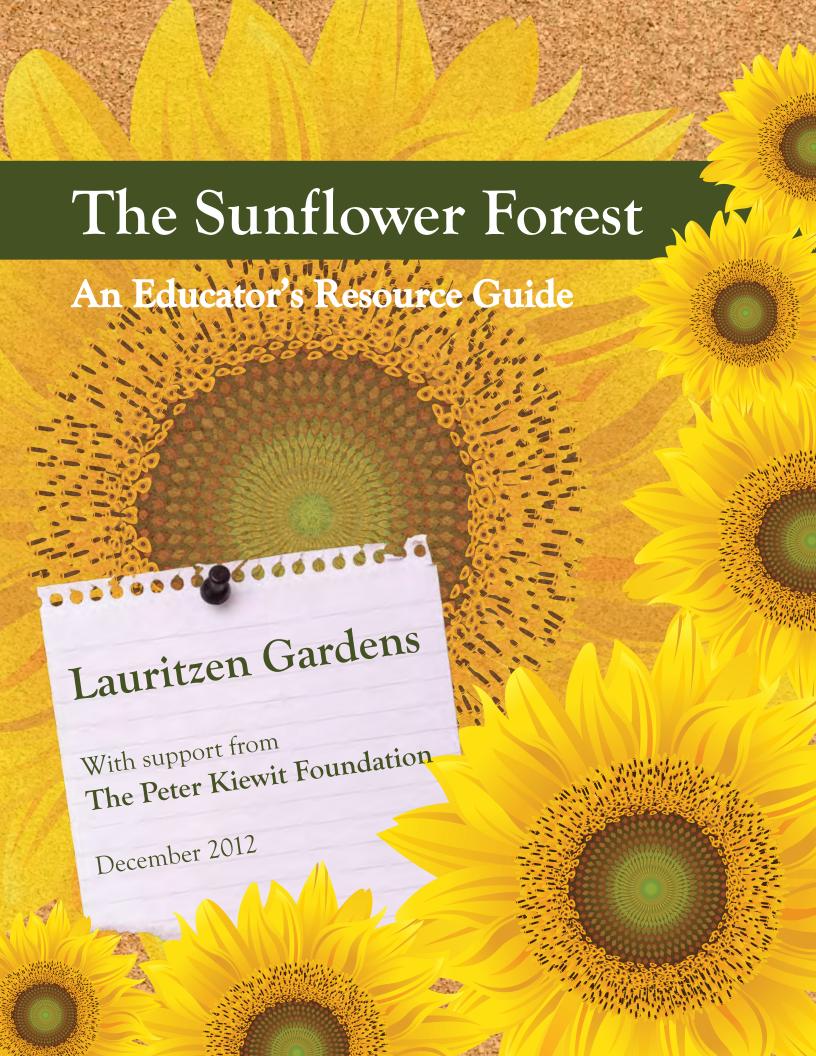
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The Sunflower Forest

An Educator's Resource Guide

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Why a Sunflower Forest?

When I was a boy I once lived near a brackish stream that wandered over the interminable salt flats south of our town. Between occasional floods the area became a giant sunflower forest, taller than the head of a man.

Loren Eiseley, The Invisible Pyramid (1970)

Loren Eiseley: Acclaimed Author with Deep Nebraska Roots

Loren Corey Eiseley was born on September 3, 1907, in Lincoln, Nebraska. He grew up in and around Lincoln and in 1933 received his bachelor's degree from the University of Nebraska in English and geology/anthropology.

Eiseley went on to receive his master's and doctorate degrees in anthropology from the University of Pennsylvania. He taught at the University of Kansas and at Oberlin College, and in 1947 returned to the faculty of the University of Pennsylvania where he worked until his death in 1977.

Although a busy university professor, researcher, and administrator, Eiseley also pursued a passion for writing about the grand themes of nature and the universe. He published his first popular essay in 1942 and his first book, a collection of personal essays titled *The Immense Journey*, in 1946. His unique talents as a writer garnered him national and international acclaim.

Eiseley is considered both a pioneer and a master of the literary genre of nature writing. With the observational skills of scientist and the sensitivity and expressiveness of a poet, his writing "delivered science to nonscientists in the lyrical language of earthly metaphor, irony, simile, and narrative, all paced like a good mystery" (*Bloomsbury Review*). Many of Eiseley's most highly regarded essays are based on his boyhood experiences in and around Lincoln and his fieldwork as an anthropologist in western Nebraska.

Additional information on the life and work of Loren Eiseley is available on the website of the Loren Eiseley Society (http://www.eiseley.org/) and in *The Loren Eiseley Reader*, a collection of essays published by the Loren Eiseley Society in 2009 (available for purchase via the society).

The Sunflower Forest: Literary Meaning

Much of Eiseley's writing touches upon the history of civilization and our relationship to the natural world. He was especially concerned about the often negative impacts humans have on the environment. In the essay, "The Last Magician," published in his book, *The Invisible Pyramid* (1970), Eiseley wrote of the need to reconnect with the "green world," both for personal wellbeing and to rekindle affection and appreciation for the earth that sustains us. It is in this essay that he introduces "the sunflower forest."

Here, and in the prologue to *The Invisible Pyramid*, Eiseley used the sunflower forest of his boyhood as a metaphor for the natural world. He contrasts the "first world" of nature with the "second world"

of human culture and technological achievement. To Eiseley, the welfare of the first world, threatened by human exploitation, depended upon "conscious reentry into the sunflower forest" (p. 155). While he doesn't describe how this "reentry" should occur, his provocative message foreshadowed by three decades the current international movement to reconnect children with nature, sparked by Richard Louv's bestselling book *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder* (2006).

The Sunflower Forest: Ecological Setting

Ecologically, the sunflower forest experienced by Eiseley was an extensive stand of annual sunflowers (*Helianthus annuus*) that occurred along the floodplain of Salt Creek, a stream that passes through Lincoln. Nine species of true sunflowers (genus *Helianthus*) occur in Nebraska. Most of our sunflowers are perennial plants that persist for many years in association with prairie vegetation. The annual sunflower plant, however, lives for only one growing season—germinating from seed in the spring, growing, flowering, and finally producing its own crop of seed by the end of summer as the plant dries up and dies.

Annual sunflowers are well adapted to what ecologists call "disturbed" habitat—places where some action has disturbed the natural cover of vegetation. Annual sunflowers flourish in a variety of human-disturbed habitats, including roadsides, construction sites, and the edges of agricultural fields. The floodplain along Salt Creek provides naturally-disturbed habitat. Here, seasonal flooding drowns out most vegetation, leaving expanses of open soil where annual sunflowers can spring up and form dense stands. Individual sunflower plants can reach remarkable heights during the growing season, some over 9 feet tall ("taller than the head of a man"). A stand of such towering plants would seem like a forest of sunflowers, especially to a young boy with a vivid imagination.

A Sunflower Forest at Lauritzen Gardens

In 2009, the Loren Eiseley Society published a collection of Eiseley's essays as a way to introduce him to a new generation of readers. The cover of the *Loren Eiseley Reader* features a whimsical interpretation of the sunflower forest by artist Aaron Franco. Given this botanical theme, Dr. Bing Chen, president of the Loren Eiseley Society, approached Lauritzen Gardens to explore possible educational collaborations around the story of the sunflower forest.

Lauritzen Gardens is a living museum of unique four-season plant displays, maintained to the highest standards consistent with environmental stewardship. It provides memorable educational and aesthetic experiences for all. As such, the garden provides a setting for children and adults to experience the beauty and wonder of nature up close. To the leadership of the garden, the sunflower forest story provided a compelling theme for educational programming, and memorable way to illustrate that a conservation ethic begins with a child-like awe of nature.

The Sunflower Forest Project was launched in 2010 as a partnership between Lauritzen Gardens and the Loren Eiseley Society, with funding provided by the Peter Kiewit Foundation of Omaha.

The aim was to raise awareness of Loren Eiseley as an important Nebraska author, and use his boyhood experience with sunflowers as a vehicle for exploring themes related to literature and scientific inquiry, as well as plant biology.

The core activity of the project was the establishment of a mass planting of sunflowers on the grounds of Lauritzen Gardens, using the same wild species of sunflower that Eiseley encountered. This unique and popular garden feature was first planted in 2011, then again in 2012. These plantings were established with the hands-on participation of nearly 1,200 students from six different elementary schools representing five Omaha metro area school districts. These students came to the garden in May to help plant the forest and returned in September for a tour of the planting.

The images and illustrations on pages 13-17 capture the involvement of students in creating and experiencing The Sunflower Forest at Lauritzen Gardens.

Taking the Sunflower Forest Statewide

The final phase of the Sunflower Forest Project is statewide in scope. A special Sunflower Forest Educator's Kit has been developed to inspire and enable every elementary school in Nebraska to explore the themes of the Sunflower Forest. One kit has been mailed to every public and parochial elementary school in Nebraska.

Sunflower Forest Project Partners

Lauritzen Gardens

(402) 346-4002

http://www.lauritzengardens.org/

Project leadership; recruited schools for project; presented classroom activities; site of sunflower forest plantings; provided guided tours of sunflower forest; developed and disseminated outreach kits to 755 Nebraska public and parochial elementary schools

The Loren Eiseley Society

http://www.eiseley.org/

Consultation on the life and work of Loren Eiseley; special acknowledgement to Dr. Bing Chen, Professor at the University of Nebraska at Omaha and President of the Loren Eiseley Society for initiating the project

The Peter Kiewit Foundation

http://www.peterkiewitfoundation.org/

Funding for numerous project activities, including the participation of nearly 1,200 students from six Omaha metro-area elementary schools in the project

Stock Seed Farms

(402) 867-3771

http://www.stockseed.com/

Source of sunflower seed for plantings at Lauritzen Gardens and outreach kits; consultation on species mix and seeding rate

Dr. Kathy Everts Danielson, Professor

Teacher Education Department University of Nebraska at Omaha

Developed pre-K through Grade 5 language arts curriculum activities for Educator's Resource Guide

Dr. Kay Kottas, Owner and President

Prairie Legacy, Inc.

http://prairielegacyinc.com/

Developed content and artwork for "Sunflowers of Nebraska" compact disk included in outreach kits

The Contents of Your Sunflower Forest Educator's Kit

Educator's Resource Guide

The main feature of the kit is a teacher's guide that provides sunflower-related language arts curriculum materials for Pre-K through Grade 5. These materials were developed by Dr. Kathy Everts Danielson, a professor in the Teacher Education Department of the University of Nebraska at Omaha with expertise in literacy, the writing process, and children's literature. Using sunflowers as the theme, Dr. Danielson has developed reading and writing activities for each grade level, all tied to and addressing Nebraska Department of Education State Standards in Language Arts.

Other components of the guide include directions for creating a schoolyard sunflower "reading room" and starting sunflower seedlings in the classroom, plus "fast facts" about sunflowers.

Sunflowers of Nebraska CD

"Sunflowers of Nebraska: A Practical Guide to Identifying Sunflowers," an interactive identification guide to the native sunflowers of Nebraska presented on a compact disk. The guide includes information and illustrations of 10 native species plus a video segment that allows the user to "build" a sunflower one part at a time to illustrate the unique composite structure of a sunflower head. This identification guide was created by Dr. Kay Kottas, a professional botanist and talented artist based in Lincoln, Nebraska and owner/president of Prairie Legacy, Inc., a botanical consulting company. The CD is packaged in an adhesive sleeve that can be affixed to the inside cover of the Educator's Resource Guide.

Sunflower Forest Reading Room

Your kit also contains a packet of enough seed to plant a schoolyard version of a sunflower forest. Developed in consultation with Stock Seed Farms of Murdock, Nebraska, the planting would occupy approximately 900 square feet (30 ft. x 30 ft.) and create a sunflower-encompassed outdoor "room" appropriate for reading and/or writing activities. Plans for establishing and maintaining the planting are presented in the Educator's Resource Guide. The packet contains seed of the wild annual sunflower (*Helianthus annuus*), which is the species Loren Eiseley encountered in his childhood "sunflower forest," mixed with seed of Maximilian's sunflower (*Helianthus maximiliani*), a native perennial species that is especially attractive to butterflies.

Creating a Sunflower Forest Reading Room

The Sunflower Forest planting at Lauritzen Gardens was a spectacular and popular garden feature designed to provide an "immersion" experience for visitors similar to what Loren Eiseley enjoyed as a boy along Salt Creek near Lincoln.

While most schools will not want to turn their grounds into a mass planting of sunflowers, we encourage you to provide a similar experience for your students by creating a smaller and more manageable sunflower forest "reading room."

The drawing on page 8 illustrates the concept, which can be accommodated in a space that is roughly 30 feet by 30 feet in dimension. The design provides a "room" for gathering a group of students for reading or other activities that is surrounded by a "wall" of sunflowers. A curved path into the room blocks views in and out and helps with the sense of immersion. The path and interior space can be covered with a mulch of wood chips or straw to help with weed control and to lessen contact with dust and mud. Straw bales or simple benches can be placed around the perimeter of the interior space for seating.

Included in this kit is enough seed to establish your own sunflower forest reading room. The enclosed packet contains seed of the wild annual sunflower (*Helianthus annuus*), which is the species Eiseley encountered in his childhood sunflower forest, mixed with a smaller percentage of Maximilian's sunflower (*Helianthus maximiliani*), a native perennial species that is especially attractive to butterflies. Annual sunflowers generally grow to about 6 feet tall by late summer, with some individual plants reaching 9-10 feet tall. Maximilian's sunflower plants will be shorter, but will flower later than the annual sunflower and provide an extended season of bloom.

Site preparation – Your planting should be sited in a location that receives sun throughout the day (i.e., no shade). You can establish the planting much the way you would start a new garden or lawn. If there is a cover of turfgrass, this should be removed and the soil beneath exposed. Then, prepare the soil by tilling to create a good seed bed free of soil clumps greater than two inches in diameter. If the soil is very dry, it would be helpful to water the site about a week before seed is to be sown. Site preparation work should be done by the end of March, earlier if weather conditions allow.

When to sow seed – The optimal time to sow sunflower seed varies across Nebraska, and the best guideline is to wait until after the chance of frost is past and the soil is beginning to warm. Generally, this would be after mid-April in eastern Nebraska to after mid-May in western Nebraska. Do not be in a rush to plant early since you want the plants to be in peak flowering when your students return to school in August and September.

Sowing seed – You have been provided with enough sunflower seed to cover approximately 600 square feet. The amount of seed in the packet may seem rather small, but it was calculated in consultation with Stock Seed Farms of Murdock, Nebraska. Broadcasting seed by hand is the simplest method of sowing the seed, similar to the technique used for sowing lawn grass seed.

There is no reason to sow seed in the part of the planting site that will become the interior seating area. Mark off the boundaries of this area with string and try to avoid broadcasting seed into it.

To insure the seed is dispersed evenly over the planting area, it is helpful to first mix the seed into a larger volume (2 to 3 times more) of lightweight, inert material such as sawdust, peat moss, or vermiculite. The latter materials can be obtained at most garden centers. The inert matter may be slightly moistened so that the seed will stick to it.

Divide the mixture into two equal amounts. Hand broadcast one half evenly over the planting area. Then, hand broadcast the second half over the area, perpendicular to the direction of broadcasting the first half.

Cover the seed with one-fourth to one-half inch of soil by raking it into the soil surface. It may be helpful to cover the planting area with a light mulch of weed free straw to prevent washing and keep the soil moist during the germination period. Water the seeded area enough to moisten the soil surface.

Caring for seedlings – You should begin to see emerging sunflower seedlings about two weeks after sowing seed. In a year when soil moisture is adequate and rainfall is about average, no supplemental water should be needed. Sunflower seedlings grow rather quickly and will overtop most weeds, but some weeds may need to be eliminated by hand pulling or light hoeing until the sunflowers are more established.

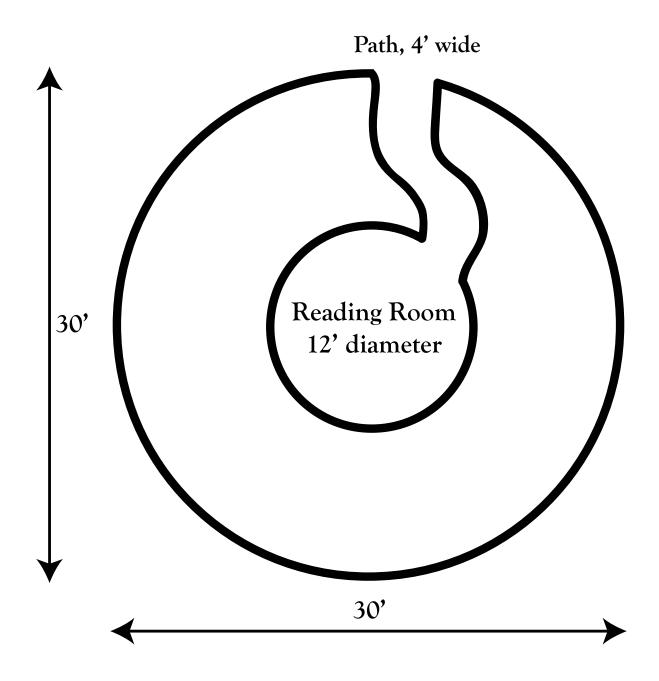
Growing through the summer – No supplemental water should be needed in a summer where soil moisture is adequate and rainfall is near average. For maximum growth, water as you would a vegetable garden (about one inch of water per week). Weed the planting as needed.

After the growing season — Annual sunflower plants live for only one growing season—germinating from seed in the spring, growing, flowering, and finally producing its own crop of seed by the end of summer as the plant dries up and dies. If you plan to keep the planting into the next year and beyond, leave the annual sunflower plants in place until the seed heads dry down and drop their seed, then pull up and discard the dead plants. Much of the seed that falls to the ground will germinate the following year and produce a new stand of annual sunflowers that will combine with the re-emerging perennial Maximilian's sunflower to re-fill the planting site.

Alternative Plan: Adding sunflower seedlings to the planting

You may choose to have students grow sunflower seedlings themselves to be used in the planting (see page 9). This is an engaging hands-on activity, but the survival rate of these indoor-grown seedlings may not be high and you will still want to sow seed into the planting area to insure a good stand of sunflowers. If so, the seedlings should be planted after the site has been prepared but before the seed is broadcast.

Sunflower Forest Reading Room Concept and Dimensions



Starting Sunflower Seedlings in the Classroom

Sunflower seedlings are easy to start and grow in a school greenhouse or sunny classroom. The seedlings could be used to help establish a sunflower forest planting on the school grounds or students can plant them at home.

Supplies needed –

- 1. Sunflower seeds (3 seed per student)
- 2. A small pot or container for each student; 3-inch diameter size is ideal; small milk/juice cartons are inexpensive alternative; container should have drainage hole(s) in bottom;
- 3. Potting soil (not garden soil)
- 4. Labels on which the student's name can be written

A packet of sunflower seed is included in this kit. It contains seed of the wild annual sunflower (*Helianthus annuus*), which is the species Loren Eiseley encountered in his childhood sunflower forest, mixed with smaller percentage of Maximilian's sunflower (*Helianthus maximiliani*), a native perennial species. The enclosed packet contains approximately 5,000 sunflower seeds. If no more than 100 students grow seedlings in the classroom (at 3 seeds per pot), there will still be adequate seed in the packet for establishing the reading room planting. Additional sunflower seed can be purchased from Stock Seed Farms in Murdock, Nebraska (see page 4)

Getting started –

- 1. Fill the pot about ³/₄ full of potting soil
- 2. Gently tamp the soil down to make a level surface within the pot
- 3. Place 3 sunflower seeds on the surface, spaced evenly apart in the shape of a triangle (there is no need to press the seeds down into the potting soil)
- 4. Add about ½ inch potting soil to the pot to cover the seeds
- 5. Gently water by filling the pot to the rim and letting the water soak in; repeat until water runs out the bottom of the pot

Growing the seedlings – Place the seedlings in a greenhouse or in the sunniest location possible in the classroom or school building. A south- or west-facing window would be best. Otherwise, the seedlings will grow spindly and weak as they stretch to reach light and will not transplant well outdoors. The soil in the pot should stay moist but not soaking wet. Water if the soil surface in the pot feels dry to the touch.

Planting the seedlings outdoors – Once the seedlings are large enough and have a good root system they can be planted outdoors. This will be about 4 weeks after the seed was sown in the classroom. Remove the seedlings from the pot by holding the pot upside-down in one hand and gently tapping on the bottom of the pot with the other until the pot separates from the root-bound soil. Do not try to remove the seedling from the pot by pulling on the seedling. Plant the seedling in a hole that is the same depth as was the top of the soil was in the pot.

Sunflower Fast Facts

Loren Eiseley's Sunflower

- The particular sunflower species of Loren Eiseley's sunflower forest was the annual sunflower, sometimes also called the common sunflower. Its scientific name is *Helianthus annuus*.
- The first part of the name, *Helianthus*, is the genus name, and comes from the Greek words *Helios*, meaning sun, and *anthos*, meaning flower.
- The second part of the name, *annuus*, comes from the Greek word for annual, and refers to the fact that this sunflower species lives for only one growing season—germinating from seed in the spring, growing, flowering, and finally producing its own crop of seed by the end of summer as the plant dries up and dies.
- Annual sunflower plants grow 3 to 7 feet tall, but in some cases can reach more than 9 feet in height. It is amazing that these plants can grow so tall in one growing season.
- ► The flowering season for the annual sunflower is July to September, with peak flowering in August.

One of Many Sunflowers

- The annual sunflower is one of over 50 different species that scientists classify together in the genus *Helianthus*. The members of this genus are sometimes called the "true sunflowers." Ten different species of *Helianthus* occur in Nebraska.
- The genus *Helianthus* is part of the Sunflower Family (Asteraceae). The Sunflower Family is one of the largest plant families on earth in terms of its number of species (about 23,000).
- The Sunflower Family includes many familiar wildflowers and garden plants: ragweed (genus *Ambrosia*); sagebrush (genus *Artemisia*); asters (genus *Aster*); chrysanthemum (genus *Chrysanthemum*); goldenrod (genus *Solidago*); dandelion (*Taraxacum officinale*).

The Sunflower Flower: More than Meets the Eye

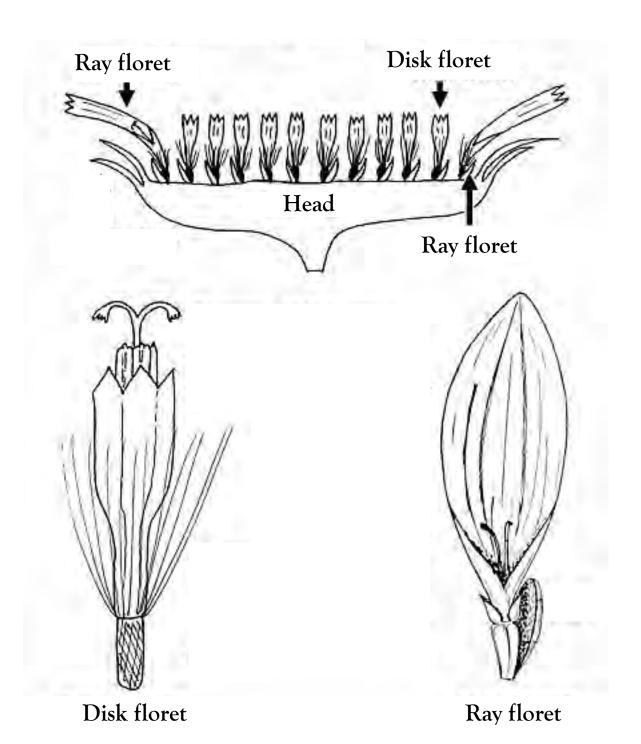
- ► Members of the Sunflower Family are related to one another by the unique structure of their flowers.
- In sunflowers, what looks like a single large flower is actually a "composite" flower made up of numerous "florets" (small flowers) crowded together onto a circular "head." See illustration on page 12.

- There are two kinds of florets: petal-like "ray florets" occur on the outer edge of the head and "disk florets" in the center.
- The disk florets produce nectar and pollen that attracts bees. As the bee probes the floret for food it picks up pollen grains and carries them to the next floret it visits. If cross-pollination and fertilization occur, the floret will mature into a seed.

More than Just a Pretty Face

- Evidence suggests Native Americans were growing sunflowers for food as early as 5,000 years ago.
- In the language of the Hidatsa Indians of the northern Great Plains, the name for the month of April is "sunflower-planting-moon."
- ► Spanish explorers found sunflowers being grown by Native Americans, and took seed back to Europe in the 1500s.
- Sunflowers were first grown in Europe as garden flowers, but were later grown for the oil that the seed contains.
- ► Large-scale farming of sunflowers first took place in Russia in the 1700s under the encouragement of the Russian ruler Peter the Great.
- Farmers in the United States started growing sunflowers as a crop in the early 1900s, and first used sunflower varieties developed in Russia.
- In the United States, sunflowers are mainly grown in the Great Plains and Midwest; Colorado, Kansas, Minnesota, Nebraska, South Dakota, and Texas are major producers.
- Sunflower kernels are a high-energy food source and are eaten as a snack food or are used in baking or as an ingredient in other foods.
- Sunflower oil is used in cooking and food preparation and has more Vitamin E than any vegetable oil.
- Many species of birds love sunflower seeds and some prefer them over any other kind of seed. Cardinals, chickadees, goldfinches, grosbeaks, house finches, nuthatches, titmice are birds that prefer sunflower seeds.

The Structure of a Sunflower



Starting the Sunflower Forest

Lauritzen Gardens staff and volunteers helped students start sunflower seedlings in their own classrooms (see page 9).







Planting the forest...



The forest emerges





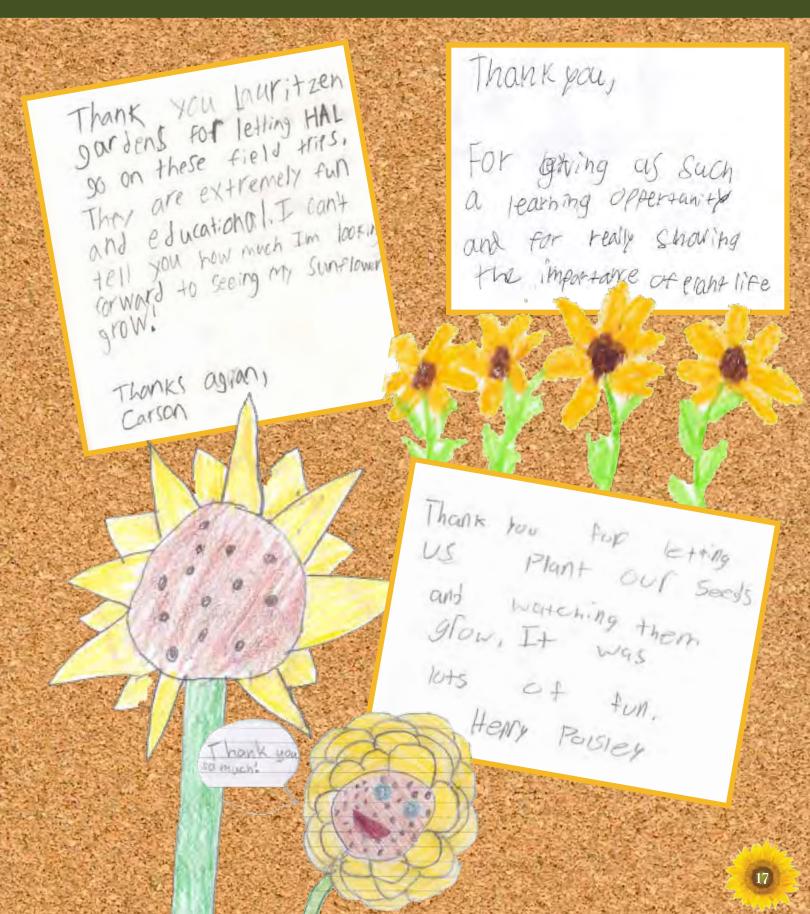
Sunflowers grow quickly and can reach over six feet in height by the end of summer. Flowering peaks in August and September.



An Immersion Experience



In the students' words...



The Sunflower Forest

Language Arts Curriculum Activities

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Pre-K Activity 1

Big Yellow Sunflower Descriptions and Actions

Overview: Students will listen to a book, act out the actions of a sunflower growing, and create their own versions of sunflowers with orally brainstormed descriptive words.

State Standards

- *LA 0.1.5. Vocabulary:* Students will build literary, general academic, and content specific grade level vocabulary.
- LA 0.3.1. Speaking Skills: Students will develop and demonstrate speaking skills to communicate key ideas in a variety of situations.
- *LA 0.3.2. Listening Skills:* Students will develop and demonstrate active listening skills across a variety of situations.
- LA 0.3.3. Reciprocal Communication: Students will demonstrate reciprocal communication skills.

Instructional Objectives

- ► Students will act out the actions of a book showing the growth of the sunflower.
- ▶ Students will create a sunflower picture or color one and then orally describe sunflowers.

Materials

Books: Big Yellow Sunflower (Barry 2008); A Handful of Sunshine (Eclare 2008)

Supplies: chart or whiteboard, paper, crayons, markers, index cards

Web resource: student-completed artwork at

http://www.kidzone.ws/geography/usa/kansas/sunflower2.htm

- 1. Read *Big Yellow Sunflower* to students. Have students act out the actions as you read the book the second time (planting the seeds underground, spreading out roots as they grow, etc.).
- 2. Have students make big, yellow sunflowers on chart paper using markers/crayons or use the above link to color an already completed sunflower. Have them sign their names on their art.
- 3. Have students brainstorm other words to describe sunflowers besides *big* and *yellow* (such as *huge*, *sunshine-colored*, etc.) and write them on chart paper.
- 4. Write descriptive words students brainstormed on index cards and display next to the sunflowers that students colored/drew.
- 5. Together read the words on the chart as you review what you learned about sunflowers.
- 6. Read *A Handful of Sunshine* to students and ask students if they learned more facts about sunflowers. Add these facts/words to the chart.

Pre-K Activity 2

"You Are My Sunshine" Song and Flower Mask

Overview: Students will listen to a book, sing a song, create sunflower masks, and sing the song again using the masks.

State Standards

LA 0.3.1. Speaking Skills: Students will develop and demonstrate speaking skills to communicate key ideas in a variety of situations.

LA 0.3.2. Listening Skills: Students will develop and demonstrate active listening skills across a variety of situations.

Instructional Objectives

- Students will listen to a story and understand the importance of cheering up a friend or family member.
- ► Students will sing a song using actions.
- ► Students will construct a sunflower mask.

Materials

Book: *Toot and Puddle: You are My Sunshine* (Hobbie 1999)

Supplies: paper, glue, tape, crayons, markers, scissors, popsicle sticks

Song: "You Are My Sunshine" (words below)

Web resource: flower mask template at http://www.dltk-holidays.com/spring/mflowermask.html

Sequence

- 1. Read *Toot and Puddle: You Are My Sunshine* to students. Talk about the importance of cheering up sad friends or family members.
- 2. Play and/or sing "You Are My Sunshine" and teach children the actions:

You are my sunshine, (point to other person; make sun with hands in circle above your head)

My only sunshine, (point to self; make sun with hands in circle above your head)

You make me happy when skies are gray, (big smile; fingers flutter like rain coming down)

You'll never know dear, (point to head – thinking)

How much I love you, (point to self; hands to heart; point to other person)

Please don't take my sunshine away! (shake head no; make sun with hands in circle above your head; push hands away)

- 3. Have students make a flower mask (see web resource) using the pattern listed above.
- 4. Have students hold the masks in front of their faces while they sing the song.

Kindergarten Activity 1

Sequencing the Growth of a Sunflower

Overview: Students will put picture cards in the correct sequence after listening to the book *Sunflower*. They will also act out the story and create a sunflower craft.

State Standards

LA 0.1.6. Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.

LA 0.3.1. Speaking Skills: Students will develop and demonstrate speaking skills to communicate key ideas in a variety of situations.

LA 0.3.2. Listening Skills: Students will develop and demonstrate active listening skills across a variety of situations.

Instructional Objectives

► Students will retell the sequence of growing a sunflower in the correct chronological order.

Materials

Book: Sunflower (Ford 1995)

Supplies: chart or whiteboard, sunflower seeds, crayons, markers

Web resource: Yolanda Yellow Colors Buddy sheet at http://www.dltk-teach.com/colors/myellow.htm

- 1. Read *Sunflower* to students. Give students each a sunflower seed after the first reading. Act out the story with the second reading, helping students to think of actions to put to the story.
- 2. Have students help retell the book in the correct order with the picture/word cards that the students create. The correct order from the book is:
 - a. Carefully I place the seed in the ground.
 - b. Every day I water it.
 - c. Then, little green leaves;
 - d. Up to my knees;
 - e. Up to my nose;
 - f. Over my head;
 - g. Big yellow petals face the sun.
- 3. Have students color and construct the sunflower (see web resource). Display their sunflowers on a bulletin board along with the picture/word cards in the correct order from step #2.

Kindergarten Activity 2

"I Shine like the Sunflower" Picture Frame and Writing

Overview: Students will listen to a book and then talk about how they shine like the sunflower.

State Standards

LA 0.1.6. Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.

LA 0.2.1. Writing Process: Students will use writing to communicate.

LA 0.2.2. Writing Genres: Student will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will listen to a story and think about how they shine like the sun.

Students will prepare a picture frame and write their own sentence about how they shine like the sun.

Materials

Book: *To Be Like the Sun* (Swanson 2008)

Supplies: scissors, tape, glue, photos of children, small magnets (if using magnetic surface)

Web resource: sunflower picture frame at

http://www.makinglearningfun.com/themepages/SunflowerNameRecognition.htm

- 1. Read *To Be Like the Sun* to students. Discuss how we all shine in our own ways (we all have positive attributes).
- 2. Using the sunflower picture frame pattern (see web resource), have students color the sunflower and then glue/tape their photograph to the center of the flower. (Or you could glue a magnet in the back of the flower to display on a classroom/home magnetic surface.)
- 3. Have students dictate their response to this prompt: I shine when I ... (encourage responses such as: smile, dance, play soccer, etc.). Then write the words or have children write these words on a piece of paper taped to the bottom of the picture frame and sign their names on the stem. Display with caption: I Shine ...

Kindergarten Activity 3

Sunflower House

Overview: Students will listen to the book *Sunflower House*, create a booklet, and then write about what they would do inside a sunflower house.

State Standards

LA 0.1.6. Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.

LA 0.2.1. Writing Process: Students will use writing to communicate.

LA0.2.2. Writing Genres: Student will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

- ► Students will listen to the story and then make their own sunflower house booklet.
- ► Students will write about what they would do inside their sunflower house.

Materials

Book: Sunflower House (Bunting 1996)

Supplies: paper, crayons, scissors, stapler, pencils

Web resource: Sunflower House booklet

http://www.makinglearningfun.com/themepages/SunflowerHouseEmergentReader.htm

- 1. Read *Sunflower House* to students.
- 2. Have students cut out and construct the sunflower house booklet (see web resource) in the correct order.
- 3. Discuss and then have students write and draw "What I Would Do Inside My Own Sunflower House"

What Flowers Need

Overview: Students will listen to the book *Fran's Flower* and discuss what flowers need. They will make a booklet of the Do's and Don'ts of growing flowers.

State Standards

- LA 1.2.1. Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.
- LA 1.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will listen to a story and write their own observations of the do's and don'ts of growing flowers.

Materials

Books: Fran's Flower (Bruce 1999); Do's and Don'ts (Parr 2004)

Supplies: paper, crayons, pencils

- 1. Read *Fran's Flower* to students. Discuss what Fran did to feed her flower and whether or not that worked. Discuss what did work to help her flower grow.
- 2. Read *Do's and Don'ts* to students. Talk about the do's and don'ts of growing a flower, such as: Do water your flower. Don't pour lemonade on it.
- 3. Have students write their own book about the do's and don'ts of growing a flower. Make sure they include things like planting, watering, giving it sunshine, etc. It may help to have students write ideas for prompts such as:

A flower needs	and		to grow.
A flower does not need		and	to grow.

Sunflower Growth Cumulative Story and Sequencing

Overview: Students will listen to the book *This Is the Sunflower* and retell the story in the correct order.

State Standards

LA 1.1.6. Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text. LA 1.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

Students will retell the story in the correct order with props, following along with the text. They will also write about their sunflower.

Materials

Book: This is the Sunflower (Schaefer 2000)

Supplies: paper, crayons, pencils, paper plates, glue, sunflower seeds (with shells on), scissors

Web resource: http://www.dltk-holidays.com/fall/mpsunflower.htm

Sequence

- 1. Read *This is the Sunflower* to students.
- 2. Have students make one of the following pictures: SUNFLOWER, MOON, BLOSSOM, SEEDS, BEAKS, MUSICAL NOTE, SPROUTS
- 3. Have students act out the story in the correct order with the above pictures as you read it aloud.

This is the sunflower, tall and bright, SUNFLOWER

That stands in my garden day and night. MOON

This is the blossom, yellow and round, BLOSSOM

That crowns the sunflower, tall and bright, SUNFLOWER

That stands in my garden day and night. MOON

These are the seeds, black and brown, SEEDS

Found in the blossom, yellow and round, BLOSSOM

That crowns the sunflower, tall and bright, SUNFLOWER

That stands in my garden day and night. MOON

These are the beaks, sharp and strong, that crack the seed... BEAKS

These are the birds, full of song... MUSICAL NOTE

Now the sun warms the moist ground... SUN

These are the sprouts... SPROUTS

4. Have students make the sunflower paper plate craft (see web resource) and then write a sentence about why they like sunflowers. I like sunflowers because...

Sequencing of a Sunflower

Overview: After listening to a nonfiction book about sunflowers, students will write about a sunflower's growth in the correct sequential order.

State Standards

LA 1.1.6. Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text. LA 1.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will correctly sequence the order of the growth of a sunflower in their illustrated writing.

Materials

Book: Sunflowers (Saunders-Smith 1998)

Supplies: paper, pencils, crayons

Sequence

- 1. Read *Sunflowers* to students. Take illustrated notes on a chart while reading aloud to show students the sequence of the growth of a sunflower.
- 2. After reading the book, go over the sequence with students.
- 3. Have students write and draw their own sequential order of the growth of a sunflower using the following pattern: Once I was ______; now I am a ______. Their completed writing/illustrations should include:

Once I was a sunflower seed, Now I am a sunflower sprout.

Once I was a sunflower sprout, Now I am a sunflower stalk

Once I was a sunflower stalk, Now I am a sunflower bud.

Once I was a sunflower bud, Now I am a sunflower.

Once I was a sunflower, Now I am a sunflower seed.

Secret Ingredient Muffins

Overview: Students will listen to the reading of the book *Little Red Riding Hood: A Newfangled Fairy Tale* and predict the secret ingredient (sunflower seeds!).

State Standards

LA 1.1.6. Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text. LA 1.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

Students will make a prediction and justification for their prediction related to the muffin's secret ingredient after listening to the book. Students will also write their own recipe using sunflowers.

Materials

Book: Little Red Riding Hood: A Newfangled Fairy Tale (Ernst 1998)

Supplies: paper, pencils

Other: muffins made from recipe in book to share at the end of the lesson:

Grandma's Wheat Berry Muffins: 2 eggs, ½ cup melted butter or margarine, 1 cup sugar, ½ tsp. almond extract, 1 cup wheat flour, 1 cup white flour, 1 tsp. baking powder, ½ tsp. salt, 2 cups blueberries, ¼ cup sunflower seeds (Grandma's secret ingredient!) *First turn on the oven to 350 degrees. In a large bowl, mix together the eggs, butter, sugar, and almond extract. In another bowl, mix the flour, baking powder, and salt. Add that to the egg mixture and stir just until combined. Gently stir in the blueberries and the secret ingredient after making sure there are not wolves lurking about. Fill oiled muffin tins ¾ full, and bake for about 20 to 25 minutes.*

1.	Read Little Red Riding Hood: A	Newfangled Fairy Tale to students.
2.	Have students write a response	to the question: "I think the Grandma's secret ingredient is
	because	,,,

- 3. Discuss students' predictions and justifications for the secret ingredient (sunflower seeds).
- 4. Share muffins made with the recipe at the end of the book.
- 5. Make a list of other possible foods that could be made with sunflower seeds.
- 6. Have students describe the recipe (e.g., salad with sunflower seeds sprinkled on top) and illustrate the ingredients (e.g., lettuce, tomatoes, carrot sticks, sunflower seeds).

Sunflower List Poems

Overview: Students will read about sunflowers and list poems, then write their own list poems about sunflowers.

State Standards

- LA 2.1.6. Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.
- LA 2.2.1. Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.
- LA 2.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will write list poems to show what they have learned about sunflowers.

Materials

Nonfiction books about sunflowers: A Handful of Sunshine (Eclare 2000); From Seed to Sunflower (Legg 1988); Sunflowers (McDonald 1997); How a Seed Grows into a Sunflower (Steward 2008); The Life Cycle of a Sunflower (Tagliaferro 2007)

Poetry: Falling Down the Page (Heard 2011); "What I Love about Winter" in Winter Eyes (Florian 2000)

Supplies: paper, pencils

Sequence

- 1. Have students search nonfiction books for information about sunflowers.
- 2. Read some of the list poems in *Falling Down the Page* and "What I Love About Winter" in *Winter Eyes*.
- 3. Have students write their own list poem about a sunflower. For example:

Seeds planted
Rain added
Sun shining
Seeds sprouting
Plant growing
Buds appearing
Flower opening
Sunflower.

Compound Words

Overview: Students will make compound words and write sentences about sunflowers with them.

State Standards

LA 2.1.5. Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary

Instructional Objectives

► Students will build compound words and write sentences using these compound words

Materials

Book: *Once there was a Bull...(Frog)* (Walton 2011)

Supplies: paper, pencils, index cards, markers.

- 1. Read *Once there was a Bull...(Frog)*. Have students supply the end of the compound word while reading it.
- 2. Display the word SUNFLOWER. Discuss how it is a compound word Sun and Flower added together.
- 3. Divide the class into two groups.
- 4. Give each student in the first group an index card with one of the following words on it: butter; grand; in; break; day; sun; home; thunder; black.
- 5. Give each student in the second group an index card with one of the following words on it: fly; mother; side; fast; light; glasses; made; storm; bird.
- 6. Have the first group come up to the front of the room. The second group should look for a card in that group that when added to their card would have a compound word. (For instance, someone in the first group has SUN and someone in the second group has FLOWER, to form the compound word SUNFLOWER.). Students should be able to create: butterfly; grandmother; inside; breakfast; daylight; sunglasses; homemade; thunderstorm; blackbird.
- 7. Have students get together with the other half of their compound word and then together with their partner write a sentence with their compound word in it that somehow relates to sunflowers. For instance, if the word is sunshine: Sunshine is needed for sunflowers.

Sunflower Haiku

Overview: Students will write haiku poems about sunflowers.

State Standards

LA 2.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will write a haiku poem about sunflowers using good word choice.

Materials

Nonfiction books about sunflowers: A Handful of Sunshine (Eclare 2000); From Seed to Sunflower (Legg 1988); Sunflowers (McDonald 1997); How a Seed Grows into a Sunflower (Steward 2008); The Life Cycle of a Sunflower (Tagliaferro 2007)

Haiku books: *Dogku* (Clements 2007); *If Not for the Cat* (Prelutsky 2004); *Guyku: A Year of Haiku for Boys* (Raczka 2010); *The Cuckoo's Haiku and other Birding Poems* (Rosen 2009) Supplies: paper, pencils, haiku books for examples of haiku:

Sequence

- 1. Have students search nonfiction books for information about sunflowers.
- 2. Read some haiku books and review the format of a haiku poem:

Line 1: 5 syllables Line 2: 7 syllables Line 3: 5 syllables

3. Have students write at least two different haiku about sunflowers; for example:

Sunflower petals
Surround a circle of seeds
Searching for the sun

4. Illustrate poems and collect in a class book with the name *Sunflower-ku*.

"I'm Talking Sunflowers" Writing

Overview: Students will summarize what they have learned about sunflowers with an "I'm Talking" poem.

State Standards

LA 2.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will show what they have learned about sunflowers in their "I'm Talking" poem.

Materials

Nonfiction books about sunflowers: A Handful of Sunshine (Eclare 2000); From Seed to Sunflower (Legg 1988); Sunflowers (McDonald 1997); How a Seed Grows into a Sunflower (Steward 2008); The Life Cycle of a Sunflower (Tagliaferro 2007)

Poetry: "I'm Talking Big" in Making Friends with Frankenstein (McNaughton 1996)

Supplies: paper, pencils, crayons

Sequence

- 1. Have students search nonfiction books for information about sunflowers.
- 2. Share the poem "I'm Talking Big" by Colin McNaughton with students.

I'm talking big!
I'm talking huge!

I'm talking enormous, immense, tremendous!
I'm talking hulking, towering, titanic, mountainous!
I'm talking maximum, massive, stupendous, gigantic, monumental!
I'm talking fantastic, fabulous, incredible, unbelievable, mammoth, vast!
I'm talking astronomical, mighty, monstrous, universal, colossal, magnificent, galactical!
I'm talking BIG!

3. Have students write an "I'm Talking Sunflowers" poem about what they have learned; for example:

I'm talking sunflower.
I'm talking yellow, golden, amber.
I'm talking huge, gigantic, immense.
I'm talking seeds, kernels, source.
I'm talking sun seeking, sun drenched, sun soaking.
I'm talking sunflower.

Third Grade Activity 1

Acrostic Poem about Sunflowers

Overview: Students will write acrostic poems about sunflowers.

State Standards

LA 3.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will write acrostic poems about sunflowers.

Materials

Nonfiction books about sunflowers: A Handful of Sunshine (Eclare 2000); From Seed to Sunflower (Legg 1988); Sunflowers (McDonald 1997); How a Seed Grows into a Sunflower (Steward 2008); The Life Cycle of a Sunflower (Tagliaferro 2007)

Samples of acrostic poems: *African Acrostics* (Harley 2009); *Silver Seeds: A Book of Nature Poems* (Paolilli and Brewer 2001); *Summer: An Alphabet Acrostic* (Schnur 2001)

Supplies: paper, pencils, markers, crayons

- 1. Have students search nonfiction books for information about sunflowers.
- 2. Read acrostic poetry examples.
- 3. Have students write their own acrostic poems about sunflowers and illustrate the poems (example below)
 - S eed are planted
 - U nder the ground and are
 - N utured by the sun and rain allowing
 - F or the seeds to sprout and
 - L uscious plants to grow as
 - O pening buds appear and
 - W iden out as an
 - E normous flower filled with the seeds to eventually
 - R eplant as sunflowers.

Third Grade Activity 2

The Important Thing about Sunflowers

Overview: Students will review what they have learned about sunflowers and write "The Important Thing about Sunflowers"

State Standards

LA 3.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

Students will write about four facts related to sunflowers.

Materials

Nonfiction books about sunflowers: A Handful of Sunshine (Eclare 2000); From Seed to Sunflower (Legg 1988); Sunflowers (McDonald 1997); How a Seed Grows into a Sunflower (Steward 2008); *The Life Cycle of a Sunflower* (Tagliaferro 2007)

Book: The Important Book (Brown 1990)

Supplies: paper, pencils, markers, crayons, chart or whiteboard

Sequence

- 1. Have students search nonfiction books for information about sunflowers
- 2. Discuss facts learned about sunflowers and record on chart or whiteboard.
- 3 Read *The Important Book* to students.
- 4. Have students use the pattern of the book to write and illustrate their own Important Book of Sunflowers (format and example below).
- 5. Collect all students' writing and compile in a class book.

The important thing about a sunflower is	·
It is,	
It is,	
And it is	<u>.</u>
But the important thing about a sunflower is	•
(First and last line are the same.)	

The important thing about a sunflower is that it always seeks out the sun. Its seed is about half of an inch long. Its plant can grow to be up to 12 feet high.

And its flower can grow to about 16 inches across.

But the important thing about a sunflower is that it always seeks out the sun.

Third Grade Activity 3

Sunflower Alliterative Alphabet Book

Overview: Students will make a class alliterative alphabet book about sunflowers.

State Standards

- *LA 3.1.5 Vocabulary:* Students will build literary, general academic, and content specific grade level vocabulary.
- LA 3.2.2. Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will write a page for an alphabet book about sunflowers using alliteration.

Materials

Nonfiction books about sunflowers: A Handful of Sunshine (Eclare 2000); From Seed to Sunflower (Legg 1988); Sunflowers (McDonald 1997); How a Seed Grows into a Sunflower (Steward 2008); The Life Cycle of a Sunflower (Tagliaferro 2007)

Alliterative alphabet books: *Aster Aardvark's Alphabet Adventures* (Kellogg 1992); *SuperHero ABC* (McLeod 2006); *Alphabet Poem* (Rosen 2004); *Walter was Worried* (Seeger 2005) Supplies: paper, pencils, markers, crayons

Sequence

- 1. Have students search nonfiction books for information about sunflowers.
- 2. Read some alliterative alphabet books, such as those listed above.
- 3. Brainstorm words for each letter of the alphabet that relate to sunflowers use chart on next page:

Third Grade Activity 3 (continued)

A	В	С	D
E	F	G	Н
T	 	17	T
I	J	K	L
M	N	О	P
Q	R	S	T
U	V	W	X
		Y	Z
			i sula
			35

How to be a Sunflower

Overview: Students will write "How to Be" poems about sunflowers.

State Standards

LA 4.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.

LA 4.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

▶ Students will write a "How to Be" free verse poem including facts learned about sunflowers.

Materials

Nonfiction books about sunflowers: From Seed to Sunflower (Legg 1988); Growing Flowers (Mauerer 2001); Sunflowers (McDonald 1997); Sunflower Farmer (Gunderson 2008); To Be Like the Sun (Swanson 2008); Sunflower! (Welch 1980)
Supplies: paper, pencils

Sequence

- 1. Have students search nonfiction books for information about sunflowers.
- 2. Model the writing of a "How To" free verse poem and/or share the following poem:

How to be a Sunflower

Grow up to 12 feet tall
Be a "sun-seeker" (always following the sun)
Be the national flower of Russia.
Be the state flower of Kansas.
Allow your seeds to be used as animal feed.

3. Have students write their own versions of "How to be a Sunflower" with facts they learn and publish poems in a class book.

Sunflower Percent Poems

Overview: Students will write percent poems to show what they learned about sunflowers

State Standards

LA 4.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.

LA 4.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

▶ Students will write percent poems to demonstrate information learned about sunflowers.

Materials

Percent poem example (below)

Book: Practical Poetry: A Nonstandard Approach to Meeting Content-Area Standards (Holbrook 2005)
Nonfiction books about sunflowers: From Seed to Sunflower (Legg 1988); Growing Flowers
(Mauerer 2001); Sunflowers (McDonald 1997); Sunflower Farmer (Gunderson 2008);
To Be Like the Sun (Swanson 2008); Sunflower! (Welch 1980)

Supplies: paper, pencils

Sequence

1. Share the autobiographical percent poem below from *Practical Poetry: A Nonstandard Approach to Meeting Content-Area Standards* (Holbrook 2005)

100% Ryan

I am 30% plump
3% brown hair
10% Mr. Peanut Worship
20% football
10% red
2% braces
5% marshmallows
And I'm 20% jolly
If you add it all up
It is equivalent to me.

--Ryan, Grade 6

2. Have students search nonfiction books for information about sunflowers.

Fourth Grade Activity 2 (continued)

3. Have students write a percent poem about sunflowers (example below).

10% hopeful seeds
10% rich dirt
25% golden sunshine
10% refreshing rain
10% fuzzy stalks
10% fragile buds
25% perfect petals
Equals 100% spectacular sunflowers

- 4. Encourage students to work in pairs to make sure the percents total up to 100.
- 5. Share and display percent poems.

Sunflower Vocabulary Bingo

Overview: Students will play Bingo using sunflower terminology.

State Standards

LA 4.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.

Instructional Objectives

► Students will play Bingo with vocabulary words to review vocabulary learned about sunflowers.

Materials

Nonfiction books about sunflowers: From Seed to Sunflower (Legg 1988); Growing Flowers (Mauerer 2001); Sunflowers (McDonald 1997); Sunflower Farmer (Gunderson 2008); To Be Like the Sun (Swanson 2008); Sunflower! (Welch 1980)

Supplies: Bingo cards (next page), sunflower seeds used for markers, definition cards

Sequence

- 1. Review vocabulary learned from reading the above nonfiction books.
- 2. Give each student a pile of sunflower seeds to use as Bingo card markers.
- 3. Play Bingo (traditional diagonal, horizontal row, or vertical column, or black out [where all squares need to be covered]) by reading the second part (the definition) and have students find the correct term on their Bingo card.

Bloom – to have flowers

Bracts – leaves growing from the flower of a plant

Bud – a flower that hasn't opened yet

Flower- the part of the plant that makes seeds

Heliotropism – a natural movement that follows sunlight

Leaf- flat, green part of a plant that grows from the stem

Petal – one of the colored outer parts of the flower

Roots – part of plan that grows down into the ground and takes in water and food to feed the plant

Seed- the part of a flowering plant from which a new plant will grow

Sprout- a new or young plant growth

Stem – the main part of a plant that supports the leaves and flowers

Sunflower – a large flower with yellow petals and a dark center.

Kansas – the sunflower is its state flower.

Russia – the sunflower is its national flower.

Botanists – people who study plants

Helianthus (hee-lee-AN-thus) – name of sunflowers given by botanists:

Helios (HEE-lee-ose) which means sun

Anthos (AN-thoce) which means flower

Tournesol (TURN-i-so)which means"turn with the sun" in French

Disk flowers – the center of a sunflower is made of hundreds of these very small flowers.

Grouse – One of the animals who eat sunflower seeds

Groundhogs – One of the animals who eat the roots of a sunflower.

Oilseeds- smaller black seeds

Confection seeds-gray-striped seeds

Cooking oil- One of the products made from sunflower seeds.

В	I	N	G	O
Botanists	Helianthus	Helios	Anthos	Tournesol
Disk flowers	Bloom	Bracts	Bud	Flower
Heliotropism	Leaf	Petal	Roots	Seed
Sprout	Stem	Sunflower	Kansas	Russia
Grouse	Groundhog	Oilseeds	Confection seeds	Cooking oil

"I Know it's a Sunflower" Poem

Overview: Students will write "I Know It's a Sunflower" poems.

State Standards

LA 4.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.

LA 4.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

Students will write a poem about sunflower using facts learned about them.

Materials

Books: I Know It's Fall (Spinelli 2005); The Scholastic Rhyming Dictionary (Young 1994)

Supplies: paper, pencils

Sequence

- 1. Read *I Know It's Fall* to students
- 2. Discuss the format of the book (every page starts with the line "I know it's fall...") and has a rhyming couplet (two lines that rhyme with each other).
- 3. Review facts learned about sunflowers from previous lessons.
- 4. Model the writing of poem on the theme "I Know It's A Sunflower" or share this one:

I know it's a sunflower when the flowers start to grow And follow the sun's warming light glow. I know it's a sunflower when it's 12 feet tall And blooming flowers signal that soon it will be fall.

- 5. Have students write their own poem on the theme "I Know It's a Sunflower."
- 6. Publish student poems in a group book of poetry.

Sunflower Poetry Picks

Overview: Students will choose a type of poetry to write about sunflowers.

State Standards

LA 4.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.

LA 4.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will choose a type of poetry to write about sunflowers.

Materials

Nonfiction books about sunflowers: From Seed to Sunflower (Legg 1988); Growing Flowers (Mauerer 2001); Sunflowers (McDonald 1997); Sunflower Farmer (Gunderson 2008); To Be Like the Sun (Swanson 2008); Sunflower! (Welch 1980) Examples of poetry types (provided below if needed) Supplies: paper, pencils

Sequence

- 1. Have students preview five different types of poetry: alphabet pyramid, cinquain poem, definition poem, diamante poem, and patterned poem (format and examples below).
- 2. Let students choose a type of poetry and use that format to show what they have learned about sunflowers.

Alphabet Pyramid

Line 1: the letter; Line 2: a noun Line 3: add an adjective Line 4: add a verb Line 5: add an adverb

S
Sunflower
Sunny Sunflower
Sunny Sunflower Shines
Sunny Sunflower Shines Silently

Fourth Grade Activity 5 (continued)

Cinquain Poem

Line 1: Subject

Line 2: four syllables describing subject

Line 3: six syllables showing action

Line 4: eight syllables expressing feeling or observation about subject

Line 5: two syllables renaming subject

Sunflower
Sun worshipping
Budding, sprouting, growing
Always searching for the hot sun
Sun seeker

Definition Poem

Line 1: Name it

Line 2: Describe it, rename it

Line 3: Tell where it would be found

Line 4: Tell more about it

Line 5: Use emotion words to tell how you feel about it

Line 6: Explain why you used the emotion words in line 5

Sunflower

Sun worshipper

Found in splendid fields in late summer Always cheerful, always searching Constant companion of the sun

Diamante Poem

Line 1: Noun

Line 2: 2 adjectives describing noun

Line 3: 3 -ing words describing noun

Line 4: 2 nouns about noun above, 2 nouns about noun below

Line 5: 3 -ing words describing noun below

Line 6: 2 adjectives describing noun below

Line 7: Noun

sunflower
sunny Golden
sprouting budding blooming
petals seeds Kernels Husks
Shucking Boiling Buttering
Sweet Crunchy
Corn

Fourth Grade Activity 5 (continued)

Patterned Poem

"I Like"

I like noun!

I like noun!

Adjective noun

Adjective noun

Adjective noun

Adjective noun

Any kind of noun!

I like noun!

Noun prepositional phrase...

Noun prepositional phrase...

Noun prepositional phrase...

Noun prepositional phrase...

I like noun!

I like sunflowers!

I like sunflowers!

Golden sunflowers

Buttery sunflowers

Amber sunflowers

Sunny sunflowers

Any kind of sunflower!

I like sunflowers!

Sunflowers heaped with seeds

Sunflowers blowing in the breeze

Sunflowers planted in spring

Sunflowers blooming in summer

I like sunflowers!

Free Verse Sunflower Poetry

Overview: Students will write a free verse poem about sunflowers.

State Standards

LA 5.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.

LA 5.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will write free verse poetry about sunflowers.

Materials

Nonfiction books about sunflowers: From Seed to Sunflower (Legg 1988); Growing Flowers (Mauerer 2001); Sunflowers (McDonald 1997); Sunflower Farmer (Gunderson 2008); To Be Like the Sun (Swanson 2008); Sunflower! (Welch 1980) Examples of free verse poetry (provided below if needed) Supplies: paper, pencils paper

Sequence

1. Have students write verse poems to show what they have learned about sunflowers. See examples below. Encourage students to revise and edit the poems to take them to final drafts.

Example 1: Have students write a letter addressed to the sunflower, complete with questions and compliments:

Sunflower,
You shine so brightly in fields of gold.
You are splendid sun worshippers.
What do you talk about with your friends in the fields?
What sunscreen do you use?

Example 2: End each line with the phrase "to be like the sun," as in the book To be Like the Sun (Swanson 2008)

Sunflowers are disks of golden petals... to be like the sun. Sunflowers are filled with sunny seeds... to be like the sun.

Example 3: Write a free verse poem of questions, as suggested by this poem from the book Blue Iris (Oliver 2004)

The Sunflowers

Come with me Into the field of sunflowers. Their faces are burnished disks. Their dry spines Creak like ship masts, Their green leaves, So heavy and many, Fill all day with the sticky Sugars of the sun. Come with me To visit the sunflowers, They are shy But want to be friends; They have wonderful stories Of when they were young – The important weather, The wandering crows, Don't be afraid To ask them questions!!!

Example 4: Compare sunflowers to a type of music, as in this poem from the book *Pumpkin Butterfly: Poems from the Other Side of Nature* (Mordhorst 2009)

Botanical Jazz

Quiet down, flower—
Not so loud!
All this stretching your neck
And spreading your arms
Bellowing your brassy yellow sass—

You're breaking our eyedrums
Trumpeting all that color and sun
Blowing that blazing yellow jazz...
Belt it out, flower—
We'll join in!

Making Connections to Sunflower Quotes

Overview: Students will write about their connections to sunflower quotes.

State Standards

- *LA 5.1.6 Comprehension:* Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.
- LA 5.1.6.m: Build and activate prior knowledge in order to identify text to self, text to text, and text to world connections before, during, and after reading.
- *LA 5.2.1 Writing Process:* Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.
- LA 5.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will write about connections they have to sunflower quotes.

Materials

Sunflower quotes (provided below)

Supplies: paper, pencils

Sequence

- 1. Display the following quotes about sunflowers and discuss their possible meanings.
- "Be like the flower, turn your face to the sun." (Kahlil Gibran)
- "The sunflower is a favorite emblem of constancy." (Thomas Bulfinch)
- "Flowers have an expression of countenance as much as men or animals. Some seem to smile; ...others are plain, honest and upright, like the broad-faced sunflower..."

 (Henry Ward Beecher)
- "I would rather have been a tall sunflower; Living in a country garden; Lifting a golden-brown face to the summer." (Carl Sandburg)
- "Turn your face to the sun and the shadows fall behind you." (Maori Proverb)
- "Keep your face to the sunshine and you cannot see the shadow. It's what sunflowers do." (Helen Keller)
- "I should like to change into a sunflower most of all. They're so tall and simple." (Colin Higgins)
- 2. Have students choose their favorite quote and write about their connection to the quote (text-life connections) or their ideas on what the quotes mean in the world (text-world connections). Model the writing of the connection or do one together or use the example provided below.

Fifth Grade Activity 2 (continued)

Example: "Keep your face to the sunshine and you cannot see the shadow. It's what sunflowers do."-- Helen Keller. I think this quote means that you should always look for the good or the positive, even when something bad happens. For instance, after being caught in a downpour when you don't have an umbrella, you may be drenched and wet, but look up and you'll see a beautiful rainbow in the sky. Or enjoy the downpour and celebrate the rain, especially in a year in which we had very little rain. Clothes will dry, but crops and flowers really need the rain to grow and prosper.

3. Display students' work and discuss differences/similarities in students' connections or explanations of similar quotes.

Taking Courage from Sunflowers

Overview: Students will write journal entries as if they were a character in a Japanese internment camp growing sunflowers.

State Standards

LA 5.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.

LA 5.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.

LA 5.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

Students will write journal entries as if they were a character in a Japanese internment camp growing sunflowers, describing the importance of a positive focus in a dismal situation.

Materials

Book: A Place Where Sunflowers Grow (Lee-Tai 2006)

Supplies: paper, pencils

Sequence

- 1. Read *A Place Where Sunflowers Grow* to students. This book is based on a true story from the author's mother and grandmother's experience at the Topaz Relocation Center. Mari and her family are interned at Topaz Relocation Center (a Japanese internment camp) in Utah during World War II. To pass the time she plants sunflower seeds and goes to art classes. The sunflowers give them hope and remind them of their backyard in California. They lived there for 3 ½ years. Even though the Utah ground was dry, the sunflowers eventually grew and gave them hope.
- 2. After reading the book, discuss Japanese internment camps (suggested resource books are listed below).
- 3. Have students write simulated journal entries as if they were Mari in the book, longing for the sunflowers to blossom. Have them focus their entries on flowers and the promise of flowers as a bright spot in a dismal camp.

Historical fiction: So Far from the Sea (Bunting 1998); Flowers from Mariko (Jenks 2001); The Bracelet (Uchida 1993)

Nonfiction: Remembering Manzanar: Life in a Japanese Relocation Camp (Cooper 2002); Dear Miss Breed: True Stories of the Japanese American Incarceration during World War II and the Librarian Who Made a Difference (Oppenheim 2006); Japanese American Internment Camps (Sakural 2007); Life in a Japanese American Internment Camp (Yancey 1998)

Writing Song Lyrics about Sunflowers

Overview: Students will write lyrics about sunflowers.

State Standards

LA 5.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.

LA 5.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.

LA 5.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will write song lyrics about sunflowers to show what they have learned.

Materials

Supplies: paper, pencils

Sequence

1. Read the words of the song below to students. The words are from the chorus of "The Big Sunflower" (words and music by Bobby Newcomb, 1868). This cheerful tune was "Pa's trouble song" from the Laura Ingalls Wilder books, *Little House on the Prairie*. "Pa," the father of the family, sang the song during blizzards to remind himself of sunny times.

And I feel just as happy as a big sunflower
That nods and bends in the breezes
And my heart is as light as the wind that blows
The leaves from off the trees---es.

2. Encourage students to write some lyrics or verses to the song, perhaps highlighting some facts they have learned about sunflowers (example below).

Sunflowers blossom and wave Strong, sturdy, and brave Always facing for the sun Until the day is done.

3. Perform the verses and add the refrain from the real song (found in: *Best Loved Songs of the American People* (Agay 1975, p. 141) or *The Laura Ingalls Wilder Songbook* (Garson 1968, pp. 114-116).

Van Gogh's Sunflowers

Overview: Students will write about Vincent Van Gogh and the impact sunflowers had on his life.

State Standards

LA 5.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.

LA 5.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit and publish writing using correct spelling, grammar, punctuation, and other standard conventions appropriate for grade level.

LA 5.2.2 Writing Genres: Students will write for a variety of purposes and audiences in multiple genres.

Instructional Objectives

► Students will write about Vincent Van Gogh and his connection to sunflowers.

Materials

Supplies: paper, pencils

Books about Vincent Van Gogh: Camille and the Sunflowers: A Story about Vincent Van Gogh (Anholt 1994); Van Gogh (Bernard 1999); Van Gogh (Crispino et al. 2008); Vincent Van Gogh (Eileen 1997); Vincent Van Gogh (Green 2002); Vincent Van Gogh: Portrait of an Artist (Green and Jordan 2001); Vincent Van Gogh (Lucas 1997); Katie and the Sunflowers (Mayhew 2001)

Sequence

- 1. Have students read Vincent Van Gogh biographies and have students keep notes on important elements of his life.
- 2. Have students view websites that feature Van Gogh's paintings of sunflowers, such as:

http://www.vggallery.com/misc/sunflowers.htm http://www.vangoghgallery.com/painting/sunflowerartists.html

3. Have students options write biographies of Vincent Van Gogh, chosing either a clerihew poem or a bio poem format (formats and examples below).

Clerihew Poem

Name Rhyme (with name) Rhyme (with below line) Rhyme (with above line)

Vincent Van Gogh
Used his paintings to show
The vibrant flowers of the sun
Before his life was done.

Bio Poem

Line 1: First name only

Line 2: Four adjectives describing the person

Line 3: Family information (Son/daughter of... or Sibling of... Significant other of...)

Line 4: Who loves...(3 things or ideas)

Line 5: Who feels...(3 things or ideas)

Line 6: Who fears ...(3 things or ideas)

Line 7: Who would like to see (3 things or ideas)

Line 8: Resident of... Line 9: Last name only

Vincent

Artistic, creative, complicated, observant Brother of Theo

Who loved his brother, sunflowers, impressionism.

Who felt creative at Arles, France; energetic when painting; peace when painting outside. Who feared poverty, darkness, not being able to express himself in paintings

Who wanted to see more sunshine, more colors, more stars

Resident of many art museums Van Gogh

Appendix

Suggested Books

The following books are listed in the curriculum activities, with appropriate grade level indicated in parentheses.

Agay, D. 1975. *Best Loved Songs of the American People* (R. Lonette, illustrator). Garden City, NY: Doubleday & Co. (G5)

Anholt, L. 1994. *Camille and the Sunflowers: A Story about Vincent Van Gogh.* Hauppauge, NY: Barrons (G5)

Barry, F. 2008. Big Yellow Sunflower. Cambridge, MA: Candlewick Press (PK)

Bernard, B. 1999. Van Gogh. New York: Dorling Kindersley (G5)

Brown, M. 1990. The Important Book. New York: HarperCollins (G3)

Bruce, L. 1999. Fran's Flower (R. Beardshaw, illustrator). New York: HarperCollins (G1)

Bunting, E. 1996. Sunflower House (K. Hewitt, illustrator). San Diego: Harcourt Brace (K)

Bunting, E. 1998. So Far from the Sea. New York: Clarion (G5)

Clements, A. 2007. *Dogku* (T. Bowers, illustrator). New York: Simon & Shuster (G2)

Cooper, M. 2002. Remembering Manzanar: Life in a Japanese Relocation Camp. New York: Clarion (G5)

Crispino, E., B. Simone, and S. Ashley. 2008. Van Gogh. Minneapolis: Oliver Press (G5)

Eclare, M. 2008. A Handful of Sunshine. Brooklyn, NY: Ragged Bears (PK, G2, G3)

Eileen, L. 1997. Vincent Van Gogh. Minneapolis: Carolrhoda (G5)

Ernst, L. 1998. Little Red Riding Hood: A Newfangled Fairy Tale. New York: Simon & Schuster (G1)

Florian, D. 2000. Winter Eyes. New York: Scholastic (G2)

Ford, M. 1995. Sunflower (S. Noll, illustrator). New York: Greenwillow (K)

Garson, E. 1968. *The Laura Ingalls Wilder Songbook* (G. Williams, illustrator). New York: Harper & Row (G5)

Green, J. 2002. Vincent Van Gogh. New York: Watts (G5)

Greenberg, and S. Jordan. 2001. Vincent Van Gogh: Portrait of an Artist. New York: Delacorte (G5)

Gunderson, J. 2008. *Sunflower Farmer* (R. Haugen, illustrator). Minneapolis, MN: Picture Window Books (G4, G5)

Harley, A. 2009. African Acrostics (D. Noyes, illustrator). Cambridge, MA: Candlewick Press (G3)

Heard, G. 2011. Falling Down the Page. New York: Roaring Brook Press (G2)

Hobbie, H. 1999. *Toot and Puddle: You are My Sunshine* by H. Hobbie (1999) Boston: Little, Brown (PK)

Holbrook, S. 2005. *Practical Poetry: A Nonstandard Approach to Meeting Content-Area Standards*. Portsmouth, NH: Heinemann (G4)

Jenks, D. 2001. Flowers from Mariko. New York: Lee & Low (G5)

Kellogg, S. 1992. Aster Aardvark's Alphabet Adventures. New York: HarperCollins (G3)

Lee-Tai, A. 2006. *A Place Where Sunflowers Grow* (F. Hoshino, illustrator). San Francisco: Children's Book Press (G5)

Legg, G. 1988. From Seed to Sunflower (C. Scrace, illustrator). New York: Franklin Watts (G2, G3, G4, G5)

Lucas, E. 1997. Vincent Van Gogh. Minneapolis: Carolrhoda (G5)

Mauerer, T. 2001. Growing Flowers. Vero Beach, FL: The Rourke Book Co. (G4, G5)

Mayhew, J. 2001. Katie and the Sunflowers. New York: Orchard (G5)

McDonald, M. 1997. Sunflowers. New York: The Child's World (G3, G4, G5)

McLeod, B. 2006. SuperHero ABC. New York: HarperCollins (G3)

McNaughton, C. 1996. Making Friends with Frankenstein. Cambridge, MA: Candlewick Press (G2)

Mordhorst, H. 2009. *Pumpkin Butterfly: Poems from the Other Side of Nature* (J. Reynish, illustrator). Honesdale, PA: Wordsong (G5)

Oliver, M. 2004. Blue Iris: Poems and Essays. Boston: Beacon Press (G5)

Oppenheim, J. 2006. Dear Miss Breed: True Stories of the Japanese American Incarceration during World War II and the Librarian Who Made a Difference. New York: Scholastic (G5)

Paolilli, P. and D. Brewer. 2001. *Silver Seeds: A Book of Nature Poems* (S. Johnson, illustrator). New York: Viking (G3)

Parr, T. 2004. Do's and Don'ts. Boston: Little, Brown (G1)

Prelutsky, J. 2004. If Not for the Cat (T. Rand, illustrator). New York: Greenwillow (G2)

Raczka, B. 2010. *Guyku: A Year of Haiku for Boys* (P. Reynolds, illustrator). Boston: Houghton Mifflin (G2)

Rosen, M. 2004. Alphabet Poem. New York: Milet Publishing (G3)

Rosen, M. 2009. *The Cuckoo's Haiku and other Birding Poems* (S. Fellows, illustrator). Cambridge, MA: Candlewick Press (G2)

Sakural, G. 2007. Japanese American Internment Camps. New York: Children's Press (G5)

Saunders-Smith, G. 1998. Sunflowers. Mankato, MN: Pebble Books (G1)

Schaefer, L. 2000. This is the Sunflower (D. Crews, illustrator). New York: HarperCollins (G1)

Schnur, S. 2001. Summer: An Alphabet Acrostic. New York: Clarion (G3)

Seeger, L. 2005. Walter was Worried. New York: Roaring Brook Press (G3)

Spinelli, E. 2005. I Know it's Fall (N. Hayashi, illustrator). New York: Scholastic (G4)

Steward, D. 2008. *How a Seed Grows into a Sunflower* (C. Franklin, illustrator). New York: Scholastic (G3)

Swanson, S. 2008. *To Be Like the Sun* (M. Chodos-Irvine, illustrator). Orlando, FL: Harcourt (K; G4, G5)

Tagliaferro, L. 2007. The Life Cycle of a Sunflower. Mankato, MN: Capstone Press (G2, G3)

Uchida, Y. 1993. The Bracelet. New York: Philomel (G5)

Walton, R. 2011. Once there was a Bull...(Frog) (G. Hally, illustrator). New York: Gibbs Smith (G2)

Welch, M. 1980. Sunflower! New York: Morrow (G4, G5)

Yancey, D. 1998. Life in a Japanese American Internment Camp. San Diego: Lucent (G5)

Young, S. 1994. The Scholastic Rhyming Dictionary. New York: Scholastic (G4)