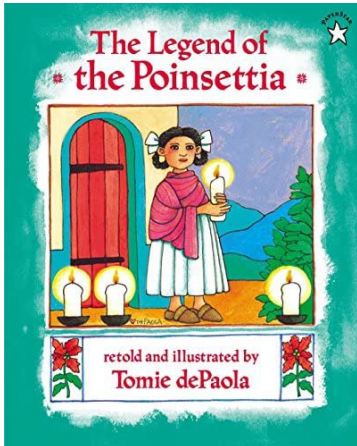


December 2022 Book of the Month

The Legend of the Poinsettia

Written & Illustrated by: Tomie dePaola



In Mexico, the poinsettia is called *flor de la Nochebuena* flower of the Holy Night. At Christmastime, the flower blooms and flourishes, the quite exquisite red stars lighting up the countryside.

This Mexican legend tells how the poinsettia came to be, through a little girl's unselfish gift to the Christ Child. Beloved Newbery honor-winning author and Caldecott honor-winning illustrator Tomie dePaola has embraced the legend using his own special feeling for Christmas. His glorious paintings capture not only the brilliant colors of Mexico and its art, but also the excitement of the children preparing for Christmas and the hope of Lucida, who comes to see what makes a gift truly beautiful.

Did You Know?

- The Mexican poinsettia found its way to the United States by Dr. Joel Roberts Poinsett, who served as our nation's first minister to Mexico from 1825 to 1830. He took cuttings home with him to South Carolina when he returned from Mexico in 1830.¹
- Originally, poinsettias were three to four-feet tall. A German farmer named Albert Ecke immigrated to California and started cultivating poinsettias in the early 1900s, and started breeding smaller varieties. This farm is still in business today, and grows over 70% of all poinsettias purchased in the U.S.¹
- Contrary to popular myth, poinsettias are not poisonous to pets or humans. A person would have to eat more than 500 leaves to have any harmful effect. The ancient Aztecs used the plant's milky sap to make a fever-reducing medicine.¹
- December 12th is Poinsettia Day.
- North Carolina ranks second in the nation for poinsettia production, behind California.
- North Carolina's green industry ('green industry' includes the variety of businesses involved in the production, distribution and services associated with ornamental plants and landscape and garden supplies and equipment) contributed approximately \$134.9 billion to the state's economy in 2019, and supported more than 900,000 jobs.²

Interest Approach – Engagement^{1,4}

1. Show children a real poinsettia plant or a picture of one. Ask, "Do you know what the name of this plant is?" Allow students time to respond. The name of this plant is a poinsettia. Give students an opportunity to view the plant up close. Let them gently touch its leaves. "What words describe this plant?" Allow students time to respond. (Possible answers include the following: red petals, bright yellow centers, shiny green leaves, velvety, soft, etc.).

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2. Explain, “The poinsettia has become a symbol of Christmas to many people all around the world.” Take a moment to see if any students have a similar symbol of a seasonal holiday that they celebrate (The menorah for Hanukkah, the seven candles/principles of Kwanzaa, etc.) and let students share the origins of the symbols if they know them.
3. Bring the discussion back to the poinsettia and ask, “Do you know where this flower comes from?” Allow students time to respond. “This flower comes from a country called Mexico.” If available, point out Mexico on a map. Show students where they live in relation to Mexico. Say, “Today I’m going to read you a story about the poinsettia. The name of the story is *The Legend of the Poinsettia*. The author is Tomie dePaola.” Read the book to the class using the literacy tips below.

Before Reading

- Ask questions: What do you think the book will be about? Why do you think that?
- Key vocabulary: Point out and define complicated words.
- Make a Connection: What do you know about the topic of this book?
- Does the topic of this book remind you of anything you know or have done?

Picture Walk

- Show students the front and back cover of the book.
- Pick one or two pages in the book to preview.
- Have students describe what they see in the pictures.
- Have students answer who, what, where, when, and why questions.
- After students preview the pictures, have them predict what they think the story will be about.

During Reading

- Plan to pause: Plan ahead where you will ask questions. Add a sticky note to that page to remind you to pause. Plan 1-2 pauses that will not interfere with the flow of the book.
- Discuss: What do you think will happen next? Why? Why do you think the ____ did ____? How do you know? What would you have done if you were _____? If you were in the story, what would you hear, taste, smell or feel?

After Reading

- Revisit/Summarize: What is the main message of this book? What does the author want you to think about? Tell me the story in your own words. Retell the most important events in the story from beginning, middle and end.
- Plan an Activity using this activity sheet.

Comprehension Check

1. Where does this story take place?

2. What did Lucida and her family do every day?
3. Why does Lucida hide when everyone goes to church?
4. Why did Lucida's mom decide to make the blanket?
5. What would you do if your mom were sick and couldn't finish the blanket?
6. Make a comparison between you and your family on the eve of a holiday, and what Lucida and her family did on Christmas Eve. What are some similarities and differences?

Activity 1: Desktop Greenhouses³

Note: This activity is condensed from the [Desktop Greenhouse Lesson](#). It investigates the phenomenon of photosynthesis. Natural phenomena are observable events that occur in the universe that we can use our science knowledge to explain or predict. Refer to [Explore and Explain \(Links\)](#) for more information about this activity/lesson.

Materials:

- [Desktop Greenhouses](#) video
- 16-ounce clear plastic cups with lids*, 2 per group
- 18-ounce black plastic cups*, 2 per group
- Black electrical tape*
- Black card stock* disks, 2 per group
- mL measuring cup or ruler
- 1/8 teaspoon
- Jiffy 7 peat pellets*, 2 per group
- Seeds* (we tested alfalfa and lettuce seeds)
- Labels, 2 per group
- White 5mm LED lights*, 1 per group
- 3-volt coin cell batteries*, 1 per group
- Craft knife
- [Desktop Greenhouse Observation Sheets](#), 1 packet per student

*These items are included in the [Desktop Greenhouses Kit](#), which is available for purchase from agclassroomstore.com.

1. Start off by asking the class to identify the things plants need to live and grow (sunlight, water, air, minerals, nutrients, temperature, weather, soil). Explain to the class that these things are called abiotic factors (nonliving parts of the environment that affect living things).
2. Explain that poinsettias are plants that rely on sunshine and dark nights to "bloom." (More about the modified leaves of the poinsettia in **Activity 2**). The shorter days and longer nights of late fall and early winter are what cause poinsettias to bloom this time of year. Poinsettias require ideal indoor temperatures of 65-70 degrees F, and will suffer damage if they are in temperatures below 50 degrees F.

3. Ask students, “How do farmers and producers grow poinsettias if they can’t grow them outside where the weather might be cold in November and December?” (They grow them in greenhouses).
4. Ask students if they know what a greenhouse is. Explain that greenhouses are enclosed structures that farmers use to grow plants in ideal conditions. Explain that farmers are better able to control abiotic factors for plants inside greenhouses.
5. Tell students they are going to investigate how plants needs can be met inside greenhouses.

Do Plants Need Light?

Teacher Note: We recommend beginning this investigation on a Friday (Day 1) to allow for germination of the seeds over the weekend. Lights will be added to the greenhouse the following Monday (Day 4), plant observations and data collection take place throughout the week, and the investigation will be completed the following Friday (Day 8). This schedule allows for key procedures to take place on school days as opposed to the weekend.

Day 1

Preparation instructions: Prior to this activity, an adult should prepare the desktop greenhouse lids. For each lid, cut out a lid-sized disk from black card stock, place on top of the lid, and secure it with two layers of electrical tape so that no clear part of the lid is exposed. Watch the [Desktop Greenhouses](#) video to view a tutorial on how to set up the greenhouses.

1. Explain to the students that they are going to investigate the importance of light to plants by creating desktop greenhouses.
2. Organize the students into partners or small groups. Provide each group with 2 clear plastic cups, 2 black plastic cups, 2 prepared lids, 2 labeling stickers, 2 peat pellets, a bag of seeds, access to water, a mL measuring cup, a 1/8 teaspoon, and a permanent marker.
3. Instruct the students to label both clear plastic cups with their name, the date, and the type of seed they are planting. Label one greenhouse with the number 1 and the other greenhouse with the number 2.
4. Fill each of the cups with 50 mL of water or mark a line on each cup 3/4 inch from the bottom and fill the cups up to the line with water.
5. Place a peat pellet, with the small hole facing up, into each of the cups of water.
6. It takes about 15 minutes for the peat pellets to hydrate and expand. When the peat pots are completely hydrated, use a pencil to loosen the top 1/4 inch of peat moss.
7. Evenly spread 1/8 teaspoon of seeds on top of each of the peat pots. Press the seeds down gently with your finger so that they contact the damp peat.
8. Have each group write their names, the date, and the type of seed they are planting on two stickers and place one on each of the black plastic cups. Label one greenhouse with the number 1 and the other greenhouse with the number 2.



9. Provide each student with the [Desktop Greenhouse Observation Sheets](#). Have the students complete the observations for Day 1.
10. Put the clear cups inside the black cups (be sure to match the numbers correctly 1 or 2) and place a prepared lid onto each of the greenhouses.
11. Place the greenhouses onto a countertop or table out of the way of direct sunlight.
12. Ask the students if they think seeds need light to germinate. After listening to the students' responses, explain that they will allow time for the seeds to germinate in the dark greenhouses and check the progress on Day 4. Do not open the greenhouses until Day 4.

Day 4

Preparation Instructions: Prior to this activity, an adult should use a craft knife to cut an X (similar to the straw X in the plastic lid) into the top of the greenhouse lid through the black card stock disk and plastic lid for each student's greenhouse number 1 lid only. Do not cut an X for greenhouse number 2. The students will place their LED light through this X.

1. Have the students check their greenhouses and complete the observations for Day 4 on their *Desktop Greenhouse Observation Sheet*.
2. Lead a discussion about the question from Day 1, "Do seeds need light to germinate?" Integrate the following points into the discussion:
 - The seeds in the desktop greenhouses were not exposed to light and germinated.
 - Most seeds germinate best in dark conditions.
 - Seeds are dormant until they are exposed to specific conditions.
 - Seeds require the proper amount of warmth, moisture, and air to germinate.
3. Ask the students, "Do plants need light to grow and be healthy?" After listening to the students' responses, explain that they will add an LED light to one of their greenhouses.
4. Provide each student with a 3-volt battery, an LED light, and a 4" piece of black electrical tape. Explain to the students that the battery will provide power to the LED light.
5. Have the students straddle the light's prongs around the battery so that the longer prong is touching the positive side of the battery. Once the light is lit, hold the prongs in place by wrapping the electrical tape around the prongs and battery.
6. Insert the light into the X on the greenhouse lid.
7. Explain to the students that they will observe any changes in the plants for the next four days.
8. Ask the students, "Do you think you will see any differences between the plant growing in the greenhouse with the light and the plant in the dark greenhouse?" If they answer yes, ask them what kind of differences they think they will see. Have the students predict which plant they think will be healthiest and record their prediction on their observation sheet.



Days 5-8

1. Allow time each day for students to observe their plants.
2. Have the students record their observations on their *Desktop Greenhouse Observation Sheet*.
3. On Day 8, discuss the differences the students observed between their plant growing in the greenhouse with the light and their plant in the dark greenhouse. Which plant is the healthiest? Was their prediction correct?
4. Have the students record their conclusions on their observation sheet.
5. Lead a discussion about the question from Day 4, "Do plants need light to grow and be healthy?"

Integrate the following points into the discussion:

- The plants in the desktop greenhouses with light were healthier than the plants in the dark greenhouses.
- Plants require nutrients, water, air, and light to survive and grow.
- Light requirements—intensity, quality, and duration—vary by plant species.
- Not all light bulbs can be used as grow lights.
- Plants also need a rest from light.
- Different plant species require different amounts of light each day.



Activity 2: The Poinsettia's Unique Bloom

Materials

- Red and green paper
- Scissors
- Pencil
- Pipe cleaners
- White glue
- Gold beads or buttons (optional)
- Gold poster paint or acrylic paint (optional)



1. Bring in a live poinsettia for students to look at (preferably a red one). If you do not have access to one, use a picture.
2. Let students observe the plant. Have them notice that the leaves and floral parts of the plant have the same shape, but are different colors (red and green).
3. Ask the students if they think the red parts of the plant are flowers or just leaves of a different color. Take a poll. Tell students to graph the results of the poll in a bar graph.

4. Explain that the red parts of the plant are actually leaves, not flowers. These modified leaves (called bracts) are often called “flowers,” but the small yellow parts clustered in the center of the bracts are the flower.
5. Give all the students their own Poinsettia Pattern Template (they can either color in the blank one, or use the pre-colored template).
6. Cut out the poinsettia pieces. Glue the two flowers together. Position the flowers in a way that the first flower’s petals stick out from the spaces in between the second flower’s petals.
7. Glue the leaf behind the bottom flower position the leaf so that the leaf tips stick out in between the petals.
8. Make a pair of holes at the center of the poinsettia. Bend a pipe cleaner in the middle. Insert the ends through the pair of holes on the poinsettia. Carefully pull the pipe cleaner all the way through until only the folded section of the pipe cleaner is visible from the top.
9. Make the flower’s center using the gold materials (buttons or beads). You can glue these in the center (or thread them on the pipe cleaner in step 8).



Links

- Poinsettias: A Big Business in North Carolina (video)
<https://www.youtube.com/watch?v=soRjiNOYQQ0>
- Explore and Explain: Phenomenon of Photosynthesis (**Activity 1**)
https://www.canva.com/design/DAFRN3ug5vw/view?utm_content=DAFRN3ug5vw&utm_campaign=designshare&utm_medium=embeds&utm_source=link
- Desktop Greenhouses (video, **Activity 1**)
<https://www.youtube.com/watch?v=jt95cyf9qVQ>
- Desktop Greenhouse Observation Sheet (**Activity 1**)
https://cdn.agclassroom.org/media/uploads/2019/03/27/Desktop_Greenhouse_Observation_Sheet_1.pdf
- Desktop Greenhouse Kit (all materials from **Activity 1** can be purchased together)
<https://agclassroomstore.com/desktop-greenhouses/>

Sources

1. <https://ncfieldfamily.org/farm/poinsettia-power/>
2. <https://cnr.ncsu.edu/news/2020/06/green-industries-north-carolina/>
3. <https://northcarolinamatrix.agclassroom.org/matrix/lesson/700/>
4. ImplementEd. (2022). *Literacy Tips* [brochure/fact sheet].

K-5 Subject Areas: Reading, Speaking and Listening, Science, Social Studies

Reading

- **RL.K.1** With prompting and support, ask and answer questions about key details in a text.
- **RL.K.3** With prompting and support, identify characters, settings, and major events in a story.
- **RL.K.4** With prompting and support, ask and answer questions about words in a text that suggest feelings or appeal to the senses.
- **RL.K.6** With prompting and support, define the role of the author and illustrator in telling the story.
- **RL.K.7** With prompting and support, describe how the words and illustrations work together to tell a story.
- **RL.K.9** With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.
- **RL.K.10** Actively engage in group reading activities with purpose and understanding.
- **RL.1.1** Ask and answer questions about key details in a text.
- **RL.1.3** Describe characters, settings, and major events in a story, using key details.
- **RL.1.4** Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.
- **RL.1.7** Use illustrations and details in a story to describe its characters, setting, or events.
- **RL.2.2** Recount events from familiar stories from diverse cultures.
- **RL.2.3** Identify the actions of the characters in a story.
- **RL.2.7** Identify illustrations or objects/tactual information in print or digital text that depict characters.
- **RL.2.10** Actively engage in group reading for the purpose of connecting prior knowledge and experiences to text.
- **RL.3.1** Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- **RL.3.2** Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson or moral and explain how it is conveyed through key details in the text.
- **RL.3.4** Determine the meaning of words and phrases as they are used in a text, identifying words that impact the meaning in a text.
- **RL.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RL.4.2** Determine a theme of a story, drama, or poem from details in the text; summarize the text.
- **RL.4.5** Explain major differences between poems, drama, and prose, and refer to the structural elements of poems and drama when writing or speaking about a text.
- **RL.4.9** Compare and contrast the use of similar themes and topics and patterns of events in stories, myths, and traditional literature from different cultures.
- **RL.5.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RL.5.4** Determine the meaning of words and phrases as they are used in a text, recognizing specific word choices that contribute to meaning and tone.
- **RL.5.5** Explain how chapters, scenes, or stanzas provide the overall structure of a particular story, drama, or poem.
- **RL.5.7** Analyze how visual and multimedia elements contribute to the meaning, tone, or aesthetics of a text.
- **RI.K.1** With prompting and support, ask and answer questions about key details in a text.
- **RI.K.2** With prompting and support, identify the main topic and retell key details of a text.
- **RI.K.3** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.
- **RI.K.4** With prompting and support, ask and answer questions about words in a text.
- **RI.K.6** With prompting and support, define the role of the author and illustrator in presenting ideas or information in a text.
- **RI.K.7** With prompting and support, describe how the words and illustrations work together to provide information.
- **RI.1.1** Ask and answer questions about key details in a text.
- **RI.1.2** Identify the main topic and retell key details of a text.
- **RI.1.4** Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
- **RI.1.5** Know and use various text features to locate key facts or information in a text.
- **RI.1.6** Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.
- **RI.1.7** Use the illustrations and details in a text to describe its key ideas.
- **RI.1.8** With guidance and support, identify the reasons an author gives to support ideas in a text.
- **RI.2.1** Answer who and what, where questions to demonstrate understanding of details in a familiar text.
- **RI.2.2** Identify the main topic of text.
- **RI.2.3** Identify individuals, events or details in an informational text.
- **RI.2.4** Identify words that relate to the topic of a text.
- **RI.2.5** Locate key facts or information in a familiar text.
- **RI.2.6** Identify the purpose of the author and the illustrator.
- **RI.2.7** Identify images, objects, or tactuals that illustrate key ideas in a text.
- **RI.2.8** Identify points the author makes in a familiar informational text.
- **RI.2.10** Actively engage in group reading of information text for the purpose of connecting prior knowledge and experiences to text.
- **RI.3.1** Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- **RI.3.2** Determine the main idea of a text; recount the key details and explain how they support the main idea.
- **RI.3.3** Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
- **RI.3.5** Use text features and search tools to locate information relevant to a given topic efficiently.
- **RI.3.7** Use information gained from illustrations and the words in a text to demonstrate understanding of the text.
- **RI.3.8** Describe how the author connects ideas between sentences and paragraphs to support specific points in a text.
- **RI.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RI.4.2** Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- **RI.4.3** Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- **RI.4.5** Describe the overall structure of events, ideas, concepts, or information in a text or part of a text.

- **RI.4.7** Interpret information presented visually, orally, or quantitatively and explain how the information contributes to an understanding of the text in which it appears.
- **RI.4.8** Explain how an author uses reasons and evidence to support particular points in a text.
- **RI.5.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RI.5.2** Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
- **RI.5.8** Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).

Speaking and Listening

- **SL.K.1** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
- **SL.K.2** Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
- **SL.K.3.** Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- **SL.K.4.** Speak audibly and express thoughts, feelings, and ideas clearly.
- **SL.K.5** Add drawings or other visual displays to descriptions as desired to provide additional detail.
- **SL.1.1** Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
- **SL.1.2** Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
- **SL.1.5** Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
- **SL.2.1** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
- **SL.2.2** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- **SL.2.4** Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent and complete sentences.
- **SL.3.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.3.2** Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- **SL.3.3** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
- **SL.3.4** Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly in complete sentences at an understandable pace
- **SL.4.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

Science

- **K.L.1.2** Compare characteristics of living and nonliving things in terms of their: structure, growth, changes, movement, basic needs.
- **1.L.1.1** Recognize that plants and animals need air, water, light (plants only), space, food and shelter and that these may be found in their environment.
- **1.L.2.1** Summarize the basic needs of a variety of different plants (including air, water, nutrients, and light) for energy and growth.
- **2.L.2.1** Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways they are different.
- **3.L.2.1** Remember the function of the following structures as it relates to the survival of plants in their environments: • Roots – absorb nutrients • Stems – provide support • Leaves – synthesize food • Flowers – attract pollinators and produce seeds for reproduction
- **3.L.2.2** Explain how environmental conditions determine how well plants survive and grow.
- **3.L.2.3** Summarize the distinct stages of the life cycle of seed plants.
- **4.L.1** Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.
- **5.L.2** Understand the interdependence of plants and animals with their ecosystem.

Social Studies

- **K.B.1** Understand cultural practices in local communities and around the world.
- **1.B.1** Understand how culture, values, and beliefs shape people, places, and environments.
- **1.G.1** Apply geographic representations, tools, and terms to describe surroundings.
- **1.H.1** Understand how people and events have changed society over time.
- **2.H.1** Understand how various people and events have shaped America.
- **3.H.1** Understand how various people and historical events have shaped local communities.
- **4.H.1** Understand the role of various people, events, and ideas in shaping North Carolina.
- **5.H.1** Understand the role of various people, events, and ideas in shaping the United States.

POINSETTIA

