



#3645

PUMPKIN CIRCLE

Grade Levels: PS-6

19 minutes

INFORMED DEMOCRACY 1997

DESCRIPTION

Pumpkins! Every fall we carve them for jack-o'-lanterns, munch their seeds, and cook delicious things with them. But where do they come from? How do they grow? Close-up and time-lapse photography chart the growth of the pumpkin plant from sprouting seed to maturity. Danny Glover narrates in verse accompanied by George Winston's music.

ACADEMIC STANDARDS

Subject Area: Science

- ◆ Standard: Knows about the diversity and unity that characterize life
 - Benchmark: Knows different ways in which living things can be grouped (e.g., plants/animals; pets/nonpets; edible plants/nonedible plants) and purposes of different groupings
 - Benchmark: Knows that plants and animals progress through life cycles of birth, growth and development, reproduction, and death; the details of these life cycles are different for different organisms
- ◆ Standard: Understands basic earth processes
 - Benchmark: Knows that fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time
 - Benchmark: Knows the composition and properties of soils (e.g., components of soil such as weathered rock, living organisms, products of plants and animals; properties of soil such as color, texture, capacity to retain water, ability to support plant growth)



ACTIVITIES

1. Plant a pumpkin seed and watch it grow.
 - a. Gather the following materials:
 - (1) potting soil
 - (2) pumpkin seeds
 - (3) half-gallon milk carton

- (4) acetate (overhead transparency) or clear plastic
 - (5) waterproof glue
 - (6) wooden block or book
 - b. Cut off the top of the milk carton; rinse the carton with soap and water.
 - c. Cut a "window" flap on one side of the milk carton, leaving the flap attached at the bottom. The flap should be about half an inch in from the edges of the container. Leave the flap attached at the bottom so the roots can be covered when not observed.
 - d. Cut acetate or plastic for a "window." Place inside the carton and glue.
 - e. Loosely pack moist potting soil to one inch below the top of the "window." Plant one seed, flat side against the top center of the "window" about 1" deep.
 - f. Place a 1" block or book under the back bottom edge of the milk carton so the "window" tips toward the ground. This encourages the roots to grow close to the window for easy viewing.
 - g. Keep "window" flap closed except when viewing roots. Check soil each day, making sure it is moist but not soaking. When the seed sprouts and grows above the soil, keep container (but not roots) exposed to daylight.
 - h. Use a journal to record changes. Make a time-lapse drawing using a different colored pencil each day.
2. Create a pumpkin museum.
- a. Gather the following materials:
 - (1) corner in a room or hallway
 - (2) table or bookcase
 - (3) drawing paper or grid paper
 - (4) ruler
 - (5) pencil or pen
 - (6) measuring tape
 - (7) 5" x 8" index cards
 - (8) one grand collection of pumpkin paraphernalia brought together from stores, attics, basements, and created by the pumpkin imagineer (note: paraphernalia may include candles, napkins, earrings, puppets, pencils, hats, figurines, china, and more)
 - b. Turn your students into treasure hunters and encourage them to ask relatives and friends to look through their attics and basements for anything and everything related to pumpkins.
 - c. Ask the owners of local shops and antique stores to provide unusual pumpkin items "on loan."
 - d. Ask the class to create original pumpkin art—paintings and sculptures of pumpkin themes.
 - e. Find a museum location and measure its length and width.
 - f. Plan your display by sketching the space on your paper. Use scale to indicate size.



- g. Place your collection on a table. Think about where you want to place each object in your exhibit. Don't make the space too cluttered.
 - h. Once you know where you want to place the objects in your exhibit, draw them on your pumpkin display plan.
 - i. Be sure to make up a title for the exhibit.
 - j. Write display signs for your collection. For the more interesting items, include brief descriptions and information such as where the object came from, its age, its use, and monetary value.
 - k. Where possible, make part of the display interactive. For example, ask people to make designs with a large bowl of seeds; ask visitors to guess the weight of a large pumpkin.
 - l. Take a photograph of the exhibit and keep it for next year.
3. Do pumpkin math.
- a. Get a small pumpkin for each student in class. Ask each to estimate the height, weight, circumference, and number of seeds.
 - b. Measure, weigh, and count. Compare results with estimates.



RELATED RESOURCES

Captioned Media Program

- Dairy Farm #3453
- Food Products #3127
- Peanuts #3640



World Wide Web



The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid-safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **SWAN PUMPKIN FARM ADVENTURES**

<http://www.thepumpkinfarm.com/adventures.shtml>

Games and pumpkin adventures. Scroll down for map.

- **RUBE GOLDBERG MACHINE CONTEST**

<http://www.rubegoldberg.com/contest.htm>

Information on kids' contests to create machines using the famous Pulitzer-Prize winner's wacky and wonderful twenty-step method.

- **HISTORY OF INVENTIONS**

<http://www.cbc4kids.ca/general/the-lab/history-of-invention/default.html>

Smith College's presented time line of inventions through history. Click and scroll. Text and pictures.

- **INVENTOR'S MUSEUM**

http://www.inventorsmuseum.com/museum_map.htm

Inventions online by topic and interest area.

- **KID'S VALLEY GARDEN**

<http://www.arnprior.com/kidsgarden/index.htm>

"Planning," "Planting," "Keeping Plants Healthy," "Showing Your Plants," "Flowers," "Veggies," "Herbs," and an organized list of kids' gardening links at

<http://www.arnprior.com/kidsgarden/links.htm>.

- **TREES**

<http://www.muohio.edu/dragonfly/trees.htmlx>

For the younger viewers from Dragonfly Magazine.

- **LIVING THINGS**

<http://www.fi.edu/tfi/units/life/life.html>

Hundreds of living things links (plants, bugs, animals, ecosystems, etc.) from the Franklin Institute of Science Online. Buttons include: "Individuals Forum," "Families Forum," "Neighborhoods Forum," and "Circle of Life Forum."

- **PARTNERS FOR GROWING**

<http://www.mobot.org/PFG/samples/index.htm>

Just for kids. Activities to see and do. Pictures. Interactive tree story. Educational activities. Easy to access. Could be used as independent tutorials.

- **CYBER CAMP**

<http://www.worldbook.com/fun/wbla/camp/html/walk.html>

World Book Encyclopedia's site. "Nature Walk," a "Craft Cabin," teacher resources, and more.

- **THE GREAT PLANT ESCAPE**

<http://www.urbanext.uiuc.edu/gpe/>

Professor Le Plant and his friends Bud and Sprout investigate (tutorials) plants, seeds, environmental information, and more.