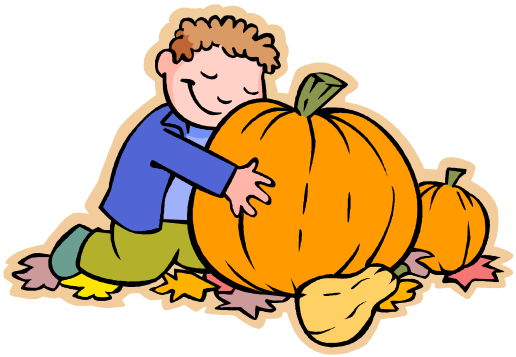


PUMPKIN JACK
by
William Hubbell

Most children know what a pumpkin is. The life of a pumpkin is varied: first the regular plant cycle (seed, plant, flower, fruit), then a jack-o-lantern, and then perhaps a pumpkin pie. Those pumpkins not chosen for jack-o-lanterns or pumpkin pie eventually rot, decompose, and return to the earth to provide seeds for new pumpkins.

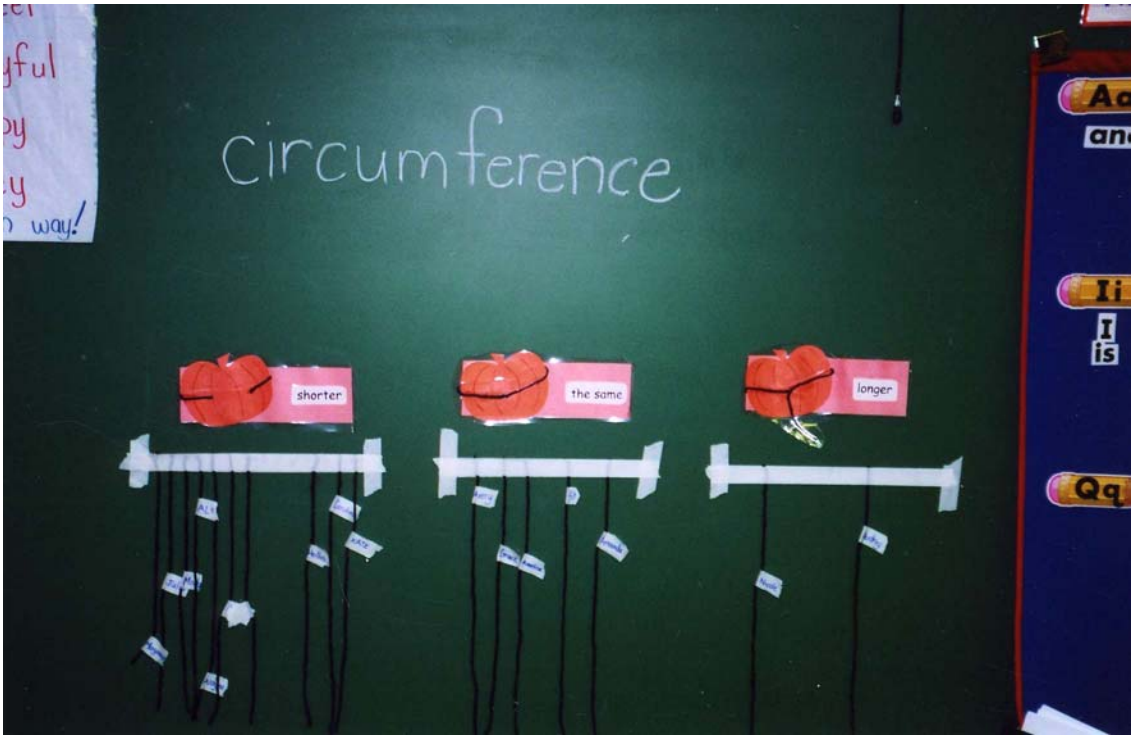
These are great activities to do in the fall when there is an abundance of all types of pumpkins, but you could do Activity #2 at any time by substituting orange poster board cut-outs.

Talk about the life of a pumpkin, and its characteristics. Pumpkins are members of the gourd family.

MATERIALS: Activity #1: one clean, washed pumpkin (try to find ones of varying heights and sizes) for each group of four students; twine/yarn; LARGE tub of water (about 12" deep), bathroom scale, pumpkin observation worksheet; Activity #2: 5 or 6 pumpkins of as close to the same size as you can get them. (The little ornamental pumpkins would also work very well.), a sharp knife, paper and pencils for writing, newspaper for clean-up, orange poster board for cutouts (if desired).

ACTIVITIES: #1-- After distributing the pumpkins have the children line all of the pumpkins up by size, smallest to largest, then shortest to tallest. Have the students decide how to sequence them according to weight. Have them estimate the pumpkin's weight and record it on the Pumpkin Observations sheet. [Note: there is room on this sheet for them to record both their predictions and their actual measurements.] Have them use the bathroom scale to verify and check their predictions. Ask them if size seemed to be a factor in determining weight. Have each group estimate the girth of its pumpkin and record it. Using twine/yarn have them measure the circumference of their pumpkins, then lay the yarn along a yardstick to find the distance around the pumpkin. Have them record this on their chart. How close was their estimation? For younger children you may wish to omit the actual measuring and just have them arrange the yarn by length on the wall. Pumpkins have vertical lines like the longitudinal lines on a globe.

Have each group predict how many lines there are on its pumpkin, and record this amount. Allow them to count the lines. Tell them to mark the first line so they'll know where they began. How close was their estimate? Finally, ask them if they think their pumpkin will float or sink. Record the prediction. After putting each pumpkin in water, record what actually happened. Allow the students to rotate from pumpkin to pumpkin and repeat these activities, if time permits. Do their predictions get better? For all of these things, first predict, then measure; record both times.



Activity #2: For this activity, you will be cutting the pumpkins in half to create a top and a bottom. As you cut, create varying patterns along the cutting line: try to make the patterns big and unique. Your children will be matching the pumpkin tops to the pumpkin bottoms. Use the following patterns: zigzag, curves, sawtooth, crenelated (looks like turrets on a castle), arced, etc., alone or in combination. Use these terms as you show the patterns to the students. Place the pumpkin bottom in the center on several layers of newspaper, butcher paper or a large sheet. Arrange the lids away from the bottoms, around the edge of the circle. Explain to the children that the pumpkin bottoms and tops have gotten all mixed up, and that the children are going to help the bottoms to find their tops again. Talk to the children about patterns, and how they match, Demonstrate with the pumpkins or with orange poster board cutouts. Show procedure for trial and error for those who cannot yet visualize matching halves. Talk about the characteristics of a pattern and how to recognize one. Discuss

"negative" and "positive" space. Allow the children to go up one at a time and match a top to a bottom; they may have to try several bottoms before finding the one which matches the top. When all but two have been covered, remove all of the lids and continue so everyone gets challenged. After everyone has had a turn, talk about the different techniques and clues each child used: elicit tips from those who wish. At the end of the discussion, have each child write down his/her experiences, and what she/he learned about pattern matching.

STANDARDS:
BSL: 1.1, 1.2, 1.3, 1.5, 1.8, 2.1, 11.3, 12.1, 12.3, 12.8, 12.9, 12.11
NCTM: 1c, 1d, 2a, 3d, 4a, 4b, 5a, 5b, 5c, 5d, 6a, 9a, 9b, 9e, 10a, 10b, 10c, 10d, 13a
SCS: A1, B1, B2, C1, H2, H5

Hubbell. Will. Pumpkin lack. [Hub] Morton Grove. IL: Albert Whitman & Company. c2000. ISBN#0-805-6665-9 In the course of one year, a jack-o-lantern, discarded after Halloween, decomposes in the backyard and eventually grows new pumpkins from its seeds.

Levenson, George. Pumpkin Circle; The Story of a Garden. Photos by Shmuel Thaler. Berkeley, CA: Tricycle Press, c1999. ISBN#1-58246-004-3 Rhyming text and photographs follows pumpkin patch as it grows, and changes, from seeds to pumpkins

ready to harvest, to jack-o-lanterns and then to seeds again.

Yacowitz, Caryn Pumpkin Fiesta. Illus by Joe Cepeda. [?]: HarperCollins Publisher. c1998. ISBN#0-06·027658-4 Hoping to win a prize for the best pumpkin at the fiesta, Foolish Fernando tries to copy Old Juana's successful gardening techniques, but without really watching to see how much effort and love she puts into her work. Includes a recipe for pumpkin soup.

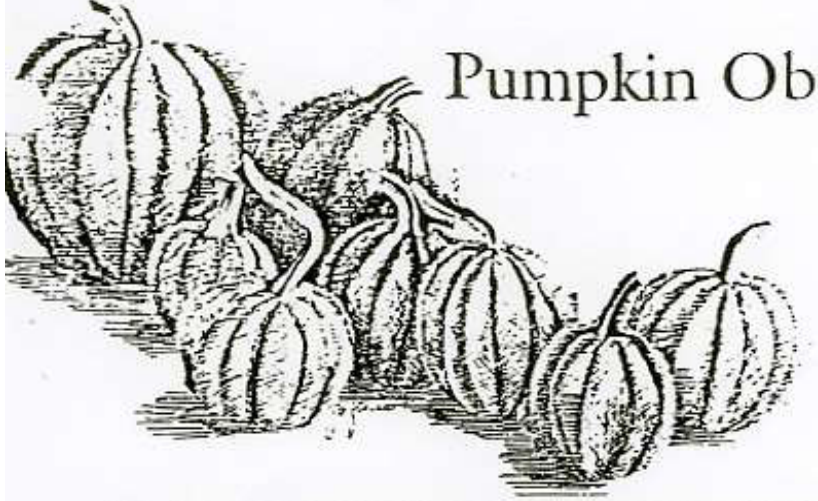
STANDARDS:

BSL: 1.2, 1.2, 1.3, 1.5, 1.8, 2.1, 11.3, 12.1, 12.3, 12.8, 12.9, 12.11

NCTM: 1c, 1d, 2a, 3d, 4a, 4b, 5a, 5b, 5c, 5d, 6a, 9a, 9b, 9e.10a, 10b, 10c, 10d, 13a

SCS: A1, B1, B2, C1, H2, H5

Pumpkin Observations



	WEIGHT	CIRCUMFERENCE	NUMBER OF LINES	FLOAT or SINK?
1				
2				
3				
4				