Lesson Title: Exploring Pumpkins

SC Standard IV, Objective 2

Implementation Time: 45 minutes, plus daily observation time

Media Resources Needed:
Growing Pumpkins, by Melvin Berger (Newbridge Publishers) Optional: How Many Seeds in a Pumpkin by Margaret McNamara

Materials Needed:
Pumpkin seeds (could collect and dry some in the fall, or purchase in spring)
Zipper bags
Paper towels
Pumpkin Sort Worksheet
Optional: Potting soil, cups, plastic tub, real pumpkins and supplies for decorating

Procedure:
Note: You can do this lesson in the fall when there are lots of pumpkins available or you can do the lesson in the spring when you could possibly send home pumpkin seedlings for the students to plant.

1. Show students a time lapse video of a pumpkin growing (do a search on Youtube.com for “pumpkin time lapse” or try pumpkincam.net) and show on your LCD.
2. Life cycle of a pumpkin. Give students the page on the Life Cycle of a Pumpkin. Color and then cut apart. Go over the order of how a plant grows and have students put their cards in order. They can glue the cards onto the sheet. (Seed, Seedling, Plant, Flower, Green Pumpkin, Orange Pumpkin)
3. Activity #1: What is in the seed?
Soak some pumpkin seeds overnight in very damp paper towels. Teacher should carefully split the seed open and let students look at the plant embryo inside (done at a center or use a document camera to project the seed on the LCD).
4. Activity #2: Sprouting a seed
Give each student a zipper bag and paper towel. Fold the paper towel into a pad and get it wet. Place the pumpkin seed inside the folds of the paper towel and slide the paper towel into the zipper bag and seal the bag. Observe the bag every day and have students draw the changes that they see.

5. Optional: Use potting soil and plastic cups to transplant the seedlings and send home with students. Class option: Grow your own class pumpkin plant. Get a large plastic tub and place an un-opened bag of potting soil in the tub (so that the bag lays flat). Poke a couple holes in the bottom of the bag for drainage. Use a knife to cut an “X” in the top of the potting soil bag and place one of the pumpkin seedlings in the soil. Place your plant in a sunny spot and let it grow (the bag helps keep the soil contained better than just using a pot). If it is spring, you could see if there is a spot on the school grounds where you could plant the pumpkin.

Assessment:
Review the students’ pumpkin books for accuracy.

Extension:
Math: Use mini, small and large pumpkins. Have students count how many seeds are inside each type of pumpkin. Find out if the size of the pumpkin is related to the number of seeds inside. Alternate: Instead of counting seeds you could count the ribs (bumps/grooves) around a pumpkin, or you could weigh pumpkins. Try having the students predict how many ribs there are and make a graph using 3x3 pieces of construction paper (or sticky notes) to count how many ribs there actually were.

Compare the size of the pumpkin to the size of its seeds

Do pumpkins sink or float?

Art: If it is fall, you could decorate/paint pumpkins.
Make a tissue-paper pumpkin by providing students with a blackline of a pumpkin. Give each student some orange tissue paper (or construction paper). Tear the paper into about 1” pieces and glue onto the blackline. Use green for the stem. Make jack-o-lantern faces on the paper pumpkin if it is October.

Music: Do an internet search for Pumpkin songs to sing:
_Pumpkin Song_ (tune: Have you ever seen a lassie?)
Have you ever seen a pumpkin, a pumpkin, a pumpkin, Have you ever seen a pumpkin, that grows on a vine?
A round one, a tall one, a fat one, a small one.  
Have you ever seen a pumpkin, that grows on a vine?
My Pumpkin Book

Name ______________________________
Inside a seed

Draw a picture:
Grow a Pumpkin
Draw a picture each day

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Pumpkin Sort

Seed

Orange Pumpkin

Plant

Flower

Seedling

Green Pumpkin
Pumpkin Sort

Glue the pictures in order

1  2

3  4

5  6