Activities

Pumpkins and Primary Classroom Activities

Grades: PreK–K, 1–2

Overview

This thematic, interdisciplinary curricular unit presents pumpkin-themed lesson plans in language arts, mathematics, social studies, and science.

Pumpkins: Not Only for Halloween!

If you teach primary grade students, it's virtually impossible to avoid the excitement inspired by the harvesting of fall pumpkins. For young children, as for most of us, pumpkins are more than just a variety of squash. They have come to symbolize not only the vibrant color of the fall season but the spirit of the season as well. This is the best time of the year to utilize the endless possibilities of pumpkins in your classroom activities. Your young students may tend to associate pumpkins only with Halloween and jack o'lanterns, yet, if you wish, you can deemphasize the holiday connections and still tap into a wide array of pumpkin-related curriculum links in math, science, language arts, social studies, cooking, music and art.
Pumpkin Literature

From the dozens of books we've used over the years with our classes, these are the pumpkin favorites we and our students come back to again and again:

- **The Berenstain Bears and the Prize Pumpkin**, by Stan and Jan Berenstain. This story offers two slants on pumpkins. One excellent application is in science, showing how everything is unique in nature. A second, equally satisfying application, ties into the concept of giving thanks.

- **The Pumpkin People**, by David and Maggie Cavagnaro. A delightful story told with beautiful photographs about a truly magical community activity, the launching of carved and lit pumpkins at a nearby lagoon.

- **The All-Around Pumpkin Book**, by Margery Culyer. An excellent resource for teacher use, this book includes the history of the pumpkin, planting tips, carving tips, cooking, party and craft ideas.

- **Jeb Scarecrow's Pumpkin Patch**, by Jana Dilon. This delightful story shows how Jeb's family has labored all year to keep the black crows away from the patch. Jeb worked very hard to carve several jack-o-lanterns before the crows arrived the week before Halloween. He succeeded in scaring the crows away as well as selling all the pumpkins and jack o'lanterns!

- **From Seed to Jack O'Lantern**, by Hanna Lyons Johnson. The title is self-explanatory! A nice life-cycle book.

- **The Biggest Pumpkin Ever**, by Steven Kroll. Every year we see those newsphotos of gargantuan pumpkins...this story makes a nice companion piece!

- **Mousekin's Golden House**, by Edna Miller. A woodland creature discovers a discarded jack o'lantern.
• **Apples and Pumpkins**, by Anne Rockwell. This story shows a young girl and her family going to the Comstock Farm to pick apples and pumpkins.

• **Big Pumpkin**, by Erica Silverman. This is another wonderful story that repeats the action of several ghoulish creatures in their efforts to get a large pumpkin off the vine in order to make pumpkin pie. The story also shows the life-cycle of a pumpkin.

• **Pumpkin, Pumpkin**, by Jeanne Titherington. This is an easy to read story, beautifully illustrated, showing the life-cycle of a pumpkin.

**Math and Science With Pumpkins**

If you are able to visit a pumpkin patch and bring pumpkins home, you're in luck -- there are many scientific and mathematical activities you can do with all those pumpkins! Before beginning any activities with the pumpkins we recommend putting each child's name on his or her "personal pumpkin" with a permanent marker to eliminate any disputes about which pumpkin belongs to whom. Two of our favorite, widely-known teacher resources, *Math Their Way*, by Mary Baratta-Lorton, and *The Pocket Book*, by Lynn Taylor and David Cooper, were the inspiration for many of these activities.

1. **The Great Pumpkin Line-Up**

   This activity reinforces the concept of shortest to tallest. Before the children begin this activity you will need to create a line on the rug with chalk or masking tape. Have the children bring their pumpkins to a group meeting. Explain to the children that they will be placing their pumpkins on the line according to height. If you are working with children who are in kindergarten or first grade you may want to use some children to visually explain what you are asking. Start by having one child placing the pumpkin on the line and then asking the next child to bring up his or her pumpkin and measure to see if it is shorter or taller. Continue this process until all the children have had an opportunity to place their pumpkin in the correct position on the line. You could count the pumpkins using ordinal numbers to reinforce the use of these numbers. This information can be recorded on a piece of adding machine tape for use with subsequent activities.
2. Attribute and Comparison Graphs
Arrange the children on the rug in a circle and have each child place the pumpkins in the center of the group. During this activity you'll be trying to elicit as many different Categories or Attributes about the pumpkins as possible. These should be recorded on chart paper or in any spot where they can easily be seen. Start the discussion by encouraging the children to compare the likenesses and differences of the pumpkins such as size, shape, type of stem, texture, coloration, weight, etc. Over a period of days, select a different attribute each day to graph. Picture graphs, bar graphs, or even post-it notes and stickers are effective graphing media.

3. Which Weighs More?
You'll need a scale to weigh the pumpkins. Prepare a class graph that can be used to record the information gathered during this lesson, and some cards reading "1 lb.," "2 lbs.," "3 lbs.," and so on, going as high as necessary for your particular collection of pumpkins. Spread these cards out on the floor during weighing.
Using the adding machine tape that was recorded with the first activity, arrange the pumpkins in size order. When they are all arranged on the line ask the children, "Which pumpkin do you think weighs more, the first pumpkin or the last pumpkin?" (Note: Height of pumpkins does not necessarily correlate with weight. Some children may assume that the biggest pumpkin will weigh the most.) Tell the children to make an estimation of which pumpkin would weigh more and then actually weigh the pumpkins. Cutting open some pumpkins to examine the differences inside will help children account for this apparent paradox.
After weighing a few of the pumpkins, when the children have an idea of what a one-, two-, or three-pound pumpkin feels like, have them, one at a time, pick up their own pumpkin, make a guess/estimation of its weight, and then actually weigh it. Read the scale with each child and then direct him or her to put the pumpkin behind the correct weight card. Continue with this process until all children have placed their pumpkins on the floor graph showing the weight of their pumpkins.
When the floor graph is completed, ask the children some questions about it, such as: 1. Do we have more pumpkins that weigh __ or __? 2. How many pumpkins weigh __ and ? 3. Are there any pumpkins that weigh __? Be as creative as you want when asking these questions. Encourage the
children to ask their own questions about the data on the graph. Children can record the information from the real-pumpkin floor graph to make individual graphs to take home and share with parents.

4. How Big Around is My Pumpkin?
This activity engages the children in estimating the circumference of their pumpkins. It is easiest to explain the circumference as the distance around the fullest part of a pumpkin, like putting a belt around the pumpkin. Prepare a graph for use with this activity with columns labeled "too long," "too short" and "just right." For each student you will need a small square or sticker to put up in the correct category, or use a standard pocket chart with name cards or pumpkin cut-outs for recording the graph. Provide pairs of students with lengths of string and scissors. Each child guesses how much string it will take to go around the circumference of the pumpkin and then cuts the string to that length. Then they "try on" their string around the pumpkin's middle to see how close their estimate comes. Each student has a turn to record the outcome of his estimate on the class graph. When the graph is complete, ask students questions similar to those in activity #3. A good follow-up for class or home is to challenge the students to find five things that are as long as their pumpkin was around.

5. Additional Experience with Estimation and Graphing
Children will enjoy estimating and graphing the number of vertical lines on a large pumpkin, or the number of seeds within. Children can write their guesses on a small post-its, and arrange them on a graph in categories (0-5 lines, 6-10 lines, etc.; 25-50 seeds; 51-100 seeds, etc.) Allow plenty of time for questions: Which number category was chosen most? Least? Were there any number categories not chosen at all? How many more/fewer children chose ___ than ?

6. Story Problems
Challenge your young mathematicians by presenting them with some pumpkin facts to incorporate into original word problems they can write together in cooperative groups. Some suggested facts: a) Pumpkins grow on vines that sometimes reach 100 feet long. b) Pumpkins are planted in little hills, with three seeds to a hill. c) Seed hills are 6 to 8 feet apart d) Each vine produces 2 to 3 pumpkins. e) Most pumpkins weigh 10 to 40 pounds each and measure 1 to 2 feet in diameter. (From "Pumpkin Batch," by Karen L. Hansen, in Learning 88, October, 1988, pp. 52-57.)
Science Journals: The Great Pumpkin Race

The presence of a collection of pumpkins in your classroom provides numerous opportunities to increase observational skills and promote some important scientific concepts. Journal writing is ideal for promoting writing. When you are able to combine observation and writing you have a dynamite project! Observational skills are a primary focus with young children, and having their own pumpkin to observe brings out their proprietary nature! During your visit to the pumpkin patch, have each child select his or her own pumpkin — one that has personality from the child's perspective — but one that he or she can carry around without too much trouble. If a trip isn't in the offing this year, try to have each child bring a pumpkin to class or solicit donations from a sympathetic (or overstocked) local merchant.

Have the children scrutinize their own pumpkins carefully and then write as many descriptive sentences about the pumpkin as they can. You might want to model some simple descriptive sentences for very young writers to use as a guide. Once their journals reflect thorough observation of their own specimen, allow for some switching with classmates to note likenesses and differences. After a few sessions of pumpkin journal writing, your students will be captivated by "The Great Pumpkin Race," an experiment to see which pumpkin will decompose faster: one in a cool, dark spot or one in a warm, bright area. Talk with the class about the need to select two pumpkins from the group to represent the whole class in the experiment (since it would be most unpleasant to have a room full of decomposing pumpkins!). Discuss predictions with the class, then give students a chance to record their observations of the representative pumpkins and to write their predictions in their journals. They can then use their journals regularly to record their observations of the pumpkins as they check them on a weekly basis for changes.

(Please Note: It is very important that you keep each pumpkin in an aquarium or other large glass container, tightly sealed with plastic wrap. This eliminates 99 percent of the odor, allowing you to keep the pumpkins quite a long time, while permitting the children full view of the changes.)
We've found the "The Great Pumpkin Race" is a memorable activity our students refer to all year long, and one which inspires dynamic journal entries.

Pumpkin Social Studies

1. Faces and Feelings
This activity takes a different slant on the omnipresent October jack o'lanterns, helping students become aware of some of the feelings and emotions expressed through facial expressions. You'll need a supply of photocopied blank pumpkin shapes, mirrors, and some of your favorite poems or books about feelings and emotions. (See September’s "Welcome to School" integrated unit for some suggestions.) Read the stories and poems showing the appropriate facial expressions as you read. Distribute mirrors and have the children make faces for different feelings that you call out. Discuss when we may experience these different feelings. Let your students help you brainstorm a list of emotions one's face can portray: Happy Sad Sleepy Mad Scared Surprised... and so on... Students can illustrate a variety of pumpkin faces to show the range of emotions we all feel. Such illustrations could be the focal point of a group-written big book on feelings!

2. Pumpkin Trivia
Primary-level students who are ready for an introduction to beginning research may enjoy looking for the answers to these questions in your classroom or school library. These questions also can make a terrific "family homework" research activity:
   a) What is the largest pumpkin on record?
   b) What is the difference between a pumpkin and a squash?
   c) Copy a poem about pumpkins.
   d) Find a book with the word "pumpkin" in the title.
   e) How long does it take a pumpkin seed to germinate?
   f) What vitamins are found in pumpkins?
   g) What are the top pumpkin-producing states in the U.S.?
   h) What is the origin of the word "pumpkin?" (Hansen, pp. 54-55.)

3. Pumpkin Parents
Remember hearing about those family studies classes where students learn about the responsibilities of parenting by caring for a raw egg? Teach the same concepts of responsibility with pumpkins (a slightly less delicate alternative to those eggs!) by having each of your students be the "parent" of a pumpkin for a day! Bring small pumpkins to class and give one to each child. Children name their pumpkins, assign personal traits to them, and paint features on them. During the day, it's each child's responsibility to care for his or her pumpkin at all times (no pumpkin-sitters allowed!). The best part of this activity will be the ongoing discussion among the proud parents all day long! A video camera or camera is a must on Pumpkin Parent Day. (Hansen, p. 55)

**Pumpkin Art**

1. Chanting, Puppetry, and Dramatization
This classic and familiar traditional chant is great for reinforcing ordinal numbers and is lots of fun to act out. Learn and chant the poem many times during the month — use sentence strips and keep it in your pocket chart, or print it on chart paper and laminate for display. Once the class knows the chant well, select five children to be pumpkins. The class then chants the poem while the pumpkin players say the speaking parts. Another nice variation is to have each child can make pumpkin finger or stick puppets to dramatize the poem.

2. Five Little Pumpkins
**Five** Little pumpkins sitting on a gate (show five fingers)  
The **First** one said, "Oh my ... it's getting late!" (Hands on cheeks, "Home Alone" expression)  
The **Second** one said, "There are witches in the air!" (Look scared)  
The **Third** one said, "I don't care!" (Hands out, palms up)  
The **Fourth** one said, "Let's run and run and run!" (Stomp feet to feign running)  
The **Fifth** one said, "It's only Halloween fun!" (shake pointer finger)  
Then whooooooo went the wind... (sway arms back and forth)  
And out (clap) went the lights  
And the **Five** little pumpkins (show five fingers) Rolled out of sight! (roll arms)
Art Activities and Bulletin Board

1. Pumpkin Border Patterns
Utilizing the importance of patterns in the primary grades, your children can make their own patterns for borders around your bulletin board. Reproduce some basic outline pumpkin shapes for the children to color and cut out. Let them experiment with colors and other details to form the basis of the patterns.
   a) Sizes : big, small, big, small or big, big, small, small. Let the children decide on how complicated the pattern should be!
   b) Vary the pumpkin colors to show the life-cycle of a pumpkin: green, yellow, orange, green, yellow, orange, etc.
   c) Make jack o'lantern faces that change: sad, happy, angry, etc.
   d) Change the types of stems: straight stem, curly stem, no stem, one to the right, one to the left, etc.
Stampers and ink pads, pumpkin stencils for tracing, and sponge painting are other art media which lend themselves well to a patterning activity.

2. Pumpkin Placemat
Trace a large pumpkin on black or orange paper. Make horizontal slits across the pumpkin at one-inch intervals, but do not cut the outer edges. (It's best if you leave about 1/2 to 1 inch around the outside). Cut black and orange strips of paper in varying widths. Contrast the pumpkin color and the strip color. Children can weave the strips into the pumpkin to create an original placemat that can be used with your fall festivities.

3. Seed Mosaics
Dried pumpkins seeds can be put to an artistic use. By gluing them on dark construction paper in interesting designs, striking creations will result. Some children may want to sketch the outline of their design with chalk or a white crayon before gluing, while for others, the unconstricted approach leads to lovely abstract designs.
Recipes for Reluctant Pumpkin Eaters

The following recipes are from *The All-Around Pumpkin Book*, by Margery Culyer:

Pumpkin filling can be purchased in a store. However, if you want to make your own, this is the easiest way of doing so. One small sugar pumpkin (3.5 lbs) yields about 4 cups of cooked pumpkin and 3/4 cup of seeds.

**Baked Whole Pumpkin**

1. Preheat oven to 350 degrees F.
2. Using paring knife, cut off top of pumpkin, keeping stem in place. Set top aside.
3. Use metal spoon to scrape out stringy pulp and seeds.
4. Replace top and put pumpkin in greased shallow baking pan.
5. Bake for 1.5 hours.
6. Remove pumpkin from oven. Pour out water that has collected on bottom.
7. Cool.
8. Cut pulp away from skin and strain through sieve or colander to get rid of lumps.
9. Use this cooked pumpkin in your favorite pumpkin bread or muffin recipe.

**Roasted Pumpkin Seeds**

Ingredients

1. Preheat oven to 250 degrees F.
2. Wash seeds under warm water in colander.
3. Mix together in bowl: seeds, salt, oil.
4. Spread seeds on cookie sheet.
5. Bake for 30 minutes, or until golden brown and crispy. Use spoon to stir seeds from time to time while baking. Serve warm or cooled, or mix with other dried snack foods to make a trail mix.

**Pumpkin Pancakes** (serves 16-18)
Use an electric griddle or fry pan to cook. Children who claim they don't like pumpkin usually love these!

**Ingredients**
- 2 cups flour
- 1 teaspoon baking soda
- 2 teaspoons baking powder
- 1/2 teaspoon salt
- 1 teaspoon cinnamon
- 1/4 teaspoon ginger
- 1/4 teaspoon nutmeg
- 2 eggs
- 1/4 cup shortening
- 1/4 cup water
- 2 cups buttermilk (or add 2 teaspoons vinegar to regular milk)
- 1 cup pumpkin, either canned or cooked and mashed
- Confectioner's sugar

**Directions**
1. Mix flour, baking soda, baking powder, salt and spices in a large bowl.
2. Beat the eggs in another bowl. Mix in the shortening, water, buttermilk (or vinegar-soured milk) and pumpkin
3. Add the flour mixture to the egg mixture and blend well.
4. Heat griddle or fry pan to about 375 degrees. Coat griddle or pan with shortening.
5. Drop spoonfuls of batter onto the griddle.
6. Turn the pancakes after the small bubbles appear and the edges start to turn brown.
7. Remove the pancakes when they are golden brown.
8. Serve with confectioner's sugar.
Related Resources

Books for Teaching With Pumpkins
By Jan Tankey
Use this book list as a starting point for discussions and experiments about pumpkins. These titles can be used as read-alouds, pocket chart stories, and choral readings.

- Subjects:
  Plants, Math, Science, Comparing and Contrasting, Life Cycles, Measurement