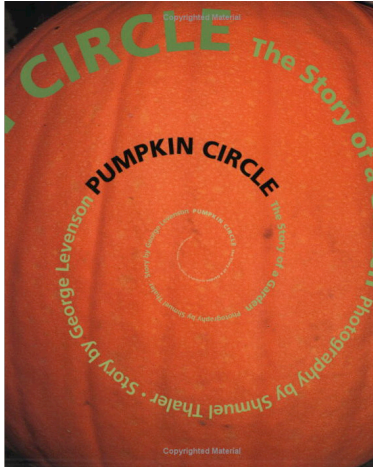


Pumpkin Circle

by: George Levenson



Pumpkins

Activity: Pumpkin Cycle Model
Grade Level: 2nd - 4th
Subject Area: Science & Visual Arts

Quick Pumpkin Facts:

Top pumpkin production states are Illinois, Ohio, Pennsylvania, and California

Pumpkin seeds can be roasted as a snack

Pumpkins are high in fiber and contain potassium and Vitamin A

Pumpkin flowers are edible

Pumpkins are used to make soups, pies, and breads

Pumpkins originated in Central America

Pumpkins range in size from less than a pound to over 1,000 pounds

The name pumpkin originated from "pepon" - the Greek word for "large melon"

Pumpkins are 90% water

Pumpkins are a fruit, botanically

80% of the pumpkin supply in the United States is available in October

Native Americans flattened strips of pumpkins, dried them, and made mats

Native Americans used pumpkin seeds for food and medicine

Source: University of Illinois Extension

Talking Points:

Source: Project Food, Land & People "We're into Pumpkins" and Oklahoma Agriculture in the Classroom

Most pumpkins grown today are sold for decorating and carving. Pumpkins range in size from less than a pound to over 1,000 pounds. The largest pumpkin on record weighs 1,469 pounds. There are dozens of varieties of pumpkins, but the Connecticut field variety is the traditional American pumpkin.

Conditions for growing pumpkins are best when the soil is warm and the temperature is above freezing. They only grow in regions where there is a growing season of at least 90 days without frost, including most of North America. For a pumpkin to grow full size, it takes about 120 days, depending on the variety. Pumpkins grow on vines and turn orange when they are ripe. They are usually harvested in the fall before the frost hits.

The pumpkin is one of only a few foods we still eat today that is native to North America. Pumpkins are part of a large family of vined plants that includes cucumbers, squashes, gourds, melons, and others. They are all part of the Cucurbitaceae or gourd family. They belong to the group of vegetables known as cucurbits.

In common terms, some cucurbits are fruits, and some are vegetables. We usually think of fruits as sweet and vegetables as not sweet. Melons, another kind of cucurbits, are fruits; squash and cucumbers are vegetables. Pumpkin is also a vegetable, but since we usually add sugar and bake it in a pie, we think of it as a fruit.

In botanical terms, all cucurbits are fruits. A fruit is the ripened ovary - together with seeds - of a flowering plant. Cucurbits are still a staple in Tennessee's gardens and agriculture. Watermelons and pumpkins are both grown in Tennessee and farmer's markets display a wonderful variety of squashes and cucumbers throughout the growing season.

Pumpkin Cycle Model:

Source: Field Guide to Utah Agriculture in the Classroom

Materials:

2 orange paper plates per student
Green yarn (an arm-length strand
for each student)
Construction paper (brown, green, yellow, and orange)
Patterns (attached)
Hole punch
Stapler
Scissors

Directions:

- Staple the paper plates together halfway around the edges with the orange sides facing outward. Be sure to leave enough space on one side of the pumpkin to pull the seed, leaves, flower, and growing pumpkins out with a piece of yarn. Use the hole punch to make a hole in the top edge of one paper plate.
- Trace the patterns onto the construction paper, using the appropriate colors. You may also copy the pattern directly onto the construction paper or card stock. Cut them out and punch a hole in the top of each one.
- Thread the pieces of yarn through the holes punched in the newly created paper patterns. Be sure the pumpkin cycle is tied together in the correct order of their formation on the pumpkin plant (seed, leaf, flower, green pumpkin, and orange pumpkin).
- Tie the piece of yarn through the hole in the paper plate, attaching the other end through the hole in the orange pumpkin.
- Carefully slide the string of plants parts into the center of the Jack-O-Lantern. Staple the pumpkin top to the back of the Jack-O-Lantern. Now you can describe the whole life cycle of the pumpkin by slowly pulling the seed, leaf, flower, growing pumpkins from the Jack-O-Lantern.

OPTIONAL: You can use a black magic marker to have the students draw Jack-O-Lantern faces on their orange paper plate.

Quick Pumpkin Pie:

Source: Tennessee Foundation for Agriculture in the Classroom

Materials:

1 gallon Ziploc freezer bag
2 $\frac{2}{3}$ cups cold milk
2 packages (4 serving size) instant vanilla pudding mix
1 can (15 oz.) solid-pack pumpkin
1 teaspoon ground cinnamon
 $\frac{1}{2}$ teaspoon ground ginger
Graham cracker crumbs
25 small cups
Scissors
1 can whipped topping
25 spoons
Can opener

Directions:

- Combine the milk and instant pudding in the bag. Remove the air and zip bag
- Squeeze and knead with hands until blended for 1 minute.
- Add the pumpkin, cinnamon, and ginger. Remove the air and zip shut.
- Squeeze and knead with hands until blended for 2 minutes.
- Place $\frac{1}{2}$ tablespoon of graham cracker crumbs in the bottom of small cups.
- Cut corner of gallon freezer bag and squeeze pie filling into cups.
- Garnish with whipped topping.
- Add a spoon. Serve and enjoy!

Paper Bag Pumpkin Patch:

Source: Alabama Agriculture in the Classroom

Materials:

Brown paper bags (lunch size)
Orange tempera paint
Brushes or sponge applicators
Green yarn or curling ribbon
Newspaper or scrap paper

Directions:

- Have students write their names on the bottom of the bags.
- Use a brush or sponge applicator to paint bags with orange tempera paint.
- Let the bags dry for at least an hour.
- Stuff the paper into the bags and tie the top with green yarn or curling ribbon
- Display your pumpkins on a windowsill or counter. You may turn them into Jack-o'-lanterns for Halloween by adding construction paper features.



Fruit or Vegetable:

Source: Oklahoma Agriculture in the Classroom

In common terms, some cucurbits are fruits, and some are vegetables. We usually think of fruits as sweet and vegetables as not sweet. Melons, another kind of cucurbits, are fruits; squash and cucumbers are vegetables. Pumpkin is also a vegetable, but since we usually add sugar and bake it in a pie, we think of it as a fruit.

In the common sense of the words, which of the following is a vegetable (not sweet), and which is a fruit (Sweet)?

tomato	potato	squash	lettuce	onion	broccoli
apple	strawberry	carrot	spinach	cauliflower	watermelon

ANSWER: Vegetables - tomato, potato, squash, lettuce, onion, broccoli, carrot, spinach, cauliflower
Fruits - apple, strawberry, watermelon

In botanic terms, all cucurbits are fruits. A fruit is the ripened ovary - together with the seeds - of a flowering plant. Which of the vegetables above are botanically a fruit?

ANSWER: tomato, apple, strawberry, squash, watermelon.

Have students look up the words "fruit" and "vegetable" in a dictionary and draw Venn diagrams to show how they are different and how they are the same.

Mini Pumpkins:

Source: Alabama Agriculture in the Classroom

Materials:

Candy orange slices (6-7 per student)
Green gumdrops
1 can white icing
Plastic knife
Paper towels or plates

Directions:

- Pass out materials to each child
- Demonstrate how to "glue" the orange slices together with the white icing to form a pumpkin
- When the pumpkin is complete, add a green gumdrop for the stem.
- Admire for a minute, then enjoy!

Tin Can Jack-O-Lantern:

Source: Alabama Agriculture in the Classroom

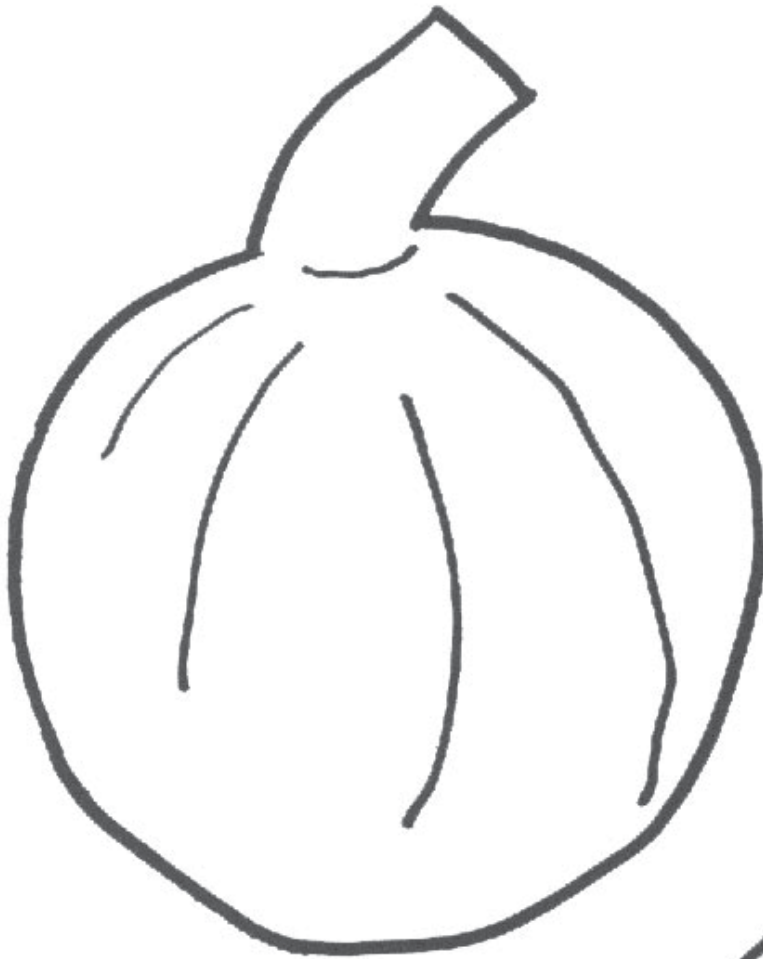
Materials:

1 large can for each student (1 lb. coffee size)
White acrylic craft paint
Orange acrylic craft paint
Black felt
Twine or pipe cleaners
Elmer's glue

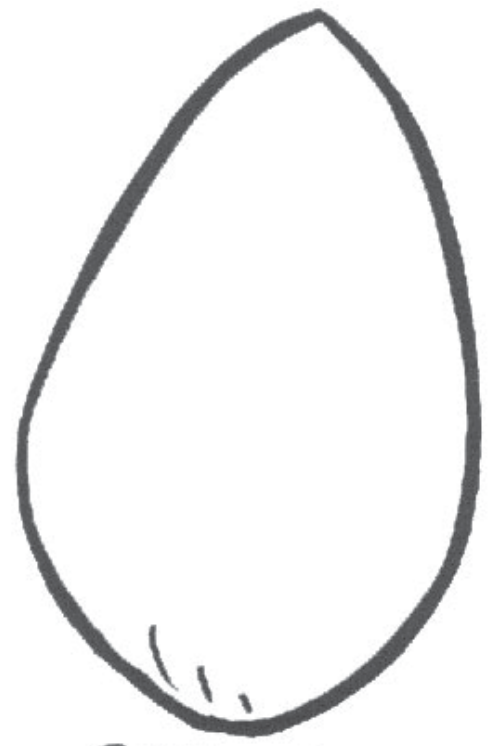
Directions:

- Thoroughly wash and dry the cans, removing all outside paper and glue.
- Paint cans with one coat of white paint and let dry.
- Paint cans with a coat of orange paint and let dry.
- Cut shapes of black felt for the facial features and glue on each can.
- Punch two holes on opposite sides of the top edge of each can.
- Use twine or twist pipe cleaners through the holes for handles.

This can be used as a room decoration, candy holder, or gift.



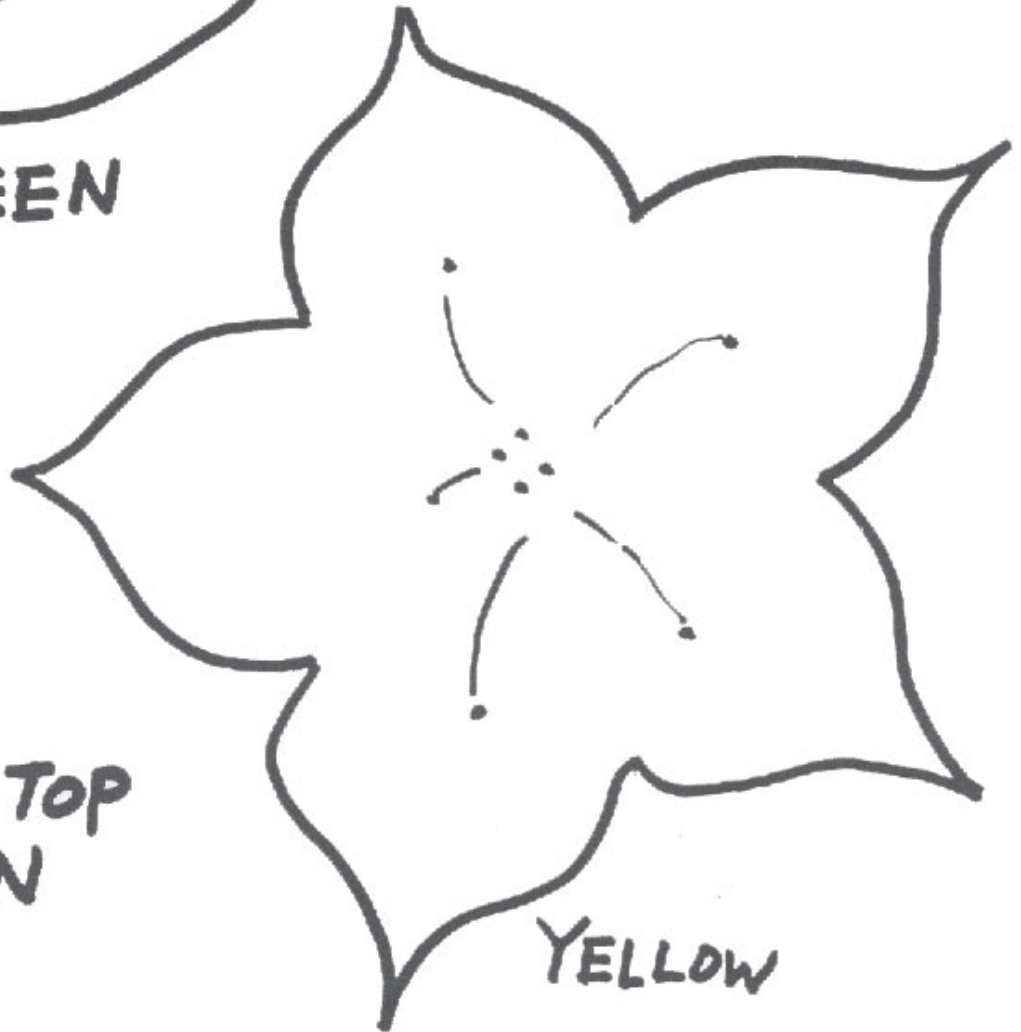
GREEN



BROWN



**PUMPKIN TOP
GREEN**



YELLOW

