

Welcome to NH Agriculture in the Classroom's Pumpkin Packet for Educators

Pumpkins are grown throughout New Hampshire as a food crop and for decorative purposes. In 2006 the pumpkin was voted as the NH State Fruit by the Legislature, thanks to heavy lobbying by students from Harrisville. Children love carving pumpkins, eating pumpkin seeds and learning about how they grow. See our newsletter from September 2011 for facts about pumpkins and ideas of how pumpkins can become a teaching tool (www.nhagintheclass.org).

We encourage educators to help their students learn about pumpkins and use pumpkins as an integrating theme to teach about other areas of curriculum. Many of the state science frameworks can be addressed by teaching about pumpkins and addressing topics such as, pollination, reproduction and genetics, life cycles, recycling and interdependence.
(S:LS1:2:3.2, S:LS1:4:1.1, S:LS1:4:2.2, S:LS1:4:3.1, S:LS2:4:3.1, S:LS2:4:3.2, S:LS3:6:3.2, S:LS3:2:3.2)

If you need further ideas for teaching about pumpkins, would like information on in-class visits or field trips or wish to borrow any of our books or videos, please contact us at 603-224-1934 or nhaite@nhfarmbureau.org.

Contents:

Pumpkin Lesson Packets

- The Pumpkin Patch from Alabama Agriculture in the Classroom
- Pumpkins, Squash and Cucurbits from Oklahoma Agriculture in the Classroom
- Pumpkins by the Pound from Oklahoma Agriculture in the Classroom

Pumpkin Resource List – many of the websites listed offer excellent online resources and links.

A sampling of pumpkin resources

Pumpkins by Jacqueline Farmer

This book is full of facts about growing and using pumpkins, as well as some of their history and mystery. The book also contains some recipes for cooking with pumpkin and plenty of websites and other books for additional resources. Appropriate for grades 1-3. ISBN: 978-1570915574

The Pumpkin Book by Gail Gibbons

This book does a nice job of explaining the planting, cultivating, and harvesting of pumpkins. Gibbons includes a description of their traditional use by the Pilgrims and at Halloween. A page of interesting facts about the history of pumpkins, their nutritional value, pollination, and instructions for drying seeds to eat is appended. Appropriate for grades K-3. ISBN: 97800823416363.

Pumpkin Circle: The Story of a Garden by George Levenson

This award winning book is illustrated with photographs and has a companion video to go with it. Together they teach about the biology of pumpkins and the cycle of growing plants. Starting with seeds and completing the circle with decomposition, this book covers it all in a simple and beautiful way. Appropriate for grades P-3. ISBN: 978-1582460789.

How Many Seeds in a Pumpkin? by Margaret McNamara

This versatile and sincere story will teach math and science concepts while modeling kind behavior. When Mr. Tiffin brings three pumpkins into class for a math and science lesson, all the children guess how many seeds are inside. Appropriate for grades P-3. ISBN: 978-0375840142.

Pumpkins by Mary Lyn Ray (NH Author)

This is a story about conservation as much as it is about pumpkins. A man grows pumpkins to make enough money to protect his land from being developed. He loves his land and his pumpkins and shares that love throughout the world. Pumpkins are the messengers and tools for connecting people to the earth. Appropriate for grades 2-6. ISBN: 978-0152013585.

Too Many Pumpkins by Linda White

This is a story book about an old woman and her distaste for pumpkins, until she learned how they could help create community and joy. Appropriate for grades 1-4. ISBN: 978-0823413201.

Pumpkins by the Pound

Background

The pumpkin is a vegetable, but most pumpkins grown today are sold for decorating and carving. They come in all sizes and shapes, from minipumpkins, the size of apples, to giant ones, weighing over 200 pounds. Some pumpkins are gray or pale green, but most are yellow or orange. Some are even white.

Pumpkin flowers are large and yellow. Some kinds of pumpkins are grown for cattle to eat. Cucumbers, squash, melons and gourds are all related to the great pumpkin.

The pumpkin is one of only a few foods we still eat today that is native to North America. The Pilgrims and other early New England settlers liked to use pumpkins because uncut pumpkins would keep for several months, if stored in a cool, dry place. Pumpkins were a main part of the early settlers daily diet.

Pilgrims and other early American settlers made the first pumpkin pies by burying pumpkin in the ashes of their fires. After a pumpkin had cooked, they would cut off the top, scrape out the pulp and add honey or maple syrup. The pulp was then made into delicious pies and breads. Pumpkins were used for many different things. Dried pumpkin shells served as bowls or containers for storing grains and seeds. Pumpkin seeds were dried and roasted for a high-energy treat. The Pilgrims' dependence on pumpkins is reflected in this poem, from 1630. (Notice the Old English "undoon" for "undone.")

For pottage and puddings and custards and pies,
Our pumpkins and parsnips are common supplies,
We have pumpkins at morning and pumpkins at noon,
If it were not for pumpkins we should be undoon.

Language Arts

1. Read and discuss background and vocabulary.
2. Hand out copies of the reading page and worksheet B.
 - Students will read independently or in groups.
 - Students will answer the questions on the worksheet

Math

1. Bring several pumpkins to class in assorted sizes.
 - Set the pumpkins out in random order.
 - Introduce the terms "weight" (a measure of the heaviness of an object) and "perimeter" (the measure of the whole outer boundary of a body or figure).
 - Students will lift the pumpkins one by one and estimate their weights.

P.A.S.S.

GRADE 1

Reading—2.1; 5.1

Math Process—1.1,2,3,5;
2.3; 3.2,3; 4.1,3; 5.1,2

Math Content—2.1,3s;
4.1; 5.1ab

Science Process—1.1,2;
2.1,2; 4.1,3

Physical Science—1.1,2

Social Studies—2.3

Physical Education—
1.1,3,4; 2.2,3; 3.1,2;
5.1,3,4; 6.1,2,3; 7.1,3

GRADE 2

Reading—4.1; 5.1c; 6.3

Math Process—1.1,2,3,5;
2.3; 3.2,3; 4.1,3; 5.1,2

Math Content—2.1a,3;
4.1ab; 5.1ab

Science Process—1.1,2;
2.1,2; 4.1,3

Social Studies—2.4

Physical Education—
1.1,2; 2.1,3; 3.1; 5.2,3;
6.1,2; 7.2

GRADE 3

Reading—4.4b; 5.3

Math Process—1.1,2,3,5;
2.3,4; 3.2,3; 4.1,3; 5.1,2

Math Content—2.1a;
4.1ab; 5.1ab

Social Studies—2.2,3,4

Physical Education—1.1;
2.1; 3.3; 5.1,2,3; 6.2

Materials

pumpkins in assorted sizes

string

scale

tape measure

1 large knife

(for each group)

1 pumpkin

3 sheets construction paper

tape

10 small cups (muffin cup,
bathroom cup, or nut cup)

2 large styrofoam cups

Roasted Pumpkin Seeds

1. Wash pumpkin seeds.
2. Place seeds in a vegetable steamer with some water.
3. Cover and cook for 30 minutes.
4. Dry the seeds with a towel.
5. Spread seeds on a cookie sheet, brush with vegetable oil and sprinkle with salt.
6. Bake the seeds in a preheated 300-degree oven for 30 minutes, or until golden.

— Students will arrange the pumpkins according to their weights — from lightest to heaviest.

2. Pass out student worksheet B.

— Students will weigh the pumpkins and record their findings in pounds and kilograms.

3. Students will estimate the perimeter of each pumpkin by cutting lengths of string they think will reach around the pumpkin.

— Students will measure the pumpkins with a tape measure.

— Create a chalkboard graph with the words “too long,” “too short,” “same.”

— Students will tape the string estimates in the correct space on the chalkboard graph.

— Discuss the graph. Ask how many pieces of yarn were too long? Too short? The same? Most estimates were

— Students will draw a model of the graph in a journal or on a separate sheet of paper

4. Introduce the abbreviation for pounds (“lbs.”) and the pound symbol (“#”).

5. Students will estimate the number of seeds in a pumpkin.

— Divide class members into groups of four or five students.

— Provide one pumpkin for each group. Allow students to handle the pumpkins.

— Review the term “estimate.”

— Each group will estimate the number of seeds in their pumpkin.

— Write the group estimates on the chalkboard.

— Hand out three sheets of construction paper.

— Groups will tape the construction paper together in a row to create place value boards.

— One member of each group will write the place value terms:

“ones” across the top of the first sheet of construction paper,

“tens” across the top of the second sheet

“hundreds” across the top of the third sheet.

— Cut the top from each pumpkin.

— Give each group 10 small cups and two large styrofoam cups. Keep extra containers handy in case any of the pumpkins have unusually large numbers of seeds.

— Students scoop the seeds from the pumpkins with their hands and place them on the construction paper labeled “ones.”

— Students count the seeds into groups of ten and place them in the small cups.

— Students place the filled cups on the construction paper labeled “tens.”

— When students have counted ten groups of ten they dump those cups into the larger cups and place them on the construction paper labeled “hundreds.”

— Continue the activity until all the seeds have been counted.

— Students will write and read the exact number of seeds in their pumpkins.

— Students compare exact numbers with estimates.

Science

1. Students will guess whether the pumpkins will sink or float. Test guesses in a tub of water.
2. Use the recipe included with this lesson to make pumpkin pie in a bag.
 - Students will describe the pie ingredients before baking.
 - Ask students to write what they think will happen after the ingredients are baked.
 - Students will describe ingredients after they are baked.

Social Studies

1. Use pumpkins as globes to represent the Earth.
 - Students will draw latitude and longitude lines on their pumpkins at 10 degree increments.
 - Students will find north, south, east and west hemispheres.
 - Students will paint continents on their pumpkins with tempera paint.
 - After the continents have dried, students will paint bodies of water.

Visual Arts

1. Make pumpkin seed art.
 - Bake clean seeds in a 300-degree oven for 30 minutes, or until golden.
 - Let the seeds cool completely.
 - Provide students with tempera paint in autumn colors, and have them dip the pumpkin seeds in the paint.
 - Let the seeds dry.
 - Students draw tree trunks with branches and glue seeds to the branches to make beautiful full trees.
4. Students draw Jack-o-lanterns, color them and use different kinds of seeds to make their features.

Get Up and Move

1. Play Pumpkin Man:
 - Teach the following chant:

Pumpkin man, pumpkin man, catch a brownie if you can,
Yes I will, Yes I will, if the brownie will stand still.
 - Divide students into two groups—a Pumpkin group and a Brownie group.
 - Students form a circle, facing inward.
 - Pumpkins step forward and put their palms together to make "windows." (Don't weave fingers.)
 - Brownies go in and out of the windows at least twice as everyone says the chant.
 - When teacher says "stop," Pumpkins lower the "windows." All Brownies inside the circle become Pumpkins and join the Pumpkin circle.
 - Play twice so everyone who started as a Pumpkin gets to be a Brownie.

Extra Reading

Gillis, Jennifer, *In a Pumpkin Shell: Over 20 Pumpkin Projects for Kids*, Storey, 1992.

King, Elizabeth, *Pumpkin Patch*, Dutton 1990.

Vocabulary

carve—to cut with care or exactness

decorate—to make more attractive by adding something that is beautiful or becoming

gourd—any of a family of tendril-bearing vines (as the cucumber, melon, squash, and pumpkin)

Pilgrim—one of the English colonists who founded the first permanent settlement in New England at Plymouth in 1620

pulp—the soft juicy or fleshy part of a fruit or vegetable

pumpkin—the usually round orange fruit of a vine of the gourd family widely used as food

settler—a person who settles in a new region

vegetable—a leafy plant (as the cabbage, bean, or potato) usually without woody tissue grown for an edible part that is usually eaten as part of a meal

Pumpkins by the Pound

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Pumpkin flowers are large and yellow. Some kinds of pumpkins are grown for cattle to eat.

Cucumbers, squash, melons and gourds are all related to the great pumpkin.

The pumpkin is one of only a few foods we still eat today that is native to North America. The Pilgrims and other early New England settlers liked to use pumpkins because uncut pumpkins would keep for several months, if stored in a cool, dry place. Pumpkins were a main part of the early settlers daily diet.

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We have pumpkins at morning and pumpkins at noon,
If it were not for pumpkins we should be undoon.

Name _____

Pumpkins by the Pound A

Write F for fact if the statement is a fact. Write O for opinions if the statement is an opinion.

1. ___ Pumpkins taste great!
2. ___ Pumpkins were eaten by pilgrims.
3. ___ Pumpkins are vegetables.
4. ___ Pumpkin pie is my favorite kind of pie.
5. ___ Pumpkin seeds can be dried and roasted.
6. ___ Pumpkin flowers are large and yellow.

7. Write a fact about pumpkins: _____

8. Write an opinion about pumpkins or pumpkin pie.

9. In the poem, the words at the end of lines 1 and 2 are pies and supplies. What do we call that sound pattern? Circle the correct answer.

rhythm rhyme syllables

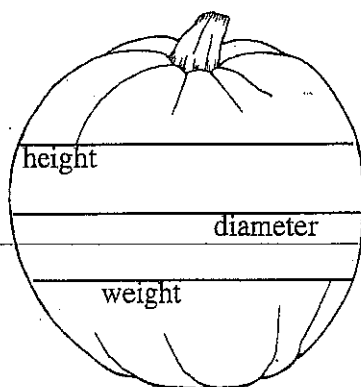
10. Write as many words as you can that rhyme with the word "pie."

Name _____

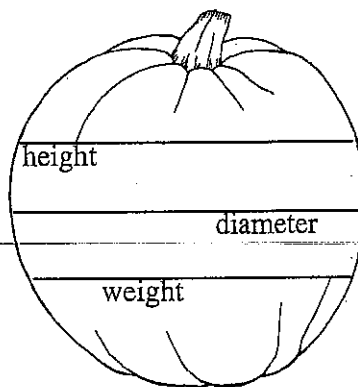
Pumpkins by the Pound B

Measure and weigh several pumpkins. Record the facts below.

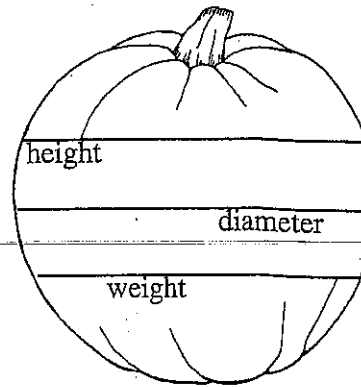
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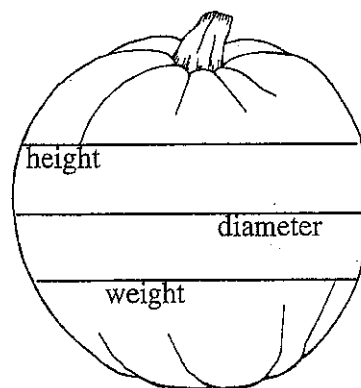
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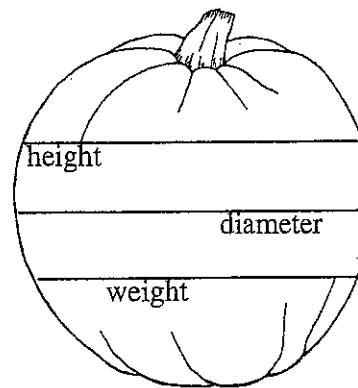
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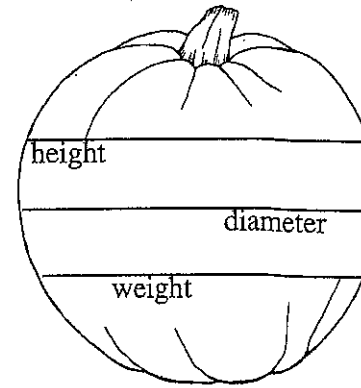
4.



5.



6.



1. Which pumpkin is biggest? _____
2. Which pumpkin weighs the most? _____
3. Does the biggest pumpkin weigh the most? _____
4. Does the smallest pumpkin weigh the least? _____
5. Which two pumpkins are closest in size? _____
6. Which two pumpkins are closest in weight? _____

Pumpkin Pie in a Bag

per two students:

1/8 cup milk
2 T canned pumpkin (not pie filling)
dash cinnamon
dash ginger
1 T vanilla pudding mix
1 T graham cracker crumbs or two ginger snaps

quart-size zip freezer bag

1. Combine the milk and instant pudding in the bag. The mix should have the consistency of pudding. If it is too runny, add pudding mix. If it is too thick, add milk.
2. Remove the air from the bag and seal it.
3. Squeeze and knead with hands until the mixture is blended—about one minute.
4. Add the pumpkin, cinnamon and ginger.
5. Remove the air and seal the bag.
6. Squeeze and knead with hands until blended—about two minutes.
7. Place 1/2 tablespoon of graham cracker crumbs or one ginger snap in the bottom of each cup.
8. Cut the corner of the freezer bag, and squeeze pie filling into the cups.
9. Garnish the cups with whipped topping.
10. Provide spoons. Enjoy.

Follow directions as above and squeeze mixture into tart-size premade graham cracker crusts, or place a ginger snap at the bottom of small cups to serve as crust.

Pumpkins, Squash and Other Cucurbits

Background

Squash, melons, pumpkins, and cucumbers are all part of the Cucurbitaceae, or gourd, family. They belong to the group of vegetables known as cucurbits.

Cucurbits were among the foods first cultivated by ancient farmers in much of what is now the US. Archaeologists believe ancient people farming along river banks may have cultivated some form of squash, sunflowers and other seed plants even before they learned to cultivate maize. After maize was introduced, farmers continued to grow squash with maize and beans, in the "three sisters" system.

Species of cucurbits are usually monoecious, with separate pollen-bearing (staminate) male flowers and seed-bearing (pistillate) female flowers on the same plant.

Cucurbits are still a staple in Oklahoma gardens and in Oklahoma agriculture. Watermelons and pumpkins are important Oklahoma field crops, and farmer's markets display a wonderful variety of squashes and cucumbers throughout the growing season.

Squash is usually divided into two categories - summer and winter. Summer squashes are harvested and eaten while their skin is still tender. Winter squash grows a thick skin, which helps it keep longer.

The term "winter squash" dates back to a time when refrigeration and cross country transportation was not as readily available as it is now. "Good keepers" became known as winter vegetables if they would "keep" until December. Winter squash have hard, thick skins and will keep for months if stored in a cool, dark, well-ventilated place.

The best tasting winter squash is available in early fall. Purchase acorn squash that is almost solid dark green. The best butternut squash has a thick neck and small round base. Ornamental squash, also plentiful during the holiday season, is edible but normally not as flavorful as acorn, butternut and spaghetti squash.

The most common summer squashes are scallop, or pattypan, constricted neck and zucchini. Pattypan is round and flattened, like a plate with scalloped edges. It is usually white. Constricted neck squash is thinner at the stem end than the blossom end, and is classified as either "crookneck" or "straightneck." It is usually yellow. Zucchini squash is cylindrical to club-shaped and is usually green. Zucchini can grow quickly to the size of a baseball bat if not picked frequently. Zucchini and other summer squash taste best when picked between five and eight inches long. One zucchini plant can pro-

P.A.S.S.

GRADE 1

Reading—4.4

Writing—2.1

Math Process—1.1,2; 2.1; 3.2,3; 4.4; 5.2

Math Content—2.1d;

4.1b; 5.1a

Science Process—1.2; 2.1; 3.1,2,4

Life Science—2.1,2

Social Studies—2.3; 5.1

GRADE 2

Reading—2.1c

Writing—2.5; 3.1g

Math Process—1.1,2; 2.1; 3.2,3; 4.4; 5.2

Math Content—2.1d;

4.1b; 5.1a

Science Process—2.1;

3.1,2,4; 4.3

Life Science—2.1

Social Studies—2.3; 3.4; 4.2

GRADE 3

Reading—4.1a,2b; 6.1

Writing—2.5

Oral Language—2.3

Math Process—2.3; 3.3; 4.2; 5.1

Math Process—1.1,2; 2.1; 3.2,3; 4.4; 5.2

Math Content—2.1bii; 4.1cd; 5.1a,2

Life Science—2.1,2

Social Studies—1.1; 3.2

P.A.S.S. continued on next page

P.A.S.S. (Cont.)

GRADE 4

Reading—4.1b; 5.1,2d

Writing—2.2

Math Process—1.1,2; 2.1;
3.2,3; 4.4; 5.2

Math Content—4.1ac;
5.1b

Science Process—1.1,2;
2.1; 3.1,3,4

Life Science—3.1,2

Social Studies—2.2;
4.1,2; 5.2,3

GRADE 5

Reading—4.1b; 5.1

Math Process—1.1,2; 2.1;
3.2,3; 4.4; 5.2

Math Content—2.1c;
5.1b,2ab

Science Process—1.1,2;
2.1; 3.1,3,4

Life Science—2.1,2

Social Studies—2.2; 3.1;
7.5

duce as many as 30 zukes per plant. Zucchini is so prolific in gardens that some people in Pennsylvania have designated an official “Sneak a Zucchini onto your Neighbor’s Porch” night (August 8).

Squash is a good source of fiber, Vitamin C, betacarotene and potassium. Betacarotene—becomes Vitamin A, which helps your eyes adjust to light changes when you come in from outside and helps keep eyes, skin and mucous membranes moist. Winter squash is a better source of betacarotene than summer squash.

Vitamin C—helps heal wounds, prevents cell damage, promotes healthy gums and teeth, and strengthens the immune system.

Potassium—is an electrolyte and is critical to maintaining a person’s heartbeat. It also plays a major role in maintaining water balance (with sodium) and cell integrity.

The world’s largest fruits belong to the cucurbit family. Pumpkins range in size from less than a pound to over 1,000 pounds.

According to *Cucurbits*, the official newsletter of the World Pumpkin Confederation, a 2005 record-breaking pumpkin weighed in at 1,469 pounds and a giant squash tipped the scales at just over 962 pounds (436 kg).

The town of Roffstown, New Hampshire, holds an annual pumpkin regatta each October, in which giant pumpkins are hollowed out to make room for a single passenger, then fitted with trolling motors and paraded on the Piscataquog River.

The tradition of carving pumpkins at Halloween started with the Irish, but the original jack-o-lanterns were made from turnips. When the Irish immigrated to the U.S., they found pumpkins a plenty, and they were much easier to carve than turnips.

The pumpkin is one of only a few foods we still eat today that is native to North America. American Indians used them as food and medicine. Dried pumpkin shells served as bowls or containers for storing grains and seeds. The Indians also flattened strips of pumpkins, dried them and made mats from them.

Pumpkins were a main part of the Pilgrims’ daily diet because they would keep for several months, if left uncut and stored in a cool, dry place.

Colonists made the first pumpkin pies by slicing off pumpkin tops, removing the seeds, filling the insides with milk, spices and honey, then baking it all in hot ashes.

Language Arts

1. Bring samples of summer squash to class.
—Students write and act out plays with the squashes as superheroes having the characteristics of the nutrients listed in the background.
2. Celebrate “Zucchini Sneak” week.
—Start with five zucchini, and place them in five students’ desks with a secret message wrapped around each one.

—Students who get the zucchini must complete the tasks printed on the message before getting permission from you to sneak the zucchini into the desks of another five students, with instructions to complete additional tasks.

—Tasks could include defining words related to zucchini (cucurbit, gourd, prolific, etc.) creating zucchini math problems, writing three adjectives to describe “zucchini,” finding three zucchini history facts online, finding zucchini nutrition information, finding the name for zucchini in Spanish (calabacita) and French (courgette), etc.

—Finish the week with a Family Cucurbit Night with all cucurbit activities and curcurbit snacks. Late August through early October, parents with gardens may have zucchini to share.

3. For each 4-5 students provide one winter squash or ornamental gourd and a list of the vocabulary words.

—Discuss haiku.

— Each student will write a haiku about the squash, using at least three of the vocabulary words.

4. What does this poem tell us about the importance of pumpkins in the lives of the Pilgrims?

For pottage and puddings and custards and pies,
Our pumpkins and parsnips are common supplies,
We have pumpkins at morning and pumpkins at noon,
If it were not for pumpkins we should be undone.

—Pilgrim verse, circa 1630

Social Studies: Geography

1. Squash is a game similar to racquetball that began in England and is popular there and around the world. Have students research the game online and learn to play.
2. Bring in an assortment of winter squashes and hide them in plain sight around the room.
 - Show one of the squash to students and ask them to guess what it is.
 - Tell students there are more of the squash hidden around the room, and tell them how many.
 - Have students stay in their seats while searching for the hidden squash and draw maps showing where the squash is located as they find them.
 - Use a timer to signal “time’s up.”
 - Divide students into groups, and have the groups take turns hiding the squash and mapping their locations for other groups to find.
3. Read the following information about cucumbers to your students. Provide world maps found on AITC website (Click on “Additional Resources” barn. Scroll down to “Maps.”) As you name the places (in bold print) where cucumbers have travelled, have students work in teams to find the locations on the map.
 - The cucumber is believed native to **India**, and evidence indicates it has been cultivated in **western Asia** for 3,000 years.
 - From India it spread to **Greece** and **Italy**, where the Romans were

Materials

pumpkins and assorted winter and summer squash

world maps

box

sharp knife and mallet or small hand saw

cutting board

Roasted Pumpkin Seeds

If you're scooping out pumpkins to make jack-o-lanterns, don't forget to save the seeds to eat.

Rinse the seeds in a colander and separate them as much as possible from the pulp. Soak them overnight in salt water. Drain and place on a baking sheet. Bake for 10-15 minutes in a 400 degree oven. Eat them like sunflower seeds.

You can roast all kinds of squash seeds, using the same method. Called *pepitas* in Spanish, the seeds are packed with protein, fiber, iron, copper, magnesium, manganese, and phosphorous, as well as the amino acids arginine and glutamic acid.

especially fond of the crop, and later into **China**. It was probably introduced into other parts of **Europe** by the Romans.

—Records of cucumber cultivation appear in **France** in the 9th century, **England** in the 14th century, and in **North America** by the mid-16th century.

—The Spaniards brought cucumbers to **Haiti** in 1494. In 1535 Cartier found "very great cucumbers" grown on the site of what is now **Montreal** in Canada. Captains Amidas and Barlow found cucumbers in Native American gardens in **Virginia** in 1584. They were also being grown by the Iroquois (on the east coast of the US) when the first Europeans visited them.

4. Pumpkins are so big they can be used to represent the world. (From Illinois Ag in the Classroom)

—Using a world map or globe, discuss longitude, latitude and hemispheres.

—Divide students into groups of 2-3 and give each group a pumpkin.

—Ask the students to pretend their pumpkin is the earth and draw latitude lines on their pumpkin at 10 degree increments.

—Tell the students the vertical lines on pumpkins are similar to the longitude lines on a map or globe. Ask the students to draw longitude lines on their pumpkins at 10 degree increments.

—The students should find the north, south, east and west hemispheres on their pumpkins, now that they have latitude and longitude lines

—Have the students paint continents on their pumpkins with tempera paint and let it dry for one hour.

—Ask the students to paint the bodies of water on the pumpkins and let them dry overnight.

—Discuss how the pumpkin globes are similar/different from manufactured globes.

Math (Measurement, Geometry, Number Sense, Data Analysis)

1. Use zucchini or cucumbers as a nonstandard unit of measure to measure the perimeter of student desks.
2. Use zucchini or cucumber for practice in fractions. (Cut into halves, fourths, etc.) Make sure students wash their hands and use clean cutting utensils. Eat as a nutritious raw snack, with or without dip.
3. Have students estimate how far students can roll zucchini, then have a zucchini roll. Measure and record the length of each student's roll, and have students calculate the average. Estimate and count rotations as well
4. Place assorted winter squash in a box where students cannot see them, with more of one kind than the rest.
 - Review the kinds of winter squash.
 - Students take squash from the box without looking.
 - Students record the kinds of squash as they are drawn from the box.
 - Students determine which kind of squash they are most likely to draw

from the box.

—Students list all the ways the different squash can be combined. (acorn/ acorn/ butternut, butternut/ turban/ spaghetti, etc.)

Science (Observe and Measure, Compare, Predict, Experiment, Plants)

1. Bring acorn squash to class.

—Students write descriptions of the squash and predict what they will find inside. (What color will it be? Will there be seeds? Where will the seeds be located? What will it smell like? How will it feel?)

—Students design charts that will allow them to compare their predictions with results.

—Use a very sharp knife and a mallet or a small handsaw and a cutting board to slice each squash in half. (Winter squash is difficult to cut, so take safety precautions. **DO NOT ALLOW STUDENTS TO CUT.**)

—Students smell, feel and taste the squash.

—Students record observations on their charts.

—Discuss results.

2. Summer squash grows to maturity in 40-50 days and can be planted for a fall garden as late as September 1 in Oklahoma.

—Students make hills in a sunny spot and plant 4-5 seeds per hill.

—After the plants have acquired their second set of leaves, students pull all-but three per hill.

—As an alternative, start plants in large container in the classroom and send home with students.

—Students keep journals to record the growth of their squash plants and watch for:

Leaves—The first leaves of squash plants are very large and robust compared with other seedlings.

Flowers—Species of cucurbits are usually monoecious, with separate pollen-bearing (staminate) male flowers and seed-bearing (pistillate) female flowers on the same plant. Squash blossoms are edible. Find a recipe and let students try eating them, or just offer them raw.

Insects—The spiny, sticky pollen is not windborne and requires insects for pollination. The most common pollinator insects appear to be beetles and bees. As an alternative you may provide Q-tips or small paint brushes and have students carefully transfer pollen from the male flower to the female.

3. Some insects are harmful to the squash plant.

—Students research to learn about squash pests (cucumber beetle, squash vine borer, squash bug).

—Students research to learn non-chemical means for controlling cucurbit pests. (row covers before flowers appear, removing insects from plants, planting before or after prime time for insects)

4. Will your jack-o-lantern sink or float? If it floats add various objects to see how much weight it will hold afloat.

Pumpkin Pottage (Soup)

Pumpkin has all the nutritional benefits of squash and can be eaten as a vegetable, although most of us only eat it in pie. Try this pumpkin soup.

Place 3 cups canned or 2 pounds cooked pureed fresh pumpkin in 3 cups scalded milk or chicken broth.

Blend together and add 1 tablespoon butter and 1 tablespoon flour. Add 1 tablespoon white sugar or 2 tablespoons brown sugar and 1/2 cup finely diced ham. Season as desired with salt, pepper, ginger and cinnamon. Heat but do not boil. This makes about 6 cups.

Vocabulary

botanical—relating to the science of plants

constricted—made narrow

cucurbit—any of various mostly climbing or trailing plants of the family Cucurbitaceae, which includes the squash, pumpkin, cucumber, and melons

fruit—the ripened ovary of a seed plant

gourd—any of a family of tendril-bearing vines (as the cucumber, melon, squash, and pumpkin)

monoecious—A plant species in which male and female organs are found on the same plant but in different flowers

ornamental—something that adds beauty

ovary—the enlarged rounded lower part of the pistil of a flower in which seeds are formed

ovule—an outgrowth of the ovary of a seed plant that after fertilization develops into a seed

pollen—a mass of tiny particles in the anthers of a flower that fertilize the seeds and usually appear as fine yellow dust

pottage—a thick soup of vegetables or vegetables and meat

prolific—producing in large numbers

scallop—one of a continuous series of rounded half-circles forming a border

vegetable—a leafy plant (as the cabbage, bean, or potato), usually without woody tissue, grown for an edible part that is usually eaten as part of a meal

Visual Arts

1. Students arrange the squash and/or gourds and do still life drawings, paintings or digital photographs.
—Use the works of art to illustrate haiku from Language Arts Activity #3.

Extra Reading

Ada, Alma Flor, Zubizarreta, Rosa, and Simon Silva, *Gathering the Sun: An Alphabet in Spanish and English*, Lothrop, 1997.

Eclare, Melanie, *A Harvest of Color: Growing a Vegetable Garden*, Ragged Bears, 2002.

Farmer, Jacqueline, *Pumpkins*, Charlesbridge, 2004.

Hughes, Meredith Sayles, *Cool as a Cucumber, Hot as a Pepper: Fruit Vegetables*, Lerner, 1998

Lottke, Jan, *From Seed to Pumpkin*, Children's, 2000.

Name _____

Fruit or Vegetable

In common terms, some cucurbits are fruit 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 cucumber are vegetables. Pumpkin is also a vegetable, but since we usually add sugar to it and bake it in a pie, we think of it as fruit.

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

tomato
broccoli

potato
apple
cauliflower

squash
strawberry

lettuce
carrot
watermelon

onion
spinach

In botanic terms, all cucurbits are fruit. A fruit is the ripened ovary—together with seeds—of a flowering plant.

2. Which of the vegetables above is botanically a fruit?

Look up the words “fruit” and “vegetable” in a dictionary. On the back of this page, draw a Venn diagram to show how they are different and how they are the same.

Write the list of fruits and veggies above in alphabetical order.

3. Look at the list of fruits and veggies and identify the blends, digraphs and diphthongs

ANSWERS:

1. vegetables—tomato, potato, squash, lettuce, onion, broccoli, carrot, spinach, cauliflower;
fruit— apple, strawberry, watermelon
2. tomato, apple, strawberry, squash, watermelon
3. blends: squash, broccoli, strawberry, spinach, cauliflower).
digraphs: squash, spinach
diphthongs. (answers: cauliflower, strawberry)

The Pumpkin Patch

An Integrated Thematic Unit



developed for Alabama Agriculture in the Classroom

December 2000

Xris McMillin Blonk

Treat the Earth well:
it was not given to you
by your parents,
it was loaned to you
by your children.

Ancient American Indian Proverb

Table of Contents

Introduction	
How Pumpkins Grow	1
Growing Pumpkins in the Classroom	
What's Inside That Seed?	2
Ziplock Success!	2
A Handful of Seeds	3
An Easy Pumpkin Patch	3
Pumpkin Math	
How Many Seeds?	4
Your Pumpkin and Circumference	4
Create a Pumpkin Graph	5
Problem Solving With Pumpkins	6
Interesting Investigations	7
Pumpkin Poetry and Songs	8-10
Tempting Pumpkin Treats	11
The Artistic Pumpkin	
Paper Bag Pumpkin Patch	12
Create a Patch of Mini-Pumpkins	12
Tin Can Jack-O-Lantern	13
Paper Plate Pumpkins	13
Language Arts	
Pumpkin-Shaped Poetry	14
Pumpkin Shape Books	14
Pumpkin Templates	15
Bibliography - Children's Literature	
Websites	

Seeds of Discovery

What's large, orange, and filled with seeds? Even the youngest of elementary-age students can answer this riddle with ease. Take a pumpkin to school with you and create an atmosphere of fun and excitement with the activities included in this unit. Each activity featured can be used by itself or as part of a week-long festival in honor of October's most famous fruit.

The specific activities are designed to be used by the elementary teacher and require readily-available, inexpensive materials. There's a lot of mileage in one modestly-priced pumpkin. So plant the seeds of discovery and watch as learning takes over in your classroom.

How Pumpkins Grow



Pumpkins belong to a family of plants called cucurbits. Other members of the family are squash, gourds, melons, and cucumbers. These grow in fields on long vines that cover the ground. Pumpkins come in a variety of colors, from white to yellow to orange, and range in size from less than a pound to more than 1,000 pounds. They trace their origins to Central America. The name *pumpkin* comes from the Greek word *pepon* meaning "large melon."

Pumpkin seeds are planted in May and June, depending on the temperature of the soil. The seeds, dependent upon warmth and moisture, generally germinate in 7-10 days. As the leaves and vines develop above the ground, an extensive root network is developing in the top twelve inches of soil. These shallow roots are noticeable as offshoots of the vine along its entire length and are used to gather most of the food, moisture, and air that the developing plant needs. The pumpkin plant develops a strong tap root that grows as deep as 2-3 feet. Tendrils that form along the length of the vine help to support the plant.

Yellow blossoms begin to appear after several weeks of growth. The vine develops both male and female flowers. Female blossoms are easily distinguished from the male by the presence of a small, rounded shape at the base of the flower. Bees spread pollen from the male to the female flowers. After pollination, the fruit at the base of the female blossom begins to develop into a full-sized pumpkin. At this stage of development, the pumpkins require a steady supply of moisture and sunlight. It takes approximately 90-120 days for the pumpkin to fully develop after the seed has been planted.

Growing Pumpkins in the Classroom

What's Inside That Seed?

Objective: Students will observe the embryo of a seed.

You'll need: Pumpkin seeds (enough so that each student has one), water, shallow dish, hand magnifiers

Procedure:

1. Discuss with students the conditions needed for seed germination: moisture, temperature. Is soil a requirement? Why or why not?
2. Explain the role and importance of the plant embryo.
3. Place a moistened paper towel in a shallow dish. Cover with pumpkin seeds. Cover with another paper towel and a small amount of water.

The Next Day:

4. Direct student to examine the damp seeds with magnifiers, observing the embryo. Have students illustrate, label, and write about their findings.

Ziplock Success!

Objective: Students will observe germination of pumpkin seeds.

You'll need: seeds (clean and dry), ziplock bags, potting soil, permanent marker

Procedure:

1. Have each student label his/her bag with a permanent marker. They should include the variety of pumpkin planted and the date.
2. Place a small amount of potting soil in each bag and add several seeds.
3. Add a small amount of water and zip the bag closed.
4. Hang bags up in the classroom and observe. They should require no further care.
5. Record changes noted over the next week. Send the young plants home to be transplanted.

NOTE: This can also be done by substituting a moistened paper towel for the potting soil.

More Growing Ideas. . .



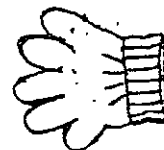
A Handful of Seeds

Objective: Students will compare and contrast the rates of germination of different varieties of pumpkins.

You'll need: Pumpkin seeds (try to find 5 varieties, or use other seeds related to pumpkins, such as gourds, squash, cucumber), clear, plastic or latex gloves, cotton balls, water, wide masking tape, fine-point permanent marker.

Procedure:

1. Label each finger of the glove with the date and variety of seed that it will hold. Example: Jack-Be-Little 3/12/01
2. Place a moistened cotton ball in the tip of each finger of the glove.
3. Place a seed on the moistened cotton ball.
4. Seal the glove at the wrist with wide masking tape or duct tape.
5. Place in a well-lighted spot out of direct sunlight.
6. Observe. Illustrate and write about changes that are noticed.



Think about it: Does the largest seed germinate first?

An Easy Pumpkin Patch

Objective: Students will observe the stages of plant development.

You'll Need: 1-10lb. bag of potting soil, a shallow plastic tub, scissors, pumpkin seeds, water, plant light or sunny window sill

Procedure:

1. Place the unopened bag of potting soil in the shallow plastic tub (it should lie flat).
2. Using scissors, cut a large X diagonally across the bag, from corner to corner. Fold the extra plastic back.
3. Plant the pumpkin seeds in the soil about 1/4" deep. Water lightly and place in a well-lighted spot.
4. Keep the soil moist but not overly wet and watch for signs of growth.
5. Have students illustrate and write about the changes they notice.

Pumpkin Math

Pumpkins are a natural for hands-on math. The following suggestions make use of a class pumpkin in teaching about estimation, graphing, place value, and measurement.

How Many Seeds?

Objective: Students will estimate the number of seeds in a pumpkin.
Students will explore place value concepts by counting pumpkin seeds.

You'll Need: chart paper, marker, pumpkin, index cards, white glue

Procedure:

1. Ask students how many seeds they think a pumpkin contains. Record all their estimates on chart paper.
2. Open the pumpkin, remove the seeds, clean and dry them.
3. Glue ten pumpkin seeds on each index card.
4. When approximately half the seeds have been grouped and counted, allow the students to revise their original estimates.
5. Continue gluing pumpkin seeds ten to a card. Tape or staple ten cards together to create a group of one hundred.
6. Compare the final count with the estimates.

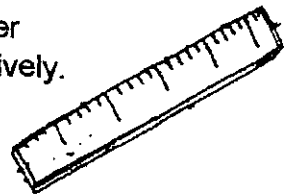
Your Pumpkin and Circumference

Objective: Students will estimate and graph the circumference of a pumpkin.

You'll Need: a pumpkin, twine or string, scissors, three construction paper pumpkins, labeled, "too long", "too short", and "about right" respectively.

Procedure:

1. Discuss the meaning of circumference and give examples using items found in the classroom (globe, kickball).
2. Tell students they are going to estimate the circumference of the class pumpkin. Tape the three construction paper pumpkins to the board.
3. Pass around a spool of twine or string and direct each student to cut off a length that they think will fit around the widest part of the pumpkin.
4. After all students have cut a length of string, allow them to take turns checking their estimates by fitting their strings around the pumpkin.
5. Direct students to tape their strings on the appropriate pumpkin (too long, too short, about right).
6. Ask students: How many strings were too long? too short? about right?



Create a Pumpkin Graph



Objective: Students will create a seasonal graph.

Students will be able to interpret information from a graph.

Materials: posterboard or chart paper, 3"x3" orange construction paper squares, pencils, black crayons, scissors, glue

Procedure:

1. Give orange squares to students and have them draw pumpkins that fills the squares.

(Younger students: Teachers may want to trace pumpkin shapes on the orange squares before giving them out to students.)

2. Have students use black crayons to create their favorite jack-o-lantern faces (happy, sad, scary, etc.). Then cut out the pumpkins.

While the students are working on their jack-o-lanterns:

3. Use a black marker to write the date and *Our Favorite Pumpkin Faces* on the long side of the posterboard.
4. Write *scary, happy, sad, etc.* categories on the short side.

After students have completed their jack-o-lanterns:

5. Ask students to glue their completed jack-o-lanterns in the appropriate category.
6. Display the completed graph.
7. Ask students the following questions.
 - a. How many students chose scary faces? happy faces? sad faces? something else?
 - b. How many more chose scary than sad?
 - c. How many scary and happy faces were chosen all together?

NOTE: Be sure to include at least one question that cannot be solved by looking at the graph. For example: "How many children like to decorate pumpkins?"

Other graphing ideas:

1. Use the Internet to research the size of giant pumpkins. Create a bar graph showing the weight of the ten largest on record.
2. If several classrooms in the school have pumpkins, assign upper-grade students the task of recording and graphing vital statistics: circumference, weight, # of seeds, # of creases or ribs, etc.

NOTE: a bar graph can be used to show the relationship between size and number of seeds or creases.
3. Create a graph of favorite ways to eat pumpkin.

Problem Solving With Pumpkins

Read and solve the following problems. Check your answers with the ones provided on the answer key.

1. Sarah and John planted pumpkins in their garden last summer. In October they picked 11 orange Giant pumpkins, 34 Jack-Be-Little pumpkins, and 18 white Casper pumpkins. How many pumpkins did they pick all together?
2. David harvested 68 pumpkins from his pumpkin patch. Jim picked 36. How many more did David pick than Jim?
3. Mrs. Jones bought a pumpkin for her classroom at the Farmers' Market for \$5.25. She paid for it with a ten-dollar bill. How much change did she receive?
4. Jamie's pumpkin weighs 24 lbs. and Jenny's weighs 18 lbs. How much do they weigh all together? How much more does Jamie's weigh than Jenny's?
5. Mr. Alison took 98 pumpkins to the market in October. Fifty-nine of the pumpkins weighed at least 10 lbs. The rest were miniature pumpkins. How many mini-pumpkins did he take to the market?
6. Brown's Pumpkin Patch harvested 176 pumpkins in October and 128 in November. How many did they pick in all? How many more did they pick in October than November?
7. Mrs. Brown gave the fourth grade 45 pumpkins to sell so that they could raise money for a class trip. If they sold them at \$5 each, how much money did they earn?
8. The fifth graders want to decorate the cafeteria for the Fall Festival. They would like to put 3 pumpkins on each of 15 tables. How many pumpkins do they need? If they have to pay \$2 for each pumpkin, how much will it cost? If they sell the pumpkins for \$4 each, how much profit will they make?

<p>Answer Key: 1.) 63 pumpkins; 2.) 32 more; 3.) \$4.75; 4.) 42lbs, 6lbs more; 5.) 39 mini-pumpkins; 6.) 304 in all, 48 more; 7.) \$225 earned; 8.) 45, \$90, \$90 profit</p>
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Interesting Investigations

Here are some intriguing questions that will get your students involved in the learning process. They can be used as part of a group exercise with younger students or with older students working in cooperative groups.

Think about the creases that run from the stem to the bottom of the pumpkin.

1. Are the creases the same distance apart at the top, bottom, and middle of the pumpkin? If not, where are they closer together? Farther apart?
2. Measure the distance between the creases at the middle of the pumpkin. Are all the creases the same distance apart?
3. Compare several different sized pumpkins. Do larger pumpkins have more creases? Do they have creases that are further apart or closer together?
4. Where on the pumpkin are the creases the shallowest? The deepest?
5. Is the crease visible on the inside of the pumpkin?

Speaking of Seeds. . .

6. Is there a relationship between the size of a pumpkin and the size of its seeds? If so, what is it?
7. Do bigger pumpkins have more seeds than smaller ones?
8. Are all of the seeds from the same pumpkin the same size? If not, where are the seeds the largest? The smallest?

Other thoughts. . .

9. Do pumpkins sink or float when placed in water? Why or why not?
10. If pumpkins float in water, do they float stem side up? Stem side down? On their sides?
11. If you tap on pumpkins of different sizes, do they all make the same sound? If not, how are the sounds different?
12. Can you make different sounds by tapping on different parts of the pumpkin? If so, why do you think this happens?

Pumpkin Poetry and Songs

Pumpkin, Pumpkin

Pumpkin, pumpkin
Sitting on the wall.
Pumpkin, pumpkin,
Tip and fall.
Pumpkin, pumpkin,
Rolling down the street.
Pumpkin, pumpkin,
Good to eat!



Jack-o-Lantern

There is a little pumpkin
Orange and round.
Down in the garden
Laying on the ground.
But on Halloween night
You will see,
A glowing jack-o-lantern
Scary as can be!

Five Little Pumpkins

There were five little pumpkins
Sitting on a gate.
The first one said,
"Oh, my it's getting late!"
The second one said,
"There are witches in the air!"
The third one said,
"I don't care!"
The fourth one said,
"Let's run, run, run!"
The fifth one said,
"I'm in the mood for fun!"
Then crash went the thunder
And out went the lights
And the five little pumpkins
Rolled out of sight.

Pumpkin Song

(tune: I'm a Little Teapot)

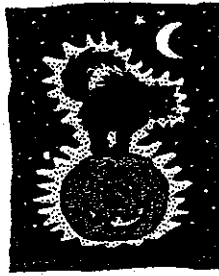
I'm a little pumpkin
Orange and round.
Here is my stem,
There is the ground.
When I get all cut up,
Don't you shout!
Just open me up
And scoop me out!

Mr. Pumpkin

(tune: Where is Thumbkin)

Mr. Pumpkin
Mr. Pumpkin
Round and fat.
Round and fat.
Harvest time is coming.
Harvest time is coming.
Yum, yum, yum.
That is that!

The Pumpkins Halloween



Five lonely pumpkins on a cloudy night,

- (1) Made a spectacular ghostly sight.
- (2) One of them hopped around on his toes,
- (3) Another one fell and skinned his nose.
- (4) A third one stretched up high in the air,
- (5) And the fourth one danced like a big, brown bear.

The last one made up a scary song,

- (6) So the five lonely pumpkins sang it all night long.

The following gestures may be used to accompany the poem as it is read or as the students say it aloud. Numbers match the line of the poem as shown above.

1. *Students make scary faces.*
2. *Point to one student who hops around.*
3. *Point to one student who rubs his/her nose with hand.*
4. *Point to a student who stretches his/her arms up high.*
5. *Point to a student who dances like a bear.*
6. *All students pretend to sing.*

Ten Little Pumpkins



Ten little pumpkins fresh from the vine,
One sits down and then there are nine.

Nine little pumpkins standing up straight
One bends over and then there are eight.

Eight little pumpkins - the clock strikes eleven,
One runs away and then there are seven.

Seven little pumpkin doing funny tricks,
One forgets how and then there are six.

Six little pumpkins looking at a hive,
One gets stung and then there are five.

Five little pumpkins knocking at the door,
One steps back and then there are four.

Four little pumpkins playing by the sea
One falls asleep and then there are three.

Three little pumpkins, friends just like you,
One goes home and then there are two.

Two little pumpkins having lots of fun,
One goes to bed and there is one.

One little pumpkin sitting in the sun,
Goes to look for others and then there are none.



Tempting Pumpkin Treats

Roasted Pumpkin Seeds

The following recipe makes a delicious classroom treat that is fun and easy!

You'll Need: pumpkin seeds (clean and dry), 1 qt. water, 1 Tablespoon of vegetable oil, 2 Tablespoons of salt

Procedure:

1. Pick through the seeds, removing any cut seeds and as much fiber as possible.
2. Bring the water and salt to a boil. Add the seeds and boil for 10 minutes. Drain, spread on paper towels, and dry.
3. Preheat oven to 250 degrees.
4. Place the seeds in a bowl and toss with the oil.
5. Spread seeds evenly in a single layer on a large cookie sheet.
6. Place in preheated oven and roast for 30-40 minutes, stirring about every 10 minutes, until crisp and golden brown.
7. Enjoy!



Mini-Pumpkins

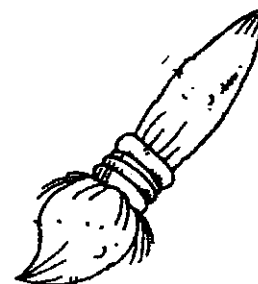
Create a sweet treat during pumpkin week!

You'll need: candy orange slices (6-7 per child), green gum drops, 1-can white icing, plastic knife, paper towels or plates

Then you: (working in a small group or center)

1. Pass out materials to each child.
2. Demonstrate how to "glue" the orange slices together with icing, sides together with the bottom edge facing out to form a pumpkin.
3. When the pumpkin is complete, add a green gumdrop for the stem.
4. Admire for a minute, then enjoy!

The Artistic Pumpkin



Would you like a pumpkin patch in the classroom, but don't have the time or room to grow your own? Turn your students loose with the following art ideas and watch your pumpkin patch spring to life!

Paper Bag Pumpkin Patch

You'll need: brown paper bags (lunch size), orange tempera paint, brushes or sponge applicators, green yarn or curling ribbon

Next:

1. Have students write their names on the bottoms of the bags.
2. Use a brush or sponge applicator to paint bags with orange tempera paint.
3. Let the bags dry for at least an hour.
4. Stuff with paper and tie the top with green yarn or curling ribbon.

Then: Display your pumpkins on a windowsill or counter. You may turn them into jack-o-lanterns for Halloween by adding construction paper features.

Create a Patch of Mini-Pumpkins

This idea works best in an art center or with a small group.

You'll need: 4"x12" strips of brown paper (grocery bags are great), a sponge, orange tempera paint, green markers, fine point black markers, Styrofoam meat tray.

Next:

1. Cut out one strip of brown paper for each student.
2. Place the damp sponge on the Styrofoam meat tray. Cover sponge with orange tempera paint and let it soak in.
3. Touch fingertips to the paint-soaked sponge and press onto the brown paper, creating mini-pumpkins.
4. Allow at least an hour to dry. Add stems, vines, and leaves with a green marker or crayon.
5. Label the pumpkin patches with the students' names. For example: Mike's Pumpkin Patch.

Tin Can Jack-O-Lantern

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

You'll need: a large can for each child (1lb. coffee size), white and orange acrylic craft paint, twine or pipe cleaners, black felt, Elmer's glue.

Next:

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

Then: Fill with candy or display in the classroom as decorations.



Paper Plate Pumpkins

What's inside that pumpkin?

You'll need: paper plates (two per child), white glue, orange crayons or markers, small pieces of yellow/orange yarn, pumpkin seeds, brads

Next:

1. Color both the top and bottom sides of two paper plates with crayons or markers.
2. Glue small pieces of yarn and pumpkin seeds to the top side of the first plate.
3. Print "What's Inside a Pumpkin?" on the top side of the second plate.
4. Add a stem and leaves cut from construction paper just above the printing on the second plate.
5. Fasten the two plates together with a brad so that the bottom of the second plate is touching the top of the first plate with the yarn and seeds attached.

Language Arts for Pumpkin Fans

Pumpkin Shape Poetry

Objective: Students will be able to list and use adjectives.

You'll need: a pumpkin, chart paper, marker, 8" x11" white drawing paper (one sheet per student), pumpkin shapes to trace, pencils, fine-point black markers (optional)

Procedure:

1. Display the pumpkin in a spot visible to all students.
2. Lead students in a discussion of adjectives as describing words and elicit specific examples of adjectives that describe the pumpkin.
3. List student-supplied adjectives on chart paper for all to see.
4. Have students choose their favorite five adjectives from the list and record them on a piece of notebook paper.
5. Distribute white art paper and ask each student to lightly trace around one of the pumpkin patterns.
(NOTE: using a variety of pumpkin shapes makes the final display more interesting)
6. Use the list of favorite adjectives and have students copy the words in order around the outline of their pumpkins, repeating the pattern until the entire outline is complete. Trace over the words with a fine-point marker.
7. Erase all pencil marks.
8. Share with other class members and display for all to admire.

Pumpkin Shape Books

Objective: Students will create and share pumpkin stories.

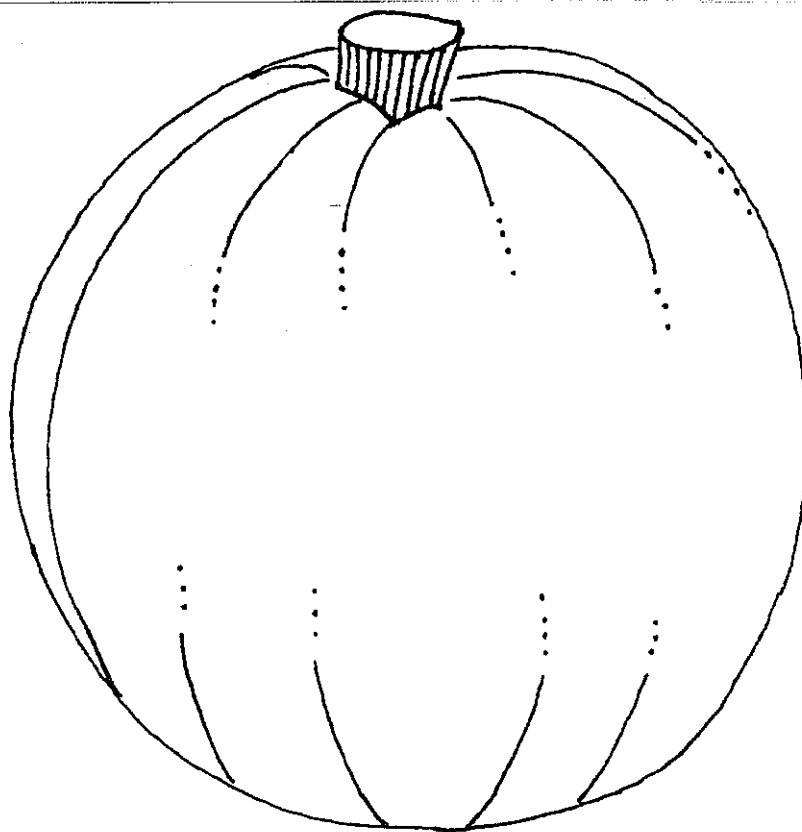
You'll need: Pumpkin shapes to trace (see previous lesson), orange construction paper, white paper, crayons, pencils, stapler.

Procedure:

1. Trace pumpkin shapes onto orange construction paper and plain white paper. Cut out in sufficient quantity for each student to make a book.
2. Brainstorm ideas for pumpkin stories - develop an information web with students on large chart paper.
3. Direct students to complete a rough draft. Conference with students to edit their efforts.
4. Copy final stories on pumpkin-shaped white paper. Use orange construction paper pumpkins for front and back covers. Add jack-o-lantern faces with black crayon.
5. Share stories with other class members.

Pumpkin Templates for Shape Poetry

Directions: Enlarge and trace onto poster board or manila tagboard. Cut out and use to create outline patterns for pumpkin poetry and shape books.



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Pumpkin Websites

The Pumpkin Patch. Features clip art, how-to-grow information, articles, recipes, pumpkin records, seeds, and more.
www.backyardgardener.com/pump.html

Swan's Pumpkin Farm. Features fun facts, word scrambles, trivia and FAQs.
www.thepumpkinfarm.com/index.html

The Magic Invisible Pumpkin. A cute (and true) story.
http://garyflegal.com/a_story_for_halloween.html

University of Illinois Extension. Comprehensive site featuring history, facts, recipes, and more.
<http://www.urbanext.uiuc.edu/pumpkins/index.html>

Pumpkin Nook. Has growing information, recipes, facts, history and games.
www.pumpkinnook.com

Other Resources

Pumpkin Circle: book and video. George Levenson. Berkeley: Tricycle Press.
Video narrated by Danny Glover: 20 minutes. 1-800-827-0949
www.pumpkincircle.com

