

The Great Pumpkin

Fall lesson

Activity: Explore the various shapes, textures, seeds and uses of pumpkins and pumpkin relatives. Learn about the nutritional benefits of pumpkin and learn how canned pumpkin is made from fresh pumpkin. Make some easy recipes using pumpkin puree.

Goals: Discover other uses for pumpkins than just jack o' lanterns, compare differences and similarities of members of pumpkin relatives. Explore fun and healthy snacks and drinks using pumpkin.

Supplies: For show and tell: In MAIN shed--various pumpkins, squashes, gourds plus cutting supplies (for parent use only).

**For no-cook recipes: On COOKING CART in Kathy Froman's room #G35--cans of pumpkin, spices, sweetening syrup, can opener, cups, plates, utensils, mixing bowls, microwave container. Put leftover pumpkin in staff room refrigerator.

Here are some fun websites:

Libby's on growing and cooking with pumpkins

<http://www.verybestbaking.com/Libbys.aspx>

Science Friday videos on carving pumpkins (has 1 bad word) and growing giant pumpkins

<http://www.sciencefriday.com/program/archives/201110213>

General Lesson Plan

Familiarize yourself with the background information on the pumpkin family below. If you plan to do an optional recipe with your group, make sure you have all the ingredients and tools ready.

Show and tell: Compare and contrast different pumpkin relatives

First discuss some interesting facts about pumpkins and other cucurbits and examine the whole fruits. Arrange the students into groups of 2-3 and spread them out on the concrete or around the big orange paper. Each group will work on one cucurbit fruit type and you will give each student in the group a piece of the fruit to study. Ask them to observe the properties of the cucurbit they have. They can remove the seeds or break it apart more. For example, is it colored on the outside or inside? Is the skin hard? What do the seeds look like? What does it smell like? Is it hard or squishy inside? Is it stringy or smooth inside?

When you are done with your samples you may put the pieces into the compost bin.

Cooking with pumpkins

**Compare fresh and canned pumpkin

For this activity you need to have some pieces of "cooking" type (like sugar pie) pumpkin precooked. An easy way to do this is to cook the whole pumpkin (punch holes in it first) or pieces of it in the microwave for 5-15 minutes. You can use the microwaves in the staff room.

Pass out pieces of pumpkin along with forks and plates to the students and have them mash up the pumpkin. Compare their product to the texture and appearance of the canned pumpkin. If fresh pumpkin is pureed in a blender or food processor and drained, it will look just like the canned version!

**Make something to eat or drink with pumpkin

You can try and use some of the mashed pumpkin or the canned pumpkin in one of the following recipes. Note that you will need to supply some of the ingredients for your class.

Pumpkin pie punch (adapted from Sacramento Bee, 10/19/2011)

(Makes about 3/4 gallon)

1 liter cold ginger ale (supplied by you)

½ gallon cold apple juice or cider (supplied by you)

½ tsp pumpkin pie spice

½ tsp cinnamon

¼ c. syrup

½ can pumpkin puree (about 1 cup)

Mix all ingredients together.

Pumpkin pie yogurt

1 quart plain or vanilla yogurt (supplied by you)

½ tsp pumpkin pie spice or cinnamon

syrup to taste

½ can (or 1 cup) pumpkin puree

Mix all ingredients together.

Pumpkin applesauce

1 quart plain applesauce (supplied by you)

½ can pumpkin puree

1 tsp cinnamon

syrup to taste

Mix all ingredients together.

Please clean up and return all items to the cooking cart when done.

Background—pumpkins

Pumpkins belong to the Cucurbitaceae family of plants, which includes squashes, cucumbers, cantaloupes, watermelons and gourds. Members of this family of plants are found all over the world and have been cultivated for many centuries. Gourds found in Mexico have been dated back to 7000 B.C. Native Americans roasted and ate pumpkins, and pumpkin pie may have arisen from a dish that the colonists made by roasting a hollowed-out pumpkin filled with milk, spices, and honey.

Cucurbits all grow as vines, and they have separate male and female flowers. The male flowers contain the pollen, and only the female flowers will form the fruit upon successful pollination. There are two major kinds of pumpkins that appear in the stores around Halloween. One type of pumpkin grows large and makes great Jack-o-lanterns but is not very good to eat. A different type of pumpkin stays smaller and is good for eating and carving.

Pumpkins, like other deep orange and dark green fruits and vegetables, are high in beta carotene, a plant substance that is converted to vitamin A in the body. Vitamin A is a component of our eye's night vision system that allows the eye to readjust to darkness after exposure to light. Vitamin A is also necessary to maintain the health of tissues that line the eye, respiratory, digestive and other systems. In the USA, the usual symptoms of a vitamin A deficiency would be temporary "night blindness," but in other parts of the world where famine is common, severe, long-term deficiencies in this vitamin can leave vital systems vulnerable to life-threatening infections.

Pumpkins and other winter squashes contain moderate amounts of potassium, a mineral necessary for fluid balance in the body. Pumpkins are also good sources of fiber.

Pumpkins can be added to lots of food like chili, spaghetti sauce, applesauce, etc. to add extra nutrients and fiber.