



11th Annual Natural Learning Design Institute
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Beyond Jack-o'-lanterns: Using Pumpkins to Support Learning

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Description: Pumpkins are typically used to create jack-o'-lanterns, supporting creative and artistic development, but those same pumpkins can be utilized to support scientific learning. These tactile experiences can provide children with important learning opportunities. This session provides an opportunity to act like a child again by exploring the wonderful tactile activities that incorporate measuring, floating, and scooping pumpkins to provide early experiences with scientific learning.

Activity #1: Too long, too short, or just right.

Learning Objective:

- To learn the concept of circumference, measurement, comparison, and hypothesis testing.

Materials:

- One large pumpkin
- Yarn
- Poster board
- Construction paper
- Marker
- Painter's tape

Instructions:

- On a piece of poster board, create a display where the circumference estimates can be displayed.
- Each child examines the pumpkin.
- Passing around several skeins of yarn, children estimate the circumference of the pumpkin by cutting yard to represent the circumference.
- Each child wraps their yarn around the pumpkin and will determine whether their estimate was too long, too short, or just right.
- The child will attach their yarn in the corresponding category on the poster board.
- The number of estimates in each category will be tallied and displayed.



Example of a display for circumference estimates from www.littlegiraffes.com

Activity #2: How tall this Fall?

Learning Objective:

- To learn the concept of height, measurement, and comparison.

Materials:

- Large pumpkin from Activity #1
- Painter's tape

Instructions:

- Use the painter's tape to mark the height of each pumpkin on the child's pants leg.
- The children compare the height of the pumpkin in relation to parts of their body, such as knee, waist, and hand.
- Then compare among the children. For example, separate the children into two groups: the height of the pumpkin is above the knee and the height of the pumpkin below the knee.

Activity #3: Sink or Float?

Learning Objective:

- To learn the concept of hypothesis testing and comparison.

Materials:

- Large pumpkin from Activity #2
- Deep plastic storage container filled with water

Instructions:

- Weigh the pumpkin.
- Let the children weigh themselves and compare.
- Ask the children to form a hypothesis regarding whether the pumpkin will float or sink in the water.
- Test the hypothesis by placing the pumpkin in the water-filled storage container.
- Have the children hypothesize as to why the pumpkin floated.
- Cut the top of the pumpkin to show that the pumpkin is hollow.

Activity #4: Pumpkin and gourd guts are squishy!

Learning Objective:

- To learn the concept of comparison, tactile discovery, and hypothesis discovery.

Materials:

- Large cut pumpkin from Activity #3
- Miniature pumpkins and ornamental gourds of various sizes

Instructions:

- Ask the children which seeds are bigger: large pumpkin, miniature pumpkins, or gourds.
- Cut open ornamental gourds.
- Let the children scoop out the pumpkin and gourd "guts".
- Encourage them to compare the insides of the pumpkins and gourds. For example, compare the size of the seeds and have them sort them into piles based on size (small, medium, and large).

Activity #5: Harvest regatta

Learning Objective:

- To encourage creative and artistic development and introduce the concept of up cycling (*process of converting waste materials or useless products into new materials or products*).

Materials:

- Cut pumpkins and gourds from Activity #4
- Deep plastic storage container filled with water from Activity #3
- Craft supplies (drinking straws, construction paper, paint, etc.) to transform pumpkins and gourds into boats.



*A miniature pumpkin boat from
www.thepreschooltoolboxblog.com*

Instructions:

- The children transform the emptied miniature pumpkins and gourds into boats using the craft supplies.

Activity #6 (option 1): Pumpkin Planter

Learning Objective:

- To introduce gardening and the growing cycle.

Materials:

- Cut pumpkins and gourds from Activity #5
- Potting soil
- Seeds

Instructions:

- Cut a hole in the bottom of the hollow pumpkin or gourd for drainage.
- Fill the pumpkin/gourd with potting soil.
- Plant the seed in the soil.
- Water.

Activity #6 (option 2): Rotting Pumpkin

Learning Objective:

- To introduce decay within the growing cycle.

Materials:

- Cut pumpkins and gourds from Activity #5
- Sealable plastic baggies
- Marker to write name on bag

Instructions:

- Place a miniature pumpkin/gourd into a sealable plastic bag and place outside.
- Document the decaying process. For example, notice which pumpkin rots first.
- Compare the rate of decay among the pumpkins and gourds.