HARVEST OF THE MONTH

March: Kale

Nutrition News—

Kale is a true super food! In addition to being packed with vitamin A, vitamin C, and vitamin K, it is also a great source of calcium, iron, and antioxidants.

Enjoy this nutritional powerhouse raw, sautéed, or even added to a smoothie.

Did you know?

Kale was one of the over 300 varieties of vegetables that Thomas Jefferson experimented with at Monticello.

AGRICULTURE IN THE CLASSROOM
AgInTheClass.org

Leaf Area and Perimeter

Standards of Learning:

Math: 3.7, 3.8, 4.7, 4.8

Objectives:

Students will be able to—

- calculate area and perimeter using alternative methods for an irregular space, such as a leaf.

Materials:

- Medium-sized leaves, edible or non-edible
- 8.5" x 11" paper
- Pencils
- Tape
- Yarn
- Dried beans, peas, or corn
- Small cups

AGRICULTURE IN THE CLASSROOM
AgInTheClass.org

Background Knowledge:

The ability to calculate area and perimeter are essential skills in order to know how many materials you will need to purchase. Perimeter is the distance around a given space. In gardening it is important to know perimeter so that you can calculate how much fencing or lumber you will need. Area is the space within a given perimeter. You should know the area of your garden, so you will know how much fertilizer or mulch to purchase for the given space.

Oftentimes a space will have an irregular shape. This lesson will introduce students to alternative methods for determining area and perimeter. The given spaces in this lesson will be leaves. You may choose to use leaves from the schoolyard or utilize edible plant leaves such as lettuce, kale, or basil to incorporate a discussion of plant parts we eat.

Procedure:

A.

1. Have students choose a medium sized leaf—edible or non-edible.

2. Students should trace an outline of their leaf on a piece of paper. A couple of small pieces of tape may be needed to hold the leaf in place for tracing.

3. Remove the leaf to reveal the outline.

4. Give each student a piece of yarn about one yard in length. Ask them to use the yarn to outline the perimeter of the leaf.

6. Cut the yarn at the point where it overlaps the starting point.

7. Remove yarn from the paper and lay it on a ruler, yardstick or tape measure to determine the perimeter of the leaf in inches.

8. Write the answer on the paper with the leaf outline. Example: perimeter = 14"

B.

1. Give students a one inch square of paper (different color) and have them glue it to the paper with the leaf outline.

2. Give students a small cup with dried beans.

3. Ask them to fill the square inch with the dried beans, laying them side by side.

4. Count the number of beans in the square inch and write that number on the

paper beside the square inch. Example: 18 beans = square inch

5. Estimate the number of beans needed to fill their leaf outline and write their

estimate on their paper.

6. Fill the leaf outline with dried beans.

7. Count the number of beans in the leaf outline. Write the total beside the leaf.

8. Divide the number of beans in the leaf outline by the number of beans in the

square inch to give the total number of square inches in the leaf.