



## FALL | Plants

### Harvest: How Much Did We Grow?

#### Summary:

At the end of every growing season, gardeners survey their garden to see what plants were most productive. Gardeners never stop learning from their gardens. They use the information from each harvest to help them plan for their next season.

#### Before Visiting the Garden:

**Gather:** Bathroom scale, calculator, tape measure, graph paper, bucket, and pencils

**Explore:** “Wall Drawing 340” by Sol Lewitt: Can you find any of the shapes from this wall drawing in our garden? Sol Lewitt created his art by writing out detailed instructions on how each piece should be drawn. Staff at the museum then followed the instructions; much like a master gardener might design a garden and then have helpers create the final product.

**Read:** *Whole-y Cow: Fractions are fun* by Taryn Souder, Illustrated by Tatjana Mai-Wyss

#### In the Garden:

Math is an important tool for gardeners. It might not look like a shovel but math is a tool to help gardeners decide what plants are the most productive and to learn which plants need the most space. They use that information to help plan where to plant and what to plant for next year’s garden.

#### Questions to Explore:

- Which plants are the largest? Smallest?
- Do the largest plants grow the most produce?
- Before doing any measuring, what plant do you think grew the most food?

#### Activity:

Harvesting

1. Choose two different types of plants to harvest from such as a pole beans and cherry tomatoes
2. Gather all the ripe produce off the plants
3. Weigh each batch of veggies (be sure to weigh your bucket empty so you can subtract the weight of the bucket from your produce total).
4. Measure the height of each plant, then measure the area around the base of the plant.
5. Grab your calculator, graph paper, and start making computations. Divide the weight of your tomatoes by the height of your plant. This fraction will tell you what percentage of the plant produces vegetables or the amount of tomatoes per inch. Do the same calculation with the weight and area of each plant.
6. Graph your findings on your paper. Which plant was the most productive? Some plants like squash take up lots of space so you have to decide as the gardener if you have enough room to accommodate that plant. Use your findings to start thinking about what you would like to plant next year.

#### Beyond the Garden | Fraction Field Trip:

Using the *Whole-Y Cow* book as inspiration, take a trip through the neighborhood to find fractions. Bring a camera and document your findings. Visit an office building and count the windows. What is the fraction of windows with the lights on? Explore six sidewalk squares. What is the fraction of squares that have cracks? Pretty soon you will see fractions everywhere!

#### Continue Exploring | Supporting Materials

Fraction Fun: <http://pbskids.org/cyberchase/find-it/fractions/>