



Math, science, geography, history, language...skip the textbooks for a few days and enjoy pumpkin school this October!

Several of these ideas come from my e-book, [Loving Living Math](#). The additional ideas were supplied by the wonderful parents in my co-op. Have fun!

- Measure the circumference by wrapping a tape measure around the largest part of the pumpkin.
- Calculate the diameter and radius using only the circumference measurement.

$$d = C \div 3.14 \quad (3.14 \text{ is otherwise known as } \pi)$$
$$r = d \div 2$$

- Count the vertical lines on the skin of the pumpkin. These numbers can be used to calculate:
 - Fractions – “1/2 of our pumpkin is equivalent to 6/12”, for instance
 - Percentages – “What percent of our pumpkin is equivalent to 2/12?”
 - Degrees – “If a full circle is 360°, how many degrees is 1/4 of our pumpkin?”
- Estimate the weight and use a scale to weigh the pumpkin.

- Complete simple algebra problems. For example, weigh three pumpkins on a scale together. Remove one pumpkin from the scale. Use an equation like $\text{Total Weight} - P = \text{New Weight}$.
- Measure heights and widths of the pumpkin and its stem.
- Measure the volume of the pumpkin using water displacement. (This is most ideal to do with a smaller pumpkin.) Place enough water in a container with measure marks so that the pumpkin can be immersed in the water. Before putting the pumpkin in the water, record the volume of water by using the measure on the side of the container. Submerge the pumpkin and write the new water volume measurement. To determine the volume of the pumpkin, simply subtract the smaller number from the larger.
- If you have several pumpkins or several children, make comparisons between the pumpkins like ordering them by height or weight, or even figuring averages on such data as height, weight, volume or number of seeds.
- Make graphs of any comparison data you collect.
- Have pumpkin races to determine such things as:
 - Which pumpkin makes the fewest revolutions to reach the finish line?
 - Which pumpkin goes farther when rolled down an incline?
 - Do varying inclines make a difference in how far a pumpkin rolls?
- If you can safely do so, drop pumpkins from a height to determine such things as:
 - Do larger pumpkins splatter farther than smaller pumpkins?
 - Do larger pumpkins fall faster than smaller pumpkins?
- Estimate the number of seeds, then count the seeds and compare your estimate.
- Examine and open the seeds. Measure and weigh them.
- Observe the difference between the inner and outer pumpkin shell.
- Measure the thickness of the shell.
- Look for signs to see where the pumpkin touched the ground and notice differences in the shell.
- Learn about the geography of where pumpkins grow in the world and complete a map.
- Learn about the history of pumpkins in America and write a report.
- Make your favorite pumpkin recipes.