

## CIRCUMFERENCE OF A PUMPKIN

**Episode 203:** Blossom and Snappy Go to the Farm, Part One  
**3<sup>rd</sup> Grade**

### Georgia Performance Standards

- M3N1a Identify place values from tenths through ten thousands
- M3N1b Understand the relative sizes of digits in place value notation (10 times, 100 times, 1/10 of a single digit whole number) and ways to represent them
- M3N2a Use the properties of addition and subtraction to compute and verify the results of computation
- M3N2b Use mental math and estimation strategies to add and subtract
- M3N2c Solve problems requiring addition and subtraction
- M3N3d Understand the effect on the product when multiplying by multiples of ten
- M3N5a Understand a decimal fraction and a common fraction represent parts of a whole
- M3N5c Understand a one place decimal fraction represents tenths
- M3N5e Understand the concept of addition and subtraction of decimal fractions and common fractions with like denominators
- M3N5f Model addition and subtraction of decimal fractions and common fractions
- M3M2b Measure to the nearest  $\frac{1}{4}$  inch,  $\frac{1}{2}$  inch and millimeter (mm) in addition to the previously learned inch, foot, yard, centimeter, and meter.
- M3M2c Estimate length and represent it using appropriate units
- M3M2d Compare one unit to another within a single system of measurement

### Objectives

- The students will describe/define the circumference of a pumpkin.
- The students will estimate the circumference of a pumpkin.
- The students will measure the circumference of the pumpkin in centimeters, but to the nearest millimeter (one tenth of a centimeter).
- The students will compare the estimated and actual circumferences of a pumpkin.
- The students will calculate the difference to the nearest tenth of a centimeter.
- The students will calculate the circumference in millimeters by using the measurement of the circumference in centimeters.
- The students will compare the circumference of the pumpkin in centimeters and millimeters.

### Materials

- TV/VCR or Computer/LCD Projector
- Video *Count On It!* 201
- Pumpkins (one for each child)

- String (a long enough piece for each student to wrap around their pumpkin)
- Pencils
- Data sheet (attached)
- Tape measures (enough for class)

## **Procedure**

### *Opening*

- Watch *Count On It!* 203 clip “Pumpkin Circumference” (VHS 6:24 – 10:18).
- Allow the students to observe and examine their pumpkins, sharing their findings.
- Discuss ways to measure a pumpkin.
- Introduce the word *circumference* and what it means.

### *Work time*

- Students estimate the circumference of their pumpkins (document on data sheet).
- Have students explore the circumference of their pumpkins with string.
- Students estimate the circumference of pumpkin using the string (document on data sheet).
- Students will measure the circumference of their pumpkins in centimeters, but to the nearest millimeter (they may use string and lay it on top of a flat tape measure, or they may use the tape measure around the pumpkin – this would be something to let them explore/choose on their own).
- You monitor that they start at the correct place on the tape measure, that they are pulling tight enough to get an accurate measure, etc.
- Students are to document their measurements on data sheet (ex. 19cm3mm).
- Ask, how many mm are there in a cm?
- Show how they would write their answer in cm only using the decimal point (19.3 cm) and that the place value for the 3 is tenths (explain tenths).
- Ask, how close was your estimate to your actual circumference?
- Students find the difference – make sure to remind students to line up their decimals when adding and subtracting.
- Now ask, if there are 10mm in every cm, then how many mm would the circumference of your pumpkin be?
- Students work to figure out the mm of their pumpkins’ circumferences, but not by measuring – they should figure it out mathematically (document on data sheet).
- Ask, what do you notice about the data you have? (19cm3mm, 19.3 cm, 193mm).

### *Closing*

- Have students write what the word circumference means on their data sheet.
- Choose several students to share their answers orally.

**Assessment**

- Teacher observation/documentation on student rubric used by your school/county during work time and closing (sample rubric can be found on our website) of estimating, measuring, multiplying by tens
- Data sheets