

Name: Sharon Hampton

Grade Level/Subject: 7th Mathematics

Topic: circumference, diameter, pi

Objectives:

- Standard 4 Measurement: The student will use measurement to solve problems in a variety of contexts.
  - 4.1b Apply formulas to solve problems involving perimeter (circumference) and area of polygons and circles.

Materials: Sir Cumference and the Dragon of Pi by Cindy Neuschwander  
Several round objects/tape measures/string

Introduction: To check to see how much my students may have already known, I asked them several questions over vocabulary.

- What is a diameter?
- What is circumference?
- Have you heard of pi?
- What does it mean?
- Where did it come from?

Instructional process: Read to the students Sir Cumference and the Dragon Pi by Cindy Neuschwander. Sir Cumference is the father, Lady Di of Ameter is the mother, and Radius is their son. Sir Cumference has been changed into a fire-breathing dragon. Can Radius solve the riddle and change his father back before time runs out?

The Circle's Measure  
Measure the middle and circle around  
Divide so a number can be found.  
Every circle, great and small----  
The number is the same for all.  
It's also the dose, so be clever,  
Or a dragon he will stay forever.

Grouped the students and had them measure first with a string just to develop the idea if they tripled the diameter it almost went around the object, but was a little short. Then they used a tape measure and told them to be as accurate as possible. They filled in a chart first with the objects circumference and then the object's diameter. To save time on the division we used calculators.

Closure: After each group had passed around and measured each object we compiled all groups' answers on a big chart to compare and contrast. We read the riddle

The Circle's Measure again. Then asked if we came up with the number to change the dragon back to Sir Cumference. Discussed the questions what is pi and where does it come from?

Assessment: The working in groups with the figures they came up with and just observing and listening to conversations as they worked allowed me to quickly have an idea of their understanding. Gave a few problems using the formulas  $C=2(\pi)r$  and  $C=(\pi)d$

Modifications/Accommodations: Have bigger circular objects to measure. In each group of three have each person measure each object to see if they agree within their own small group.

Reflection: Students loved something different. I've never read a math book to my class before. I believe it was a great tool for motivation and the students do know and understand the meaning of circumference, diameter, and pi. The number saved Radius's father from being a dragon was circumference divided by diameter or pi.