

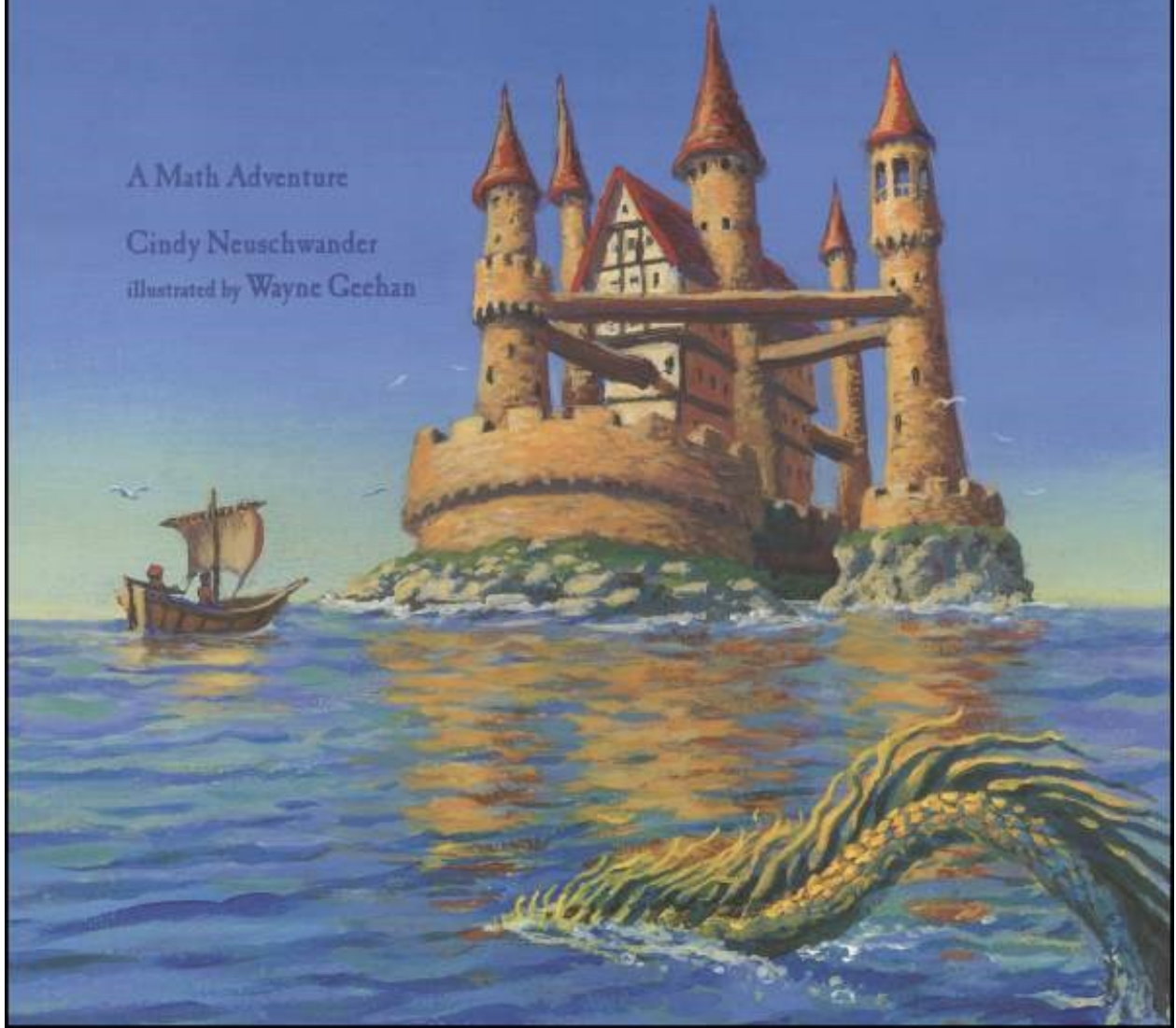
Sir Cumference

and the Isle of Immeter

A Math Adventure

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illustrated by Wayne Gechan



Sir Cumference

and the Isle of Immeter

Unit Study & Printables

Sir Cumference and the Isle of Immeter

Social Studies

Note: See Social Studies Lessons under **General Lessons to be Used Throughout Unit**

Science

Citrus Fruits-

An orange is used in the book to demonstrate how to find the area of a circle. This would be a good time to talk about citrus fruits. Citrus fruits come from a type of flowering plants that originally came from Southeast Asia. The plants are normally shrubs or small trees. The fruit is actually a specialized type of berry. Can your child list the names of some citrus fruits? Here is a list: orange, lemon, lime, grapefruit, tangerines, kumquats, tangelos, ugli fruit (cross between a tangerine and a grapefruit), etc. Take this opportunity to go to the grocery store and see how many types of citrus fruits you can find? Buy some and bring them home to enjoy! Can your child name and find the parts of the fruit (rind or peel, segments, oil, juice)?

Language Arts

Myths-

On page 6 Radius mentions that the sea serpent is probably just a myth. What is a myth? It is a story that is not based on something that is true. Many myths are stories about different gods. If you feel comfortable, introduce your child to some of the Greek myths, such as Pandora's box, Heracles, Jason and the Golden Fleece or Odysseus. This would be a good time to talk about the difference between the myths surrounding the Greek gods and the stories of the God of the Bible. The former would be considered myths whereas the latter would be considered history.

Math

Perimeter-

Perimeter is the length around any shape. In the game *Inners and Edges*, the edges were the perimeter. You find perimeter of a straight-sided shape by adding up the length of each side. To remember what perimeter is just think of it as measuring the "rim"...the word rim is in the word perimeter.

[Charlotte Williams](#) created this fun mnemonic game for perimeter.

Peri's Meter (or Measure from the Greek *metron*)

Peri is a lowly foot soldier whose job is to guard the castle walls from attack. He is working the graveyard shift so it is pitch black, not even a torch to light his way; any kind of light would let the enemies know where he was so they could attack from the opposite side. His shift is over only when he has gone all the way around the castle. The only way he can know if he has gone all the way around is by counting his steps and adding them up. "Pssssssss! Peri, where are you?" his replacement calls.

Perimeter = **s+s+s+s+s+s+s...**

Perimeter game board found at the end of this file.

Area-

Area is the amount of space inside a shape. In the game *Inners and Edges*, the inners referred to the area. You can find the area of a rectangle by multiplying its length and its width.

[Charlotte Williams](#) created this fun mnemonic game for area.

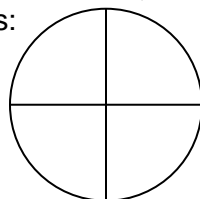
Arthur's Area

King Arthur needs to know the area of each room in his castle. His floors are terrible! (It was probably white carpet put in by the previous owner who was a bachelor king and who didn't know better! ...ahem...I digress) As the story goes, the royal donkey, Rectangle, was accidentally let loose in the castle and he ruined the carpet in every room. King Arthur needs to know how much flooring to buy for each room on each floor of the castle so we have to figure out the area for Arthur. Now, how do we remember the formula? We know what the Biblical name for a donkey is (we also know not to say it in public) but if we need to remember how to figure out the area of a Rectangle, just remember the royal donkey named Rectangle who ruined poor King Arthur's floors. The **Area= Side x Side**.

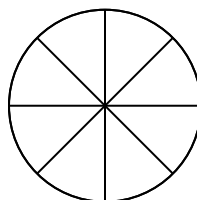
Area game board found at the end of this file.

Area of a Circle-

The instructions for finding the area of a circle are on page 17. There is also more information on page 32. Basically the area of a circle can be found without pi by multiplying $\frac{1}{2}$ the circumference to the radius. Have your child draw a large circle on a piece of paper using a compass or dinner plate. Have him/her measure $\frac{1}{2}$ of the circumference by using a string to measure it and then laying that piece of string against a ruler to get the measurement. Then have him measure the radius. Have him multiply the radius times $\frac{1}{2}$ of the circumference. Have him write down his answer. Now have him with a pencil and ruler divide the circle into 16 equal parts. To do this, have him draw the diameter and then another diameter so that he gets 4 equal parts like this:



Then have him draw diameters to divide the 4 parts into 8 equal parts.



Do this one more time so that he gets 16 equal parts. Have him cut out the circle and the wedges. Have him place the wedges together as shown on the bottom of page 17. Then measure the long and short side of the rectangle. Multiply the measurements together. Is the number close to the radius times $\frac{1}{2}$ the circumference? It should be!

Grid Game- [Here](#) is a game similar to the *Inners and Edges* game in the book. See page four of this document.

Art

Mosaics-

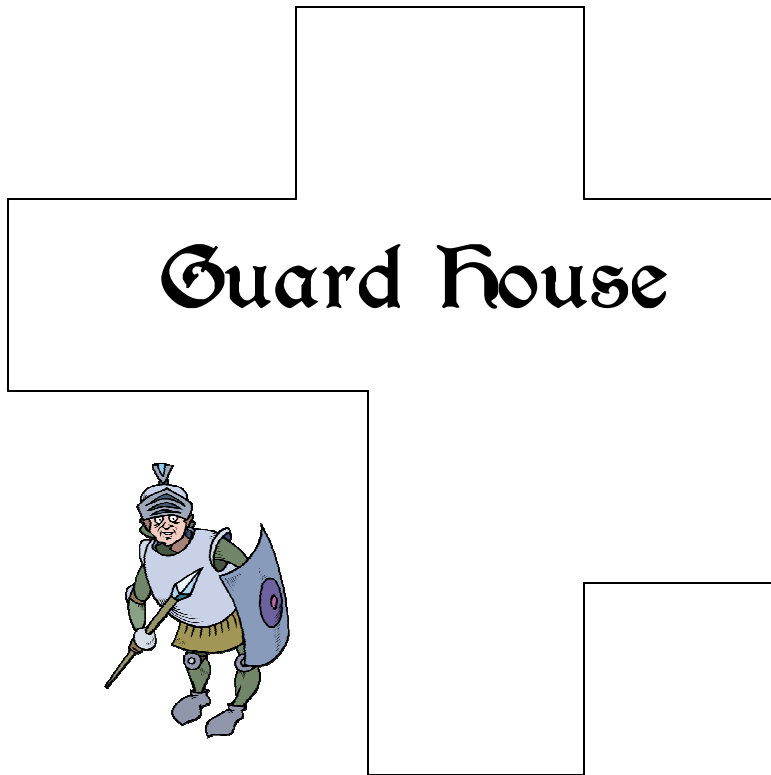
There are some simple mosaics on the floors in the book. Mosaic is the art form in which pictures are created using small pieces of colored glass, stone or pottery. If you can find a copy of the book Saint Valentine by Robert Sabuda read it. All the illustrations are done in mosaics. Have your child create a mosaic. Tear or cut up construction paper in different colors and have her create a picture with them by gluing the colored pieces onto a white sheet of paper.

Peri's Meter



Measure how far Sir Peri has to march until his midnight shift is done.

$$\text{Perimeter} = S + S + S + S$$



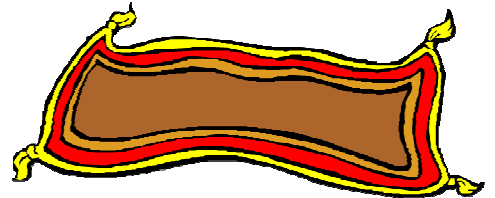
Main Castle

King Arthur's Area

The royal donkey, Rectangle, got loose in the castle and ruined the carpet! Help King Arthur replace the carpet by finding the area of each room.

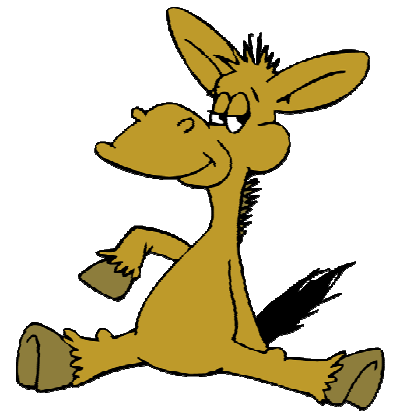


$$\text{Area of Rectangle} = S \times S$$



Second
Floor

First
Floor



Attic

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