**Grade 9 Math News**

**Unit 1**

Square Roots and Surface Area

**Ways Parents Can Help**

1. Ask your child to show you what he/she is learning in math.

2. Make your child aware

of the need to apply

understanding of

square roots and surface area

3. Help your child to

learn the words to

know in this unit.

4. Research together more real-world examples of where we encounter square roots and surface area.

**Math Links and Resources**

Square Roots:

<http://teachers.henrico.k12.va.us/math/HCPSAlgebra1/module11-1.html>

Surface Area:

<http://staff.argyll.epsb.ca/jreed/math8/strand3/3208.htm>

**Important Vocabulary**

* Perfect square
* Non-perfect square
* Composite object

**Unit 1: What Students Should Know and Be Able To Do**

* Determine the square roots of fractions and decimals that are perfect squares.
* Approximate the square roots of fractions and decimals that are non-perfect squares.
* Determine the surface areas of composite 3-D objects to solve problems.

**Unit Problem**

Students are given the opportunity to apply their skill and understanding to a real life problem – designing a play structure for young children. Students will have a budget of $800 and the design can only include cylinders, rectangular prisms, and triangular prisms.

**Why It’s Important**

Real world measures are often expressed as fractions or decimals. We use the square roots of these measures when we work with formulas such as the Pythagorean Theorem (Prize for the first parent who remembers this formula and emails it to me!)

An understanding of surface area allows us to solve practical problems such as calculating: amount of wrapping paper needed; the number of cans of paint to paint a room; and the amount of siding to cover a building.

**Goals**

In this unit, your child will revisit previous work with squares and square roots. He will extend his understanding of square roots to include the square roots of positive rational numbers.

This will be demonstrated by developing and describing strategies for determining whether a rational number is a perfect square, the square of a rational number that is a perfect square and using benchmarks to estimate the square of a rational number that is not a perfect square.

He will determine the surface area of composite 3-d objects.

As much as possible these goals will be attained using real-world situations. We are keeping it real in math!

