

Dear parents/caregivers

Your child has been provided with a CD containing a number of Geometer's Sketchpad activities designed to help develop understanding of important ideas in mathematics. With your support and encouragement it is hoped that she/he will enjoy regular use of these activities to support mathematical learning.

To begin using the activities insert the CD into the disk drive of your computer. You will find links to Installers and Parent Resources. You will need to install Geometer's Sketchpad before using the Sketches tab to explore activities related to concepts that your child is studying. You might like to take a moment to view the "Reading a Sketch tutorial", which requires QuickTime (available from the Installers tab).

Your role, in support of your child, is not to "teach the concept"; rather, it is to encourage students to explore, to explain their thinking, to justify their decisions, and to make sense of the mathematics. Research says that students need to grapple with ideas and learn from their own mistakes in order to develop deep understanding. Use of this CD at home provides a no-risk opportunity for students to take the time they need to explore the mathematics. Technology allows students to experiment, adjust, improve and confirm their understanding.

An Outline of Some of the GSP Sketches

Integers

Red and blue counters provide visual representation for operations with integers. Students are encouraged to attach meaning to the processes rather than memorizing rules without understanding. In fact, research shows that students who try to learn rules before they understand the processes may not be able to go back later to develop this understanding.

Circles and Pi

Based on their previous experiences with perimeter and area of two-dimensional shapes, students investigate the meaning of Pi and, through exploration, develop formulas for circumference and area of a circle.

Dilatations: What a Stretch!

Students examine dilatations (enlargements or reductions) to discover the properties. They will have opportunities to apply their understanding in real-life investigations and in the creation of unique designs.

Solving Equations by Systematic Trial

Students are encouraged to extend "guessing and checking" to using systematic trials to solve linear equations.

Volume – Just Figure It Out

Students determine, through investigation, that the relationship among the height, the area of the base, and the volume of right prisms is: $(\text{Area of base})(\text{height}) = \text{volume}$

Angle Sum Conjecture

Students have opportunities to explore visual representations as well as physical models to recognize that the sum of the angles in triangles is constant.

We hope that your experience with these resources will be positive and result in your child's greater confidence in Mathematics.