

Three-Week Geometry Course: Measurement

Session 1: Perimeter and Area Concepts

- Overview of the Course and importance in the classroom
- Measurement
 - Units
 - Using a Ruler
 - Using a Protractor
- Linear Measurement:
 - Perimeter as Concept -
 - Variations as new skills are learned
 - Circumference
 - Discovering pi Activity
- Area as Concept
 - Area on Dot Paper Activity

Session 2: Area

- From the Rectangle to the Circle
 - The Yellow Material
 - Rectangle
 - Parallelogram
 - Triangles
 - Trapezoid
 - Kites and Rhombi
 - Regular Polygons
 - Circles

Session 3: The Pythagorean Theorem

- Relating to Area - Historical Discovery
- Montessori Material and Euclid
- Applications and Algebra

Session 4: Solid Geometry Measurement

- Naming of Solids
- Surface Area of Prisms and Pyramids
- Volume of Prisms and Pyramids
- Volume and Surface Area of a Sphere

Session 5: Similarity

- Ratio and Proportion
- Three cases with Triangles

- Similarity in One, Two and Three Dimensions
 - On Being the Right Size
- Towards Trigonometry

Session 6:

- Unfinished Business, Recap, Questions and Extensions