

Syllabus For Geometry: Logic and Constructions Course

Tuesday & Thursday 8:00am-9:00am EST June 9- June 25

Office Hours: Thursday 2:00 pm EST

Readings: Ch. 1 and Ch 2 from *Teaching Geometry to the Adolescent: A Montessori Approach*

Session 1

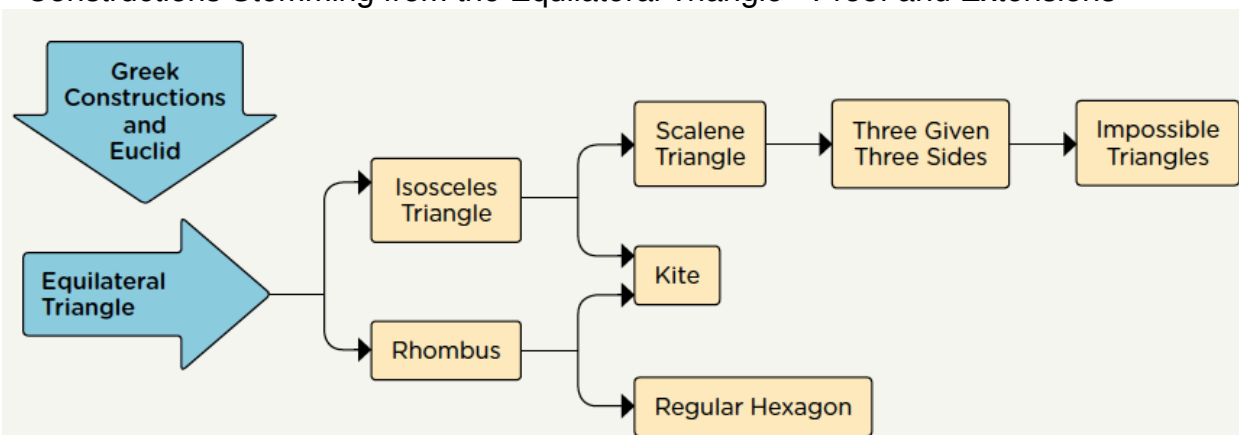
- Introduction to the Flow of Work
- Why Logic is Important
- Formal Mathematics from Greek Philosophy
 - Zeno's Paradoxes
 - Other Questions
- Logic Puzzles and Games - Supporting to Deductive Reasoning and Proof
 - Guess My Number
 - Color-Square Game
 - Other Games

Session 2

- Checkerboard Proof
- MU Puzzle and Axiomatic Systems
- Euclid's Axiomatic Geometry
 - Definitions
 - Common Notions
 - Postulates

Session 3

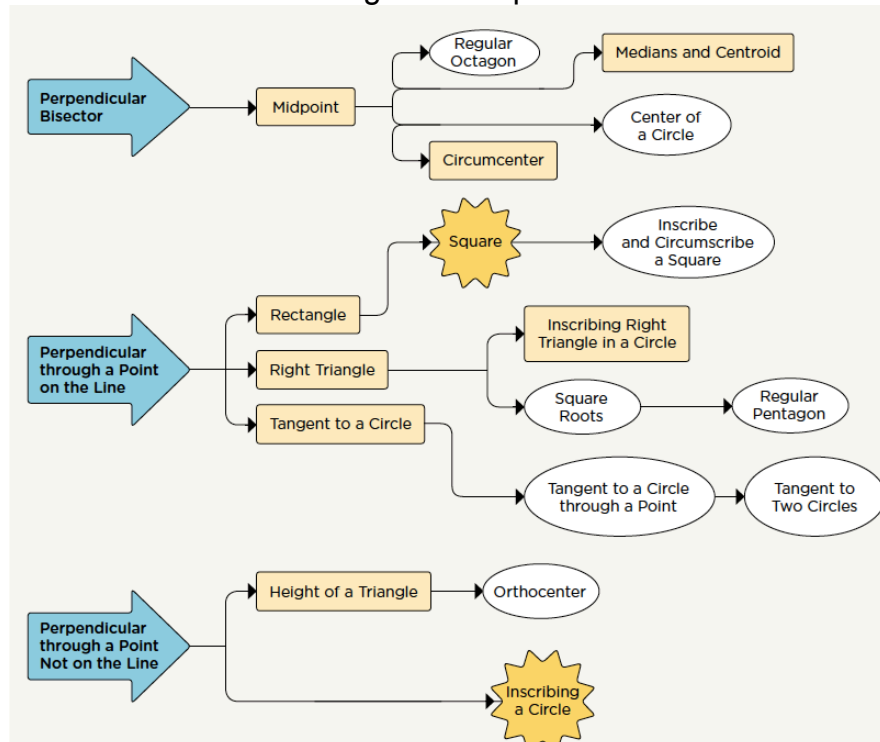
- Constructions Stemming from the Equilateral Triangle - Proof and Extensions



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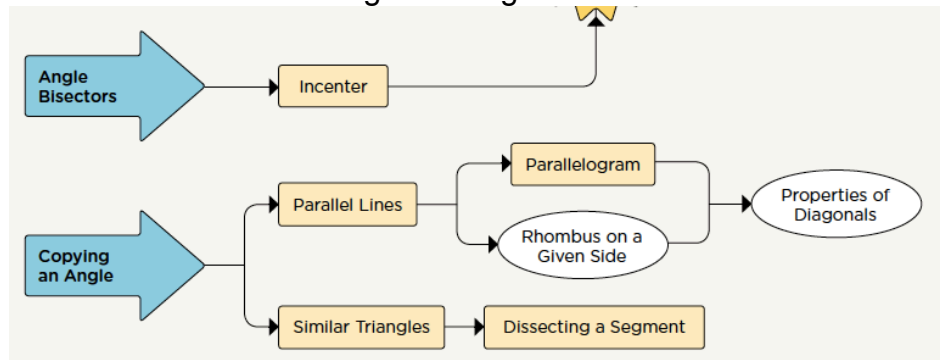
Session 4

- Constructions Stemming from Perpendicular Lines - Proof and Extensions



Session 5

- Constructions Stemming from Angles- Proof and Extensions



Session 6

- Projects
- Further Work
- Review of the Flow of Work and Implementation Strategies