

# The Mythology and Mystery of the Golden Ratio

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## BACKGROUND INFORMATION

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**Subject(s):** Mathematics

**Topic or Unit of Study:** The magic of phi and how its applied to the real world

**Grade/Level:** 9-10

## STANDARDS & ASSESSMENT

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### Standards:

#### **NJ- New Jersey Core Curriculum Content Standards**

- **Subject :** Mathematics (Adopted July 2, 2002)
  - **Standard 4.2:** (GEOMETRY AND MEASUREMENT) ALL STUDENTS WILL DEVELOP SPATIAL SENSE AND THE ABILITY TO USE GEOMETRIC PROPERTIES, RELATIONSHIPS, AND MEASUREMENT TO MODEL, DESCRIBE AND ANALYZE PHENOMENA.
    - **Range/Grade Level 0:** By the end of Grade 12
      - **Strand A:** Geometric Properties
        - **Cumulative Progress Indicator 1:** Use geometric models to represent real-world situations and objects and to solve problems using those models (e.g., use Pythagorean Theorem to decide whether an object can fit through a doorway).
        - **Cumulative Progress Indicator :** 5. Perform basic geometric constructions using a variety of methods (e.g., straightedge and compass, patty/tracing paper, or technology).
          - Perpendicular bisector of a line segment
          - Bisector of an angle
          - Perpendicular or parallel lines

**Assessment Plan:** At the end of the presentation ask if golden ration is real or myth

**Assessment/Rubrics:**

## IMPLEMENTATION

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**Goal(s):** Students will be able to define Phi and its appliatcaions in creating geometrical shapes

**Objective:** Students will be able to understand the formal defination of the golden ratio. As well as its use to create the thre "golden" geometrial shapes. Then be able to identify these geometrical shapes in at least three peices of art or ariciture.

**Purpose:** To see real world applications of mathematics

**Procedure:** History  
Geometry: Construction, properties  
Other Areas of Math: formuals  
Art

**Special Needs  
Component  
[modification(s)]:**

**Sample Student  
Products:**

**Model(s) of  
Instruction:** Direct instruction

**Time Allotment:** 1 class period. 20 Min. per class.

**Author's  
Reflection(s)/Critical  
Analysis:**

## **MATERIALS AND RESOURCES**

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**Instructional  
Materials:**

**Links**

1. [Golden Ratio](#)

**Resources:**

**Attachments**

1. [Slide Show](#)