

Why: Intro

Math is everywhere in the world, including art, architecture, music, and nature.

Learn about one special series of numbers, Fibonacci numbers and how and where you can find it.

What: Fibonacci History/Overview

- Who Fibonacci was
- How/why he discovered this series of numbers

What: Fibonacci Series

- How to calculate the series

How: Fibonacci Series Exercise

- Using mental math fill in the blanks to calculate the first 13 numbers in the series

How: Fibonacci Series in the World

- Find numbers from the Fibonacci sequence on a plant or flower
- Find numbers from the Fibonacci sequence on a piece of art or architecture

What: Golden Ratio

- What is a ratio
- Where do you see ratios in the world
- How to calculate the golden ratio (phi)

How: Build a Golden Rectangle

- Start with a line of a certain length and multiply the length by phi (using online calculator) to create a new line
- Duplicate both lines
- Use the four lines to build a golden rectangle (drag and drop)

How: Golden Rectangles in the World

- Find golden rectangles in art/ architecture

What: Golden Spiral Demo

- Watch a demonstration of the procedure of building a golden spiral using rectangles the size of the fibonacci series

What: Golden Spiral in the World

- Look at photos of things in nature with golden spirals

Assessment

Questions addressing each learning objective

If: Fibonacci Resources

- List of online resources for learning more about Fibonacci numbers