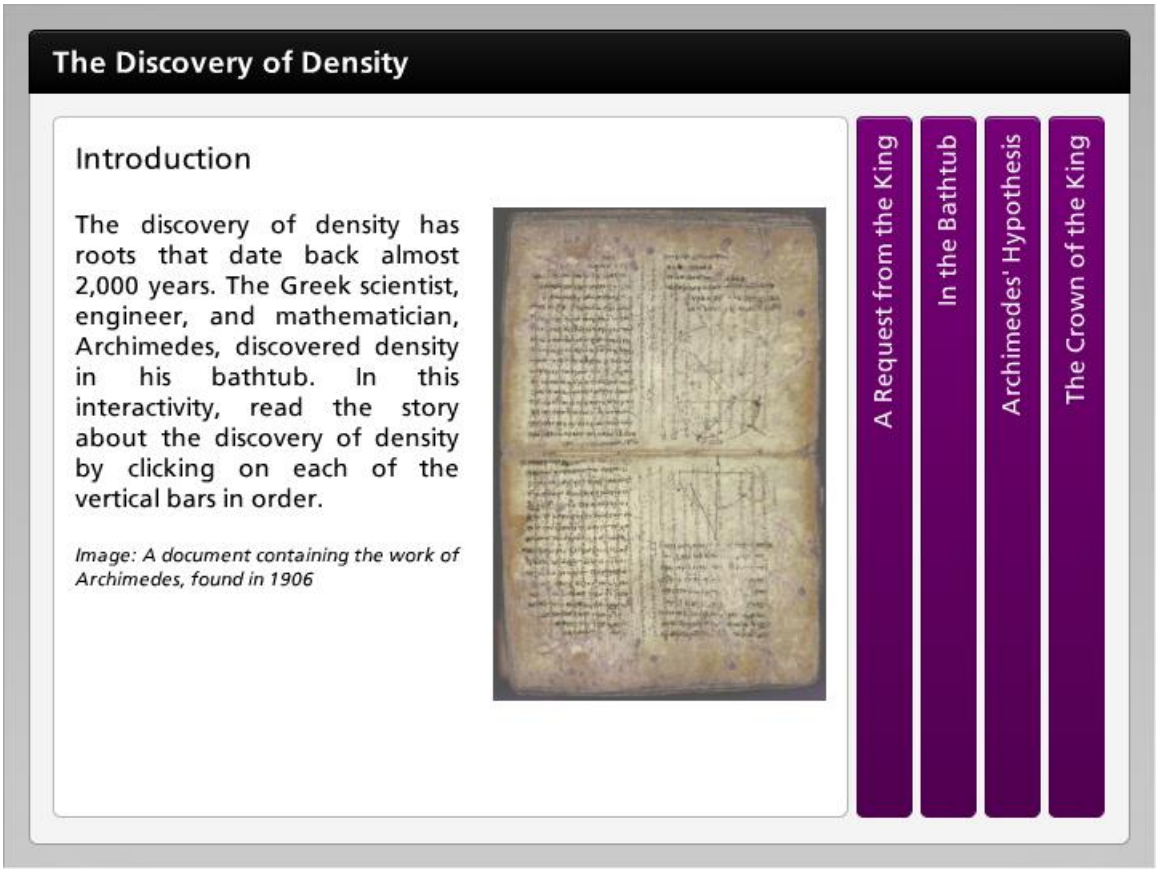
Module 1: What is Chemistry?
Topic 3 Content: The Discovery of Density Presentation Notes

Introduction



The discovery of density has roots that date back almost 2,000 years. The Greek scientist, engineer, and mathematician, Archimedes, discovered density in his bathtub. In this interactivity, read the story about the discovery of density by clicking on each of the vertical bars in order.

Image: A document containing the work of Archimedes, found in 1906

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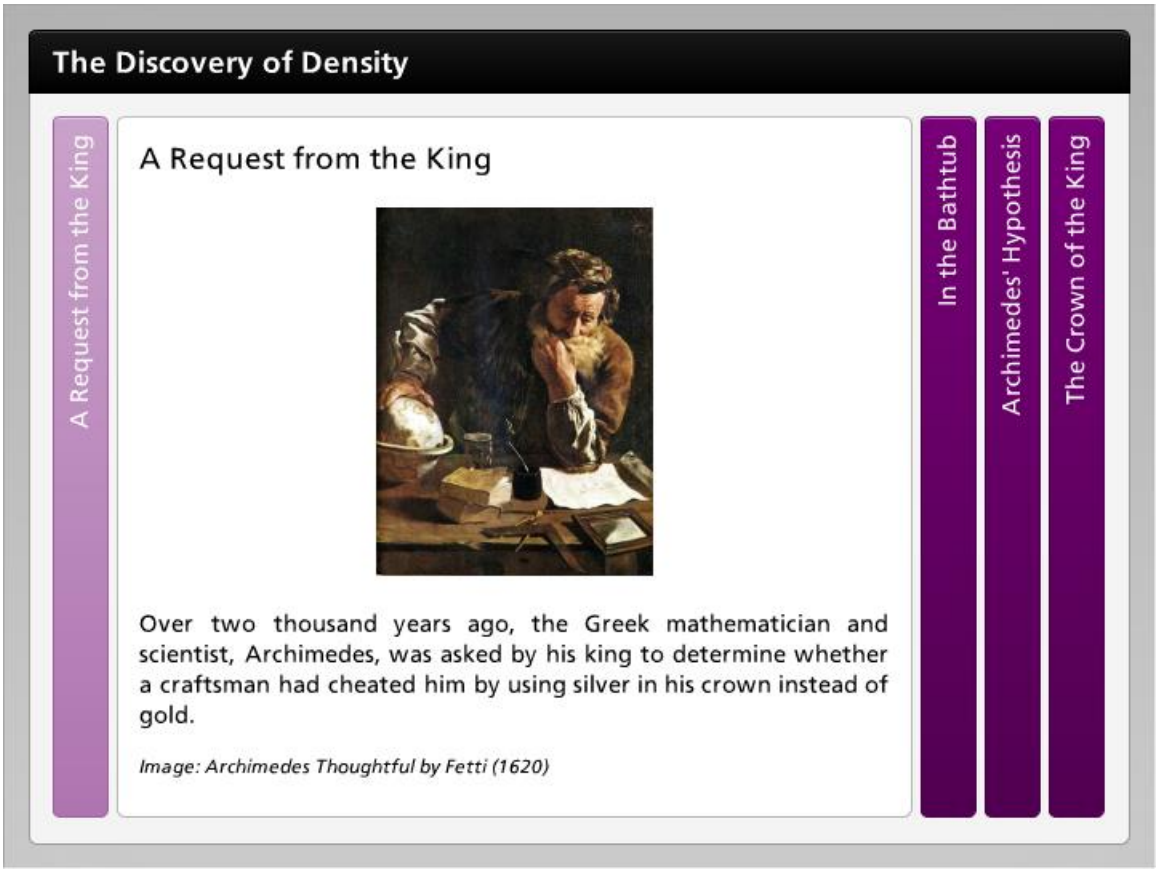
A Request from the King



Over two thousand years ago, the Greek mathematician and scientist, Archimedes, was asked by his king to determine whether a craftsman had cheated him by using silver in his crown instead of gold.

Image: Archimedes Thoughtful by Fetti (1620)

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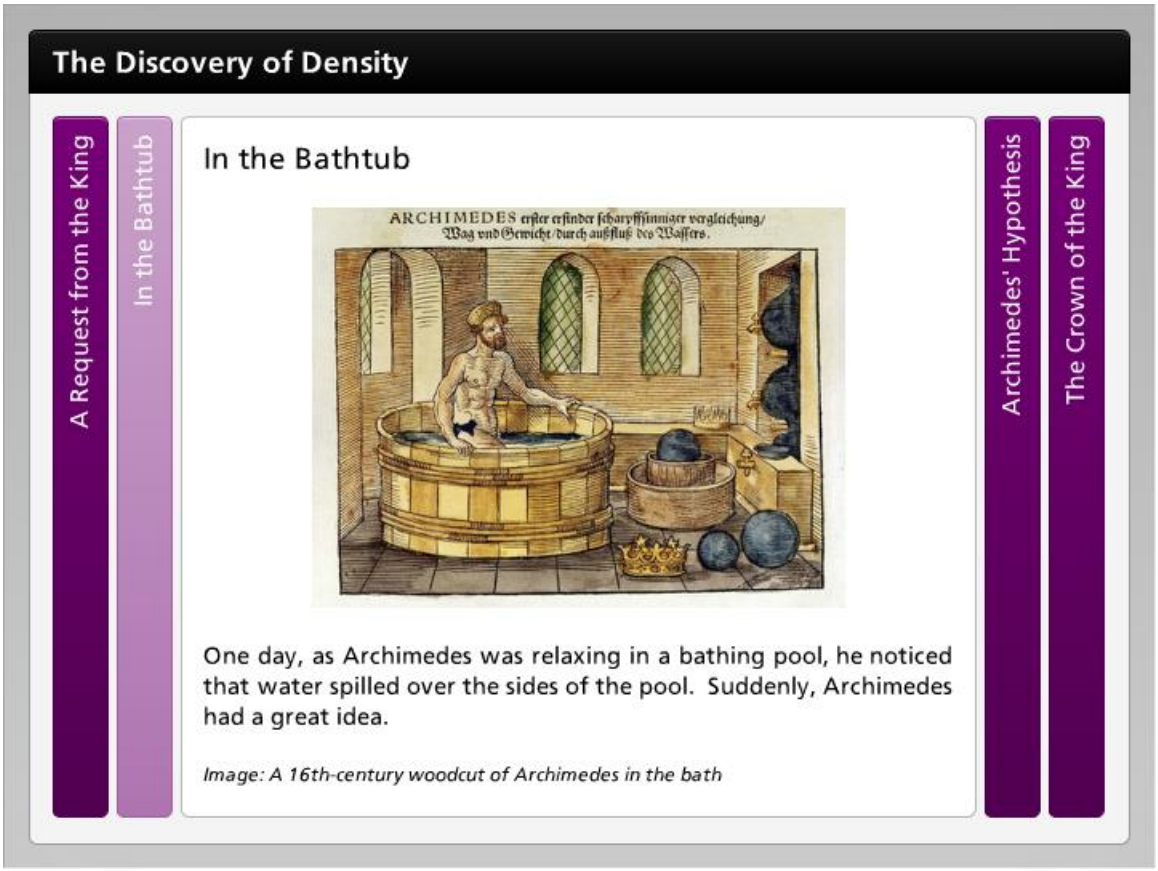
In the Bathtub



One day, as Archimedes was relaxing in a bathing pool, he noticed that water spilled over the sides of the pool. Suddenly, Archimedes had a great idea.

Image: A 16th-century woodcut of Archimedes in the bath

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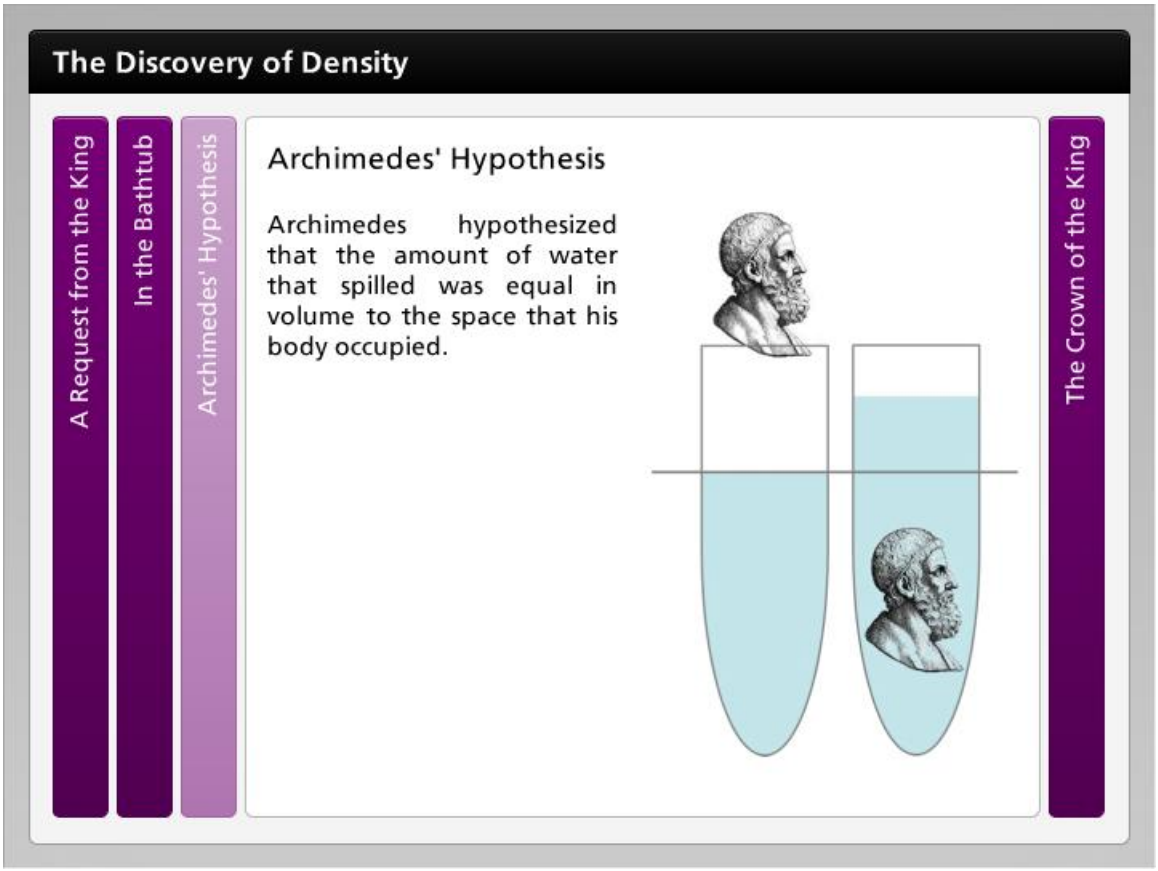
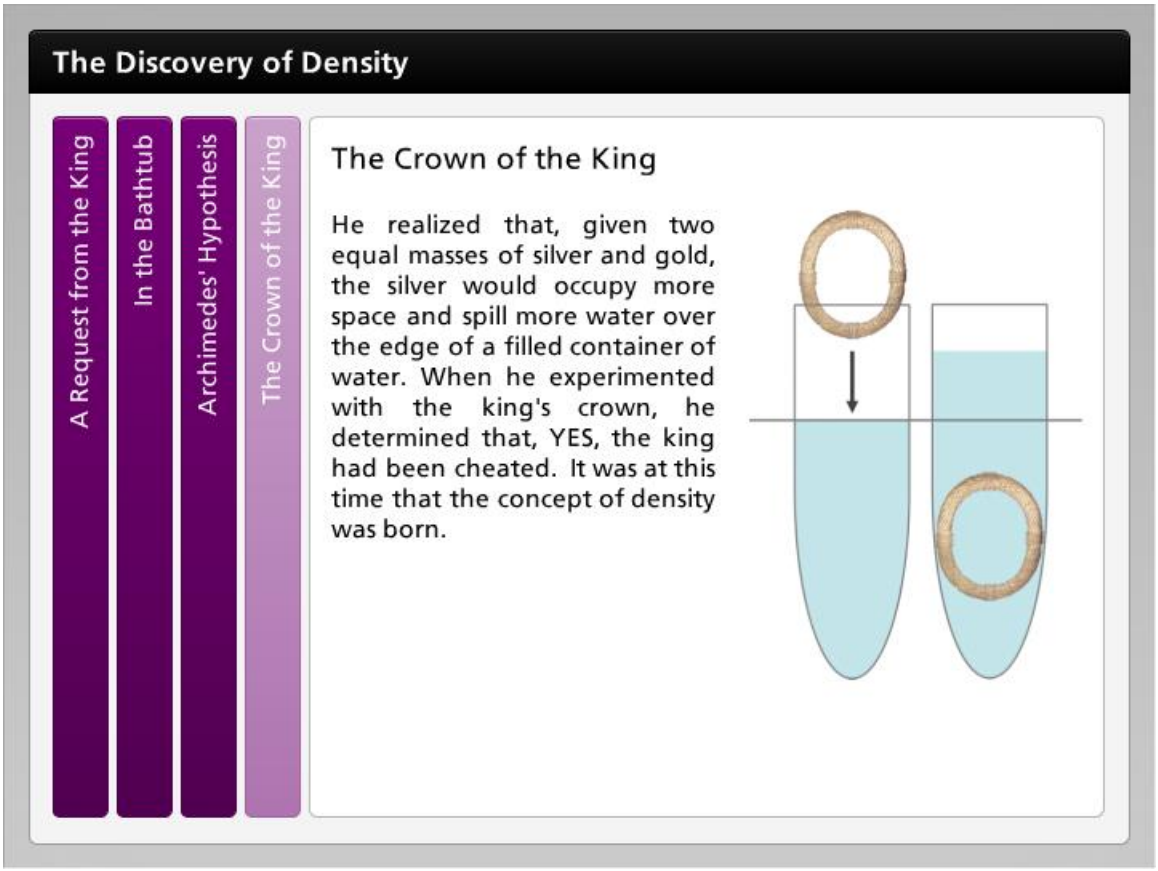
Archimedes' Hypothesis



Archimedes hypothesized that the amount of water that spilled was equal in volume to the space that his body occupied.

The Crown of the King



He realized that, given two equal masses of silver and gold, the silver would occupy more space and spill more water over the edge of a filled container of water. When he experimented with the king's crown, he determined that, YES, the king had been cheated. It was at this time that the concept of density was born.