Objective

By the end of this lesson, the student will understand the basic concepts of Archimedes' contributions to science and mathematics, as well as how his discoveries relate to everyday life. The student will also practice reading, counting, and problem-solving through engaging activities.

Materials and Prep

- Paper for drawing and writing
- Colored pencils or crayons
- A bowl of water (for the water displacement activity)
- Small objects to test in water (like a toy, a spoon, or a small rock)
- Timer or clock (to measure time in activities)

Before the lesson, it’s helpful to read "The Door of Science" by Jeanne Bendick to familiarize the student with Archimedes and his ideas. Prepare the water activity by filling a bowl with water and gathering small objects to use.

Activities

- **Story Time:**

  Read a chapter from "The Door of Science" together. Discuss what Archimedes did and why he is important. Ask the student questions about the story to encourage understanding.

- **Water Displacement Experiment:**

  Using the bowl of water, the student will drop different objects into the water to see how much water they displace. Discuss why some objects float and others sink, relating it to Archimedes' principle.

- **Archimedes’ Shapes:**

  Have the student draw different shapes that Archimedes might have studied, like circles, triangles, and rectangles. Encourage them to color the shapes and talk about how we can measure them.

- **Counting with Archimedes:**

  Create a simple counting game using the objects from the water experiment. Ask the student to count how many objects sink and how many float, reinforcing basic math skills.

Talking Points

- "Do you know who Archimedes was? He was a very smart man who loved to learn about shapes and how things work!"
- "When we drop something in water, it can push the water out of the way. This is called displacement! Can you see how much water moves when we drop an object?"
- "Archimedes discovered that some things float and some things sink. Why do you think that happens?"
- "Shapes are everywhere! Can you think of any shapes you see around us? Let's draw some of them!"
- "Counting is fun! How many things do we have that float? How many sink? Let's count them together!"

- "Learning about science is like being a detective! We ask questions and find answers just like Archimedes did!"