

## INTERNATIONAL YEAR OF ASTRONOMY 2009 GALILEO ACTIVITY

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### LIQUID DENSITY

From *Galileo for Kids: His Life and Ideas* by Richard Panchyk (Chicago Review Press, 2005). There is extensive background information and many more activities in this book recommended by the National Science Teachers Association (NSTA).

#### Background

Water (a liquid) is denser than air (a gas). If you weigh 1 cubic inch of air, it would weigh less than 1 cubic inch of water. That is why when you pour water into a cup, it remains on the bottom, below the air. But all liquids are not the same density. This is the principle that Galileo applied to his thermometer.

#### Materials

- ½ cup water
- ½ cup cooking oil
- ½ cup pancake syrup
- glass measuring container
- drinking glass

#### Activity

What do you think will happen when you put these three liquids into one container? Which will be on top? Pour the cooking oil into a glass. Now, pour the water into the same glass. Observe what happens; the oil rises to the top. Now, pour the maple syrup into the glass. Where does the syrup wind up? Which one do you think is the densest of the three liquids?

IYA2009 is modern astronomy's quadricentennial and an international celebration of numerous astronomical and scientific milestones. It marks the 400<sup>th</sup> anniversary of Galileo's first use of a telescope to study the skies and Kepler's publication of *Astronomia Nova*.