

## Project Summary: Layering Liquids to Assess Density

### Project Title (Driving Question)

*How can we layer different liquids without them mixing, and what does this tell us about their density?*

### Grade Level

Elementary School (3rd - 5th grade)

### Project Overview

This project explores the concept of density by having students conduct a hands-on experiment to layer liquids without mixing. It is aligned with NGSS standards and Common Core, and includes rubrics to assess student understanding and performance.

### Project Sections

- **General Guidelines:** Provides a step-by-step approach to help students understand density through direct experimentation and teamwork.
- **Brainstorming:** Encourages creative ideas on how to predict and test the order in which liquids will layer based on their densities.
- **Project Planning and Designing:** Guides students to set goals, create a task list, and plan the experiment, ensuring all steps are well organized.
- **Project Execution:** Supports students in conducting the experiment, assigning roles, and collaborating as they layer liquids without mixing.
- **Experimenting:** Details the materials and steps required to successfully layer different liquids and observe how density impacts their behavior.
- **Presentation:** Offers options like slide decks, posters, or videos for students to present their findings on density in a clear and engaging way.

### Why Use This Project?

This project makes the abstract concept of density tangible and accessible for young students through hands-on experimentation. It promotes scientific inquiry, critical thinking, and collaboration, helping students develop observation, prediction, and analysis skills. Teachers can use this lesson to meet science standards, foster teamwork, and encourage curiosity about the physical world, all while using a structured and easy-to-follow format.