Marietta City Schools

District Unit Planner

Kindergarten

Theme	*Unit 1 Physical Attributes*	**Unit duration**	*7 Weeks*

Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?*

GaDoE Standards/3D Science Elements

SKP1. Obtain, evaluate, and communicate information to describe objects in terms of the materials they are made of and their physical attributes.
a. Ask questions to compare and sort objects made of different materials. (Common materials include clay, cloth, plastic, wood, paper, and metal.)
b. Use senses and science tools to classify common objects, such as buttons or swatches of cloth, according to their physical attributes (color, size, shape, weight, and texture).
c. Plan and carry out an investigation to predict and observe whether objects, based on their physical attributes, will sink or float.

Unit Objectives:
Students will explore the properties of different objects using their senses.
Students will compare how the materials are similar and how they are different.
Students will group objects based on their attributes and explain their reasoning.
Students will test objects for buoyancy and apply their knowledge to solve a problem.

Unit Phenomena: Aircraft Carrier How can an object this large float? Record student thinking on a chart. Refer to the chart throughout the unit.

Page Keeley Probes: These probes can be used as phenomena. They are intended to elicit student understanding about science concepts. Starting a unit or lesson with a probe will help you uncover misconceptions and see what students already know about a topic. Using a probe at the beginning of a lesson and then at the end of the lesson serve the purposes of pretesting and then formatively evaluating student thinking. Below is a list of probes from Page Keeley's book Uncovering Student Ideas in Primary Science, that are appropriate for this unit. This book has been purchased for your grade level by the Office of Academic Achievement and can be found in your media center.
• Sink or Float / • Watermelon and Grape

Science & Engineering Practices:	Disciplinary Core Ideas:	Crosscutting Concepts:
• Asking questions and defining problems • Planning and carrying out investigation • Constructing explanations and designing solutions • Obtaining, evaluating, and communicating	• Properties of Matter • Physical Attributes • Floating and Sinking	• Patterns • Scale, Proportion, and Quantity

Misconceptions: Students may believe that boats float due to their engines or motors; in reality, the shape and weight distribution of the boat allows for it to float. Boats will float even when engines are not functional.

Math/ELA Connections/STEM Connections
ELAGSEKRL1 With prompting and support, ask and answer questions about key details in a text.
ELAGSEKRL4 With prompting and support, ask and answer questions about unknown words in a text.
ELAGSEKSL3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
MGSEK.MD.1 Describe several measurable attributes of an object, such as length or weight. For example, a student may describe a shoe as, “This shoe is heavy! It is also really long!”
MGSEK.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.
MGSEK.G.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length). MGSEK.G.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
Invent a Backscratcher
Everyday Materials Lesson

Discovery Education Science Techbook Resources: (*You will need to be logged into Discovery Education using your Google credentials to access these resources*) You will find center activities on the **Engage** page of each Techbook unit.

Sink or Float
Comparing Different Types of Matter Moving Things
Sink & Float with movement
Sink & Float song with highlighted lyrics

Hands-on Activities
Sort buttons by color, shape, size, material, number of holes, etc.
Use a mystery bag with various materials. Have students describe objects by using their senses.
Use a pipette to drop water on wood, metal, clay, and cloth. Have students observe the water's movement.
Read the Three Little Pigs- provide hay, sticks, and a brick. Allow students to blow hay, feel the sticks, weigh them all and analyze why the brick house worked the best.
Experiment with a variety of materials to see which sink, which float, and why.

Sort soil by color, by reaction to water, by texture and by particle size.
Sort rocks by color, texture, size, luster, and ability to float or sink.

Essential Questions

Factual—

What are the 5 senses?
What are the parts of the body associated with senses?
What type of objects float? Sink?

Inferential—

What attributes do objects have?
How can we use our senses to help us describe objects?
Can you predict when an object will float or sink?

Critical Thinking-

Why would you need to sort items?

Tier II Words- High Frequency Multiple Meaning	**Tier III Words-** Subject/ Content Related Words
sort, color, size, shape, water, air, touch, taste, smell, sight, hear	float, soil, rocks, sink, texture, weight

Assessments

SIOP Floating and Sinking

*Teachers can access the anticipation guides via the grade level Schoology Course.

Teacher Resources These resources are intended to support teachers with background information and planning for instruction

The following Knowledge-Based Unit contains instructional read alouds designed to build knowledge around concepts associated with this planner. Highlighted lessons provide direct text-based support for the expectations of the associated SS or Sci standards and could be used to deepen student understanding/application of those standards. The remaining lessons build similar knowledge but do not directly relate to the content standards.

15-Day Plan: Using Our Senses to Investigate Physical Properties

GaDOE Inspire Science Kindergarten: Unit 1: Physical Attributes

Objective or Content	Learning Experiences	Differentiation Considerations
CLE 1: SKP1. Obtain, evaluate, and communicate information to describe objects in terms of the materials they are made of and their physical attributes.	Classifying Materials Georgia DOE Instructional Unit - In this 5E instructional segment, students will evaluate and classify materials based on their attributes and apply their knowledge of these materials to build a model of a cargo ship.	Student Choice Performance Tasks Reflection and Goal Setting Learning Stations Choice Boards Formative Probes Science Journaling Multi-sensory activities Assistive Technology Flexible Grouping Multiple Means of Representation
CLE 2: SKP1. Obtain, evaluate, and communicate information to describe objects in terms of the materials they are made of and their physical attributes.	Sort It Out! Children explore grouping and sorting in this lesson plan featuring hands-on activities and a video excerpt from Curious George.	

Recommended High Quality Complex Text By Lexile Band

Floating and Sinking - Children's Science Book About Basic Physics by Amy S. Hansen

What Is It Made Of? by Amy S. Hansen

What is it Made From? By Bobbie Kalman

Sort It Out! by Barbara Mariconda