

Teacher: Claire Hasselle		Course: 5th Grade Science	Lesson Plan: AI Lesson & Density
		Planning Dates: Monday, November 9 - 13	
Learning Targets: - <u>Analyze</u> observations of various types of matter to determine their properties [P.5.5A.3, P.5.5A.4] - <u>Construct</u> an explanation for how an object's mass and volume determine if it sinks or floats in water [P.5.5A.4] - <u>Measure</u> and <u>test</u> predictions about an object's density compared to water [P.5.5A.3, P.5.5A.4]		Performance Objectives: <ul style="list-style-type: none"> ● P.5.5A.3 - Analyze matter through observations and measurements to classify materials (e.g., powders, metals, minerals, or liquids) based on their properties (e.g., color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, solubility, or density). ● P.5.5A.4 - Make and test predictions about how the density of an object affects whether the object sinks or floats when placed in a liquid. ● P.5.5A.5 - Design a vessel that can safely transport a dense substance (e.g., syrup, coins, marbles) through the water at various distances and under variable conditions. Use an engineering design process to define the problem, design, construct, evaluate, and improve the vessel. 	
Essential Question:		Items that are more dense are made of particles that are closer together than the particles in less dense items. Why?	
Core Idea:		Density is a physical property of matter. It tells how much space (volume) a certain amount (mass) of matter takes up. In other words, density is the amount of matter present in a certain volume of a substance.	
BIG IDEAS & MISCONCEPTIONS		<ul style="list-style-type: none"> ● Density is the amount of matter present in a certain volume of a substance. ● Density indicates how close together the particles in an object are. The density of a substance is always the same, no matter how much of the substance there is. ● "Heavy objects sink and light objects float." Objects that are less dense than water will float; objects are more dense than water will sink. The weight does not determine density. 	
ESSENTIAL VOCABULARY		Students will use Quizlet to develop mastery of this vocabulary set: atom, boiling, change of state, chemical change, compound, condensation, conservation of mass, density, displacement method, freezing, gas, liquid, mass, matter, melting, molecule, physical change, physical property, reaction, solid, state of matter, surface area, temperature, viscosity, volume, weight.	
LESSON COMPONENT	DAY S	ACTIVITIES	
BELL RINGERS (Daily)	4	Students will complete a Google Form Bellringer assignment. Bellringer questions are focused on unit vocabulary. Students will be using vocab to write a sentence and give examples.	
MONDAY Begin AI Lesson	1	AI Lesson: Students will complete an Art Integrated lesson focused on examining the spacing and movement of gases, solids, and liquids. We will	

		<p>review particles in each state by watching Crash Course Kids “Part(icles) of Your World”.</p> <ul style="list-style-type: none"> - Using the Promethean Board, I will show students the process with step-by-step instructions, accompanied by photos of each step. They will see the finished product. - Students will each have their own set of paint, brushes, water, and oil pastels, circle stencil, and paper. -I will talk with each student about which state they have chosen, and for them to give me some properties of that state. -I will post this document, updated with current student reflections, with the display of finished student artwork. -My goal is to have this AI lesson complete in 1 ½ class block. I will begin the Density unit immediately after. <p>EIL Assignment: Greek & Latin Roots: Unit 5 - Part 5B & 5C</p>
TUESDAY Finish AI Lesson		<p>Wrapping Things Up: Finish AI Lesson.</p> <p>Time Allowing: Use any time left to begin the Density lesson below</p> <p>EIL Assignment: Greek and Latin Roots: Unit 5 - Part 5E</p>
WEDNESDAY	1	<p>ISJ Entry: Students will take home an ISJ foldable activity packet, “Properties of Matter”. The packet will include detailed instructions, with pictures of each step. Students will be reminded to take their supplies home as well. I will take up the ISJ’s on Thursday to be graded.</p>
THURSDAY Engage & Explore	1	<p>Spiral Review: Watch the video “What’s My Property?” Crash Course Kids. Students will write important points from the video in their ISJ’s. The notes they are to write will be posted on the board, as well as in Google classroom. Notes will be printed for students with accommodations. They will glue the notes into their ISJ.</p> <p>State our Objective for the Week: I can explain how an object’s mass and volume determine if it sinks or floats in water</p> <p>Hook: “Floating Golf Ball Lab” I will do this as a demonstration in front of the class.</p> <p>Activity: “Defining Density” to connect the definition of density with a visual example. Students will complete “lab reports” via Google Forms.</p> <p>See and Say: Students will practice unit vocabulary on Quizlet. I will monitor the student’s progress as they study using the Quizlet “class progress” feature.</p> <p>EIL Assignment: Greek and Latin Roots: Unit 5 - Part 5F</p>
FRIDAY Evaluate	1	<p>Assessment: Teacher made assessment including material from physical properties of matter, Greek and Latin roots, and vocabulary.</p> <p>EIL Assignment: Complete Study Guide activity in preparation for today’s assessment.</p>
EXIT TICKET (Daily)	4	<p>Students will complete a Google Form Exit Ticket. Exit Tickets combine short answer questions with multiple-choice questions. Questions are created from vocabulary and material covered that day in class.</p>