



Vision - St. Louis Public Schools is the district of choice for families in the St. Louis region that provides a world-class education and is nationally recognized as a leader in student achievement and teacher quality.

Mission - We will provide a quality education for all students and enable them to realize their full intellectual potential.

St. Louis Public Schools – Blended Learning Weekly/Bi-Weekly Planner

Name		Grade	10	Subject	Chemistry
Week of	Weeks 3-4 of Quarter 1	Topic	A Particle View of Matter (Classroom Mystery)	Link to Tracker	https://stlps-my.sharepoint.com/:x/g/personal/vbumbu0901_slps_org/Ef79X9Z_FA1HqH47tkU7qdkBFUhtUxNFRzE1aL6CCIIITQ?e=4Es158

Planning and Preparation

Cultural Context: Overarching lesson design based on student's individual needs and learning styles. The teacher should consider and honor the unique cultural differences of the student population when selecting content, process, products, the learning environment. The use of ongoing assessment and flexible grouping is an effort to establish a safe and supportive learning environment. It is critically important to ensure every learner is able to access grade level curriculum and resources.

Standards Based Objective(s) Long term goal about what students will know and be able to do at the end of a unit. (Information for this section can be copied from the Curriculum Plan or Proficiency Scale.)	Missouri Learning Standards List your standard(s) for the week here. You should include the Missouri Learning Standard code(s), link the appropriate proficiency scale(s), and include the full text of the standard(s).	
	HS-PS1-3 (9-12.PS1.A.3)*** Plan and conduct an investigation to gather evidence to compare the structure and properties (m.p., b.p., density, etc.) of substances at the bulk scale to infer the strength of electrical forces between particles - Mass, Volume - Density (dimensional analysis) - Other properties of matter - Classification of matter based on particles - substance, element, compound, etc. HS-ETS1-2 (9-12.ETS1.A.2)* Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	
Learning Target(s) Learning targets are short term, student-friendly statements that clearly define what students should know and be able to do at the end of the lesson. (Information for this section of the plan can be copied from the Curriculum Plan or Proficiency Scale.)	Know (What are the learning targets?) Learning targets are short term, student-friendly statements that clearly define what students should know and be able to do at the end of the lesson(s). This comes directly from the unwrapped content standard in the Content Area Proficiency Scales and should be written as "I can..." or "The student can..." statements.	Do (Define how students will demonstrate that they have met the learning target. This section is grade level and content specific. Please reference the exemplar from your Content Area Curriculum Specialist.)
	LT1: I can use mass and volume data in order to explain the differences between the densities of substances. - dimensional analysis - proper use of laboratory tools LT2: I can use particle diagrams to explain density as the compactness of particles in a sample of matter.	LT1: I can use mass and volume data in order to explain the differences between the densities of substances. - dimensional analysis - proper use of laboratory tools LT2: I can use particle diagrams to explain density as the compactness of particles in a sample of matter.
Essential Question(s) (Can be copied/pasted from Curriculum Plan.)	Lesson 1 How can we use evidence to solve for an unknown? Lesson 2 How can we use measurement data to solve a problem? How can we evaluate quantitative evidence? Lesson 3 What is density? How can we convert between units? How can we use models to compare the properties of substances?	

Academic Vocabulary (Can be copied/pasted from Content Area Proficiency Scales)	Evidence, quantitative data, qualitative data, significant digits/figures, dimensional analysis, matter, mass, volume, density
Summative Assessment Performance Tasks /	Design or identify a standards-based summative performance task or assessment that will demonstrate progress towards proficiency on the standard / objectives. Density models/calculations quizzes/exit tickets; district quarter 1 summative assessment



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Blended Learning Instructional Framework: Whole Group Instructional Plan				
Lesson/Topic	Learning Target <i>Learning targets are short term, student-friendly statements that clearly define what students should know and be able to do at the end of the lesson.</i>	Activities, Instruction & Modeling <i>What do you need to explain, present, facilitate, or model? What instructional strategies will you use? What will students do to understand concepts or practice skills (practice, discussion, reflection, creation)? Synchronous learning refers to a learning event in which a group of students are engaging in learning at the same time. Asynchronous learning is instruction and learning that does not occur in the same place or at the same time – usually independent.</i>		Formative Assessment /Exit Slip <i>How will students demonstrate their daily learning? How will you know if they understand concepts or can apply skills? Please provide links.</i>
		Synchronous/Live Instruction	Asynchronous Playlist	
Lesson 1 (TBD – 1 day)	SWBAT To ask questions and develop hypotheses based on patterns in evidence from an investigation.	Do Now: 1. In your own words, describe the meaning of EVIDENCE. You may use examples from your own experiences to support your definition. 2. Why do you think collecting evidence is important for solving a mystery? Engage: Students will observe the scene (in person or an image). Give them the following instructions to complete in writing: - Write down as many observations as you can from the scene (at least 10). Be sure not to jump to conclusions or make assumptions about what they might MEAN, focus only on what you SEE. - Write down your INFERENCES based on your observations. What might what you see MEAN about what happened? After at least 8 minutes of writing time, facilitate a class share-out of observations and inferences. Explore Part 1: Students will read about the Persons of Interest in pairs or small groups.	Explore Part 2: Students will use the hyperdoc to complete the soil analysis and the fabric analysis in order to narrow down their list of suspects. Students will have a document with basic information about pH testing and fabric analysis. They will collect their data as instructed and fill in their charts. They will also be given definitions for quantitative and qualitative observations. Explain: Students will answer in writing (or verbally via Flipgrid) the prompt below: Explain WHO should be eliminated from the list of the suspects and the EVIDENCE that supports your claim.	Students will answer the prompt using all of the following terms: <i>evidence, quantitative, qualitative</i> How was evidence used today for you to come closer to solving the case?

		After at least 5 minutes for small group thinking, facilitate a discussion that highlights QUESTIONS the students have for the suspects based on the information provided.			
Lesson 2 (TBD – 1 day)	SWBAT Ask questions and develop hypotheses based on patterns in evidence from an investigation.	Do Now: 1. Which of these do you think is a BETTER measurement for foot size? A) 21.256 cm long B) 7.5 size shoe 2. Based on what you know about the crime size, describe at least 1 quantitative observation (reminder: this means data represented by a number) we can make of the evidence. Engage: Show students this video about the value of accurate and consistent measurement. After they watch, students should answer the following question in writing: Why does it matter that scientists across the world use the metric system? Support your answer with specific examples from the video.	Explore Part 1: Students will complete the workbook pages regarding accuracy, precision, and significant figures in measurement. Explore Part 2: Students will investigate two new pieces of evidence: the shoe print and the coffee thermos. They will apply what they learned in part 1 to use appropriate significant figures and units for measuring length and volume. Their analysis will get them thinking about the accuracy and precision of their measurements. Explain: Prompt students to review the Persons of Interest document and their previous notes from the case. Students will answer in writing (or verbally via Flipgrid) the prompt below: Based on your new evidence today, has your theory of the case changed?	Prompt students to answer the following question using these terms: data, accuracy (or accurate), precision (or precise) How did you use MEASUREMENT to come closer to solving the case?	
Lesson 3 (TBD – 2 days)	SWBAT explain differences in the densities of substances using appropriately scaled models and mathematical thinking .	DAY 1 Do Now/Engage #1: The goal here is to get students thinking about weight (mass) and size (volume) of OBSERVING a phenomenon in this video. As students watch, have them fill out a chart of their NOTICINGS and WONDERINGS. After watching the video several times and giving students 2-3 minutes to write independently, facilitate a share-out of their ideas. <i><Direct instruction/intervention as needed (personalized by period) during Explore #1></i> DAY 2 Do Now #2: Students will write about and then discuss their answers to the following question. Which of these is bigger? 1000-g of lead 1000-g of feathers Engage #2: This is an open-ended task in which students should work together in pairs or small groups. They are tasked with manipulating a simulation in order to rank objects based on their densities. Encourage students to engage with this problem in any order or steps that they want, and provide reminders for skills and formulas as needed.	DAY 1 Explore #1 Part 1: Students will complete the Density portion of the Math of Science digital workbook, which has them engage with both the math and modeling SEPs. Explore #1 Part 2: Students will follow a procedure to manipulate a simulation to determine the density of the necklace material, and then match this density with known densities of given materials. After determining the material, they will answer analysis questions in which they consider the <i>certainty</i> of their answers. This is an opportunity to discuss accuracy and precision in measurement, and how these concepts are critical for building a case/argument based on evidence. DAY 2 Explain #2 Part 1: Students will practice changing the units of measurement depending on the problem you want to solve using dimensional analysis with the final component of the math of Chemistry Digital Workbook. Explain #2 Part 2: Students will work independently through density practice problems that require them to conceptualize using models and manipulate formulas and complete calculations.	DAY 1 Explain #1: Students will evaluate two particle diagrams and apply their understanding of density to match the models with substances from the investigation. DAY 2 Exit Ticket/Evaluate: Prompt students to answer the following question using these terms: matter, mass, volume, density Go back this link from the Do Now #1. Explain what is happening in this video.	

Supporting Student Learning Pathways

Please note specific Learning Targets of focus and what resources are being used or provided to support students at each level.

Intensive Scaffolding <i>Students demonstrating performance at level NE or 1 on the Content Area Proficiency Scale.</i>	Moderate Scaffolding <i>Students demonstrating performance at level 2 on the Content Area Proficiency Scale.</i>	Enrichment/Independent <i>Students demonstrating performance at level 3 or 4 on the Content Area Proficiency Scale.</i>
Self-paced hyperdocs Sentence starters I notice, I wonder statements Annotation of text using SLPS Quick writes strategies (Because, But, So; Hochman's method of 5Ws to extract a one sentence summary from text) Graphic organizers (embedded in the Hyperdocs) Scaffolded formative assessment questions	Self-paced hyperdocs Annotation of text using SLPS Annotation of text Quick writes strategies (Because, But, So; Hochman's method of 5Ws to extract a one sentence summary from text) Graphic organizers (embedded in the Hyperdocs) Scaffolded formative assessment questions	Additional enrichment resources in the Elaborate portion of the 5Es. Teacher may assign other enrichment resources from Intervention for Enrichment Resources for a particular standard (from curriculum plans or standard descriptor documents).

Weekly Intervention Schedule & Differentiated Learning Planner

When applicable, teachers should utilize data from tracker to plan who receives intervention, when the intervention is delivered, how it is delivered, and what content will be covered. Please note if the planned intervention is for the purpose of remediation or enrichment.

Day/Date	Monday	Tuesday	Wednesday	Thursday	Friday
Group/Time					
Group/Time					
Group/Time					
Group/Time					