

Name Tiffany Holt

Lesson Plan

Learning Segment Focus Data Collection Lesson 2 of 4

Course & topic addressed Engineering, Technology, and Applications of Science/Data Collection Date 11/06/2020 Grade 4

Student Outcomes

Specific learning objectives for this lesson.	To learn how to successfully collect and report data.
Justify how learning tasks are appropriate using examples of students' prior academic learning .	This task will allow the assessment of comparison and research skills that the students have developed. It will also allow the teacher to make an assessment of how the students pay attention to detail.
Justify how learning tasks are appropriate using examples of students' personal, cultural, linguistic, or community assets .	This lesson plan will be one or more of the following: personal, cultural, and community assets. The students will be researching prices in stores in their community to get prices to compare for science equipment necessary to complete a science experience.

State Academic Content Standards

List the state academic content standards with which this lesson is aligned. Include abbreviation, number & text of the standard(s).	4-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
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Key Vocabulary

What vocabulary terms/content specific terminology must be addressed for students to master the content?	Light, experiment, battery, LED, Compare, Price, Chart, Graph, Store,
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Academic Language Support

What are the Academic Language Function(s) (the content and language focus of the learning task represented by the active verbs within the learning objectives/outcomes) and explain how they are utilized in the lesson plan? What planned Academic Language Supports will you use to assist students in their understanding of key academic language to express and develop their content learning and to provide varying supports for students at different levels of Academic Language development? How do these supports address all three Academic Language Demands (vocabulary, syntax, and discourse) ?	The academic language that will be used are the vocabulary words: light, experiment, battery, LED, compare, chart, graph, and store. The vocabulary words will be utilized throughout the data collection lesson. They will be discussed in various ways such as what is needed for making a light or when comparing prices in different stores or locations. The students will have worksheets that they will use for collecting data during class. They will be writing the vocabulary on their work sheets in multiple places, multiple times. If a student does not understand a word, I will be prepared to have pictures or an explanation waiting to help them understand the meaning. The students will be using their listening, speaking, and writing skills to perform the lesson.
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Materials

Materials needed by teacher for this lesson. (such as books, writing materials, computers, models, colored paper, etc.)	Computer, paper, printer, ink, scissors, aluminum foil, file folder labels, index cards, batteries, LED lights, overhead projector, tape
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Materials needed by students for this lesson. (computers, journals, textbook, etc.)	Pencil or pen, scissors, aluminum foil, file folder labels, index cards, batteries, LED lights, tape
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Lesson Timeline with Instructional Strategies & Learning Tasks

Amount of Time	Teaching & Learning Activities (This should be a BULLETED LIST)	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson. (This should be VERY DETAILED)
10-15 minutes	Introduction: I will go over the agenda for the class. I will also briefly show the students an example of the finished product of the assignment we will be doing.	I will be speaking with the students about what we will be doing. I will also introduce what data collection is.
30-45 minutes	<p>Instruction:</p> <ul style="list-style-type: none"> • I will show the students an example of the data sheet that was previously filled in. • We will go over what data collection is and why it is important. • We will discuss and gather the products we will be comparing prices on. All products will be for making a flashlight project. • We will search 3 different stores for all of the supplies needed for the project: Walmart, Target, and Kroger. • Students will write down all information on their worksheet that they were given • They will compare prices and determine which store is the cheapest. 	<p>We will go over the worksheet that we will use to collect data. I will show an example of what the worksheet will look like when they are finished. We will discuss why data collection is important and when it can be used.</p> <p>As a class we will search three different stores sites to gather the prices of the equipment needed to make a flashlight. I will ask questions along the way such as how much do you think the batteries will be? Or how many light bulbs do we need?</p> <p>As we search for prices, we will write down all of the information needed for fill in their worksheet. I will then pull up graphs on the overhead and show them what it would look like if all of the information was put into a chart. We will discuss the comparison in information and why it would be important to know the different prices. We would also discuss why we would use graphs and their importance.</p>

Amount of Time	Teaching & Learning Activities (This should be a BULLETED LIST)	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson. (This should be VERY DETAILED)
5-10 minutes	Closure: When finished collecting and recording the data, we will go over the importance of the lesson. We will also discuss what other situations would benefit from data collection.	We will briefly go over what we learned and take a poll as to how many students think that data collection would be useful for the jobs they want to do when they get bigger.

Accommodations/Modifications

<p>How might I modify instruction for: <i>Remediation?</i> <i>Intervention?</i> <i>IEP/504?</i> <i>LEP/ESL?</i> (All students who have plans mandated by federal and state law.)</p>	<p>For students that may need modification or additional help will receive a worksheet with the information already on it. The information can or will be colored coded to make the information a little easier to understand.</p>
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Differentiation

<p>How might you provide a variety of techniques (enhanced scaffolding, explicit instruction, contextualized materials, highlighters/color coding, etc.) to ensure all student needs are met? (All students who are not on specific plans mandated by federal and state law.)</p>	<p>All materials needed to complete the assignment will be provided such as the paper with the charts printed on them, pens, a list of stores, and a list of things needed to complete the experiment. I will also have the projector on for the students to see the process from each store along with charts to show the comparison of the prices.</p>
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Assessments: Formative and/or Summative

<p>Describe the tools/procedures that will be used in this lesson to monitor students' learning of the lesson objective(s) (include type of assessment & what is assessed).</p>	<input type="checkbox"/> Formative / <input checked="" type="checkbox"/> Summative	<p>How confident they are in researching and collecting data.</p>
	<input type="checkbox"/> Formative / <input checked="" type="checkbox"/> Summative	<p>How confident they are filling in a chart or graph.</p>
	<input type="checkbox"/> Formative / <input checked="" type="checkbox"/> Summative	<p>Looking at the worksheet that was completed during class. (Students will fill in a chart that is on the worksheet).</p>

Research/Theory

<p>Explain connections to theories and/or research (as well as experts in the field or national organization positions) that support the approach you chose and justify your choices using principles of the connected theories and/or research.</p>	<p>One of the most important things that they need to know is why it is important. It is important because data analysis or collection can answer questions that there are no immediate answers to. If the students understand the why of the data, then they may want to learn more and that could help them in the future. It will help motivate them to want to try things and know how they work.</p>
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Lesson Reflection/Evaluation

What went well ? What changes should be made? How will I use assessment data for next steps?	<i>TO BE FILLED IN AFTER TEACHING</i>
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Include supporting material such as slides, pictures, copy of textbook, and handouts for any activities students will be using as part of your lesson.

*adapted from: <http://webcache.googleusercontent.com/search?q=cache:EsQcNWuG1ZoJ:web.mnstate.edu/harms/StudentTeachers/edTPA-LessonPlan.doc+&cd=2&hl=en&ct=clnk&q=us>; <http://www.moreheadstate.edu/getmedia/cd3fd026-939f-4a47-a938-29c06d74ca01/Lesson-Plan-and-Reflections.aspx>;
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