Problem Based Enhanced Language Learning
iteachELLS, Mary Lou Fulton Teachers College at Arizona State University

<table>
<thead>
<tr>
<th>Teacher: Andrea, Shaymus, David</th>
<th>Grade/Subject: 7th grade ELA/ Math/Social Studies</th>
</tr>
</thead>
</table>

**Title of Experience/Topic:** Vandalism of School bathrooms

**Problem Statement:** Our school faculty has noticed an overwhelming increase in school vandalism. The time and resources spent in preventing vandalism is costing the school far too much.

**Question:** How can we as a class determine the cost and consequences of vandalism in our schools and then develop solutions for this problem?

**Time Frame:** Ten days, 45 min blocks

**Content Standards**

**Mathematics**
7.RP.A Analyze proportional relationships and use them to solve mathematical problems and problems in real-world context.

**Social Studies**

**Concept 1: Foundations of Economics**
PO SW1. Explain how limited resources and unlimited human wants cause people to choose some things and give up others.
PO 2. Analyze how scarcity, opportunity costs, and tradeoffs influence decision making.

**ELA**

7.W.1
Write arguments to support claims with clear reasons and relevant evidence.
- Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.
- Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
- Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from and supports the argument presented.
7.W.2
Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
c. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
e. Establish and maintain a formal style.
f. Provide a concluding statement or section that follows from and supports the information or explanation presented.

Speaking and Listening Standards

Comprehension and Collaboration
7.SL.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others’ ideas and expressing their own clearly.

a. Come to discussions prepared having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
b. Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
c. Pose questions that elicit elaboration and respond to others’ questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
d. Acknowledge new information expressed by others and, when warranted, modify their own views.

7.SL.2 Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, and orally) and explain how the ideas clarify a topic, text, or issue under study.

7.SL.3 Delineate a speaker’s argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence. Presentation of Knowledge and Ideas

7.SL.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, appropriate vocabulary, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

7.SL.5 Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

7.SL.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

Integrated Language Arts Standards:
The student will identify and apply conventions of standard English in his or her communications.

**ELL Listening and speaking standards**

**Standard 1:** The student will listen actively to the ideas of others in order to acquire new knowledge.
- LI-4: summarizing the main ideas and key points/details of presentations.
- LI-6: following multi-step instructions/directions, procedures and processes which contain specific academic content vocabulary.
- LI-7: responding to social conversations by rephrasing/repeating information, asking questions, offering advice, sharing one’s experiences and expressing one’s thoughts.
- LI-9: summarizing main ideas and supporting details from content area presentations and discussions.

**Standard 2:** The student will express orally his or her own thinking and ideas.
- LI-3: expressing personal needs and emotions in complete sentences.
- LI-4: participating in formal and informal conversation tasks using complete sentences.
- LI-6: making predictions and inferences about academic content using complete sentences with instructional support.
- LI-8: providing an appropriate response to given formal and informal situations.
- LI-10: preparing and delivering an expository report on academic content in including clear main ideas, supporting details, and a recognizable conclusion using complete sentences.

**ELL Writing Standard**

**Standard 4:** The student will integrate elements of effective writing to develop engaging and focused text.
- LI-3: writing paragraphs using language appropriate to the audience and purpose (i.e., formal vs. informal).
- LI-1: writing clearly focused text that incorporates relevant details.

**Standard 5:** The student will demonstrate research skills by using a variety of reference materials to complete a variety of writing tasks.
- LI-2: organizing student collected data (e.g., facts they learn, procedures they conduct) in appropriate format.
- LI-5: producing group reports including summarizing the purpose of the project, reaching consensus regarding the research, and assigning research tasks.

**ELP Reading standard**

**Standard 4:** The student will analyze text for expression, enjoyment, and response to other related content areas.
- LI-7: connecting information and events in text to life experiences and to related text and sources (text-to-self, text-to-text).
- LI-8: summarizing the main idea and supporting details from text using academic vocabulary.

- Assessed
- Not Assessed

---

**Content Language Objective**

Students will be able to use the language of inquiry/research to figure out the true cost of school vandalism by researching, surveying, and analyzing data.

**Sub-Objectives:**

**David (Mathematics)**
SWBAT use their language of inquiry to formulate questions about the cost of items, labor (etc.) for the school.  
SWBAT gather data from a district employee using the language of inquiry questions formulated.  
SWBAT use the data collected to build equations represented to the cost of vandalism for the students individual inquiry questions.  
SWBAT discuss and compare equations to decide on what is the most impactful cost to the school.

Andrea (ELA)  
SWBAT evaluate the current vandalism at their school.  
SWBAT assess students attitudes about vandalism by creating, administering, and analyzing a vandalism survey.  
SWBAT collect and summarize data, analyze results, and create an informative essay about how vandalism is costing the school way too much money.

Shaymus (Social Studies)  
SWBAT investigate and research people, events and recordings of historical acts of vandalism using magazines, articles, text, and the internet.  
SWBAT analyze, and create a KWL chart on an historical act of vandalism  
SWBAT create an outline on the event they have chosen  
SWBAT apply the research and summarize their findings.

Materials:  
computers, books, paper, writing utensils, powerpoint, smartboard, information on vandalism, graph poster board, examples of vandalism and why is this important. Students will be using several different forms of graphic organizers.

<table>
<thead>
<tr>
<th>Vocabulary taught prior to the experience (Background):</th>
<th>Vocabulary developed during lesson:</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Cost</td>
<td>● Vandalism</td>
</tr>
<tr>
<td>● Compare</td>
<td>● Functions</td>
</tr>
<tr>
<td>● Equation</td>
<td>● Equations</td>
</tr>
<tr>
<td>● surveys</td>
<td>● Cost over time</td>
</tr>
<tr>
<td></td>
<td>● Different formats of web pages</td>
</tr>
<tr>
<td></td>
<td>● Creditability</td>
</tr>
<tr>
<td></td>
<td>● Appropriate sources</td>
</tr>
<tr>
<td></td>
<td>● informative essay</td>
</tr>
</tbody>
</table>

Academic Conversation:  
What language function will students have the opportunity to practice? How will this language be explicitly taught? How will this language be applied and practiced? 

Explicit (teacher will)  

Why: Teacher will introduce the language of inquiry by explaining the importance of inquiry/research based questions. (reason we use language of inquiry/research so we can learn more about the environment around us. If we began to understand what we know, we can then ask questions about what we do not know and about what we want to learn and make necessary changes) . For the students this means they can ask their own questions about the cost and consequences of vandalism at their school.
How: The teacher will introduce the topic of solar system. The students will discuss what they already know about the solar system. The teacher will ask them to think of something they might not know or want to know more about. Thus requiring them to research their own questions to answer.

Model: What do you wonder about? Model why we have pumpkin pie on thanksgiving. Model the KWL chart. As a class we will fill out what we know about pie and having it on Thanksgiving. Then we will come up with questions about what we want to learn more about. Then we will research our questions and find out what learned from our findings.

Practice: The students will fill out a KWL chart on the solar system. They will first fill out what they already know about the solar system. Then the students will fill out the W, what they want to know. They will then research their questions they have about the solar system and come together as a class to share what they learned, which they will fill out in the L column.

**Establish the Problem:**

*How will prior knowledge be accessed? How will the problem be introduced to students? How will students inquire about the problem (optional planning tool attached) How are students using language (reading, writing, listening, and/or speaking) and how are they being supported?*

**Day 1: All contents will be apart of the same hook and establishment of the problem.**

Students will be called into an assembly where 7th grade is all together. Prior knowledge will be accessed by allowing the students to talk with a partner or small group about things they have seen in the school that have been vandalized or no longer work due to inappropriate student use. After students have had a chance to come up with a few things that they have seen around the school they will be called back to order. A powerpoint will be shown with things around the school that have been ruined in the past. VOCABULARY will be introduced here.

1. Vandalism-the willful or malicious destruction or defacement of property. (EXPLAIN and SHOW pictures for ELL students)

The students will then be presented with the essential question: “How can we, as 7th grade, determine the cost and consequences of vandalism in our school?” Teachers will talk about how within all the content areas they will be focusing on a different part of the essential question in order to put together a Public Service Announcement like the one that a different student from a different school put together. Show the vandalism video: [https://www.youtube.com/watch?v=MOM-oyUPZnc](https://www.youtube.com/watch?v=MOM-oyUPZnc)

Allow the students to discuss ideas that they might have in partners or small groups. Call the students back together. Use the following questions to lead discussions: “Is this a problem at our school? What type of vandalism do you see in our classrooms, hallways and other locations?”

After discussions, callback student attention. Introduce the “focus” questions per content area as followed:

“You are now tasked with creating ideas and a public service announcement to share with our school about vandalism. You have two weeks to create this PSA. No fear! You are not alone in this endeavor. Your math, social studies, and English teachers each have a guiding question that will help you create you PSA. In math your question is: “How can we figure out how vandalism is costing our school?” In ELA, your question is “How can we learn how people feel about vandalism? and in Social Studies your question is “How has vandalism changed the world throughout history? “ “Can you think of any historical vandalism?” You will use all three questions within your PSA for the school. We are excited to be working with you on this very important topic for our school.”
## Creating the Experience:

*How will students work together to develop and present solutions? How are students using language (reading, writing, listening, and/or speaking) and how are they being supported?*

### Presenting the Content Question for ELA: How can we learn how people feel about vandalism?

**Day 1:** 7th Grade Assembly.

**Day 2:** Students will create a survey to see what people think and feel about vandalism in their school. Types of questions they can include, have you witnessed any vandalism at school? If so, how often is it occurring? What types of vandalism is happening at school? What would make people stop vandalising their school? Each class will create their own questions for their survey and then put all of the survey questions into one survey to be used when questioning students. Questions that are irrelevant or repeated will be taken out of the final survey.

**Day 3:** We will have a class discussion about how to give the survey to the students at the school, whether it is in person interviews, internet, cell phones, etc). Students will be divided into groups and given a group of people to survey as well as how they want to give the survey to that group of people.

**Day 4:** After the students survey their specific group of people, they will work together to analyze and organize the data. The students will then share these results with each other. They will take these results to math to further analyze the data.

**Day 5:** Students will create a brochure from the information they found for vandalism from the survey as well as any research from their other classes to create a public service announcement. The brochure will discuss why students at their school should care about vandalism. The students will include research and the survey results to show people how vandalism is a serious issue and how it is affecting their school. The brochure will also include what students can do to stop vandalism. They will rephrase their survey results and research in a creative way on their brochure to get people’s attention and for students to want to care about vandalism.

Have a small lesson about creating a public service announcement to an audience to prepare for presentations in ELA.

**Presenting the Content Question for History- “Can you think of any historical vandalism?” “How has vandalism changed the world throughout history?”

**Day 1:** 7th Grade Assembly.

**Day 2:** Invite a guest speaker from city government to discuss how vandalism has affected our local community negatively and how our government is repairing and stopping vandalism. Ask students to consider this information in relation to our school and the vandalism. Discuss as a class whether we believe our school has a problem with vandalism or not.

**Day 3:** Students will then be assigned a time period and ask to investigate major acts of vandalism and solutions that occurred in the given time frame. Tell students they can choose the format in which to
present the information. Have students create a timeline graphic organizer to use as a visual tool to assist in making statements about information they collected.

**Day 4:** After information is collected, students will incorporate it into a class Padlet. The purpose of the Padlet is to show the class's research on how vandalism has taken place throughout history and all over the World. We will discuss our research as a class and each student will create a venn diagram on aspects of researched vandalism and vandalism they have noticed in our school.

**Day 5:** Have students individually compose a final reflection piece answering the Essential Question: Can you determine the cost and consequences of vandalism in our schools and then develop solutions for this problem?

The Students will apply critical-thinking skills to organize and use information gathered from multiple sources including technology. The students will communicate in written, oral and visual forms when conducting research on historical acts of vandalism. Students will use problem-solving and decision-making skills in order to find out how vandalism affects many communities around the globe. Students will work independently and with others.

**Presenting the Content Question for Mathematics- “ In what ways is vandalism costing our school?”**

**Day 1:** 7he Grade Assembly.

**Day 2:** Present objective: I can use academic language to create questions to present to a district employee. Teacher will present the academic language and provide sentence stems for ELL students. Teacher will model how to use academic language to create mathematics based questions.

**Example of sentence stems:**
1. I’d like to ask you about...
2. Something else I would like to know is.....
3. I’m sorry can you explain more about...

**Day 3:** Present objective: I can gather data based on my academic questions. Presenter coming in from the district to talk about cost of things for 1 school and then district wide. Students will present questions and collect data from presenter. Sentence stems still on the board for students to reference when they have an additional question.

End the lesson with exit ticket of gathered data.

**Day 4:** Present objective: I can use my data to create equations to represent the cost of vandalism to our school. Teacher will model how to create an equation using data from a different resource. Students will then complete their equations and come up with a cost of certain vandalisms around the school.

Exit ticket for equations.

**Day 5:** Present objective: I can compare and discuss my results and identify the most impactful area of vandalism in our school. Teacher will group students, help guide discussions when needed and allow for share time at the end of class.

**Homeroom collaborative group work for PSA guided question: How can we as a class determine the cost and consequence of vandalism in our school?**
(All content knowledge is going to be pulled into the homeroom for creation of PSA. Students are already grouped in groups of 5 to 6)

**Day 6:** Present Objective: I can brain storm and finalize solutions for the current vandalism occurring within the school. I can create a data collection from all content areas to be used in PSA.
Teacher will model how to brainstorm ideas. Teacher will facilitate groups who need assistance with finding possible solutions. Teacher will collect final solutions from each group.

**Day 7:** Present Objective: I can create an outline of how my group is going to shoot the PSA and a script for what is being said.
Teacher will model how to create an outline and a mini script for students to use as a reference.

**Day 8:** Present Objective: I can finalize my outline and begin to practice filming the PSA.
Teacher will facilitate and help finalize how each group is going to film PSA and what they are going to say.
Teacher will allow students to practice. Give students assessment rubric to grade outline and PSA.

**Day 9:** I can film and turn in my PSA.
Teacher will assist the groups in filming and creating the final PSA. Teachers will collect and chose 4 PSAs to show at the assembly.

**Day 10:** PSA showcase.

---

**Evaluate:**

*When and how will you use formative and summative assessments to measure student progress and learning (content and language)?*

**Formative:**

- Students using thinking stems and the language of inquiry to develop questions on the cost of vandalism, how it affects current and future classes, and answering if it is a problem.
- Students brainstorm solution and share results
- Students play a contributing role in group settings.
- Students are able to paraphrase important information from expert interview.
- Students are able to evaluate PSA’s for information gathered in content areas using rubric checklist.
- Group created problem statements and surveys
- Student solutions make sense and use information from the problem and the research conducted as a class.

**Summative evaluation:**

With scripts, graphic organizer, small group collaboration, observations, and student lead research, students will create a PSA describing information they have collected in content areas and informing the school of possible solutions to any vandalism problems at the school. Teachers will evaluate the final PSA with a rubric to make sure all content is in the PSA. The top 4 PSA’s will be shared at a school assembly where it will be a school decision of which action to be taken.
## Brochure Rubric

<table>
<thead>
<tr>
<th>Standards</th>
<th>Absent</th>
<th>NSH</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• large, prominent, clear</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• catchy, concise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• summarizes fiscal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtitles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• adequate size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• concise, informative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• important words capitalized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Front Cover</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• title/s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• eye-catching, thematic design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• author</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Body</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• accurate data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• rich details</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• comprehensive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Back Cover</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• references listed in correct bibliographic format</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• contact information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Illustrations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• enhance knowledge of topic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• black ink or colored</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• neatly drawn and/or trimmed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Conventions (Mechanics)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• correct spelling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• correct grammar and punctuation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• complete sentences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance (Neatness)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• legible letter forms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• effective word and letter spacing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• clean corrections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments:</th>
<th>0</th>
<th>1</th>
<th>9</th>
<th>17</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-7</td>
<td>10-15</td>
<td>18-23</td>
<td>26-31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>16</td>
<td>24</td>
<td>32+</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>F</th>
<th>D</th>
<th>C</th>
<th>B</th>
<th>A</th>
</tr>
</thead>
</table>

Reproducible from "Solving the Assessment Puzzle Revised Edition" © Pieces of Learning
<table>
<thead>
<tr>
<th>Score</th>
<th>Focus</th>
<th>Content</th>
<th>Organization</th>
<th>Style</th>
<th>Conventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Advanced</td>
<td>You show a clear understanding of what information was required, and who your audience is. You write about one clear topic, and give many details to support your topic.</td>
<td>You use plenty of details to support your topic. You show a clear understanding of the purpose for writing this piece, and you clearly understand the information.</td>
<td>Your writing is very organized. You use transitions well, and the order of your information makes good sense. This paper is easy to read and understand!</td>
<td>You demonstrate an excellent use of language and your sentence structure. You clearly understand how informational pieces are written, and your tone is clear.</td>
</tr>
<tr>
<td>3</td>
<td>Proficient</td>
<td>You show an understanding of what information was required, and who your audience is. You write about one clear topic, and included details in most of your writing.</td>
<td>You give the appropriate amount of details to support your topic. You show a good understanding of the purpose for writing this piece, and you understand the information.</td>
<td>Your writing is organized well. Most of your transitions are used correctly, and your order of information does make sense. This paper can be read and understood with very few problems.</td>
<td>You show good control of language and sentence structure. Your writing has many parts that resemble informational pieces, and your tone is clear.</td>
</tr>
<tr>
<td>2</td>
<td>Basic</td>
<td>You show a partial understanding of what information was required, and who your audience is. You have a topic, but some of the details do not support this topic clearly.</td>
<td>You give some details to support your topic. You do not demonstrate a strong understanding of the purpose for writing this piece, and you may not fully understand the information written.</td>
<td>Your writing is not very organized. Some of your transitions may be used correctly, but overall the errors make it difficult to understand.</td>
<td>Your use of language and sentence structure makes it difficult to clearly identify tone. You demonstrate some knowledge of how informational pieces are written.</td>
</tr>
<tr>
<td>1</td>
<td>Below Basic</td>
<td>You do not show an understanding of what information was required, and who your audience is. A specific topic is unclear and details are not clear.</td>
<td>You give very few details to support your topic. You do not demonstrate understanding of the purpose for writing this piece, and you do not show understanding of the information written.</td>
<td>Your transitions are not present or not used correctly. The information is not organized well. This paper is unclear and difficult to understand.</td>
<td>You demonstrate very little control of language and sentence structure, which makes it difficult for the reader to recognize tone. You show little understanding of how informational pieces are written.</td>
</tr>
</tbody>
</table>

Score: 

Total Score: out of 20 possible points