

The Environment, Literacy, and the Common Core

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The Common Core ELA standards demand a level of rigor that will challenge many students. Unlike previous curriculum reforms that were content specific, the Common Core expectations involve the integration of skills across content areas including social studies, science and language arts. Students must apply reading, writing, research, and speaking and listening to content provided through articles, speeches and videos. The new performance tasks that are a key component of Smarter Balanced assessment system require research skills, note-taking abilities, and the difficult challenge of synthesizing ideas into well-written essays or speeches that explain or advocate.

In order to engage students in these rigorous expectations, teachers must find rich content for the students to explore. Sustainability issues provide relevant topics and complex problems that invite analysis and research. Students can practice and apply the ELA expectations using topics related to our environment. Resources supporting environmental issues are readily available on line in the form of articles, videos, and speeches. In addition, students can gather relevant data through outdoor learning experiences, a unique benefit to this content area. Teachers can structure rich and relevant investigations that mirror performance tasks on the new assessments, using the environment as a context for learning.

Designing a Performance Task

Let's visit a grade three elementary classroom where the children have been studying the life cycle of the salmon including how to preserve and protect water quality and quantity so that salmon can continue to survive. After visiting a local fish hatchery, the students illustrate the life stages of salmon, monitor their own water consumption, and create a rule that they can enact at school to preserve and protect water. In addition, they visit a local creek to view the salmon first hand, appreciating their beauty and endurance. How might the Common Core ELA standards support the learning in this unit? What might students research, what issue might they weight in on, and what product might they create- an essay or a speech?

The new performance assessments are designed to measure proficiency in reading, writing, research and speaking and listening. The students are given a scenario that is grounded in a real world context. Then they acquire knowledge of the topic or issue by reading pre-selected articles and watching chosen videos. The students are expected to take notes on the information provided, keeping in mind the task that they are given in the scenario.

Here's how this might play out in our elementary classroom. The students are provided with this scenario: *You have been asked to explain why salmon need clean water to survive. You will read an article and watch a video that provides you with information about the needs of salmon for their survival. You will take notes on the articles and the video, writing an informational essay explaining why salmon need clean water to survive.*

Students read the article provided, preferably on the computer since all of the new assessments will be delivered using technology. Students will work in an entirely on line environment so must learn how to navigate websites, read material on a computer screen, and compose their essays using a keyboard. For our hypothetical Salmon task, reading and viewing material might include the following:

Article #1: Short piece explaining the salmon's need for clean water

Video #1: Showing pollution in our waters and its effects on salmon

Scoring Performance Tasks: Research Skills and Writing Rubrics

All performance tasks include research questions that require the students to draw information from the multiple sources in preparation for writing an essay or speech. These questions are measuring specific research skills.

The research skills include the following:

- The ability to locate information
- The ability to select the best information including distinguishing relevant from irrelevant information and facts from opinions.
- The ability to provide sufficient evidence to support opinions expressed

Rubrics are provided for each of the three skills and are used for scoring student responses. (Figure #1)

Here are some example research questions that link to our salmon task:

1. According to the video, what are two important steps we can take to preserve and protect our salmon? Use details from the video to support your answer. (Locating Information)
2. Which source, the video or the article, best helps you understand the needs of salmon? Use details from both sources to support your answer. (Selecting the best information)
3. Based on the reading and the video, what do you think is the one most important thing we could do to protect our salmon? Use details from both sources to support your answer. (Using sufficient evidence)

Students write their responses to the research questions using the notes that they have taken while reading the article or viewing the video. They submit their answers for scoring and on a second day, proceed to part two of the assessment.

Part two involves writing an essay or outlining and delivering a speech. The Common Core ELA requires that students be skilled in their ability to write in three different modes: informative/explanatory, opinion/argumentative, and narrative. Students must also be able to outline and deliver a speech on a given topic. In our elementary grades salmon task example, students might be given the following prompt:

You have been asked to write an informational essay where you share what salmon need to survive. Use information from both the article and the video to support your ideas.

To demonstrate the CC ELA writing standards, students must use information from the various sources, clearly summarizing their information with text based evidence. Background knowledge is not a factor when scoring these essays. Students must cite text-based evidence to support their ideas, not prior knowledge from other sources. Essays are scored using a five-trait rubric. (Figure #2) Close reading of text is paramount in the ELA CC standards.

Scenario-Based Problems

Performance tasks require students to engage with a scenario-based problem, research information presented in various media, extract key ideas from the information, answer research questions, and compose an essay or speech that presents their original opinions and ideas supported by text based evidence. Task developers follow a specific template when creating performance assessments. The template includes identifying a plausible scenario, locating appropriate source material, designing research questions and structuring an essay or speech that synthesizes information from the research. (Figure #3)

Selecting the content for these tasks is critical for the content must be relevant and problem based. Students practice and apply career and college ready skills including critical thinking and analysis. Topics connected to the environment provide real-world scenarios that can capture the interests of our students. Here are some examples:

- *Healthy Waters*: How do water treatment plants work and why are they important?
- *SOS: Saving Our Sound*: What can we do to improve the health of the Puget Sound?
- *Stormwater Engineering*: How do engineers solve problems linked to storm water runoff?
- *Earth Day*: What is the history behind the environmental movement and how has this movement influenced legislation today?
- *Ocean Acidification*: What can we do to ensure the survival of our shellfish?

Field Experiences and Performance Tasks

Field experiences, an important component of environmental education, can be part of a performance assessments, either embedded in the assessment itself or as a follow up activity. Students can enhance their knowledge acquired through text-based research with knowledge gained in a systematic way through direct experience. Scenarios may be developed that incorporate outdoor learning experiences where students reinforce their understanding of the topic provided through direct observation and data gathering. In our salmon example, students could be prompted to take pictures on their field experiences to the fish hatchery and to the local stream, providing visual images of the salmon to support their text-based evidence. These photos can serve as primary source material when students compose their essays or outline their speeches. (For an additional example, see Figure 4, *Rain Garden Task*)

Much has been written and created regarding sustainability issues. Teachers can select a topic appropriate to their grade level curriculum and locality, compose a scenario that is directly relevant to the student, and identify source material for student engagement. They can also incorporate outdoor learning experiences that enhance understanding, promote enthusiasm for the environment, and add to the knowledge base as in the Rain Garden task. (Figure #4) By designing performance tasks using the environment as the context for learning, students work with relevant information, learn about the challenges we face, and form opinions at a young age that will guide their future thinking and civic involvement.

Democracies, for their survival, demand an informed electorate. Environmental issues may be the most critical issues our children will face. We can accomplish two important goals by linking performance assessments to sustainability education. One goal is to teach and practice the ELA skills that the students will need to be career and college ready. The second and equally important goal is the ability to form reasoned judgments about environmental issues. By connecting the Common Core ELA standards to the environment, students benefit on two fronts: Acquiring both environmental literacy and literacy in English- Language Arts.

Our children face crucial decisions regarding a sustainable future. Their knowledge base, critical thinking skills, and ability to effectively communicate are keys to informed decision-making. We must educate our children to effectively read, write, research, speak and listen. They need to think critically and creatively in order to solve the complex problems we face.

Let's make content choices for our curriculum that are meaningful today and into the future. Nothing is more relevant, engaging, and crucial than issues related to preserving and protecting our environment.

Attachments:

Figure #1: Research Rubrics

Figure #2: Informative Writing Rubric

Figure #3: Performance Assessment Templates

Figure #4: Rain Garden Task

Rubrics for Research Questions

Question 1:

ANALYZE / INTEGRATE Information Rubric Claim 4, Target 2	
2	• The response gives sufficient evidence of the ability to gather, analyze and integrate information within and among multiple sources of information.
1	• The response gives limited evidence of the ability to gather, analyze and integrate information within and among multiple sources of information.
0	• A response gets no credit if it provides no evidence of the ability to gather analyze and integrate information within and among multiple sources of information.

Question 2:

EVALUATE Information/Sources Rubric Claim 4, Target 3	
2	• The response gives sufficient evidence of the ability to evaluate the credibility, completeness, relevancy, and/or accuracy of the information and sources.
1	• The response gives limited evidence of the ability to evaluate the credibility completeness, relevancy, and/or accuracy of the information and sources.
0	• A response gets no credit if it provides no evidence of the ability to evaluate the credibility, completeness, relevancy, and/or accuracy of the information and sources.

Question 3:

USE EVIDENCE Rubric Claim 4, Target 4	
2	• The response gives sufficient evidence of the ability to cite evidence to support arguments and/or ideas.
1	• The response gives limited evidence of the ability to cite evidence to support arguments and/or ideas.
0	• A response gets no credit if it provides no evidence no evidence of the ability to cite evidence to support arguments and/or ideas.

Informative / Explanatory Writing Rubric (Grades 3-5)

Score	4	3	2	1
Statement of Purpose Focus	<p>The response is fully sustained and consistently and purposefully focused:</p> <ul style="list-style-type: none"> controlling idea or main idea of a topic is focused, clearly stated, and strongly maintained controlling idea or main idea of a topic is introduced and communicated clearly within the context 	<p>The response is adequately sustained and generally focused:</p> <ul style="list-style-type: none"> focus is clear and for the most part maintained, though some loosely related material may be present some context for the controlling idea or main idea of the topic is adequate 	<p>The response is somewhat sustained and have a minor drift in focus:</p> <ul style="list-style-type: none"> may be clearly focused on the controlling or main idea, but is insufficiently sustained controlling idea or main idea may be unclear and somewhat unfocused 	<p>The response may be related to the topic but may provide little or no focus:</p> <ul style="list-style-type: none"> may be very brief may have a major drift focus may be confusing or ambiguous
Organization	<p>The response has a clear and effective organizational structure creating unity and completeness:</p> <ul style="list-style-type: none"> use of a variety of transitional strategies logical progression of ideas from beginning to end effective introduction and conclusion for audience and purpose 	<p>The response has an evident organizational structure and a sense of completeness, though there may be minor flaws and some ideas may be loosely connected:</p> <ul style="list-style-type: none"> adequate use of transitional strategies with some variety adequate progression of ideas from beginning to end adequate introduction and conclusion 	<p>The response has an inconsistent organizational structure, and flaws are evident:</p> <ul style="list-style-type: none"> inconsistent use of transitional strategies with little variety uneven progression of ideas from beginning to end conclusion and introduction, if present, are weak 	<p>The response has little or no discernible organizational structure:</p> <ul style="list-style-type: none"> few or no transitional strategies are evident frequent extraneous ideas may intrude
Elaboration of Evidence	<p>The response provides thorough and convincing support/evidence for the controlling idea or main idea that includes the effective use of sources, facts, and details:</p> <ul style="list-style-type: none"> use of evidence from sources is smoothly integrated, comprehensive, and relevant effective use of a variety of elaborative techniques 	<p>The response provides adequate support/evidence for the controlling idea or main idea that includes the use of sources, facts, and details:</p> <ul style="list-style-type: none"> some evidence from sources is integrated, though citations may be general or imprecise adequate use of some elaborative techniques 	<p>The response provides uneven, cursory support/evidence for the controlling idea or main idea that includes partial or uneven use of sources, facts, and details:</p> <ul style="list-style-type: none"> evidence from sources is weakly inter=grated, and citations, if present are uneven weak or uneven use of elaborative techniques 	<p>The response provides minimal support/evidence for the controlling idea or main idea that includes little or no use of sources, facts, and details:</p> <ul style="list-style-type: none"> use of evidence from the source material is minimal, absent, in error, or irrelevant
Language	<p>The response clearly and effectively expresses ideas, using precise language:</p> <ul style="list-style-type: none"> use of academic and domain-specific vocabulary is clearly appropriate for the audience and purpose 	<p>The response adequately expresses ideas, employing a mix of precise with more general language:</p> <ul style="list-style-type: none"> use of domain-specific vocabulary is generally appropriate for the audience and purpose 	<p>The response expresses ideas unevenly, using simplistic language:</p> <ul style="list-style-type: none"> use of domain-specific vocabulary that may at times be inappropriate for the audience and purpose 	<p>The response expression or ideas is vague, lacks clarity, or is confusing:</p> <ul style="list-style-type: none"> uses limited language or domain-specific vocabulary may have little sense of audience and purpose

Score	2	1
Conventions	<p>The response demonstrates an adequate command of conventions:</p> <ul style="list-style-type: none"> errors in usage and sentence formation may be present, but no systematic pattern of errors is displayed and meaning is not obscured adequate use of punctuation, capitalization, and spelling 	<p>The response demonstrates a partial command of conventions:</p> <ul style="list-style-type: none"> errors in usage may obscure meaning inconsistent use of punctuation, capitalization, and spelling

NS	Insufficient, illegible, in a language other than English, incoherent, off-topic, or off-purpose writing
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Task:

PART 1 (# of Minutes)

Student Directions:

Your assignment:

(Scenario that is grounded in a real world problem or issue.)

Steps you will be following:

In order to plan and compose your essay, you will do all of the following:

1. Read _____ and watch _____.
2. Answer 3 questions about the sources.
3. Plan and write your essay.

Directions for beginning:

You will now watch ___ video(s) and read ___ articles. Take notes because you may want to refer to your notes while writing your essay. You can look at any of the sources as often as you like.

Video:

Article:

Article:

Questions

Use the remaining time to answer the questions below. Your answers to these questions will be scored. Also, they will help you think about the sources you've read and viewed, which should help you write your essay. You may click on the appropriate buttons to refer back to the sources when you think it would be helpful. You may also refer to your notes. Answer the questions in the spaces provided below them.

1. (Question Focus: Locating Information within or among sources)
2. (Question Focus: Selecting the best information: most relevant, most accurate)
3. (Question Focus: Providing sufficient information to support a position)

Task:

PART 2

Student Directions:

You will now have __ minutes to review your notes and sources, plan, draft, and revise your essay. While you may use your notes and refer to the sources, you must work on your own. You may also refer to the answers you wrote to earlier questions, but you cannot change those answers. Now read your assignment and the information about how your essay will be scored, and then begin your work.

Your assignment:

Provide a relevant scenario with a clear topic, audience, and purpose. Remind students to use information from all sources in writing the essay or speech.

How your essay will be scored:

The people scoring your essay will be assigning scores for:

(Insert either the Argumentative criteria or the Explanatory criteria here.)

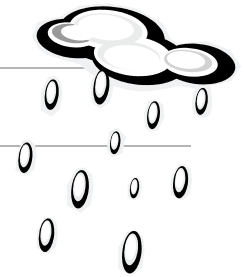
Now begin work on your essay.

Manage your time carefully so that you can:

- plan your essay
- write your essay
- revise and edit for a final draft

**Word-processing tools and spell check function
are available to you.**

Task: RAIN GARDENS



PART 1 (60 minutes)

Student Directions:

Your assignment:

Your neighborhood council is researching the benefits of installing rain gardens in your community. You will read two articles and watch one video describing what rain gardens are and how they benefit the environment. You will also visit your school's rain garden, taking photos to document its benefits. You will compose and deliver a speech explaining how rain gardens improve the environment, incorporating photos from your school's rain garden in your speech.

Steps you will be following:

In order to plan and compose your speech, you will do all of the following:

1. Read two articles and watch one video.
2. Visit your school's rain garden and take pictures
3. Answer three questions about the sources.
4. Compose and deliver your speech

Directions for beginning:

You will now watch a video and read two articles about rain gardens, taking notes with the templates provided. You may want to refer to your notes when composing your speech. You may refer back to any of the sources as often as you like.

Source Information:

Source #1: *Make a Rain Garden!*

Video <http://curriculum.tahomasd.us/elementary/Grade%203/Make%20a%20Raingarden.mov>

Source #2: *Introduction to Rain Gardens*

Article #1

Source #3: *4 Steps to Building a Rain Garden*

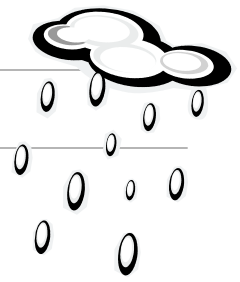
Article #2

Research Questions:

1. Define what a rain garden is using information from the articles and video. **(Claim 4, Target 2)**
2. Which source is best for learning how to construct a rain garden, the articles or the video? Explain your answer using evidence from the sources. **(Claim 4, Target 3)**
3. Provide evidence from the articles and the video to support the statement: A rain garden improves the environment. **(Claim 4, Target 4)**



Task: **RAIN GARDENS**



Part 2: Field Observations

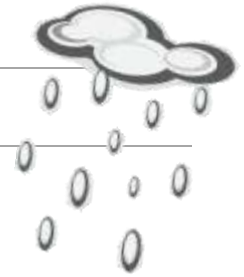
Today, you will visit your school's rain garden! Make observations about the construction of the rain garden including its location, plants, and depth. Take pictures of the rain garden to illustrate its characteristics for use in your speech. Remember that your task is to explain why installing a rain garden improves the environment.

Characteristics	My Observations
Location	
Plants	
Depth	

Questions for Discussion:

1. What observations supported the information from the video and articles?
2. What additional information did you gain from visiting a real rain garden?
3. What pictures did you decide to take and why?
4. What do you think are the most important benefits of a rain garden?

Task: RAIN GARDENS



PART 3 (70 minutes)

Student Directions:

You will now have 70 minutes to compose and deliver your speech. While you may use your notes and refer to your sources, you must work on your own. You may also refer to the answers you wrote to earlier questions but you cannot change those answers. Now read your assignment and the information about how your speech will be scored and then begin your work.

Your assignment:

Compose and deliver a 2-3 minute speech for your neighborhood council explaining how rain gardens will improve the environment. Include details about the construction and benefits of rain gardens from the video and articles as well as photographs from your school's rain garden to support your ideas.

How your speech will be scored:

The people scoring your speech will be assigning scores for

1. **Focus** - how well your speech clearly introduces and communicates your ideas
2. **Organization** – how well your ideas flow from the opening to the conclusion and how well you stay on topic throughout the speech
3. **Elaboration of Evidence** – how well you use sources, facts, pictures, and details as evidence
4. **Language and Vocabulary** – how well you effectively express ideas using precise language that is appropriate for your audience and purpose
5. **Presentation** – how well your speech is presented, including eye contact, pronunciation, and awareness of audience and the use of visual/graphics/audio enhancements appropriate to your message

