Literacy Design Collaborative

Fuel for Examination: Investigating the Natural Gas Fracking Hullabaloo

TASK LADDER

by Annette Brown

What is hydraulic fracturing? Why is it so controversial? In this lesson, students learn how to develop a paper and poster in which they investigate the facts behind the hydrofracking controversy, identify how the demand for natural gas is changing, and research and map how natural gas development may impact a community. They write a "pro or con" paper and poster appropriate for presentation to a community or environmental agency.

The focus cluster for this module is RST9 and WST1.

GRADES	DISCIPLINE	COURSE	PACING
7 - 9	Science	Environmental/Earth	N/A

Section 1: What Task?

Teaching Task

Task Template 2 - Argumentation

Is hydraulic fracturing a cost effective and safe method for the use of extracting natural gas without causing harm to the environment? After reading the selected texts, write a paper and construct a poster for the Environmental Protection Agency in which you address the question and argue whether this process for extracting fossil fuel is safe for the environment, and cost effective. Support your position with evidence from the text(s).

Standards

Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects

RST.9-10.1
Focus

Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

RST.9-10.2

Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

RST.9-10.4

Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9—10 texts and topics.

RST.9-10.6

Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

RST.9-10.9
Focus

Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.

RST.9-10.10

By the end of grade 10, read and comprehend science/technical texts in the grades 9—10 text complexity band independently and proficiently.

WHST.9-10.1
Focus

Write arguments focused on discipline-specific content.

WHST.9-10.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

WHST.9-10.5

Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

WHST.9-10.9
Focus

Draw evidence from informational texts to support analysis, reflection, and research.

WHST.9-10.10

Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Next Generation Science Standards

All forms of energy production and other resource extraction have associated economic, social, environmental, and geopolitical costs and risks as well as benefits. New technologies and social regulations can change the balance of these factors.

Resource availability has guided the development of human society.

ESS3.A

Natural Resources

HS-ESS3-2
Focus

Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.

Texts

- **LiveBinder - All resources**
- **A History of Natural Gas**
- **Communities Divided Over Natural Gas Drilling**

- What the Frack? Natural Gas from Subterranean Shale
- The Facts on Fracking

Student Work Rubric - Argumentation Task - Grades 9-12

	Emerging	Approaches Expectations	Meets Expectations	Advanced
	1	2	3	4
Controlling Idea	Makes a general claim with an unclear focus.	Establishes a **clear** claim **that addresses the prompt**, with an **uneven focus**.	Establishes **and maintains** a **clear, specific, and credible claim** that addresses **all aspects** of the prompt.	Establishes and maintains a **precise, substantive** claim that addresses all aspects of the prompt. **Acknowledges limitations and/or the complexity of the issue or topic**.
Selection & Citation of Evidence	Includes minimal details from sources. Sources are used without citation.	Includes **details, examples, and/or quotations** from sources that are **relevant to the claim**. **Inconsistently** cites sources.	Includes details, examples, and/or quotations from sources that **support** the claim and **supporting ideas**. **Consistently** cites sources **with minor formatting errors**.	Includes **well-chosen** details, examples, and/or quotations from sources that **fully support** the claim and supporting ideas. Consistently cites sources **using appropriate format**.
Development / Explanation of Sources	Explanation of ideas and source material is irrelevant, incomplete, or inaccurate.	Explains ideas and source material **to support the argument**, with **some incomplete reasoning or explanations**.	**Accurately** explains ideas and source material and **how they support** the argument.	**Thoroughly** and accurately explains ideas and source material, **using logical reasoning to support and develop** the argument.
Organization	Lacks an evident structure. Makes unclear connections among claims, reasons, and/or evidence.	**Groups ideas and uses transitions** to develop the argument, with **some lapses in coherence or organization**.	**Groups and sequences** ideas to **develop a cohesive argument**. Uses transitions **to clarify the relationships among claim(s), reasons, and evidence**.	Groups and sequences ideas **in a logical progression in which ideas build to create a unified whole**. Uses **varied** transitions to clarify the **precise** relationships among claim(s), reasons, and evidence.
Conventions	Major errors in standard English conventions interfere with the clarity of the writing. Language or tone is inappropriate.	Errors in standard English conventions **sometimes interfere** with the clarity of the writing. Uses language and tone that are **sometimes inappropriate** for the audience and purpose.	**Consistently applies** standard English conventions; **minor errors**, while noticeable, **do not interfere** with the clarity of the writing. Uses language and tone **appropriate to the audience and purpose**.	Consistently applies standard English conventions, **with few errors**. Demonstrates **varied syntax** and **precise word choice**. **Consistently** uses language and tone appropriate to the audience and purpose.
Content Understanding (Generic)	Attempts to include disciplinary content in explanation or argument but understanding of content is weak; content is irrelevant, inappropriate, or inaccurate.	Briefly notes disciplinary content relevant to the prompt; shows basic or uneven understanding of content; minor errors in explanation.	Accurately presents disciplinary content relevant to the prompt with sufficient explanations that demonstrate understanding.	Integrates relevant and accurate disciplinary content with thorough explanations that demonstrate in-depth understanding.

Background for Students

A century ago, natural gas was considered a waste product in oil fields and flared or vented off. But after a giant gas field was found in the Panhandle in 1918, it was used to manufacture carbon black, which is used to make car tires. Eventually, Americans began using gas to heat their homes and, later, to fire power plants. But it never became as important a fuel as coal, oil or even nuclear power. A combination of circumstances has drawn new attention to natural gas.

Natural gas cracked out of shale deposits may mean the U.S. has a stable supply for a century, but at what cost to the environment and human health? You have explored this topic in the unit. Now in a paper and poster take a position in which you side "pro or con" on the issue as it might affect your community.

Extension

As a class, invite a geologist to talk to you about fracking and what you have learned.

Section 2: What Skills?

Preparing for the Task

TASK AND RUBRIC ANALYSIS > TASK ANALYSIS: Ability to understand and explain the task's prompt and rubric.

BRIDGING CONVERSATION > TASK ENGAGEMENT: Ability to connect the task and new content to existing knowledge, skills, experiences, interests, and concerns.

Reading Process

ACTIVE READING > ESSENTIAL VOCABULARY: Ability to identify and master terms essential to understanding a text.

ACTIVE READING > NOTE-TAKING: Ability to select important facts and passages for use in one's own writing and to identify pro and con arguments.

SCIENTIFIC INQUIRY: Ability to use scientific concepts and apply them to develop or simulate experimental designs.

Transition to Writing

DEBATE: Ability to present information that supports a position in a debate.

Writing Process

CLAIM AND INITIAL DRAFT: Ability to establish a claim and consolidate information relevant to task.

REVISION AND PEER EDITING: Ability to proofread and format a piece to make it more effective.

ABSTRACT: Ability to write an abstract for the poster and paper.

POSTER: Ability to use media and other materials to support the poster paper.

COMPLETION: Ability to submit final piece that meets expectations.

Section 3: What Instruction?

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
Preparing for the Task				
1 hr and 30 mins	**TASK AND RUBRIC ANALYSIS > TASK ANALYSIS**: Ability to understand and explain the task's prompt and rubric.	**PARAPHRASING AND LIST** *What is the task asking you to do? What are the expectations for this task? Write 3-4 sentences in which you answer the question in your own words.* *Analyze the posters and list their characteristics. What do you see in the posters that relate to the rubric? Provide a short list of characteristics.*	***Meets:*** *You provide an accurate paraphrase of the task and rubric.* *You provide accurate list of characteristics related to the rubric.* ***Not yet:*** Attempts but does not meet 1-3 criteria for "meets"	Pose the question- What are the expectations for this task? Students will review the task and address these points: What is the task asking you to do? • Product • Audience • Purpose • Content This task asks students to prepare a digital poster for an agency to advocate for or against fracking. Arrange students in small groups, and assign each group three or more posters to analyze, using resources at one or more of the following sites: ALA Poster Sessions Images of Physical Posters - http://writing.colostate.edu/guides/guide.cfm?guideid=78 NCSU Example Posters Ask students to jot down general characteristics that they see in the posters. Allow approximately 10 minutes for groups to explore the examples and list their observations. Gather the class and ask them to share the characteristics that they have noted. Record their observations on the board or on chart paper. Be sure that students include observations on both text and graphic design elements in their comments. If necessary, ask questions to encourage wider analysis of both text and graphics. Working with the information students have shared, group like observations to create a class list of characteristics of effective posters. Compare the characteristics to the requirements on the ***Educurious Rubric for Science Argumentation / Analysis Tasks***, asking students to indicate how the posters they examined would be scored with the rubric. Discuss and add details to the characteristics of effective posters that address the rubric and will be required for then to meet expectations on this task. Make sure that they have identified the purpose of the poster and the audience for which it is intended. **Teacher preparation** - Have a copy of the task and the rubric for students to analysis. If students do not have computer access,
	Standards: **RST.9-10.3** : Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.			
	Additional Attachments:			
50 mins	**BRIDGING CONVERSATION > TASK ENGAGEMENT**: Ability to connect the task and new content to existing knowledge, skills, experiences, interests, and concerns.	**DISCUSSION AND FACT LIST** Brainstorm and list facts that are relevant to "natural gas" and "hydrofracking". Watch the video and answer these questions: • How natural gas is formed? • Where is it located? • How did it get there? • How is it removed? Discuss answers with group and submit one group answer for each question to *Today's Meet*.	***Meets:*** Your group accurately presents in a discussion a list with at least three *relevant* facts about each, "natural gas" and "hydrofracking". ***Not yet:*** Your group provides less than 3 facts or terms or they are not relevant to the task.	First have the students brainstorm and create a list of words/information about "natural gas" and "fracking". Then in small groups discuss and compare the information. They may supply one-word reactions, facts, personal experience, or anything else that is relevant. Next, invite groups to report what they discussed, and write their contributions on the board. Now have student view (First 4 minutes) the video; A History of Natural Gas and answer the questions: **How natural gas is formed?** **Where is it located** **How did it get there?** **How is it removed?** After small group discussion, review answers submitted to *Today's Meet.* **Teacher preparation** - Before students arrive, write the words "natural gas" and "hydrofracking" in the center of the classroom board, circling both terms. Create a Today's Meet for student responses. https://todaysmeet.com/
	Standards: **SL.9-10.1** : Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9—10 topics, texts, and issues,			

	building on others' ideas and expressing their own clearly and persuasively.			
	Additional Attachments: **A History of Natural Gas - play only first 4 minutes**			
Reading Process				
30 mins	**ACTIVE READING > ESSENTIAL VOCABULARY**: Ability to identify and master terms essential to understanding a text.	**VOCABULARY LIST** *State key terms relevant to the topic in your own words and construct a picture, pictograph, or symbolic representation of the term.*	***Meets*:** You provide an accurate definition and visual representation for key terms. ***Not yet*:** Attempts but does not yet meet the criteria for "meets".	This strategy is intended for students to use throughout the reading process as they encounter news terms that is essential to their understanding of the content. (Marzano, 2004). 6-step method to teaching vocabulary As new vocabulary is encountered or needed for understanding the content. 1. Provide a description, explanation, or example of the new term. 2. Ask students to restate the description, explanation, or example in their own words. 3. Ask students to construct a picture, pictograph, or symbolic representation of the term. 4. Engage students periodically in activities that help them add to their knowledge of the terms in their vocabulary notebooks. 5. Periodically ask students to discuss the terms with one another. 6. Involve students periodically in games that enable them to play with terms. Use the first three steps when introducing a term to students. For example, the term *mutualism*. Instead of offering a textbook definition, describe the term to illustrates its meaning (Step 1). Explain that the crocodile and a bird called the Egyptian plover have a relationship that exemplifies mutualism. The crocodile opens its mouth and invites the plover to stand inside. The plover picks things out of the crocodile's teeth. Both parties benefit: The plover gets fed; the croc gets its teeth cleaned. While explaining this relationship, show students images found on the Internet if possible. In Steps 2 and 3, students explain the meaning of *mutualism*. They devise an explanation or an example from their own lives (Step 2). Next, they draw an image. A few days later, review the new term using Steps 4, 5, and 6, which needn't be executed in sequence. Have students compare the meaning of *mutualism* with another previously studied term, such as *symbiosis* (Step 4). Students might pair up and compare their entries on the term in their vocabulary notebooks (Step 5), or craft a game that students play using these terms (Step 6). **Teacher preparation -** Construct list of vocabulary words essential to content understanding.
	Standards: **L.9-10.4** : Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9—10 reading and content, choosing flexibly from a range of strategies.			
50 mins	**ACTIVE READING > NOTE-TAKING**: Ability to select important facts and passages for use in one's own writing and to identify pro and con arguments.	**SCIENCE NOTEBOOK** 1. With an objective eye and ear, read or listen to each text. 2.Record notes in your science notebook to include information about fracking and the effects on the environment. Set aside your bias and try to read and select information as if you were a detective. 3. Based on the information you have read, what is your position? Identify the information you plan to use to support your position. 4. What is the counter-position? Write a brief restatement of the counter-position.	***Meets:*** 1. You provide notes one set of notes that relate information objectively. 2. You state in one sentence your position and identify information you will use to argue your position. 3. You provide a restatement of a counter-position. ***Not yet*:** Your notes are not sufficient or relevant and you do not have information to support your position.	1. Direct students to use a system for note-taking. 2. Teach the logic required to arrive at a position by modeling or through a class discussion. The "if/then" method works well when helping students see different ways to arrive at a position or claim.
	Standards: **WHST.9-10.2.A** : Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. **WHST.9-10.8** : Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.			
	Additional Attachments:			

The Science Spot

1 hr and 30 mins	**SCIENTIFIC INQUIRY**: Ability to use scientific concepts and apply them to develop or simulate experimental designs.	**PERMEABILITY LAB ORGANIZER** **Guiding Question:** During the extraction of natural gas, is it possible that commination can occur? Construct a lab for testing the permeability of different rock/soil materials. Conduct the lab investigation that you created using the DSET organizer and the formula Permeability = distance traveled / elapsed time. **Product:** Written lab procedure Developing a Scientific Explanation Tool (DSET) organizer.	***Meets*:** Your lab is accurate and organized so that others can follow it; you provide a complete DSET organizer. ***Not yet*:** Attempts but does not yet meet the criteria for "meets."	Group students. Groups of two to three work best. During this lab, students will gather both qualitative and quantitative data. You may want to review this prior to the mini-task. Qualitative Data: Individually students brainstorm a list of terms that are used as qualitative descriptions. Next, students within each group create a list. Then class discussion and record their responses (class list) of the terms for qualitative descriptions. Quantitative Data: As a class discuss what they will measure and how they will gather the data. You may want to discuss how this e the formula *"Permeability = distance traveled / elapsed time"* is used. Students locate four different samples of soil that vary in texture, color, and density. If possible they should look for rocky soil, sandy soil, clay, or good planting soil. They need to be different enough so determine differences when compared. Name each rock/soil samples, either by its soil type, or by location, and then write a detailed description of each sample. Remember to refer to the class list for these qualitative descriptions - color, texture, odor, as well as descriptions of the various items that is observed within the sample. Predict: Which soil sample will have the most permeability and which soil sample will have the least permeability. Now design your procedure for testing the samples. Manipulate the materials until you are confident with the procedure. As your group works, ask yourselves these questions: • Is there accurately measuring the rate at which water flows through the soil? • Does the procedure provide a measurement that can be compared for different soil types? (Think about constants that should remain the same for each group to make them comparable.) • Is the procedure easily replicated so that someone else would get similar results? • Will there be multiple trials conducted to get more accurate data? • Does the procedure allow for comparison of rates of water flow to each other fairly? Now write the procedure. Conduct the investigation and collect and organize the appropriate data.
	Standards: **WHST.9-10.2** : Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.			
Transition to Writing				
50 mins	**DEBATE**: Ability to present information that supports a position in a debate.	**DEBATE AND NOTES** Debate whether "hydrofracking" should be allowed in your community. Present one single argument as affirmative or negative. As you listen to other debaters, take notes relevant to their position and evidence.	Debate not scored but notes are shared and given credit.	**Debate of the Masses** Divide the group into two halves: affirmative and negative. Then divide each of those groups into two halves: the first affirmatives and the second affirmatives, etc. Start by having half of the affirmative speakers get up in turn and present one single argument (no more than 30 seconds each). Everyone is instructed to write down and number each point, so if there are ten affirmative speakers in the first point, they should have numbered arguments one through ten in the first column of their notes. Before the affirmatives start, let the first negatives know that they will be responsible for refuting one of the affirmative arguments (have the speakers numbered in a sequence so that if a person is negative #7, then they know they refute the 7th affirmative argument. Once the first group of affirmative speakers have finished, have the first group of negative speakers answer each of the affirmative points. Following this, the second group of affirmative speakers is up. Their goal is to defend one of the original affirmative arguments by attacking the negative response to that argument. Again, each person has a number, so affirmative #3 would be expected to defend the 3rd affirmative argument by attacking what the negative says against that argument. Finally, the second group of negative completes the process in the same manner. If you like, you can add judges who present a decision. For instructors, the goal is to have an informal free-flowing exchange and to keep things moving so that everyone speaks. Even if the arguments aren't very good, students will get the idea of structure and given the numbers you should hear at least a couple of good arguments and good answers.
	Standards: **SL.9-10.4** : Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.			
Writing Process				

50 mins	**CLAIM AND INITIAL DRAFT**: Ability to establish a claim and consolidate information relevant to task.	**CLAIM AND OUTLINE** Revisit your position made in the debate. Write a claim in 1-3 sentences for or against fracking and complete the argument outline accordingly.	**Meets:** Claim is credible and graphic organizer is completed correctly according to the claim. OUltine shows a logical heirarchy of points that support the position. ***Not yet*:** One or more "meets" criteria is missing or incomplete	Argument writing graphic organizer: Provide students with the graphic organizer. Remind students to use notes, lab data, and information gained from the readings to aide in the completion of the organizer. Model the use of the first section of the organizer and check in with students to ensure their outlines provide sufficient and accurate evidence. This is a good time to teach students ways to organize an argument deductively or inductively. **Teacher Preparation** Run copies of graphic organizer
	Standards: **WHST.9-10.1.A** : Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. **WHST.9-10.1.B** : Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns.			
	Additional Attachments: **Graphic Organizer** **Argument Writing Graphic Organizer**			
50 mins	**CLAIM AND INITIAL DRAFT**: Ability to establish a claim and consolidate information relevant to task.	**INITIAL DRAFT** Write an initial draft of the paper that will accompany your poster. Be sure that your paper is complete with opening, development, and closing, and you cite textual evidence. • Your opening should state a position and address a counter-position. • Your development should lead the reader through your argument with supporting evidence from your research and lab. • Your closing should restate your claim in new terms.	• Provides complete draft with all parts; content is generally credible and argument basically sound. • Supports the opening in the later sections with evidence and citations.	• Encourage students to re-read prompt partway through writing, to check that they are on track.
	Standards: **W.9-10.1** : Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.			
50 mins	**REVISION AND PEER EDITING**: Ability to proofread and format a piece to make it more effective.	**DRAFTS WITH REVISIONS AND PEER FEEDBACK** Use revision strategies to create a clear and coherent text. With other students, get feedback and help with editing for grammar and formatting.	***Meets:*** Demonstrates use of appropriate revision strategies for addressing chosen categories. Provides evidence of working with another student to correct editing problems. ***Not yet*:** Attempts but does not yet meet criteria for "meets"	Review criteria that students will be using to give feedback and edit other students' products including proofreading marks. The four categories of the rubric for editing are **Development, Claims, Evidence, and Content**. All students will be assigned a color to proof the draft of the product. **Development** – Blue **Claims** – Green **Evidence –** Red **Content** - Black Provide each student with a copy of the peer review sheet for them to attach to their draft (see attached). Placed students in groups of four. They will then review four papers from another group using the peer review sheets provided (see attached). Establish and set an amount of time. For them to complete proofing each section. When that time is finished, they pass the draft and review page to the next. This process continues until each student has reviewed four drafts for their category. 5 to 8 minutes should be a sufficient amount of time for each review round. Each student looks only at the criteria assigned and does this on each of the four papers.
	Standards: **WHST.9-10.5** : Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.			

	WHST.9-10.2.D : Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers.			
30 mins	**ABSTRACT**: Ability to write an abstract for the poster and paper.	**ABSTRACT** Write an abstract for your paper and poster that summarizes your position and key reasons for taking that position.	Your abstract is concise and informs the reader of your position in scientific terms.	Abstracts are expected elements in scientific papers and poster. Have students read abstracts online and analyze their purpose and elements, particularly how abstracts crystallize key elements of a paper and how this helps the reader.
	Standards: **WHST.9-10.4** : Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.			
50 mins	**POSTER**: Ability to use media and other materials to support the poster paper.	**MEDIA SOURCES LIST** Locate and list digital sources such as video, music, pictures, and/or charts that support your position and evidence.	***Meets:*** You select materials to supports and strengthens the argument and the sources are cited. ***Not yet:*** Attempts but does not yet meet criteria for “meets”	Discuss the criteria for effective posters and argumentative writings referring to the task and rubric analysis. Have them determine the number and types of media needed to fully support their position. Using the *Live Binder* of resources, students select their media and cite the source. Refer to the notes for effective posters if needed. **Teacher Preparation**: Set up a live binder or other bookmaking tool with various sites for students to use to select media.
	Standards: **RST.9-10.7** : Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.			
50 mins	**POSTER**: Ability to use media and other materials to support the poster paper.	**POSTER** Construct a poster presentation that includes the media needed to present a convincing argument. Attach your paper to the poster.	***Meets:*** You construct a poster that includes sources and various types of media to support the position and evidence presented in the paper. ***Not yet***: Attempts but does not yet reach “meets”	Use the "Writing@CSU GuidePoster Sessions guide" to work with students on the poster presentation.
	Standards: **WHST.9-10.6** : Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.			
	Additional Attachments: **Writing@CSU Guide Poster Sessions**			
50 mins	**COMPLETION**: Ability to submit final piece that meets expectations.	**PAPER AND POSTER** Turn in your paper and poster ON TIME with the self-assessment rubric. Participate in the school hallway exhibit.	You discuss your self-assessment score with your teacher. Set new goals for the next module.	Use this opportunity to congratulate students on what shows improvement and help them set realistic goals for the next module.
	Standards: **WHST.9-10.10** : Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.			

Instructional Resources

Teacher Resource

- **Educurious Rubric (this document contains the intended rubric for the student work)**

Section 4: What Results?

Student Work Samples

No resources specified

Teacher Reflection

Not provided