Literacy Design Collaborative

Forms and Transformations of Energy

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This module is meant to be taught independently or in conjunction with the Colorado Department of Education Instructional Unit Sample for High School Physical Science, "Forms and Transformation of Energy", found at: http://www.cde.state.co.us/standardsandinstruction/instructionalunits-science

The Colorado Department of Education unit focuses on forms of energy and how those forms are transformed and conserved in a variety of situations. Beginning with the foundation of energy conservation, students explain and calculate how various types of energy (kinetic, potential, mechanical, thermal, chemical, nuclear, electrical, and radiant, etc.) are used in real life scenarios. They identify efficient forms of energy used to do work and recognize that the transformations involved conserve instead of “lose” energy. The unit culminates in a performance assessment that asks students to investigate ways to decrease energy consumption for their school and present a report to their local school board.

This LDC module may be incorporated into Learning Experience 11 of the CDE unit or on its own. Students will be researching and analyzing the viability, efficiency, and sustainability of various energy resources. Students will analyze energy sources from a variety of perspectives and derive a conclusion, based on their research, that answers the question: "Which energy sources is most effective for a productive, sustainable future?".

GRADES	DISCIPLINE	COURSE
9 - 12	Science	Physics

Section 1: What Task?

Teaching Task

Task Template 1 - Argumentation

After researching scientific articles on the efficiency and cost of various energy sources, write a letter to the editor in which you argue for the viability of a renewable and a nonrenewable resource both for present day and the future. Your argument must provide a cost benefit analysis in relation to efficiency and energy conservation for both resources. Support your position with evidence from your research.

Common Core State Standards

Reading Standards for Literacy in Science and Technical Subjects 6—12

RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

RST.11-12.4 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 11—12 texts and topics.

RST.11-12.10 By the end of grade 12, read and comprehend science/technical texts in the grades 11—CCR text complexity band independently and proficiently.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6—12

WHST.11-12.1 Write arguments focused on discipline-specific content.

- **WHST.11-12.1.e** Provide a concluding statement or section that follows from or supports the argument presented.
- **WHST.11-12.1.d** Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- **WHST.11-12.1.c** Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
- **WHST.11-12.1.b** Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.
- **WHST.11-12.1.a** Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.

WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

WHST.11-12.5 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.11-12.9 Draw evidence from informational texts to support analysis, reflection, and research.

WHST.11-12.10 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.

Additional Standards

Colorado

Colorado Academic Standards for Science

CO Examine, evaluate, question, and ethically use information from a variety of sources and media to investigate the conservation of mass and energy

CO When energy changes form, it is neither created not destroyed; however, because some is necessarily lost as heat, the amount of energy available to do work decreases

- CO Use direct and indirect evidence to develop and support claims about the conservation of energy in a variety of systems, including transformations to heat
- CO Evaluate the energy conversion efficiency of a variety of energy transformations
- CO Describe energy transformations both quantitatively and qualitatively
- CO Differentiate among the characteristics of mechanical and electromagnetic waves that determine their energy
- CO Examine, evaluate, question, and ethically use information from a variety of sources and media to investigate energy conservation and loss

CO Use direct and indirect evidence to develop and support claims about the conservation of energy in a variety of systems, including transformations to heat

CO Evaluate the energy conversion efficiency of a variety of energy transformations

CO Describe energy transformations both quantitatively and qualitatively

CO Examine, evaluate, question, and ethically use information from a variety of sources and media to investigate energy conservation and loss

Texts

- **Exploring New Energy Alternative**
- **Renewable Energy Gains Momentum**
- **It's Scary. It's Expensive. It Could Save the Earth. National Geographic April 2006**
- **Future Power**
- **The End of Cheap Oil**

- **Can Solar Save Us?**
- **The Dark Side of Solar, Wind Power**
- **The Coal Paradox**
- **Project to Pour Water into Volcano to Make Power**
- **Nation Energy Education Development Project website**

LDC Student Work Rubric - Argumentation

	Not Yet	Approaches Expectations	Meets Expectations	Advanced
	1	2	3	4
Focus	Attempts to address prompt, but lacks focus or is off-task.	Addresses prompt appropriately and establishes a position, but focus is uneven. D. Addresses additional demands superficially.	Addresses prompt appropriately and maintains a clear, steady focus. Provides a generally convincing position. D: Addresses additional demands sufficiently	Addresses all aspects of prompt appropriately with a consistently strong focus and convincing position. D: Addresses additional demands with thoroughness and makes a connection to claim.
Controlling Idea	Attempts to establish a claim, but lacks a clear purpose.	Establishes a claim.	Establishes a credible claim.	Establishes and maintains a substantive and credible claim or proposal.
Reading/Research	Attempts to reference reading materials to develop response, but lacks connections or relevance to the purpose of the prompt.	Presents information from reading materials relevant to the purpose of the prompt with minor lapses in accuracy or completeness.	Accurately presents details from reading materials relevant to the purpose of the prompt to develop argument or claim.	Accurately and effectively presents important details from reading materials to develop argument or claim.
Development	Attempts to provide details in response to the prompt, but lacks sufficient development or relevance to the purpose of the prompt.	Presents appropriate details to support and develop the focus, controlling idea, or claim, with minor lapses in the reasoning, examples, or explanations.	Presents appropriate and sufficient details to support and develop the focus, controlling idea, or claim.	Presents thorough and detailed information to effectively support and develop the focus, controlling idea, or claim.
Organization	Attempts to organize ideas, but lacks control of structure.	Uses an appropriate organizational structure for development of reasoning and logic, with minor lapses in structure and/or coherence.	Maintains an appropriate organizational structure to address specific requirements of the prompt. Structure reveals the reasoning and logic of the argument.	Maintains an organizational structure that intentionally and effectively enhances the presentation of information as required by the specific prompt. Structure enhances development of the reasoning and logic of the argument.
Conventions	Attempts to demonstrate standard English conventions, but lacks cohesion and control of grammar, usage, and mechanics. Sources are used without citation.	Demonstrates an uneven command of standard English conventions and cohesion. Uses language and tone with some inaccurate, inappropriate, or uneven features. Inconsistently cites sources.	Demonstrates a command of standard English conventions and cohesion, with few errors. Response includes language and tone appropriate to the audience, purpose, and specific requirements of the prompt. Cites sources using appropriate format with only minor errors.	Demonstrates and maintains a well-developed command of standard English conventions and cohesion, with few errors. Response includes language and tone consistently appropriate to the audience, purpose, and specific requirements of the prompt. Consistently cites sources using appropriate format.
Content Understanding	Attempts to include disciplinary content in 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

As population increases all over the world, the demand and necessity for a sustainable and efficient energy source is ever increasing. The issue is of such great importance that scientists and politicians alike have been focusing their collective thoughts on the dilemma. You will be researching various forms of energy, both renewable and nonrenewable, and formulating a plan for the most viable forms of energy for both present day and the future.

Extension

Students may develop a video, public service announcement or 10 minute TED talk on the topic.

Section 2: What Skills?

Preparing for the Task

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

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

Reading Process

PRE-READING > TEXT SELECTION: Ability to identify appropriate texts.

ACTIVE READING > ANNOTATION: Add your own definition here

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.

Transition to Writing

BRIDGING CONVERSATION > PREPARING FOR WRITING: Ability to begin linking reading results to writing task.

Writing Process

INITIATION OF TASK > ESTABLISHING THE CONTROLLING IDEA: Ability to establish a claim and consolidate information relevant to task.

PLANNING > PLANNING THE WRITING: Ability to develop a line of thought and text structure appropriate to an argumentation task.

DEVELOPMENT > BODY PARAGRAPHS: Add your own definition here

REVISION, EDITING, AND COMPLETION > REVISION: Ability to refine text, including line of thought, language usage, and tone as appropriate to audience and purpose.

Section 3: What Instruction?

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
Preparing for the Task				
Not provided	**BRIDGING CONVERSATION > TASK ENGAGEMENT**: Ability to connect the task and new content to existing knowledge, skills, experiences, interests, and concerns.	**SHORT RESPONSE WITH BULLETS (LDC PROTOTYPE)** In a quick write, record your first reaction to the task prompt. Add some notes of things you know about energy resources and related economic, political and environmental issues.	*No Scoring*	• Link this task to earlier class content. • Discuss student responses. • Clarify timetable and support plans for the task.
Not provided	**TASK AND RUBRIC ANALYSIS > TASK ANALYSIS**: Ability to understand and explain the task's prompt and rubric.	**PARAPHRASED TEACHING TASK** Read the task carefully, underline key words, and restate the task in your own words.	Product meets criteria if: Task is annotated with key words underlined Task is restated using at least 2-3 sentences Task is restated using language that is appropriate and original	1. Review definitions of "paraphrase" and "annotate" and discuss how they are connected. 2. Model how to closely read, and annotate a task (see teacher handout). Then model how to restate the task in your own words. 3. Have students practice closely reading, annotating, and restating a task. 4. Introduce the actual task. 5. Have students work individually or in pairs to complete the full process with the relevant task. Share out ideas. Additional Instruction Ideas adapted from: Jaclyn M. Wells, Sara Ballute & Timothy Lent
	Additional Attachments:  **Understanding the Task.pdf**  **TaskParaphrase_StudentWork.pdf**  **Understanding the Task - TEACHER COPY.pdf** **Understanding the Task.doc**			

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
Not provided	**TASK AND RUBRIC ANALYSIS > TASK ANALYSIS**: Ability to understand and explain the task's prompt and rubric.	**BULLETS (LDC PROTOTYPE)** In your own words, what are the important features of a good response to this prompt?	*No Scoring*	• Share examples of type of text students will produce (either from past students or from professional writers). • Identify or invite students to identify key features of examples. • Pair students to share and improve their individual bullets. • Create a classroom list: Choose one student to share a few ideas on the board, and ask others to add to it.
Reading Process				
Not provided	**PRE-READING > TEXT SELECTION**: Ability to identify appropriate texts.	**NOTES (LDC PROTOTYPE)** For each text, list the needed bibliographic information. Add bullets on why you think the work is credible and/or worthy of study.	• Identifies author, title, publisher, date, and any other needed information (for example, the volume for a periodical or the editor for an anthology). • Includes reasonable evidence that work is credible and/or worthy of study.	• Provide citation guide and discuss why each element of citation is needed. • Ask students to brainstorm what makes an author credible and/or worthy of study. • Provide access to research sources for students to assess the texts. • **Note:** for an “after researching” task, add teaching and time for students to select the texts they will use.

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
1 hr	**ACTIVE READING > ANNOTATION**: Add your own definition here	**INITIAL ANNOTATIONS** Read the text through three times. The first time, just get a feel for what's happening in the text. The second time, circle or underline terms you need to learn more about. The third time, note questions in the margin.	Student work meets expectations if it uses annotations to demonstrate appropriate puzzling in the early phases of reading a demanding text.	One thought for starting this work: students should be learning that important texts normally require multiple readings. If they struggle and try several approaches, that means they're doing it right. That point is worth making before and during their work on this task. Model all three steps on the first one to three paragraphs: 1. Read aloud the text without pausing. 2. Read aloud the text, pausing to underline *(and explain why you are underlining)* important terms. You might say something like: ● *I'm going to underline ___, because he seems like an important person based on how much the author mentions him.* ● *I'm going to underline the word ___ and its definition, because if the author bothers to define a word, I know it must be pretty important.* ● *I'm going to underline ___, because even though I'm not quite sure what it means, I can tell its important.* 3. Read aloud the text, pausing to ask questions. You might say something like: ● Hm, I'm wondering why the author keeps talking about this, so I am going to write "Why is this so important?" ● I realize I dont know much about ___, and the author seems to assume that I do. I think I might have to look it up. I'm going to write, "What is ___?"
Not provided	**ACTIVE READING > ESSENTIAL VOCABULARY**: Ability to identify and master terms essential to understanding a text.	**ESSENTIAL VOCABULARY PRACTICE** Prompt: Use netbooks to find the meanings of seven words you don't know in the assigned texts. Record in vocabulary table in Writer's Notebook. Product: Vocabulary table	*Work meets expectations if:* • Vocabulary table is completed with correct definitions • Students participate in the vocabulary Ask Me review	Teacher will read through the text and instruct students to circle words they do not know. The students will then share their words with their partner and work together to find the meanings of the words using available resources (ipads, books, etc.). While words are being written on large chart paper, teacher will add to discussion any additional information the students may need to know in order to fully understand the texts. Once all pairs are done, pairs will list the words on chart paper. As pairs add words to the list, they will also share the definitions with the class.
	Additional Attachments: **Vocabulary Table**			

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
Not provided	**ACTIVE READING > NOTE-TAKING**: Ability to select important facts and passages for use in one's own writing.	**IDENTIFICATION OF A TEXT'S MAIN IDEA** In your own words, identify the main idea of a text. Cite and paraphrase details from the text that support the identified main idea.	• Student accurately identifies the main idea of each assigned text. • Main idea is in student's own words. • Cited and paraphrased details align with student's identification of main idea.	1. Define "main idea" (controlling idea, thesis, claim). 2. Read a simple short text with students and have them put it away and then ask them to state in a complete sentence what the main idea of the text was. 3. Write the agreed upon main idea of the text on the board and ask students "how do you know this is the main idea of the text?". 4. Ask students to get out the text again and find details in the text that prove that the correct main idea has been stated. First, have them cite text from the reading directly. Secondly, have them paraphrase parts of the text. 5. Model this process using the attached graphic organizer (either with same text or with another text) -- have students fill in with you. 6. Independent practice: have students practice with another similar text. Collect and score this work. 7. Have students use copies of this graphic organizer for all of the texts they are using in this module. Score them and return them to students with feedback so they can use as notes during the writing process. Additional Instruction This mini-task was originally designed for a module in a high school science class. Attached example articles come from that context.
	Additional Attachments: **Determining Main Idea.docx** **Mini-taskChecklistMainIdea.docx** **6.4 Tantulum properties reading.doc** **6.5 Main Idea from Article.doc** **6.6 Main Idea from Article 2.doc** **Determining Main Idea_TEMPLATE.docx**			
Not provided	**ACTIVE READING > NOTE-TAKING**: Ability to select important facts and passages for use in one's own writing.	**NOTES (LDC PROTOTYPE)** From each text, make a list of the elements that look most important for answering the prompt. Do what you need to do to avoid plagiarism.	• Identifies relevant elements. • Includes information to support accurate citation (for example, page numbers for a long text, clear indication when quoting directly).	• Teach a sample format for note taking. • Check that early student work is in the assigned format (or in another format that gathers the needed information effectively).
Transition to Writing				

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
Not provided	**BRIDGING CONVERSATION > PREPARING FOR WRITING**: Ability to begin linking reading results to writing task.	**DEBATE (PARTICIPATION AND GRAPHIC ORGANIZER)** Complete the graphic organizer by (1) Describing the energy resource (or combination of sources) that you feel is most viable, (2) Stating three reasons that would convince someone that your viewpoint is valid, (3) Writing 3 facts or examples to support each of your main reasons, and (4) Concluding your argument by summarizing the most important details of the argument. Finally, participate in the class debate by orally explaining and supporting your viewpoint.	- Viewpoints are clear and organized. - Arguments are supported with facts and examples for the texts. - All supporting arguments are relevant to energy resources. - All arguments are strong and convincing. - Voice is clear and can always be heard. - Student is well prepared with a detailed and completed graphic organizer.	**Session 1 -** 1. Explain that the class is going to have a debate about sustainable, reliable, efficient and viable energy resources. 2. Assign students to groups and stances. Groups should be no larger than four students per group, but at least three students. Half of the groups will be assigned to the renewable energy resources; the other half will be assigned to the nonrenewable energy resources. (For example, a class with 24 students will have six groups of four students each, and three of those groups will be for the resource type, three against the resource type.). You will decide who is assigned to which source. Discuss with students that this is simply an activity to teach a concept, and they may or may not be assigned to the group with which they agree. 3. Provide students with texts (This could have also been completed in the previous reading mini-tasks. In that case, they should instead use their notes to guide the discussion.). Ask them to read the text thoroughly and highlight or underline important ideas that will help them in their debate. Also, ask students to write at least three questions about this text in the margins, to be addressed at the beginning of the next session. 4. Help students answer their questions about the text. 5. Show students the Debate Graphic Organizer and explain that they will use it to formulate their arguments. For the *Goal or Thesis* step, ask students to write a sentence explaining what they hope to accomplish during the debate. 6. Each student is to come up with three reasons he or she is for or against the energy resource (depending on their assigned stances, regardless of students? initial opinions) along with three pieces of support (from the provided text). Encourage students to think of compromises and alternatives that will appeal to their opposition. What middle-ground might appeal to the most people? How does the text support these compromises? **Session 2 -** 1. When they have finished their Debate Graphic Organizer they should meet in their small groups (3 or 4 members) to share their goals, reasons, and support with their group members. The purpose of the smaller groups initially is to keep the logistics around planning, sharing, and debating manageable, since groups larger than four aren't generally a good idea. Ultimately, several small groups will work together to debate. 2. Explain that each group is to elect a group representative to choose a group goal, from the 3 or 4 individual goals, to present during the debate. To ensure that goals aren't repeated, group representatives will meet for the *For* and *Against* groups to choose a group goal for every group on their side. (Example: One of the Against groups might use this as their goal: Our goal is

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
				to convince people that renewable energy resources are a viable long-term solution. Our main reason for this is that _____. The support to back this up was found in the article we read. It stated that _____.) 3. Group representatives will now meet with representatives from other groups who are also arguing their stance (renewable or nonrenewable). They should take all of their group members? Debate Graphic Organizer with them. The purpose of this meeting is for all groups who are arguing the same stance to be aware of all of the proposed goals, reasons, and support for their stance and to make decisions about how to create the strongest argument. They may find that some of the goals, reasons, and support overlap or are weaker than others, so they will need to make decisions about which goals, reasons, and support will be used during the debate and by which groups. ***While representatives are making these decisions, the other group members can decide who will be the first speaker/presenter for each group during the debate. Each group will alternate with the opposing side, speaking one at a time. 4. Once the representatives make these decisions, have them return to their groups and share the debate plan. (Example: If you have a class of 24 students and there are three groups arguing for renewable resources and three groups against it, then the three groups will need to agree on a plan for how they will try to persuade the nonrenewable groups to change their minds. This is what the representatives will help the groups do. All of the renewable groups will work together during the debate, as will all of the nonrenewable groups, taking turns giving reasons and support to back up their stance.) 5. Once each group has decided which goals, reasons, and support to use during the debate, ask them to organize themselves in an order. Which group will give what goal, reasons, and support first, second, and third, etc.? Students should write this order down in their notebooks or a piece of paper to keep track for themselves. 6. Have students arrange their desks so that the nonrenewable groups are facing the renewable groups. If the room doesn't allow for that, it will work to put desks in a circle. Encourage groups to arrange themselves according to which group will go first, second, third, etc. 7. Flip a coin to decide who will go first. 8. Explain that students should take notes on the opposing arguments so that they can make a clear rebuttal. (Explain that a rebuttal argues against the argument that has been laid forth by the opposing side.) 9. Opening Arguments: Each side will alternate. So if the renewable side gets to go first, they will give one goal along with reasons and support for that particular goal. Then the nonrenewable side will do the same. Each side will alternate this way until all groups have given their goals, reasons, and support.

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
				10. Rebuttals: Tell the groups they are ready for rebuttal. Ask students to look at the notes they have taken on the opposing side's arguments. Tell them to raise their hands when they are ready to refute one of those arguments. When students make their rebuttals, they must briefly summarize what the opposing side said to remind everyone of the point they are arguing against. Call on students on each side, one at a time, to make rebuttals. Give each side at least three chances to rebut before moving on to the next step. 11. Ask students to stand up and move their desks back to their usual places. Now ask them to return to the designated place they were in on the first day of the activity, either R*enewable, Nonrenewable or Undecided.* 12. Tell the class that they now have the opportunity to reevaluate their original position by moving to a new position. 13. Discuss why people did or didn't change their minds. What aspects of the final debate were most persuasive? What aspects made students want to stay put? Additional Instruction Instructional Strategies and Handout adapted from: Jamie R. Wood and NCTE
	Additional Attachments: **Debate - Instructional Strategies.doc**  **Debate Graphic Organizer.pdf**			
Writing Process				
Not provided	**INITIATION OF TASK > ESTABLISHING THE CONTROLLING IDEA**: Ability to establish a claim and consolidate information relevant to task.	**PLAUSIBLE COUNTERCLAIMS (RESPOND TO A CLAIM)** After reading and debating renewable versus nonrenewable energy resources, write a valid claim (thesis statement). Then, write a plausible counterclaim.	Valid claim and plausible counterclaim are identified.	***See **attached** detailed instructions. 1. Engage prior knowledge. 2. Define counterclaim. 3. Model finding one. 4. Ask students to find others.
	Standards: **CCSS.ELA-LITERACY.CCRA.W.1** : Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.			

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
	Additional Attachments: **counterclaim teacher.docx** **counterclaim.docx**			
Not provided	**PLANNING > PLANNING THE WRITING**: Ability to develop a line of thought and text structure appropriate to an argumentation task.	**OUTLINE/ORGANIZER (LDC PROTOTYPE)** Create an outline based on your notes and reading in which you state your controlling idea in regards to energy resources, sequence your points, and note your supporting evidence.	• Creates an outline or organizer. • Supports controlling idea. • Uses evidence from texts read earlier.	• Discuss examples of writing outlines or organizers. • Invite students to generate questions in pairs about how the format works and fits the writing task. Then, take and answer questions.
Not provided	**DEVELOPMENT > BODY PARAGRAPHS**: Add your own definition here	**INITIAL DRAFT (LDC PROTOTYPE)** Write an initial draft of your letter to the editor. Be sure it is complete with opening, thesis, development, and closing; insert and cite textual evidence to support your claim regarding which energy resource type is more viable.	• Provides complete draft with all parts. • Supports the opening in the later sections with evidence and citations.	• Encourage students to re-read prompt before, partway through and after writing, to check that they are addressing all parts of the task.

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
40 mins	**REVISION, EDITING, AND COMPLETION > REVISION**: Ability to refine text, including line of thought, language usage, and tone as appropriate to audience and purpose.	**REVISING FOR TONE** One thing good writers do is they make sure their writing is the correct tone for their audience. Your letter to the editor has a formal tone. Revise it to make sure it reads as formal and is of appropriate length.	Student meets expectations if: • Less formal words are changed to fit the appropriate tone. • The replacement words are formal in tone.	*Need dictionaries, thesauri, or the internet! 1. Provide students with a definition of tone: the way a text (or voice) sounds. Today, we will think about two tones: *casual* and *formal.* Casual is how you talk with friends and family. Formal is how you talk when you are trying to get a job, or an A on an essay. 2. Which is casual? Which is formal? Why? She walked to the store and got candy. She ambled to the corner market and purchased confections. Explain how a thesaurus works, invite students to try in the next step... **Be sure to remind students not to use words that they don't know! 2. With a partner: Consider the following phrases, and try to rephrase them so they are formal using a thesaurus. I got football after class so I wont be catching the bus until late. --> She always gets mad when I make a joke --> 3. When you made these phrases more formal, what changed? (how long they were, the vocabulary) 4. Now, using the same tools, go back to your essays and make them more formal. 5. End of class: share out your best revision.

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
40 mins	**REVISION, EDITING, AND COMPLETION > REVISION**: Ability to refine text, including line of thought, language usage, and tone as appropriate to audience and purpose.	**TRANSITIONS** As you develop your letter to the editor, consider the following questions to guide your thinking: Are you paragraphs glued together with the appropriate transitions? Do they communicate to the reader the relationship between the ideas?	Work meets expectations if students revise their writing to: ● use transitions to indicate to the reader a strong relationship between ideas.	1. Provide student a poster in the classroom that says: **Transitions** link ideas together. They include: *First, second, third, last...* *In addition,* *As well,* *This is because...* *In contrast,* *Simularly,* *To summarize,* *To conclude,* 2. Provide students with the following paragraph: I walked around the corner. I went down the stairs. I jogged down a long hallway. I got to my English class. It was a long walk. Ask students what transitions could be included, and how the paragraph sounds different once they are included. 3. Give students time to add transitions to their own writing. Circulate. Pick a few exemplary revisions and have students share.
1 hr and 30 mins	**REVISION, EDITING, AND COMPLETION > REVISION**: Ability to refine text, including line of thought, language usage, and tone as appropriate to audience and purpose.	**WRITE FINAL DRAFT** After proofreading and revisions are complete, write the fianl draft of your letter to the editor.	Use LDC Argumentation Rubric	Allow time and provide support as needed for students to complete the final draft of their writing pieces.

Instructional Resources

No resources specified

Section 4: What Results?

Student Work Samples

No resources specified

Teacher Reflection

Not provided