

The Literacy Design Collaborative
Argumentation Module

Cryobiology

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Information Sheet

Module Title: Cryobiology

Module Description (overview):

Students have just finished units on States and Properties of Matter. They will take the concepts learned and expound upon them by examining the field of cryobiology. Cryobiology is the study of living things at very low temperatures. This science is filled with many technological advances. Students will examine the pros and cons of the techniques used and formulate an argument based on scientific facts.

Template Task (include number, type, level)	Teaching Task
Task 2 Argumentation/Analysis [Insert question] After reading _____ (literature or informational texts), write a/an _____ (essay or substitute) that addresses the question and support your position with evidence from the text(s).	Should cryobiology techniques be used to preserve living matter for future use? After reading texts on cryobiology, write an article that addresses the question and support your position with evidence from the texts.

Grade(s)/Level: Grade Eight

Discipline: Science

Course: Physical Science

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Section 1: What Task?

What task sets clear, measurable goals for learning?

A. Template task (include number, type, level): Insert the Argumentation template task you selected exactly as it is worded.

Task 2 Argumentation/Analysis

[Insert question] After reading _____ (literature or informational texts), write a/an _____ (essay or substitute) that addresses the question and support your position with evidence from the text(s).

B. Standards: The Literacy Design Collaborative has already identified the CCSS “built in” to all Argumentation Tasks. Please select which (if any) “When Appropriate” Common Core State Standards are included in the Argumentation task/module you developed.

Common Core State Standards

READING	
“Built In” Reading Standards For Argumentation Template Tasks	
1	Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2	Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
4	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
10	Read and comprehend complex literary and informational texts independently and proficiently.
“When Appropriate” Additional Reading Standards	
3	Analyze how and why individuals, events, and ideas develop and interact over the course of a text.
5	Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., section, chapter, scene, or stanza) relate to each other and the whole.
6	Assess how point of view or purpose shapes the content and style of a text.
7	Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.
8	Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9	Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

WRITING	
“Built In” Writing Standards For Argumentation Template Tasks	
1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
9	Draw evidence from literary or informational texts to support analysis, reflection, and research.
10	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audience.
“When Appropriate” Additional Writing Standards	
2	Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
6	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with peers.
7	Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8	Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

State or District Content Standards: Insert appropriate content standards as defined by your state/district.
You can also include appropriate grade-level CCSS.

Number	Content Standard(s)
3.2.7	Inquiry and Design A. Explain and apply scientific and technological knowledge -Explain how new information may change existing theories and practice
3.8.7	Science, technology, and Human Endeavors A. Explain how sciences and technologies are limited in their effects and influences on our society. B. Explain how human ingenuity and technological resources satisfy specific human needs and improve the quality of life. C. Identify pros and cons of applying technological and scientific solutions to address problems and the effect upon society

Content Standards Source : PA Standards Aligned System

Teaching Task: Design your teaching task.

Background to share with students:

Cryobiology is the study of living things at very low temperatures. This science is filled with many technological advances. Students will examine the pros and cons of the techniques used and formulate an argument based on scientific facts.

Prompt:

Should cryobiology techniques be used to preserve living matter for future use? After reading texts on cryobiology, write an article that addresses the question and support your position with evidence from the texts.

Reading texts:

See materials list

Extension (optional):

Teaching Task Rubric (Argumentation)

Scoring Elements	Not Yet	Approaches Expectations		Meets Expectations		Advanced	
	1	1.5	2	2.5	3	3.5	4
Focus	Attempts to address prompt, but lacks focus or is off-task.		Addresses prompt appropriately and establishes a position, but focus is uneven.		Addresses prompt appropriately and maintains a clear, steady focus. Provides a generally convincing position.		Addresses all aspects of prompt appropriately with a consistently strong focus and convincing position.
Controlling Idea	Attempts to establish a claim, but lacks a clear purpose. (L2) Makes no mention of counter claims.		Establishes a claim. (L2) Makes note of counter claims.		Establishes a credible claim. (L2) Develops claim and counter claims fairly.		Establishes and maintains a substantive and credible claim or proposal. (L2) Develops claims and counter claims fairly and thoroughly.
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. (L3) Makes no connections or a connection that is irrelevant to argument or claim.		Presents appropriate details to support and develop the focus, controlling idea, or claim, with minor lapses in the reasoning, examples, or explanations. (L3) Makes a connection with a weak or unclear relationship to argument or claim.		Presents appropriate and sufficient details to support and develop the focus, controlling idea, or claim. (L3) Makes a relevant connection to clarify argument or claim.		Presents thorough and detailed information to effectively support and develop the focus, controlling idea, or claim. (L3) Makes a clarifying connection(s) that illuminates argument and adds depth to reasoning.
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.

Section 2: What Skills?

What skills do students need to succeed on the teaching task?

Each module is required to identify the specific student skills, define them, and cluster them. The example below is one list. Module builders can use this version, change it, or identify different skills, different definitions, and different clusters using the chart.

LDC Example Skills List	
Specific Skills <i>What skills are essential?</i>	Student Skills Defined (“Ability to...”) <i>How do you define/describe those skills?</i>
Skills Cluster 1: Preparing for the Task	
1. Bridging conversation	Ability to connect the task and new content to existing knowledge, skills, experiences, interests, and concerns.
2. Task analysis	Ability to understand and explain the task’s prompt and rubric.
3. Project planning	Ability to plan so that the task is accomplished on time.
Skills Cluster 2: Reading Process	
1. Reading “habits of mind”	Ability to select appropriate texts and understand necessary reading strategies needed for the task.
2. Essential vocabulary	Ability to apply strategies for developing an understanding of a text by locating words and phrases that identify key concepts and facts, or information.
3. Note-taking	Ability to read purposefully and select relevant information; to summarize and/or paraphrase.
4. Organizing notes	Ability to prioritize and narrow supporting information.
Skills Cluster 3: Transition to Writing	
1. Bridging conversation	Ability to transition from reading or researching phase to the writing phase.
Skills Cluster 4: Writing Process	
1. Planning	Ability to develop a line of thought and text structure appropriate to an argumentation task.
2. Initiation of task	Ability to establish a controlling idea and consolidate information relevant to task.
3. Development	Ability to construct an initial draft with an emerging line of thought and structure.
4. Revision	Ability to apply revision strategies to refine development of argument, including line of thought, language usage, and tone as appropriate to audience and purpose.
5. Editing	Ability to apply editing strategies and presentation applications.

Section 3: What Instruction?

How will teachers teach students to succeed on the teaching task?

All LDC instructional ladders have mini-tasks (prompt, product and mini-task scoring), instructional strategies and pacing. The following is an example instructional ladder. Module developers can adopt, adapt or delete the approaches for each section in order to build their own mini-tasks, instructional strategies and pacing to teach to skills identified in Section 2.

LDC INSTRUCTIONAL LADDER I

Skills Cluster I: Preparing for the Task

Optional Pre-test: Administer classroom assessment as pre-test if need to gather information.

1. Bridging conversation: *Ability to connect the task and new content to existing knowledge, skills, experiences, interests, and concerns.*

Mini-task

- *Prompt:* Mr. Kimmel is considering cryonic preservation when he passes away. Write a letter to him that advises him what to do. Be sure to explain why you think he should or should not be cryonically preserved.
- *Product:* Short response
- *Mini-task scoring:* No scoring

Instructional strategies

- Teach or review content required for the task depending on when in the sequence they teach the content – before or during the production of the task.
- Teacher used MetaMetrics Oasis web-based system to have students respond to the prompt. The Oasis program provided a baseline Lexile score for each student's writing.

Pacing 1 class period

2. Task analysis: *Ability to understand and explain the task's prompt and rubric.*

Mini-task

- *Prompt:* In your own words, write a brief explanation of what you need to carry out the task.
- *Product:* Short response
- *Mini-task scoring:* No scoring

Instructional strategies

- While students are writing, teacher circulates around the room to review each student's response to ensure she/he understands the task.
- Have students share responses by posting them on the interactive white board so that students can hear/know what each other is thinking.
- Discuss in detail the prompt, type of writing and structure, the product, and the rubric.
- Students responded in Writer's Notebooks. (See attached.)

Pacing 1 class period

3. **Project planning:** Ability to plan so that the task is accomplished on time.

Mini-task

- *Prompt:* Create a project timeline.
- *Product:* Timeline
- *Mini-task scoring:* N/A

Instructional strategies

- Teacher provided timeline with due dates.
- Discuss the importance of planning.

Pacing completed by the teacher

Skills Cluster 2: Reading Process

1. **Reading “habits of mind”:** Ability to select appropriate texts and understand necessary reading strategies needed for the task.

Mini-task

- *Prompt:* Use “Talking to the Text” strategy to understand the texts. Identify text structures of the articles.
- *Product:* Annotated text
- *Mini-task scoring:*

Meets	Not yet
<ul style="list-style-type: none">• Demonstrated active reading using annotation.	Attempts to meet the criteria for “meets.”

Instructional strategies

- Teacher will guide reading for first reading selection.
- Students will use a variety of active reading strategies with appropriate support for the remaining selections.
- Teacher uses group discussion to extend thinking.
- Teacher reinforces active reading techniques throughout student readings by having students demonstrate processes use the interactive white board.
- See handout “Directions for Reading and Taking Notes on the Articles.”

Pacing 4 class periods

2. **Essential vocabulary:** Ability to apply strategies for developing an understanding of a text by locating words and phrases that identify key concepts and facts, or information.

Mini-task

- *Prompt:* Compare and contrast the terms cryobiology, cryonics, and cryogenics. Using vocabulary page in Writer’s Notebook, define words in context as you read.
- *Product:* Vocabulary notebook entries
- *Mini-task scoring:*

Meets	Not yet
<ul style="list-style-type: none">• Explain similarities and differences of the terms cryobiology, cryonics, and cryogenics.• Identifies vocabulary, phrases and notes their meaning in context of the passage(s).• Writes in readable prose.	Attempts to meet the criteria for “meets.”

Instructional strategies

- Use of dictionary and other sources to acquire understanding.
- Teach strategies for understanding words in context.
- Introduce language of reading and writing relevant to task.
- Introduce or review relevant terms used in the discipline (e.g. cryonics, cryobiology, cryogenics).

Pacing: ongoing

3. **Note-taking:** Ability to read purposefully and select relevant information; to summarize and/or paraphrase.

Mini-task

- **Prompt:** Using a note taking method, select information (passages, facts, data) relevant to the task; list (bullet) each source and note relevant information. Refer to Writer's Notebook- "Cryobiology – Argumentative Module Notes."
List pros and cons of cryobiology techniques.
What does "plagiarism" mean and what strategies can you use to avoid it?
Complete samples of paraphrasing.
- **Product:** Notes & short response
- **Mini-task scoring:**

Meets	Not yet
<ul style="list-style-type: none">• Accomplishes task by defining cryobiology, and listing reasons showing pros and cons for using cryobiology techniques.• Answers question about plagiarism correctly and provides appropriate strategies for avoiding it.• Paraphrasing of sample information.• Writes in readable prose.	Attempts to meet the criteria for "meets."

Instructional strategies

- Review policy for plagiarism and develop students' understanding of it.
- Provide students with a note taking method(s) and template. . (See "Cryobiology- Argumentative Module Notes" sheet.)
- Discuss the term "relevant" and what it means stay on task - two demands embedded in the rubric.
- Identify any gaps or unanswered questions as you do you read about your topic.
- Teach strategies for summarizing or paraphrasing.

Pacing 3 class periods

4. **Organizing notes:** Ability to prioritize and narrow supporting information.

Mini-task

- **Prompt:** Prioritize relevant information in your notes on which to build your sequence or process.
- **Product:** Notes and graphic organizer
- **Mini-task scoring:**

Meets	Not yet
<ul style="list-style-type: none">• Provides a prioritized set of notes that connect points for logic structure or line of thought.• Suggests implications drawn from information about the issue or topic.• Writes in readable prose.	Attempts to meet the criteria for "meets."

Instructional strategies

- Students organize notes using the “Directions for Reading and Taking Notes on the Articles” sheet and teacher feedback.

Pacing on-going

Skills Cluster 3: Transition to Writing

I. Bridging conversation: *Ability to transition from reading or researching phase to the writing phase.*

Mini-task

- *Prompt:* Following Socratic seminar guidelines, students explore both sides of the issue.
- *Product:* Note cards, oral discussion
- *Mini-task scoring:* No scoring

Instructional strategies

- Use a video recorder to film the seminar for students to view and evaluate.
- Conduct a value-line exercise to ensure students understand a range of issues or options.
- Review guidelines for the Socratic seminar. (See the Paideia Seminar Manual: *Active Thinking Through Dialogue* for background on how to conduct a seminar).
- Teacher conducts a fishbowl modeling of a mini-Socratic seminar using a common science topic and student volunteers.
- Conduct a Socratic seminar on the prompt’s question (if using that version) or key issue or topic. Organize students in small groups to ensure both sides of issue are represented.
- Following the seminar, students evaluate the effectiveness of details and examples to support their claim. Reread and adjust notes as necessary.
- Review professional or other samples of writing type and structure.
- Deconstruct professional samples of the type of writing students will engage in:
 - Demonstrate patterns of development (e.g. from most important to least important)
 - Note the difference between a claim and a controlling idea or thesis
 - Note the difference between an “explanation” and an “argument”
 - Analyze purpose and audience
 - Analyze tone and language choices
 - Evaluate effectiveness – Do you get the information and explanation you expect? Why?
- Discuss the prompt and what students need to do to complete the writing portion.
- Refer to rubric – point out demands and qualities of performance.

Pacing 2 class periods

Skills Cluster 4: Writing Process

I. Planning: *Ability to develop a line of thought and text structure appropriate to an argumentation task.*

Mini-task

- *Prompt:* Create an outline including key elements drawn from your reading or research and order them in some logical way (e.g. chronologically, sequentially).
- *Product:* Outline/plan on teacher provided template
- *Mini-task scoring:*

Meets	Not yet
<ul style="list-style-type: none"> • Applies an outline strategy to develop reasoning for argument. • Provides citations and references with elements for correct form. • Draws a credible implication from information about an issue or topic. • Writes in readable prose. 	Attempts to meet the criteria for “meet.”

Instructional strategies

- Use mini-lessons in logic structures.
- Use discussion-based strategies to develop thinking relevant to prompt.
- Have students connect ideas among the arts, literature, events.

Pacing 1 class period

2. Initiation of task: *Ability to establish a controlling idea and consolidate information relevant to task.*

Mini-task

- *Prompt:* Write a summary paragraph that includes a controlling idea and sequences the key points you plan to make in your composition.
- *Product:* Paragraph
- *Mini-task scoring:*

Meets	Not yet
<ul style="list-style-type: none">• Writes a concise summary statement or draft opening that establishes a controlling idea and identifies key points that support development of information and/or explanation.• Writes in readable prose.	Attempts to meet the criteria for “meets.”

Instructional strategies

- Show students’ thesis statements/opening paragraphs.
- Demonstrate how to write an opening paragraph using the template provided on “Brainstorming Article Organizer” sheet found in “Writer’s Notebook.”

Pacing 2 class periods

3. Development: *Ability to construct an initial draft with an emerging line of thought and structure.*

Mini-task

- *Prompt:* Redraft an opening for your composition with one or more paragraphs that establishes the controlling idea and provides a lead in for your reader. Write an initial draft of multiple paragraphs: which includes an opening, argument one, argument, two, argument three, and a closing paragraph.
- *Product:* Opening paragraph and first draft
- *Mini-task scoring:*

Meets	Not yet
<ul style="list-style-type: none">• Provides an opening to include a controlling idea and an opening strategy relevant to the prompt.• Provides an initial draft with all elements of the prompt addressed.• Writes in readable prose.	Attempts to meet the criteria for “meets.”

Instructional strategies

- How to open and end an argumentation composition.
- Use of template for all levels to guide students through first draft (Brainstorming Article Organizer).
- Student-led revision session using “Revising the Rough Draft” in “Writer’s Notebook.”

Pacing 2 class periods

4. Revision: Ability to apply revision strategies to refine development of argument, including line of thought, language usage, and tone as appropriate to audience and purpose.

Mini-task

- *Prompt:* Apply revision strategies for clarity, logic, language, cohesion (students should do at least 2 drafts).
- *Product:* Revised drafts (2 or more)
- *Mini-task scoring*

Meets	Not yet
<ul style="list-style-type: none">• Demonstrates use of revision strategies that clarify logic and development of ideas; embeds relevant details; improves word-usage and phrasing; and creates smooth transitions between sentences and paragraphs.• Applies a text structure to organize reading material content and to explain key points related to the prompt.• Organizes a bibliography.	Attempts to meet the criteria for “meets.”

Instructional strategies

- Develop ways to manage revision process so that students get feedback in timely and helpful ways.
- Draft study (students volunteer a segment for class or small group help and discussion)
- Student-led revision session using “Revising the Rough Draft” in “Writer’s Notebook”
- Peer feedback on clarity of thinking and development of claim/argument
- Read-aloud for peer and adult feedback
- Strategies for embedding information – citation methods, quoting, paraphrasing (minimum one citation per paragraph)

Pacing 3 class periods

5. Editing: Ability to apply editing strategies and presentation applications.

Mini-task

- *Prompt:* Finalize draft for the readership; apply finishing touches (e.g. visuals, neatness, formatting, copy editing).
- *Product:* Final draft
- *Mini-task scoring*

Meets	Not yet
<ul style="list-style-type: none">• Demonstrates use of strategies that enhance the readability and appearance of the work for presentation.	Attempts to meet the criteria for “meets.”

Instructional strategies

- Use of error analysis to encourage self-correction of language usage and grammatical errors

Pacing: 1 class period

Final draft: Submit your final draft before or on due date for scoring and feedback.

E. Materials, references and supports: List the materials you will need and students will use. Provide citations.

For Teachers	For Students
<p>Resources: Oasis (A Personalized Learning Platform): http://alearningoasis.com/</p> <p>Paideia Class (Active Learning): http://www.paideia.org/</p> <p>Simoneau, C., Orcutt, K., & Konrad T. (n.d.). Text Structures. (Chart). ESSDAK, Hutchinson, KS.</p>	<p>Text for teaching task: “Cryobiology.” <i>Jrank.org</i>. Web. 11 Apr. 2011. http://science.jrank.org/pages/1888/Cryobiology.html</p> <p>“Cryobiology: Opposition.” <i>Cryobiology</i>. Web. 13 Apr. 2011. http://cryobiology.synthasite.com/ethics.php.</p> <p>“Cryobiology.” <i>World of Invention</i>. Thomson, Gale, 2005-2006. BookRags. Web. 11 Apr. 2011</p> <p>“Freezing for the Future: Life-Saving Cryobiology.” Research/University of Kentucky. Web. 13 Apr. 2011. http://www.research.uky.edu/odyssey/fall00/freezing.html.</p> <p><i>Immortality on Ice</i>. Discovery Channel Video, 1996. Videocassette.</p> <p><i>The World of Absolute Zero</i>: Films for the Humanities & Sciences, Inc. Videocassette.</p> <p>Resource: EasyBib (Free Bibliography Maker): http://www.easybib.com/</p>

Section 4: What Results?

How good is good enough?

- A. **Student work samples:** Include two student work samples that received scores at each level on the rubric.
- B. **Classroom assessment task (Optional):** Design a classroom assessment task using the same template task as the one you will be teaching.

Background to share with students:

Prompt:

LDC Argumentation Classroom Assessment Rubric	
MEETS EXPECTATIONS	
Focus	Addresses the prompt and stays on task; provides a generally convincing response.
Reading/Research	Demonstrates generally effective use of reading material to develop an argument.
Controlling Idea	Establishes a credible claim and supports an argument that is logical and generally convincing. (L2) Acknowledges competing arguments while defending the claim.
Development	Develops reasoning to support claim; provides evidence from text(s) in the form of examples or explanations relevant to the argument (L3) Makes a relevant connection(s) that supports argument.
Organization	Applies an appropriate text structure to address specific requirements of the prompt.
Conventions	Demonstrates a command of standard English conventions and cohesion; employs language and tone appropriate to audience and purpose.
NOT YET	
Focus	Attempts to address prompt but lacks focus or is off-task.
Reading/Research	Demonstrates weak use of reading material to develop argument.
Controlling Idea	Establishes a claim and attempts to support an argument but is not convincing; (L2) Attempts to acknowledge competing arguments.
Development	Reasoning is not clear; examples or explanations are weak or irrelevant. (L3) Connection is weak or not relevant.
Organization	Provides an ineffective structure; composition does not address requirements of the prompt.
Conventions	Demonstrates a weak command of standard English conventions; lacks cohesion; language and tone are not appropriate to audience and purpose.

Teacher Work Section

What now, what next?

- A. **Teacher thoughts.** Provide thoughts and ideas after teaching the module to different students in different classes.

This cryobiology module was the second module that I taught this year. It went much more smoothly than the first. I am extremely pleased with the progress of the students along the way and with the final product. The essays were very well done. I was pleasantly surprised at how professional they appear. All students benefited from this literacy endeavor. All students were able to produce a final product.

The cryobiology module was successful as a result of much collaboration with the communication arts teacher, the learning support teacher, other teachers involved in creating modules, and the IU 13 personnel.

- B. **Possible variations.** Add ideas for spin-offs or extensions to the module.

This cryobiology module was implemented after students studied properties and changes of states of matter. It could easily fit into a lesson dealing with technology

Appendix

The attached materials support teaching this module.



Paragraph #1: (Narrow as you go down. Get more specific about topic.)

Start off with a broad interesting statement. _____

Use the **definition** of cryobiology here. _____

Place your first argument support here. _____

Place your second argument support here. _____

Place your third argument support here. _____

End with thesis sentence. _____



Paragraph #2: (In this paragraph, go into detail about your **first** argument support.)

Use a transition word. _____

Topic Sentence: _____

Supporting Detail #1: _____

Supporting Detail #2: _____

Supporting Detail #3: _____

Closing Sentence: _____

****Do not use "This is why" or "That is my reason/description". Do not make it sound like a list. Use references to articles.**



Paragraph #3: (In this paragraph, go into detail about your **second** argument support.)

Use a transition word. _____

Topic Sentence: _____

Supporting Detail #1: _____

Supporting Detail #2: _____

Supporting Detail #3: _____

Closing Sentence: _____



Paragraph #4: (In this paragraph, go into detail about your **third** argument support.)

Use a transition word. _____

Topic Sentence: _____

Supporting Detail #1: _____

Supporting Detail #2: _____

Supporting Detail #3: _____

Closing Sentence: _____



Paragraph #5: (Start specific and get more broad.)

Restate (reword) your thesis sentence. _____

Summarize main point #1. _____

Summarize main point #2. _____

Summarize main point #3. _____

Closing statement about topic: _____

Bibliography

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Immortality on Ice. Discovery Channel Video, 1996. Videocassette.

The World of Absolute Zero. :Films for the Humanities & Sciences, Inc. Videocassette.

Article 1: ("Cryobiology." Jrank.org)

Article 2: ("Freezing")

Article 3: (Thomson)

Article 4: ("Cryobiology: Opposition")

("Immortality")

("The World")

Revising the Rough Draft

- Before you do any peer editing, it is important that you read your paper out loud to yourself. Many mistakes can be cleared up by doing this.
- Read your partner's paper to them quietly. Allow your partner to listen and stop you each time he/she hears something that should be corrected. Make the correction and continue reading. After doing this exercise with each paper, complete the peer editing checklist for your partner's paper.
- Since paragraph one was already edited by a teacher, begin your editing information with paragraph two.
- Place a "yes" or "no" on the space provided.

Paragraph 2 has:

_____ a transition word
_____ a topic sentence that introduces reason #1 to support your claim
_____ strong, sophisticated details to support reason #1 (at least three)
_____ parenthetical documentation used in this paragraph?
_____ a closing sentence

Paragraph 3 has:

_____ a transition word
_____ a topic sentence that introduces reason #2 to support your claim
_____ strong, sophisticated details to support reason #2 (at least three)
_____ parenthetical documentation used in this paragraph?
_____ a closing sentence

Paragraph 4 has:

_____ a transition word
_____ a topic sentence that introduces reason #3 to support your claim
_____ strong, sophisticated details to support reason #3 (at least three)
_____ parenthetical documentation used in this paragraph?
_____ a closing sentence

Concluding paragraph has:

_____ a transition word
_____ restatement of thesis to emphasize claim from introductory paragraph
_____ restatement of three overall reasons to support your claim
_____ a "clincher"

Overall Format:

_____ Minimum FIVE paragraphs are evident

Name: _____

Period: _____

Cryobiology Article/Essay Rubric

/5	Heading <ul style="list-style-type: none"> Includes the title: Argumentative Essay Includes student name, class period, and date In the correct place as on the board
/5	Format of Paper <ul style="list-style-type: none"> Proper spacing and alignment Appropriate size 12 font
/10	Focus <ul style="list-style-type: none"> Highly focused and detailed response Thesis is focused on the topic and purpose Hook and thesis statement are evident
/10	Reading/Research <ul style="list-style-type: none"> Accurately represents and applies information relevant to prompt Proper sources are cited in correct bibliography
/5	Controlling Idea <ul style="list-style-type: none"> Claim clearly stated in thesis statement and task addressed
/10	Development <ul style="list-style-type: none"> Presents detailed information Shows strong, sophisticated ideas in the writing Arguments are supported
/10	Organization <ul style="list-style-type: none"> Applies an effective structure (i.e. logical order of discussion) Correct number of paragraphs
/5	Conventions <ul style="list-style-type: none"> Demonstrates a well-developed command of standard English conventions and cohesion Uses tone appropriate for audience
/60	Total Points Possible

Note- This was developed using the 2010-2011 Argumentative rubric.

Vocabulary

As you read the articles, you may come across some words that may make understanding the article more difficult. List those words below in column one. By using context clues, predict the meanings of those words. Place your prediction in column two. Then, use a dictionary to look up the actual definition. Were you close? If your predicted definition is close to the dictionary definition, place a smiley face in column three. Using what you learned, write your revised definition in Column 4.

[illegible]

Why Cite?

Why is it important to provide parenthetical citations in your writing?

1. **It gives credit to the person who published the work:** In order to avoid plagiarism, it is important to clearly acknowledge the person or persons who created or authored the work.
2. **It makes the writing more believable or credible:** Citing research helps the writer gain the reader's trust. It's important for the reader to believe that what the author is saying is true.
3. **It is a courtesy to the reader:** Citing evidence from the reading includes telling the reader where the information came from so that the reader can find the information easily and do additional research if he or she so chooses.
4. **It is an expectation for academic writing:** Scholars engage in academic conversations through writing. Providing parenthetical citations allows these writers to respond to one another by agreeing with, disagreeing with, and adding to another person's work.

"Why Cite?" UCLA Library. Web. 18 May 2011. <<http://unitproj.library.ucla.edu/col/b Bruinsuccess/03/02.cfm>>.

What do the LDC Rubrics Say about Citing Evidence?

Argumentation and Informational/Explanatory Rubrics

	Not Yet	Approaches Expectations	Meets Expectations	Advanced
Argumentation and Informational/Explanatory	Attempts to demonstrate standard English conventions, but lacks cohesion and control of grammar, usage, and mechanics. <i>Sources are used without citation.</i>	Demonstrates an uneven command of standard English conventions and cohesion. Accuracy and/or appropriateness of language and tone is uneven. <i>Inconsistently cites sources.</i>	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. <i>Cites sources using appropriate format with only minor errors.</i>	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. <i>Consistently cites sources using appropriate format.</i>
Narrative	Lacks control of grammar, usage, and mechanics; little or ineffective use of transitions.	Demonstrates an uneven command of standard English; inconsistently uses transitions between sentences and paragraphs to connect ideas.	Demonstrates a command of standard English conventions with few errors; consistently uses transitions between sentences and paragraphs to connect ideas. <i>Provides bibliography or works consulted when prompted.</i>	Demonstrates a well-developed command of standard English conventions; effectively uses transitions between sentences and paragraphs to connect ideas. <i>Provides bibliography or works consulted when prompted.</i>

MLA Style Tips for Citing within the Text

- Citations within the text should refer specifically to sources listed on the works cited page.
- Keep the parenthetical citations brief. Embedding source information directly in the content of the paper, (ie—using the author's name in the sentence as opposed to the citation) improves the overall flow and readability of the paper.
- In general, end punctuation should be placed outside of the parentheses.

Examples of Common Formatting

In general, the author's name(s) and page number(s) should be listed in the parenthetical citation.

Example: This point has already been argued (Tannen 178-85).

- Author's Name in Reference with Quote:

Example: It may be true that "in the appreciation of medieval art the attitude of the observer is of primary importance..." (Robertson 136).

If the author's name is used in the text, then only the page number needs to be listed in the parenthetical citation.

Example: Tannen has argued this point (178-85).

- Author's Name in Text with Quote:

Example: It may be true, as Robertson maintains, that "in the appreciation of medieval art the attitude of the observer is of primary importance..." (136).

If no author is listed, the title of the article or work and page number, *if available*, should be listed.

Example: Even *Sixty Minutes* launched an attack on modern art, in a segment entitled "Yes...but Is It Art?"

If a publication is used that does not include page numbers (e.g., a Web publication), the author's name should be included within the text.

Example: Collins refers to this phenomenon when he writes, "..."

If the student wants to cite a specific definition in a dictionary entry, he or she should give the relevant designation (e.g., number, letter) after the abbreviation *def.*

Example: Milton's description of the moon at "her highest noon" signifies the "place of the moon at midnight" ("Noon," *def.* 4b).

MLA Handbook for Writers of Research Papers. 7th ed. New York: The Modern Language Association of America, 2009. Print.

Example Sentence Starters for Citing Sources

- According to (author of source), ...
- Research from Smith and Jones (insert authors' last names) supports that...
- In her article entitled "How to Cite Sources," (article title) Johnson (author) defines (content-area term) as "insert quote here."
- In his speech, President Obama argues that...
- In "Cheetahs; How fast are they?" (article title) National Geographic (periodical title) writer, Paul Jones, explains...
- To illustrate this point, Sheila Jackson (author/researcher) uses the following example in her article...
- Biologists (content-area) Marks and Watson (authors/experts) discovered that...

Writer's Notebook

Argumentative Module LDC Task#2

Name: _____

Period: _____

Mrs. Particelli

2010-2011

Cryobiology?

Cryobiology

Argumentative Module

-Task-

Should cryobiology techniques be used to preserve living matter for future use? After reading texts on cryobiology, write an article that addresses the question and support your position with evidence from the texts.

What do you need to carry out this task?

Cryobiology Module

-Task-

Should cryobiology techniques be used to preserve living matter for future use? After reading texts on cryobiology, write an article that addresses the question and support your position with evidence from the texts.

Directions: In a quick write, write your first reaction to the task prompt listed above.
What do you think the task is asking you to do?

X

X

X

X

X

X

Directions for Reading and Taking Notes on the Articles

1. Place your name in the upper right-hand corner of the article's first page.
2. As you read the article, "talk to the text". Show evidence of this in at least five places. Use your Think Mark to guide you.
3. Use the vocabulary sheet and dictionary to help you as you read.
4. Identify the text structure. Place it in the upper left-hand corner of the article's first page.
5. Now, read the article again. Any place you see a definition for cryobiology, underline it.
6. If the article refers to a reason why cryobiology techniques should be used, highlight it in yellow.
7. If the article refers to a reason why cryobiology techniques should not be used, highlight it in pink.
8. Be sure you have highlighted the category with the matching color on the "Cryobiology – Argumentative Module Notes" sheet.
9. After you have marked your article for a definition and highlighted reasons for/against the use of cryobiology techniques, you are ready to take notes.
10. Use the lines on the "Cryobiology - Argumentative Module Notes" sheet to paraphrase your underlining and highlighting. The notes should be bulleted.
11. When all articles have been read and paraphrased for notes, you are ready to begin writing your argumentative article. Remember that you may use your video notes sheet as well.

Cryobiology – Argumentative Module Notes

Title of Article #1: _____

Definition of cryobiology: _____

Reasons why cryobiology techniques should be used: _____

Article #1

Reasons why cryobiology techniques should not be used: _____

[illegible]

-Task-

Should cryobiology techniques be used to preserve living matter for future use? After reading texts on cryobiology, write an article that addresses the question and support your position with evidence from the texts.

Cryobiology – Argumentative Module Notes

Title of Article # 2: _____

Definition of cryobiology: _____

Reasons why cryobiology techniques should be used: _____

Article # 2

Reasons why cryobiology techniques should not be used: _____

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

-Task-

Should cryobiology techniques be used to preserve living matter for future use? After reading texts on cryobiology, write an article that addresses the question and support your position with evidence from the texts.

Cryobiology – Argumentative Module Notes

Title of Article # 3: _____

Definition of cryobiology: _____

Reasons why cryobiology techniques should be used: _____

Article # 3

Reasons why cryobiology techniques should not be used: _____

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

-Task-

Should cryobiology techniques be used to preserve living matter for future use? After reading texts on cryobiology, write an article that addresses the question and support your position with evidence from the texts.

Cryobiology – Argumentative Module Notes

Title of Article # 4: _____

Definition of cryobiology: _____

Reasons why cryobiology techniques should be used: _____

Article # 4

Reasons why cryobiology techniques should not be used: _____

[illegible]

-Task-

Should cryobiology techniques be used to preserve living matter for future use? After reading texts on cryobiology, write an article that addresses the question and support your position with evidence from the texts.