Genetic Testing and Bio-Engineering

Science, Life Science

Middle School



Common Assignment 2

LDC Argumentative Essay: What Role Should Ethics Play in Genetic Testing or Bio-Engineering?

Table of Contents

- 1. Teacher Materials
 - a. LDC Instructions, Standards, Scoring Guide, and Resources
- 2. Modified LDC Rubric
- 3. Student Materials
 - a. Instructions





MC IMPORT: Ethics of Genetic Testing and Bio-Engineering



MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

by Jessica E. Pollard, Susan Schultz, and Chastity Stringer

Adapted from "MC IMPORT: Ethics of Genetic Testing" by Chastity Stringer

Students create an editorial on the ethics of genetic testing, which will allow them to interact more deeply with the ethical responsibilities that result from the advancements in technology.

This LDC module was designed to be embedded within a genetics unit. Before this module, students will engage in lessons about heredity of traits, Punnett squares, genetic mutations, natural selection, analyzing data and evaluating patterns of inheritance.

These prior lessons will help students understand the big ideas.

- Characteristics of an organism are controlled by genes which may be inherited by offspring.
- DNA changes in population over time and causes variation.
- · Traits appear in two forms: dominant and recessive.

Original Author(s): Chastity Stringer, Jessica Pollard, Anne Love, Marjorie Oyler, Craig Schroeder, Amy Eads, Jessica Murray, James Backstrom, and Tracy Teetaert

GRADES

DISCIPLINE

COURSE

7 - 8

Life Science

Litaracy Design Collaborativa

1 01 14



MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

Section 1: What Task?

Teaching Task

Task Template 2 - Argumentation

What role should ethics play in genetic testing and bio-engineering? After reading informational texts addressing a selected topic write an editorial that addresses the question and support your position with evidence from the text(s).

D L2

Be sure to acknowledge competing views.

DL3

Give examples from past or current events or issues to illustrate and clarify your position.

Standards

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

CCR.R.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.

CCR.R.2

Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

CCR.R.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.

CCR.R.7

Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

CCR.R.10

Read and comprehend complex literary and informational texts independently and proficiently.

CCR.W.1

Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCR.W.4

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

Literacy Design Collaborative

2 of 14





MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

CCR.W.5

Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

CCR.W.9

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

CCR.W.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 audiences.

Custom Standards

RST.6-8.1

Cite specific textual evidence to support analysis of science and technical texts.

RST.6-8.2

Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

RST.6-8.4

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 6–8 texts and topics.

RST.6-8.5

Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.

Next Generation Science Standards

_

Students who demonstrate understanding can:

MS-LS3-1

Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.

MS-LS3-2

Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.

MS-LS4-5

Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.

Texts



3 of 14





MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

- % To Stop Crimes, share your genes. CODIS New York Times article. (student)
- % My Medical Choice. Angelina Jolie opinion about her choice. (student)
- % Seeking your genetic information pros and cons. Great resource for struggling students. (student/teacher)
- % Cracking Your Genetic Code. Link to NOVA movie (additional activities to accommodate the movie are in uploaded resources). (teacher)
- Predisposed Genetic Testing articles .docx
- Angelina Jolie.docx
- The DNA Dilemma.docx
- DNA Profiling and CODIS Article.docx
- DNA and CODIS Solve Decade Old Crime Missing and Exploited Children.pdf
- Genetic Ethics Videos-3.docx
- designer_baby_articles_modified V2.docx



4 of 14



MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

Argumentation Rubric for Grade 6-12 Teaching Tasks

	Not Yet	Approaches Expectations	Meets Expectations	Advanced
	1	2	3	4
Focus	Attempts to address prompt but lacks focus or is off task. D: Attempts to address additional demands 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 (when applicable)	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, mechanics, language and tone. 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.









MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

Background for Students

You are a journalist for *Science Scholar Magazine*, a monthly periodical that presents facts and opinions about current events and trends in the science community. The next edition will highlight ethical decision-making in science, and will be titled "Genetic Testing and Bio-Engineering: Just because we *can*, does it mean we *should*?"

Your task for this month's magazine is to research current topics in genetics and write an editorial that addresses the following question: What role should ethics play in [insert topic of genetics you are researching]? For example: What is the role of ethics in genetically engineering "Designer Babies"?

When you write your editorial, be sure to use evidence and examples from research to support your claims and reinforce your position. Address any opposing viewpoints. A fabulous research based editorial on a controversial topic should allow our magazine to receive national recognition and increased sales.

Extension

Not provided



Literacy Design Collaborative

7



MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

Section 2: What Skills?

Preparing for the Task

TASK ANALYSIS: Ability to understand and explain the task's prompt and rubric and build connections to the task and content from existing knowledge, skills, experiences, interests, and concerns.

Reading Process

ACTIVE READING: Ability to identify the central point and main supporting elements of a text; identify and analyze competing arguments; and make clarifying connections and provide examples.

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

ACADEMIC INTEGRITY: Ability to use and credit sources appropriately.

NOTE-TAKING AND ANNOTATION: Ability to select important facts and passages relevant to the task for use in one's own writing.

Transition to Writing

BRIDGING CONVERSATION: Ability to link reading to writing task.

Writing Process

POSITION: Ability to establish a position.

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

DEVELOPMENT: Ability to construct an initial draft with an emerging line of thought and structure. L2

Analyze competing arguments. L3 Make clarifying connections and/or provide examples.

REVISION: Ability to refine text, including line of thought, language usage, and tone as appropriate to

audience and purpose.

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

COMPLETION: Ability to submit final piece that meets expectations.



Literacy Design Collaborative

8



MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

Section 3: What Instruction?

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES				
Prepai	ring for the Task							
1 hr	TASK ANALYSIS: Ability to understand and explain the task's prompt and rubric and build connections to the task and content from existing knowledge, skills, experiences, interests, and concerns.	ESSENTIAL QUESTION ENGAGEMENT Observe the bird-dog picture and analyze the statement "Just because we can, does it mean that we should?" Write your observations and analysis below:	Student meets expectations if he/she: No Scoring	Introduce the article "Thinking ethically: a guide to moral decision making." http://www.scu.edu/ethics/practicing/decision/thinking.htmlEthics Approach JigsawAssign students to 5 groups, each group becomes a specialist on one of the 5 approaches to ethics. Each student in the group is responsible for taking notes that will allow him/her to present information to jigsaw peers. After a few minutes, teacher will assign each student to a new group that includes 1 person from each specialist group. Each person will have 2 minutes to present their ethical approach to their group. Allow time for questions. Students are responsible for taking short notes during each peer presentation. Teacher will have 5 approaches to ethics posted in the classroom (individual poster paper). Students will write their names on a post-it, and place it on the poster that best matches the ethical approach by which they operate.				
	Additional Attachments: % Ethics Article link and Jigsaw Directions \$\frac{1}{2}\$ 5ApproachestoEthicsJigsaw.pdf \$\frac{1}{2}\$ BirdDog.docx							
20 mins	TASK ANALYSIS: Ability to understand and explain the task's prompt and rubric and build connections to the task and content from existing knowledge, skills, experiences, interests, and concerns.	DECONSTRUCTING THE RUBRIC & EVALUATE COMMAND TERMS Read and reflect on what proficiencies are needed to achieve a "meets expectations" score (3), or higher, on each section of the rubric.	Student meets expectations if he/she: Reviews and highlights the descriptions of a "meets expectation" score on the rubric.	Pass the argumentative rubric to students. As a class discuss each category under the "meets expectations" (3) column. Have students read and reflect on what proficiencies are needed to achieve a "meets expectations" score (3), or higher, on each section of the rubric. Bring attention to key vocabulary on the rubric using underlining, or highlighting strategies.				
	Additional Attachments:							
	% Command Terms							
1 hr	TASK ANALYSIS: Ability to explain the task's prompt and rubric and build connections to the task and content from existing knowledge and skills,	WHAT IS AN EDITORIAL? Define what an editorial is, identify attributes of an editorial, read examples and analyze text as a whole group.	Student meets expectations if he/she: Completes activity. Answers the prompt How is an editorial different from other types of news articles?	Editorials are meant to influence public opinion, promote critical thinking, and sometimes cause people to take action on an issue. In essence, an editorial is an opinionated news story. Review attributes of an editorial. With the whole group, model locating the attributes in an example editorial. Give students editorial examples, which can be differentiated according to needs. Students identify attributes of the editorial and share in small groups with the same editorial.				

Literacy Design Collaborative

8 of 14





MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES					
	Additional Attachments:								
	% What is an editorial?								
Readi	ng Process								
1 hr and 35 mins	ACTIVE READING: Ability to identify the central point and main supporting elements of a text; identify and analyze competing arguments; and make clarifying connections and provide examples.	SHORT CONSTRUCTED RESPONSE Complete a graphic organizer for each article. "What is the author's claim? Identify text elements that illustrate this." L2 "What competing arguments (counterclaims) across the texts have you encountered or can you think of?" L3 "What historical or current examples can you note that relate to the task prompt?"	Student meets expectations if he/she: • Answers questions with credible responses and supporting elements from the texts/images.	Students will Choose one of the following topics: designer babies, CODIS, or predisposed genetic disorders. Read and analyze documents. Complete the attached graphic organizer for each article. Use the guiding questions to reflect on the readings. Reflect on and identify evidence within the article on the author's claim. Reflect on and identify evidence of any counter claims. Complete the organizer by giving two supports of their claim based on evidence from the article.					
	Additional Attachments: iii graphic organizer-CODIS.pdf iii graphic organizer-Predisposed genetic disorders .pdf iii graphic organizer-designer babies.pdf								
1 hr	ESSENTIAL VOCABULARY: Ability to identify and master terms essential to understanding a text.	KEY UNIT VOCABULARY Vocabulary list: "In your notebook, list and define words and phrases that challenge your understanding of the text/s."	Student meets expectations if he/she: Completes minitask. Provides accurate definitions and/or explanations.	Throughout the unit students will engage with key vocabulary terms. Make pictorial representations or use graphic organizers to illustrate vocabulary terms (e.g. word mapping). Write definitions in their own words.					
	Additional Attachments: Genetics Vocabulary.docx								
30 mins	ACADEMIC INTEGRITY: Ability to use and credit sources appropriately.	SHORT CONSTRUCTED RESPONSE Definition and strategies: "Explain why plagiarism is a problem and list ways to avoid it."	Student meets expectations if he/she: Proper use and credit of sources. Explain appropriate strategies to avoid plagiarism.	Discuss respect for others' work to assemble evidence and create texts. Discuss academic penalties for stealing others' thoughts and words. Instruct students on proper citation of sources used.					

Literacy Design Collaborative

9 of 14





MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES					
ACING	Additional Attachmen			INSTRUCTIONAL STRATEGIES					
	% Plagiarism video link								
40 mins	NOTE-TAKING AND ANNOTATION: Ability to select important facts and passages relevant to the task for use in one's own writing.	CLOSE READING STRATEGIES FOR ANALYZING TEXT Notes and Annotation: "For each text, take notes and/or annotate elements relevant to the task. Make sure you have the information to do a citation when needed to avoid plagiarism."	Student meets expectations if he/she: Identifies relevant elements – facts, quotes, explanations. Includes necessary citation information to support facts, questions, etc. (for example, page numbers for a long text, clear indication when quoting directly).	Teach or review strategies for note taking and/or annotation Check that early student work is in the assigned format (or in another format that gathers the needed information effectively).					
Trans	ition to Writing								
30 mins	BRIDGING CONVERSATION: Ability to link reading to writing task.	STUDENT DISCOURSE ABOUT TEXT "Review the task and identify key points and information from your texts/images that will help you address the task."	Student meets expectations if he/she: No Scoring	 Review the task. Discussion-based strategies, such as seminars. Small group discussion using teaching task. 					
Writin	ng Process								
30 mins	POSITION: Ability to establish a position.	SHORT CONSTRUCTED RESPONSE Position statement:"Write a 1-3 sentence position statement which establishes the focus and purpose of your work."	Student meets expectations if he/she: Writes a concise summary statement answering the main prompt. Establishes claim or position for the paper. Identifies key points that support development of argument.	Offer several examples of position statements. Ask class to discuss what makes them strong or weak. Review the list that students created earlier to identify needed elements from skills cluster 1.					
1 hr	PLANNING: Ability to develop a line of thought and text structure appropriate to an argumentation task.	OUTLINE Outline/organizer: "Create an outline based on your notes in which you state your position, sequence your points, and note your supporting evidence.	Student meets expectations if he/she: Creates an outline or organizer. Supports opening position. Uses evidence from texts and images.	 Provide and facilitate using an argumentative editorial paper organizer. Invite students to generate questions in pairs about how the format works, and then take and answer questions. 					

Literacy Design Collaborative

10 of 14





MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
			Identifies competing argument(s). Provides appropriate number of sound connections.	
	Additional Attachment		0150430-3-13g4q1c[1] V2.	pdf
1 hr and 30 mins	DEVELOPMENT: Ability to construct an initial draft with an emerging line of thought and structure. L2 Analyze competing arguments. L3 Make clarifying connections and/or provide examples.	LONG CONSTRUCTED RESPONSE Initial Draft: "Write an initial draft complete with opening, development, and closing; insert and cite textual evidence." "Identifies competing argument(s)." "Provides appropriate number of sound connections."	Student meets expectations if he/she: Provides complete draft. Supports the stated position with evidence and citations in each section.	 Encourage students to re-read prompt partway through writing, to check that they are on-track. Work with students on a logical, reasoned organization of the paper. Ask students to provide their reasons for the organization of their paper. Provide students with an opportunity to do peer review on each other's work Reference the Emotional and Social Wellness standards in the "Teacher Work Section" for establishing guidelines in the development of a safe, inclusive work environment.
25 mins	REVISION: Ability to refine text, including line of thought, language usage, and tone as appropriate to audience and purpose.	LONG CONSTRUCTED RESPONSE - AUTHOR EDIT Multiple Drafts: "Use strategies which refine the work's logic, reasoning, and organization of ideas/points. Use textual evidence carefully, with accurate citations. Decide what to include and what not to include."	Student meets expectations if he/she: Provides complete draft. Supports the opening in the later sections with evidence and citations. Improves earlier edition.	Timely feedback and conferencing Feedback balances support for strengths and clarity about weaknesses. Peer review to provide each other with feedback on strengths and weaknesses of the paper Reference the Emotional and Social Wellness standards in the "Teacher Work Section" for establishing guidelines in the development of a safe, inclusive work environment.
40 mins	EDITING: Ability to proofread and format a piece to make it more effective.	LONG CONSTRUCTED RESPONSE - PEER EDITING Correct Draft: "Revise draft to have sound spelling, capitalization, punctuation and grammar.	Student meets expectations if he/she: Provides draft free from distracting errors. Uses format that supports purpose.	As a class discuss the purpose and how to effectively peer edit. Briefly review selected skills that many students need to improve. Teach a short list of proofreading marks. Assign students to proofread each other's texts a second time using the rubric as a guide.

Literacy Design Collaborative

11 of 14





MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

PACING	SKILL AND DEFINITION	PRODUCT AND						
	Additional Attachments: PeerEditingReviewSheet V2] .pdf							
35 mins	COMPLETION: Ability to submit final piece that meets expectations.	LONG CONSTRUCTED RESPONSE - FINAL Final Work: "Turn in your complete set of drafts, plus the final version of your work."	Student meets expectations if he/she: Submits final work for evaluation.	Not Provided				

Instructional Resources

Teacher Resource

- **■** Genetic Ethics Videos-3.docx
- GeneticsUnitOutline.pdf



Genetic Testing and Bio-Engineering

Common Assignment 2



MC IMPORT: Ethics of Genetic Testing and Bio-Engineering

Section 4: What Results?

Student Work Samples

Not Yet

- LDC Rubric Not Yet.docx
- Genetics LDC Not Yet Sample.docx

Approaches Expectations

- Genetics LDC Approaches Expectation.docx
- LDC Rubric Approaches Expectations.docx

Meets Expectations

- LDC Rubric Meets Expectation Sample.docx
- Genetics LDC Meets Expectation Sample V2.docx

Advanced

- Genetics LDC Module Sample Meets Expectation Plus.docx
- LDC Rubric Meets Expectataion Plus.docx

Teacher Reflection

Not provided





Genetic Testing and Bio-Engineering

Common Assignment 2

MC IMPORT: Ethics of Genetic Testing and Bio-Engineering



All Attachments

- % To Stop Crimes, share your genes. CODIS New York Times article. (student): https://s.ldc.org/u/7exx9wwz51oc3mf9fkqdj6gok
- % My Medical Choice. Angelina Jolie opinion about her choice. (student): https://s.ldc.org/u/6mbn58ta3muxmpueidigdcckt
- % Seeking your genetic information pros and cons. Great resource for struggling students. (student/teacher): https://s.ldc.org/u/e4hag3avn1hwyehq5vvl4uqb0
- % Cracking Your Genetic Code. Link to NOVA movie (additional activities to accommodate the movie are in uploaded resources). (teacher): https://s.ldc.org/u/3lzdk4rj6e8axl5refnbv58bo
- Predisposed Genetic Testing articles .docx : https://s.ldc.org/u/dvi2jooz8jdrjwtovakpplsyv
- Angelina Jolie.docx: https://s.ldc.org/u/eljnt3yo9svg71qlv66v8in5
- The DNA Dilemma.docx: https://s.ldc.org/u/94jqsh1oshhz58cdr3x5cggw
- DNA Profiling and CODIS Article.docx : https://s.ldc.org/u/134e7qqekiaaq0zz0j0mg7zom
- DNA and CODIS Solve Decade Old Crime Missing and Exploited Children.pdf: https://s.ldc.org/u/lx7kvmx4s6uny6pko173hfh8
- Genetic Ethics Videos-3.docx : https://s.ldc.org/u/1o0pgpd5mnmx5jhtzw8qm6s6i
- designer_baby_articles_modified V2.docx: https://s.ldc.org/u/as600a2jbqf026dradbxp2hs1
- LDC Rubric Not Yet.docx : https://s.ldc.org/u/579wdblsafqg392hsiprgx7gs
- Genetics LDC Not Yet Sample.docx: https://s.ldc.org/u/3jekrlicwzt361o9zw6c8lke7
- Genetics LDC Approaches Expectation.docx: https://s.ldc.org/u/8v3y4wyiqc3koeupucltk0jxd
- **■** Genetics LDC Module Sample Meets Expectation Plus.docx : https://s.ldc.org/u/8yyo73fuu2kup7nyx7pvafapt
- LDC Rubric Meets Expectataion Plus.docx : https://s.ldc.org/u/dhmgmhy3gs3ilru9siib7b05l
- LDC Rubric Meets Expectation Sample.docx : https://s.ldc.org/u/eo8co209kn4cu9160aczs6b2h
- Genetics LDC Meets Expectation Sample V2.docx: https://s.ldc.org/u/5o92ll58a9foo9q50zzlv2qyq
- LDC Rubric Approaches Expectations.docx : https://s.ldc.org/u/5boany6twoe0fi7ctnr9j9j5j
- Genetic Ethics Videos-3.docx : https://s.ldc.org/u/c25pe7a0c6n62lesnqjmowlv2
- GeneticsUnitOutline.pdf: https://s.ldc.org/u/cr8lfhye01w4c0rob2ejzpwgp



Modified LDC Rubric

SCORING DOMAIN	NOT YET	E/D	APPROACHING EXPECTATIONS	D/P	MEETS EXPECTATIONS	P/A	ADVANCED
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.
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.
Content Understanding	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.



16 Middle School Science



Genetic Testing and Bio-Engineering: Just because we *can*, does it mean we *should*?



You are a journalist for *Science Scholar Magazine*, a monthly periodical that presents facts and opinions about current events and trends in the science community. The next edition will highlight ethical decision-making in science and will be titled "Genetic Testing and Bio-Engineering: Just because we *can*, does it mean we *should?*"

Your task for this month's magazine is to research current events and opinions in genetics and write an editorial that addresses the following question: What role should ethics play in [insert field of science you are researching]? For example: What is the role of ethics in genetically engineering "Designer Babies"?

When you write your editorial, be sure to use evidence and examples from research to back up your claims and reinforce your position. Address any opposing viewpoints. A fabulous research-based editorial on a controversial topic should allow our magazine to receive national recognition and increased money in magazine sales.

The Prompt for the Editorial

L1: What role should ethics play in genetic testing or bio-engineering? After reading informational texts addressing a selected topic, write an editorial that addresses the question and support your position with evidence from the text(s). L2: Be sure to include and address competing viewpoints. L3: Give examples from past or current events or issues to illustrate and clarify your position.

