Unit Title: Posing Questions and Solving Problems

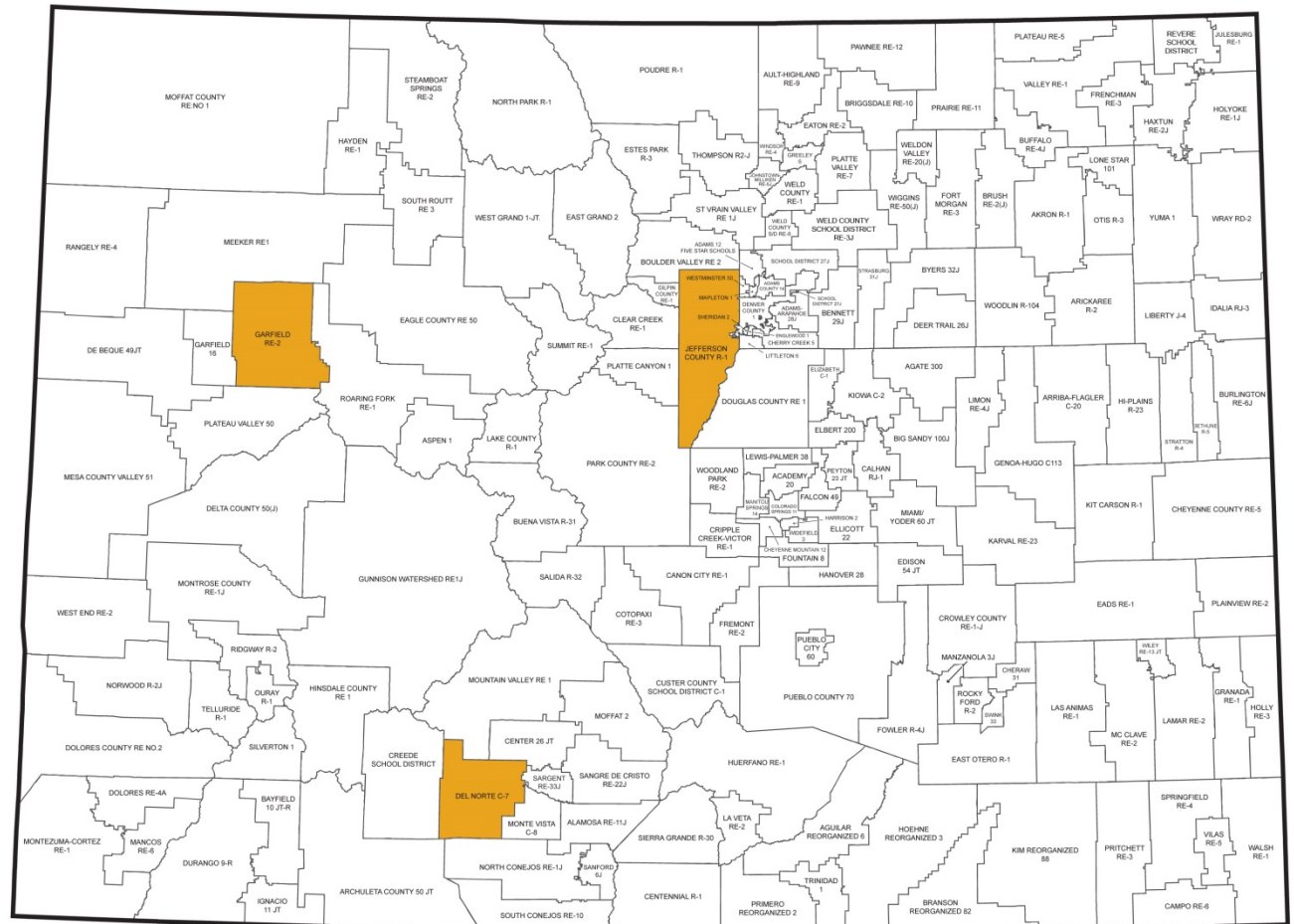**Colorado's District Sample Curriculum Project**

INSTRUCTIONAL UNIT AUTHORS

Garfield RE-2 School District

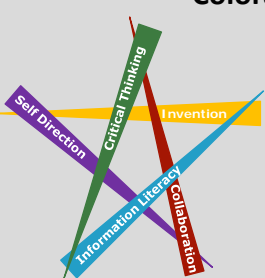**BASED ON A CURRICULUM OVERVIEW SAMPLE AUTHORED BY**

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This unit was authored by a team of Colorado educators. The template provided one example of unit design that enabled teacher-authors to organize possible learning experiences, resources, differentiation, and assessments. The unit is intended to support teachers, schools, and districts as they make their own local decisions around the best instructional plans and practices for all students.

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Content Area	Reading, Writing, and Communicating		Grade Level	9th Grade
Course Name/Course Code				

Standard	Grade Level Expectations (GLE)	GLE Code
1. Oral Expression and Listening	1. Oral presentations require effective preparation strategies	RWC10-GR.9-S.1-GLE.1
	2. Listening critically to comprehend a speaker's message requires mental and physical strategies to direct and maintain attention	RWC10-GR.9-S.1-GLE.2
2. Reading for All Purposes	1. Increasingly complex literary elements in traditional and contemporary works of literature require scrutiny and comparison	RWC10-GR.9-S.2-GLE.1
	2. Increasingly complex informational texts require mature interpretation and study	RWC10-GR.9-S.2-GLE.2
3. Writing and Composition	1. Literary and narrative texts develop a controlling idea or theme with descriptive and expressive language	RWC10-GR.9-S.3-GLE.1
	2. Informational and persuasive texts develop a topic and establish a controlling idea or thesis with relevant support	RWC10-GR.9-S.3-GLE.2
	3. Writing for grammar, usage, mechanics, and clarity requires ongoing refinements and revisions	RWC10-GR.9-S.3-GLE.3
4. Research and Reasoning	1. Informational materials, including electronic sources, need to be collected, evaluated, and analyzed for accuracy, relevance, and effectiveness for answering research questions	RWC10-GR.9-S.4-GLE.1
	2. Effective problem-solving strategies require high-quality reasoning	RWC10-GR.9-S.4-GLE.2

Colorado 21st Century Skills

Critical Thinking and Reasoning: *Thinking Deeply, Thinking Differently*

Information Literacy: *Untangling the Web*

Collaboration: *Working Together, Learning Together*

Self-Direction: *Own Your Learning*

Invention: *Creating Solutions*

Text Complexity

Unit Titles	Length of Unit/Contact Hours	Unit Number/Sequence
Posing Questions and Solving Problems	4-6 weeks	1

Unit Title	Posing Questions and Solving Problems		Length of Unit	4-6 weeks	
Focusing Lens(es)	Inquiry Problem-Solving	**Standards and Grade Level Expectations Addressed in this Unit**	RWC10-GR.9-S.1-GLE.1 RWC10-GR.9-S.1-GLE.2 RWC10-GR.9-S.2-GLE.1 RWC10-GR.9-S.2-GLE.2		RWC10-GR.9-S.3-GLE.1 RWC10-GR.9-S.3-GLE.2 RWC10-GR.9-S.3-GLE.3 RWC10-GR.9-S.4-GLE.1 RWC10-GR.9-S.4-GLE.2
Inquiry Questions (Engaging-Debatable):	- Is inquiry about changing my own views or changing the views of others? - What makes some problems easier to resolve than others? - What does it take to change someone's ideas and actions?				
Unit Strands	Oral Expression and Listening, Reading for all Purposes, Writing and Composition, Research and Reasoning				
Concepts	**In content:**		**In reading:**	**In writing:**	
	points of view, solution, issues, choices, inquiry		analysis, questioning, sources/evidence, choices, evaluation, collaboration, decision-making, problem-solving, self-reflect, reasoning	process/plan for inquiry, synthesis, position/claim, argument, feedback, choices, evaluation, collaboration, decision-making, problem-solving, reflect, reasoning	

Generalizations My students will **Understand** that…	**Guiding Questions**	
	Factual	**Conceptual**
Effective problem-solving relies upon consideration of a variety of options derived from the evaluation of multiple sources. (RWC10-GR.9-S.2-GLE.2-EO.c) and (RWC10-GR.9-S.2-GLE.2-EO.e) and (RWC10-GR.9-S.2-GLE.2-EO.h) and (RWC10-GR.9-S.4-GLE.1-EO.a.d)	Which options for solving [your selected] problem are presenting in the texts you've read? How much evidence should I consider before deciding on a solution to this problem?	Why do different individual/authors propose different solutions to the same problem?
Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue. (RWC10-GR.9-S.1-GLE.2-EO.a) and (RWC10-GR.9-S.4-GLE.2-EO.a.c)	What are the steps in your plan for inquiry? Why?	How does questioning change the way we interact with issues and ideas? How does collaboration enrich our process of inquiry?
Self-reflection often leads to more meaningful inquiry and the refinement of an individual's problem-solving process. (RWC10-GR.9-S.4-GLE.2-EO.a.c.d)	Based on what happened today, what will you change for tomorrow?	Why is self-reflection important? How do I become a self-reflective learner?
Written and spoken arguments that propose solutions	What does it mean to support a position with	What does it mean for reasoning to be well-supported?

must draw upon organized, well-supported reasoning to increase their persuasive potential/capacity. (RWC10-GR.9-S.1-GLE-1-EO.c.e) and (RWC10-GR.9-S.1-GLE.2-EO.c) and (RWC10-GR.9-S.3-GLE.2-EO.a)

reasoning?
What strategies are you using to organize your ideas?

Why are some solutions we present accepted by others while other solutions are not?

Critical Content: My students will **Know**…	Key Skills: My students will be able to **(Do)**…
• Reading and note-taking strategies, such as outlining, mapping systems, skimming, scanning, key word search (RWC10-GR.9-S.2-GLE.2-EO.e) • Difference between primary and secondary sources (RWC10-GR.9-S.4-GLE.1-EO.a.d) • Criteria for evaluating information from a variety of sources include diverse media and formats (RWC10-GR.9-S.1-GLE.2-EO.g) and (RWC10-GR.9-S.2-GLE.2-EO.c) • Strategies for effective collaboration (RWC10-GR.9-S.1-GLE.2-EO.a) • Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions (RWC10-GR.9-S.4-GLE.2-EO.a) • Potential steps of an inquiry-based research process (RWC10-GR.9-S.4-GLE.2-EO.a.c) • Strategies for connecting solutions (claims), reasoning, and evidence. (RWC10-GR.9-S.1-GLE.1-EO.c) and (RWC10-GR.9-S.3-GLE.2-EO.a) • Effective audience and oral delivery skills (RWC10-GR.9-S.1-GLE.1-EO.b.e) • Effective listening skills (RWC10-GR.9-S.1-GLE.2-EO.c) • Criteria for evaluating writing (e.g., checklists, scoring guides, mentor texts, rubrics) (RWC10-GR.9-S.3-GLE.1-EO.e) • Characteristics of phrases and clauses (RWC10-GR.9-S.3-GLE.3-EO.a) • Strategies for creating effective, correctly punctuated sentences (e.g., sentence combining, sentence imitation) (RWC10-GR.9-S.3-GLE.3) • Strategies for editing for capitalization, punctuation, and spelling	• Evaluate clarity and accuracy of information through investigation and the analysis of other sources. (RWC10-GR.9-S.2-GLE.2-EO.c) • Use flexible reading and note-taking strategies to organize information and make connections within and across informational texts. (RWC10-GR.9-S.2-GLE.2-EO.e) • Integrate information from different sources, including primary and secondary sources, to research and complete a project (RWC10-GR.9-S.4-GLE.1-EO.a.d) • Work with peers to support one another in the decision-making and inquiry processes. (RWC10-GR.9-S.1-GLE.2-EO.a.) • Pose questions to drive an inquiry-based research process. (RWC10-GR.9-S.4-GLE.2-EO.a.c) • Analyze and reflect on one's reasoning and the reasoning of others (RWC10-GR.9-S.4-GLE.2-EO.a) • Monitor and reflect on the rationale for, and effectiveness of, choices made throughout the problem-solving process (RWC10-GR.9-S.4-GLE.2-EO.d) • Craft a written argument to support a solution, using valid reasoning and relevant and sufficient evidence. (RWC10-GR.9-S.1-GLE.1-EO.c) and (RWC10-GR.9-S.3-GLE.2-EO.a) • 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 (RWC10-GR.9-S.3-GLE.1-EO.e) and (RWC10-GR.9-S.3-GLE.3-EO.a.c) • Present one's solution orally, using effective audience and oral delivery skills and incorporating diverse media or formats. (RWC10-GR.9-S.1-GLE.1-EO.b.e) and (RWC10-GR.9-S.1-GLE.2-EO.g) • Listen critically to the arguments of peers, evaluate the quality of their reasoning and evidence, and give verbal and nonverbal feedback to the speaker. (RWC10-GR.9-S.1-GLE.1-EO.b) and (RWC10-GR.9-S.1-GLE.2-EO.c) and (RWC10-GR.9-S.3-GLE.1-EO.e) and (RWC10-GR.9-S.4-GLE.2-EO.a) • Distinguish between phrases and clauses and use this knowledge to write varied, strong, correct, complete sentences (RWC10-GR.9-S.3-GLE.3-EO.a.ii)

Critical Language: includes the Academic and Technical vocabulary, semantics, and discourse which are particular to and necessary for accessing a given discipline.
EXAMPLE: A student in Language Arts can demonstrate the ability to apply and comprehend critical language through the following statement: *"Mark Twain exposes the*

hypocrisy of slavery through the use of satire."	

A student in _____ can demonstrate the ability to apply and comprehend critical language through the following statement(s):	I utilized the comprehension and critical thinking strategies of analyzing, questioning, evaluating, and synthesis in order to support my inquiry-based research process. When arguing for specific solutions/claim, I support my reasoning with a variety of evidence, including primary and secondary sources.
Academic Vocabulary:	analyzing, questioning, evaluating, synthesizing, inquiry-based process, primary and secondary sources, reasoning, sources/evidence claim, argument feedback, choices, collaboration, decision-making, problem-solving, self-reflection, points of view, solution, issues, choices, critical listening
Technical Vocabulary:	diverse media or formats phrases, clauses, conventions of standard English

Unit Description:	This 4-6 week unit will focus on having students develop an academic problem-solution research essay using MLA style. This process will be initiated with the development of an inquiry question that stems from issues and themes that have been (or will be) discussed throughout the course of the year. This inquiry question will be developed from a student's perspective on an issue that has been discussed during the course. Once the inquiry question is established, students will work in small groups to strengthen their question, begin the research process to find evidence to support their belief, and to receive feedback throughout the writing process. The final written product will be a problem-solution essay.
Considerations:	The authors of this unit have envisioned that this will be the culminating unit of the year. As such, many of the themes, issues, and topics will have been identified and analyzed in the literature studied throughout the year. Other teachers may want to use this research unit as the introduction to the year and have students explore the themes, issues, and topics that will be the focus of the year. In essence, by using this unit as the first of the year, the teacher will create a collaborative environment, develop inquiry questions to explore issues to be studied, and receive a formal piece of student writing in the first month of the school year.
Unit Generalizations	
Key Generalization:	Written and spoken arguments that propose solutions must draw upon organized, well-supported reasoning to increase their persuasive potential/capacity.
Supporting Generalizations:	Effective problem-solving relies upon consideration of a variety of options derived from the evaluation of multiple sources.
	Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue.
	Self-reflection often leads to more meaningful inquiry and the refinement of an individual's problem-solving process.

Performance Assessment: *The capstone/summative assessment for this unit.*

Claims: (Key generalization(s) to be mastered and demonstrated through the capstone assessment.)	Written and spoken arguments that propose solutions must draw upon organized, well-supported reasoning to increase their persuasive potential/capacity.
Stimulus Material: (Engaging scenario that includes role, audience, goal/outcome and explicitly connects the key generalization)	You have been chosen as a student representative at your high school to discuss a contemporary problem and present an argument for your proposed solution. Your audience will be fellow students and community members who want to hear your voice and perspective about contemporary issues facing students. Your research will be part of a class collection of problem-solution argument essays. Since it is a formal collection, you will need to provide citations and effective formatting for your end product.
Product/Evidence: (Expected product from students)	Students will produce a written problem-solution argument. Since this is a more formal piece of academic writing, students will be asked to demonstrate effective research skills, provide accurate citations, and show a well-reasoned analysis of a problem and proposed solution.
Differentiation: (Multiple modes for student expression)	The academic research essay may be demonstrated in a presentation (with variations: e.g. speech format, video production)

Texts for independent reading or for class read aloud to support the content

Informational/Non-Fiction	Fiction
Varying articles and informational text that support students inquiry question	Anchors texts (from prior or previous units) that have key social commentary

Ongoing Discipline-Specific Learning Experiences

1.	Description:	Students will use textual evidence to support claim and reasoning	Teacher Resources:	http://www.readwritethink.org/professional-development/strategy-guides/close-reading-literary-texts-31012.html (PD resource: close reading) http://www.adlit.org/strategies/22091/ (double-entry journals)
			Student Resources:	http://www.readwritethink.org/professional-development/strategy-guides/close-reading-literary-texts-31012.html (PD resource: close reading) http://www.adlit.org/strategies/22091/ (double-entry journals)
	Skills:	Close reading (e.g. questioning, annotation, analysis)	Assessment:	Students will present annotated texts, inquiry questions, summary of texts, or other responses as demonstrations of their learning. Students will complete double entry journals to demonstrate their ability to find textual evidence and explain their relevance
2.	Description:	Students will structure their writing or presentations effectively.	Teacher Resources:	https://owl.english.purdue.edu/owl/resource/685/05/ (Purdue OWL writing lab) http://www.readwritethink.org/professional-development/strategy-guides/developing-evidence-based-arguments-31034.html (developing evidence-based arguments) http://www.readwritethink.org/classroom-resources/lesson-plans/modeling-academic-writing-through-1133.html (students analyze the article, and then prepare the article for presentation

				by highlighting key elements of its structure and content.)
			Student Resources:	http://www.readwritethink.org/classroom-resources/lesson-plans/modeling-academic-writing-through-1133.html (students analyze the article, and then prepare the article for presentation by highlighting key elements of its structure and content.)
	Skills:	Paragraphing, structuring an argument	Assessment:	Students will demonstrate their ability to structure through short writings throughout the unit, by annotating other writing examples.
3.	Description:	Students will use conventions and mechanics effectively	Teacher Resources:	http://grammar.ccc.commnet.edu/grammar/combining_skills.htm (sentence combining exercises) http://www.readingrockets.org/strategies/sentence_combining (sentence combing examples) http://www.interventioncentral.org/academic-interventions/writing/sentence-combining-teaching-rules-sentence-structure-doing (sentence combining from Intervention Central)
			Student Resources:	http://grammar.ccc.commnet.edu/grammar/combining_skills.htm (sentence combining exercises) http://www.readingrockets.org/strategies/sentence_combining (sentence combing examples) http://www.interventioncentral.org/academic-interventions/writing/sentence-combining-teaching-rules-sentence-structure-doing (sentence combining from Intervention Central)
	Skills:	Developing mechanically, grammatically correct sentences Use a variety of sentence structures	Assessment:	Formative assessment activities asking students to combine sentences. Demonstration of combining sentences in students own writing.

Prior Knowledge and Experiences
Students may understand different perspectives (cultural norms, historical perspectives, etc.) that impact their view on different social issues. Students should be able to identify cultural perspectives in pieces of literature. Students should have some knowledge of different organization of writing patterns, the writing process, and using MLA format.

Learning Experience # 1	
Task Description: *The teacher may… so that students can…*	The teacher will introduce common themes and topics from the year's content (e.g. poverty, economics, gender roles, race), so that students can revisit their current beliefs about the themes and topics and the problems associated with them in contemporary times.
Generalization Connection(s):	Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue.
Teacher Resources:	List of topics and themes discussed (or will be discussed) throughout the year from varying anchor texts (dealing with social issues/commentary)

Student Resources:	Journal/ graphic organizer	
Assessment:	Students will participate in-class discussion and share journal entries. Students will draft statements of personal beliefs and identify problems related to the themes/topics of the year.	
Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A
Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	Students may support their belief with modern examples
Critical Content:	• Strategies for effective collaboration • Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions • Potential steps of an inquiry-based research process • Effective listening skills	
Key Skills:	• Use flexible reading and note-taking strategies to organize information and make connections within and across informational texts. • Pose questions to drive an inquiry-based research process. • Listen critically to the arguments of peers, evaluate the quality of their reasoning and evidence, and give verbal and nonverbal feedback to the speaker.	
Critical Language:	beliefs, values, theme(s), claim	

Learning Experience # 2	
Task Description: *The teacher may… so that students can…*	The teacher may provide question stems and model generating questions (e.g. Higher Order Thinking Questions), so that students can begin to understand and apply question generation and inquiry based research.
Generalization Connection(s):	Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue.
Teacher Resources:	http://blog.curriculet.com/38-question-starters-based-blooms-taxonomy/ (Bloom's taxonomy question stems) http://iss.schoolwires.com/cms/lib4/NC01000579/Centricity/Domain/1366/BloomQuestions_000.pdf (Bloom's taxonomy question stems) http://www.nscsd.org/webpages/jennisullivan/files/hots_questions.pdf (higher order thinking question stems) http://www.readwritethink.org/professional-development/strategy-guides/inquiry-charts-charts-30762.html (inquiry charts) http://odelleducation.com/wp-content/uploads/2013/09/Posing-Inquiry-Questions.pdf (posing inquiry questions) http://www.primas-project.eu/servlet/supportBinaryFiles?referenceId=4&supportId=1362 (teacher resource about question

	generation)
	http://thoughtfullearning.com/blogpost/10-questions-inquiry-bigger-better (useful information to support students in developing effective inquiry questions)
	http://www.scholastic.ca/education/teaching_tip/april2013.html (tips for moving students toward more effective inquiry questions)
	https://inquiry-questions.wikispaces.com/Creating+Questions (tips for developing inquiry questions)
	http://ww2.kqed.org/mindshift/2013/03/11/creating-classrooms-we-need-8-ways-into-inquiry-learning/ (teacher resource about inquiry-based instruction)
Student Resources:	http://blog.curriculet.com/38-question-starters-based-blooms-taxonomy/ (Bloom's taxonomy question stems)
	http://iss.schoolwires.com/cms/lib4/NC01000579/Centricity/Domain/1366/BloomQuestions_000.pdf (Bloom's taxonomy question stems)
	http://www.nscsd.org/webpages/jennisullivan/files/hots_questions.pdf (higher order thinking question stems)
	http://www.readwritethink.org/professional-development/strategy-guides/inquiry-charts-charts-30762.html (inquiry charts)
	http://odelleducation.com/wp-content/uploads/2013/09/Posing-Inquiry-Questions.pdf (posing inquiry questions)
Assessment:	Students will develop inquiry questions at various levels within Bloom's taxonomy around a contemporary issue of their choice.

Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	Teacher may provide question stems at different levels in Bloom's taxonomy	Students may generate questions from the stems provided

Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A

Critical Content:	• Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions • Potential steps of an inquiry-based research process
Key Skills:	• Pose questions to drive an inquiry-based research process. • Analyze and reflect on one's reasoning and the reasoning of others
Critical Language:	inquiry questions, beliefs, analyze, higher order thinking questions

Learning Experience # 3	
Task Description: *The teacher may… so that students can…*	The teacher may model ways to provide feedback and critiques of inquiry questions, so that students can understand the power of collaborative processes in refining their individual inquiry questions.
Generalization Connection(s):	Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue.

Teacher Resources:	http://www.teachthought.com/learning/20-collaborative-learning-tips-and-strategies/ (collaborative learning strategies) http://www.edutopia.org/blog/nurturing-collaboration-5-strategies-joshua-block (collaborative strategies from edutopia) http://www.vcaa.vic.edu.au/documents/auscurric/progressionpoints/scienceinquiryquestions.pdf (examples of inquiry questions)	
Student Resources:	http://www.vcaa.vic.edu.au/documents/auscurric/progressionpoints/scienceinquiryquestions.pdf (examples of inquiry questions) checklist of attributes of a well written inquiry question	
Assessment:	Students will revise their individual inquiry questions based on collaborative input.	
Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A
Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A
Critical Content:	• Strategies for effective collaboration • Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions • Potential steps of an inquiry-based research process • Effective listening skills	
Key Skills:	• Work with peers to support one another in the decision-making and inquiry processes. • Pose questions to drive an inquiry-based research process. • Analyze and reflect on one's reasoning and the reasoning of others • Monitor and reflect on the rationale for, and effectiveness of, choices made throughout the problem-solving process	
Critical Language:	inquiry questions, beliefs, analyze, higher order thinking questions	

Learning Experience # 4	
Task Description: *The teacher may… so that students can…*	The teacher may model inquiry-based research strategies, so that students can understand that inquiry drives meaningful research. [*Understanding text, Responding to text*]
Generalization Connection(s):	Effective problem-solving relies upon consideration of a variety of options derived from the evaluation of multiple sources. Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue.
Teacher Resources:	https://owl.english.purdue.edu/owl/resource/747/02/ (MLA citation style)
Student Resources:	https://owl.english.purdue.edu/owl/resource/747/02/ (MLA citation style)

Assessment:	Students will locate sources related to their topic and inquiry question. Students may provide a bibliography with MLA citations for their sources.	
Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	The teacher may provide MLA Citation Sheet template	Students may finalize MLA citations in the template
Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A
Critical Content:	- Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions - Potential steps of an inquiry-based research process - Strategies for connecting solutions (claims), reasoning, and evidence. - Effective audience and oral delivery skills - Effective listening skills - Criteria for evaluating writing (e.g., checklists, scoring guides, mentor texts, rubrics) - Characteristics of phrases and clauses - Strategies for creating effective, correctly punctuated sentences (e.g., sentence combining, sentence imitation) - Strategies for editing for capitalization, punctuation, and spelling	
Key Skills:	- Evaluate clarity and accuracy of information through investigation and the analysis of other sources. - Use flexible reading and note-taking strategies to organize information and make connections within and across informational texts. - Integrate information from different sources, including primary and secondary sources, to research and complete a project - Pose questions to drive an inquiry-based research process. - Analyze and reflect on one's reasoning and the reasoning of others	
Critical Language:	Reasoning, analysis, primary source, secondary source	

Learning Experience # 5	
Task Description: *The teacher may… so that students can…*	The teacher may group students based on inquiry questions, so that students can "close read" their individual resource and listen to the analysis of the multiple sources found by their group mates. [*Understanding text, responding to text*]
Generalization Connection(s):	Effective problem-solving relies upon consideration of a variety of options derived from the evaluation of multiple sources. Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue.
Teacher Resources:	http://www.readwritethink.org/professional-development/strategy-guides/close-reading-literary-texts-31012.html (PD resource:

	close reading) http://www.ascd.org/publications/educational-leadership/dec12/vol70/num04/Closing-in-on-Close-Reading.aspx (PD resource: close reading) https://www.facinghistory.org/for-educators/educator-resources/teaching-strategies/two-column-note-taking (two column notes) http://www.readingquest.org/edis771/column_notes.html (two column notes) http://www.teachingthecore.com/purposeful-annotation-close-reading/ (purposeful annotation) http://www.readwritethink.org/classroom-resources/lesson-plans/teaching-student-annotation-constructing-1132.html (teaching students effective annotation)
Student Resources:	https://www.facinghistory.org/for-educators/educator-resources/teaching-strategies/two-column-note-taking (two column notes) http://www.readingquest.org/edis771/column_notes.html (two column notes) http://www.teachingthecore.com/purposeful-annotation-close-reading/ (purposeful annotation) http://www.readwritethink.org/classroom-resources/lesson-plans/teaching-student-annotation-constructing-1132.html (teaching students effective annotation)
Assessment:	Students will turn in two-column notes and annotation of texts they have studied

Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	The teacher may narrow the focus to one element of close reading (e.g. only annotating, only summarizing) The teacher may assign partners	Students may complete just one element of close reading Students may work with partners to complete close reading

Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A

Critical Content:	• Reading and note-taking strategies, such as outlining, mapping systems, skimming, scanning, key word search • Difference between primary and secondary sources • Criteria for evaluating information from a variety of sources include diverse media and formats • Potential steps of an inquiry-based research process • Strategies for connecting solutions (claims), reasoning, and evidence.
Key Skills:	• Evaluate clarity and accuracy of information through investigation and the analysis of other sources. • Use flexible reading and note-taking strategies to organize information and make connections within and across informational texts. • Integrate information from different sources, including primary and secondary sources, to research and complete a project. • Work with peers to support one another in the decision-making and inquiry processes. • Pose questions to drive an inquiry-based research process. • Analyze and reflect on one's reasoning and the reasoning of others • Listen critically to the arguments of peers, evaluate the quality of their reasoning and evidence, and give verbal and nonverbal feedback to the speaker.

Critical Language:	bias, purpose, evaluating, synthesizing, analysis, claim, primary/secondary sources

Learning Experience # 6	
Task Description: *The teacher may… so that students can…*	The teacher may introduce criteria for evaluating sources, so that students can begin to understand that effective research depends on credible sources and strengthening inquiry questions throughout the process. [*Understanding text, critiquing text*]
Generalization Connection(s):	Effective problem-solving relies upon consideration of a variety of options derived from the evaluation of multiple sources Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue.) Self-reflection often leads to more meaningful inquiry and the refinement of an individual's problem-solving process.
Teacher Resources:	http://www.juniata.edu/services/library/instruction/handouts/craap_worksheet.pdf (worksheet for evaluating sources) http://www-lib.iupui.edu/files/Applying%20the%20CRAAP%20Test%20to%20Evaluating%20Web%20Sites.pdf (worksheet for evaluating websites) http://www.readwritethink.org/classroom-resources/lesson-plans/inquiry-internet-evaluating-pages-328.html (inquiry based learning from readwritethink.org) http://odelleducation.com/wp-content/uploads/2013/09/Posing-Inquiry-Questions.pdf (posing inquiry questions)
Student Resources:	http://www.juniata.edu/services/library/instruction/handouts/craap_worksheet.pdf (worksheet for evaluating sources) http://www-lib.iupui.edu/files/Applying%20the%20CRAAP%20Test%20to%20Evaluating%20Web%20Sites.pdf (worksheet for evaluating websites) http://odelleducation.com/wp-content/uploads/2013/09/Posing-Inquiry-Questions.pdf (posing inquiry questions)
Assessment:	Students will submit a resource, source evaluation worksheet, and revised inquiry question

Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A

Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A

Critical Content:	- Reading and note-taking strategies, such as outlining, mapping systems, skimming, scanning, key word search - Difference between primary and secondary sources - Criteria for evaluating information from a variety of sources include diverse media and formats - Strategies for effective collaboration - Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions - Potential steps of an inquiry-based research process

	• Strategies for connecting solutions (claims), reasoning, and evidence. • Effective audience and oral delivery skills • Effective listening skills
Key Skills:	• Evaluate clarity and accuracy of information through investigation and the analysis of other sources. • Use flexible reading and note-taking strategies to organize information and make connections within and across informational texts. • Integrate information from different sources, including primary and secondary sources, to research and complete a project. • Pose questions to drive an inquiry-based research process. • Analyze and reflect on one's reasoning and the reasoning of others. • Monitor and reflect on the rationale for, and effectiveness of, choices made throughout the problem-solving process. • 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.
Critical Language:	inquiry questions, beliefs, analyze, evaluate, credibility, source, higher order thinking questions

Learning Experience # 7	
Task Description: *The teacher may… so that students can…*	The teacher may model and reinforce the research process, so that students can continue to collect resources and begin to understand how to synthesize sources within a research paper. **Teacher note**: This Learning Experiences begins the formal writing process for their problem-solution essay. [*Understanding text, Responding to text, Producing text*]
Generalization Connection(s):	Effective problem-solving relies upon consideration of a variety of options derived from the evaluation of multiple sources. Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue. Written and spoken arguments that propose solutions must draw upon organized, well-supported reasoning to increase their persuasive potential/capacity.)
Teacher Resources:	Research Paper Rubric
Student Resources:	Research Paper Rubric, Computers, Databases, Graphic Organizer
Assessment:	Students will continue to revise their bibliography as they collect resources

Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	The teacher may provide a MLA Citation Sheet template	Students may complete the template for each source
Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	The teacher may model "annotated bibliography"	Students may create an annotated bibliography for their sources

Critical Content:	• Reading and note-taking strategies, such as outlining, mapping systems, skimming, scanning, key word search • Difference between primary and secondary sources • Criteria for evaluating information from a variety of sources include diverse media and formats • Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions • Potential steps of an inquiry-based research process • Strategies for connecting solutions (claims), reasoning, and evidence.
Key Skills:	• Evaluate clarity and accuracy of information through investigation and the analysis of other sources. • Use flexible reading and note-taking strategies to organize information and make connections within and across informational texts. • Integrate information from different sources, including primary and secondary sources, to research and complete a project • Pose questions to drive an inquiry-based research process. • Analyze and reflect on one's reasoning and the reasoning of others • Monitor and reflect on the rationale for, and effectiveness of, choices made throughout the problem-solving process.
Critical Language:	MLA, Works Cited, Analyze, Synthesize

Learning Experience # 8	
Task Description: *The teacher may… so that students can…*	The teacher may provide resources for the writing process (e.g. models of organization, editing resources), so that students can begin developing a draft of a research-based problem-solution argument essay. **Teacher note**: This learning experience may cover multiple days of instruction to move students through the writing process. [*Producing text*]
Generalization Connection(s):	Written and spoken arguments that propose solutions must draw upon organized, well-supported reasoning to increase their persuasive potential/capacity.
Teacher Resources:	https://www.ocps.net/cs/services/cs/currareas/lang/IR/Documents/The%20Writing%20Process%20A%20Writing%20Resource%20Guide%20Final.pdf (writing process materials) http://www.bcps.org/offices/lis/writing/secondary/writingprocess.html (writing process materials) http://www1.kent.k12.wa.us/curriculum/writing/sec_writing/persuasivewritesites.htm (materials for persuasive writing) http://www.cte.cornell.edu/documents/Science%20Rubrics.pdf (several rubrics – including a research paper rubric) http://turnitin.com/en_us/resources/teaching-tools/rubrics?start=8 (rubrics)
Student Resources:	https://www.ocps.net/cs/services/cs/currareas/lang/IR/Documents/The%20Writing%20Process%20A%20Writing%20Resource%20Guide%20Final.pdf (writing process materials) http://www.bcps.org/offices/lis/writing/secondary/writingprocess.html (writing process materials) http://www1.kent.k12.wa.us/curriculum/writing/sec_writing/persuasivewritesites.htm (materials for persuasive writing) http://www.cte.cornell.edu/documents/Science%20Rubrics.pdf (several rubrics – including a research paper rubric) http://turnitin.com/en_us/resources/teaching-tools/rubrics?start=8 (rubrics)
Assessment:	Students will demonstrate progress throughout the process of writing their problem-solution research paper in teacher-student writing conferences, peer-to-peer conferences for different drafts.

Differentiation:	Access (Resources and/or Process)	Expression (Products and/or Performance)
(Multiple means for students to access content and multiple modes for student to express understanding.)	The teacher may provide a shortened assignment and modified rubric	The student may develop their essay based on their skills and abilities
Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	Teacher may allow students the opportunity to present their information	So the students can publicly demonstrate their findings and opinions
Critical Content:	• Reading and note-taking strategies, such as outlining, mapping systems, skimming, scanning, key word search • Difference between primary and secondary sources • Criteria for evaluating information from a variety of sources include diverse media and formats • Strategies for effective collaboration • Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions • Potential steps of an inquiry-based research process • Strategies for connecting solutions (claims), reasoning, and evidence. • Effective listening skills • Criteria for evaluating writing (e.g., checklists, scoring guides, mentor texts, rubrics) • Characteristics of phrases and clauses • Strategies for creating effective, correctly punctuated sentences (e.g., sentence combining, sentence imitation) Strategies for editing for capitalization, punctuation, and spelling	
Key Skills:	• Evaluate clarity and accuracy of information through investigation and the analysis of other sources. • Use flexible reading and note-taking strategies to organize information and make connections within and across informational texts. • Integrate information from different sources, including primary and secondary sources, to research and complete a project • Work with peers to support one another in the decision-making and inquiry processes. • Pose questions to drive an inquiry-based research process. • Analyze and reflect on one's reasoning and the reasoning of others • Monitor and reflect on the rationale for, and effectiveness of, choices made throughout the problem-solving process • Craft a written argument to support a solution, using valid reasoning and relevant and sufficient evidence. • 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 • Listen critically to the arguments of peers, evaluate the quality of their reasoning and evidence, and give verbal and nonverbal feedback to the speaker. • Distinguish between phrases and clauses and use this knowledge to write varied, strong, correct, complete sentences	
Critical Language:	Feedback, Group Work, Problem solving, Self-Reflection, Peer-Reflection, Critical Listening, Claim, Argument, Solution, Reasoning, Sources, Evidence, Outline, Brainstorm, MLA, Works Cited, Analyze, Synthesize	

Learning Experience # 9		
Task Description: *The teacher may… so that students can…*	The teacher may provide mentor texts and organizational strategies for research-based problem-solution arguments, so that student can begin to think about effective organization of research findings. [*Producing text*]	
Generalization Connection(s):	Thoughtful research questions and a plan for inquiry provide the foundation for developing a more complex understanding of an issue. Written and spoken arguments that propose solutions must draw upon organized, well-supported reasoning to increase their persuasive potential/capacity	
Teacher Resources:	Brainstorm and outline templates/ exemplars, Mentor texts for problem-solution arguments https://owl.english.purdue.edu/owl/resource/658/05/ (research paper elements from OWL at Purdue)	
Student Resources:	Brainstorm and outline templates/ exemplars, Mentor texts for problem- solution arguments	
Assessment:	Students will receive feedback from peers and teacher on drafts. Teachers may differentiate expectations for students in individual conferences based on the needs of individual students.	
Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A
Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A
Critical Content:	• Reading and note-taking strategies, such as outlining, mapping systems, skimming, scanning, key word search • Difference between primary and secondary sources • Criteria for evaluating information from a variety of sources include diverse media and formats • Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions • Potential steps of an inquiry-based research process • Strategies for connecting solutions (claims), reasoning, and evidence. • Criteria for evaluating writing (e.g., checklists, scoring guides, mentor texts, rubrics)	
Key Skills:	• Evaluate clarity and accuracy of information through investigation and the analysis of other sources. • Use flexible reading and note-taking strategies to organize information and make connections within and across informational texts. • Integrate information from different sources, including primary and secondary sources, to research and complete a project. • Pose questions to drive an inquiry-based research process.	

	• Analyze and reflect on one's reasoning and the reasoning of others • Monitor and reflect on the rationale for, and effectiveness of, choices made throughout the problem-solving process. • Craft a written argument to support a solution, using valid reasoning and relevant and sufficient evidence. • 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
Critical Language:	Claim, Argument, Solution, Reasoning, Sources, Evidence, Outline, Brainstorm,

Learning Experience # 10		
Task Description: *The teacher may… so that students can…*	The teacher may facilitate writing response groups, so that students can understand the importance of giving peer feedback and the ways that feedback can strengthen research writing and presenting. [*Producing text*]	
Generalization Connection(s):	Written and spoken arguments that propose solutions must draw upon organized, well-supported reasoning to increase their persuasive potential/capacity.	
Teacher Resources:	http://lhs.lawsoncardinals.org/common/pages/DisplayFile.aspx?itemId=13492148 (research paper peer feedback form)	
Student Resources:	http://lhs.lawsoncardinals.org/common/pages/DisplayFile.aspx?itemId=13492148 (research paper peer feedback form)	
Assessment:	Students will receive feedback for peers and teacher on research paper drafts.	
Differentiation: (Multiple means for students to access content and multiple modes for student to express understanding.)	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A
Extensions for depth and complexity:	**Access** (Resources and/or Process)	**Expression** (Products and/or Performance)
	N/A	N/A
Critical Content:	• Reading and note-taking strategies, such as outlining, mapping systems, skimming, scanning, key word search • Difference between primary and secondary sources • Criteria for evaluating information from a variety of sources include diverse media and formats • Strategies for effective collaboration • Criteria used to evaluate thinking or reasoning, such as purpose, question at issue; points of view; implications and consequences; inferences; and assumptions • Potential steps of an inquiry-based research process • Strategies for connecting solutions (claims), reasoning, and evidence. • Effective audience and oral delivery skills • Effective listening skills • Criteria for evaluating writing (e.g., checklists, scoring guides, mentor texts, rubrics)	

Key Skills:	• Work with peers to support one another in the decision-making and inquiry processes. • Pose questions to drive an inquiry-based research process. • Analyze and reflect on one's reasoning and the reasoning of others • Monitor and reflect on the rationale for, and effectiveness of, choices made throughout the problem-solving process • Present one's solution orally, using effective audience and oral delivery skills and incorporating diverse media or formats. • Listen critically to the arguments of peers, evaluate the quality of their reasoning and evidence, and give verbal and nonverbal feedback to the speaker.
Critical Language:	Feedback, Group Work, Problem solving, Self-Reflection, Peer-Reflection, Critical Listening