

★ TASK ★ LADDER

by Erin Coker, Eva Bridgeforth, and Bridgett Bird

After learning about water as a resource and the challenges the Earth's population faces, this module asks students to propose a solution for maintaining Colorado's water supply. Students will explore methods of conservation, finding a new water supply and recycling and/or reusing water. This module asks students to think globally, but act locally by writing a letter to a member of the Colorado Congress proposing their solutions and sharing their evidence and reasoning in the body of their letter.

In this module students will build on their knowledge and apply it to a real world situation.

This module connects to the following year long 6th grade science standard:

SC09-GR.6-S.3-GLE.3: Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled.

This module best fits when implemented following the unit "Water as a Resource". In this unit students are learned about the following.

- The water cycle consists of evaporation, condensation, and precipitation.
- Water distribution and recycling in various forms and locations.
- How to describe water by its properties, including mass, weight, volume, and density.
- Different phases of water (i.e., solid, liquid, gas) and each phase's unique properties.
- Reasons why changes in temperature are not always equivalent to changes in state.
- Unique properties of solids, liquids, and gasses that make them useful in different situations.
- How gravitational force can change objects' weight (and not mass).
- Reasons why mass, weight, and volume affect density.
- Specific tools that gather information about mass, weight, volume, and density.
- Causes and effects of water pollution in local and world water distributions.
- Relationships between water systems and local, regional, and world population development.

Following this module students will be exploring more about water, specifically around water rights in 7th grade

Language Arts (Expeditionary Learning).

This module also connects to the fall module about Hydraulic Fracturing. Students can be asked to make connections regarding the amount of water required through the process of Fracking.

Special Note:

This module's instructional ladder uses several fields in ways not conventional to LDC for the purpose of meeting requirements of Denver Public Schools and its common module approach.

• Skill and Mini-Task Repetition. To provide clarity around the sequencing of the teaching of the same skill multiple times in this module, the same skill and/or mini-task sometimes appears multiple times in the Instructional Ladder's "Reading Process."

Mini-Task Prompts. To meet the local mandate of including content/language objectives (CLOs) in every lesson, these mini-task prompts include the sentence starter "students will be able to (SWBAT)." While these are not strictly "student-facing" as required by LDC, each CLO is always communicated to students in this format as a daily goal.

GRADES DISCIPLINE COURSE PACING	
GRADES DISCIPLINE COURSE PACING	

Section 1: What Task?

Teaching Task

Task Template A10 - Argumentation

After reading informational texts, scientific research, and viewing videos on water as a resource, write a letter to your local state representative in which you identify a problem concerning the availability of water in Colorado and propose a solution. Support your position with evidence from the text/s. Give 3 example/s from past or current issues to illustrate and clarify your position.

Standards

Colorado Academic Standards for Science

3.3.

Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled

3.2.

Water on Earth is distributed and circulated through oceans, glaciers, rivers, ground water, and the atmosphere

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

WHST.6-8.1

Write arguments focused on discipline-specific content.

RST.6-8.1

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

SL.6.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

L.6.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

RST.6-8.10

By the end of grade 8, read and comprehend science/technical texts in the grades 6—8 text complexity band independently and proficiently.

Next Generation Science Standards (NGSS Comprehensive)

ESS3.A:1.

Humans depend on Earth's land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes. (MS-ESS3-1)

ESS3.C:2.

Typically as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise. (MS-ESS3-3), (MS-ESS3-4)

MS-ETS1.CC.1.1.

All human activity draws on natural resources and has both short and long-term consequences, positive as well as negative, for the health of people and the natural environment. (MS-ETS1-1)

Texts

Focus

- % "The Colorado River Runs Dry" (Reading)
- % American Southwest Water Crisis (Interactive Map/Picture Slideshow)
- % "How much water is there on, in, and above the Earth?" USGS (Reading)
- % Finding New Supply: "Saline water: Desalination" USGS (Reading)
- % ArcGIS Colorado River Basins Maps
- % Finding New Supply: "Aquifer Storage and Recovery Study" Denver Water (Reading)
- 𝗞 "Water Recycling and Reuse: The Environmental Benefits" EPA (Reading)
- % Conservation: "Simple Steps to Save Water" EPA (Reading #1)
- **Solution:** "Drip Irrigation Expanding Worldwide" (Reading #2)
- Source of the second se
- **Water Food (Infographics) Barilla (Reading #4a)**
- % Conservation "What the World Eats" National Geographic (Reading #4b)
- **%** Optional* Water Footprint Calculator (Calculator)

Student Work Rubric - Argumentation Task - Grades 6-8

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

Background for Students

Although over 70% of Earth's surface is covered with water, less than 1% of this water is available for human consumption. This, along with increasing population growth and increasing demand for water, causes many people to be concerned that humans are going to run out of a fresh water supply. After learning about water as a resource and the challenges we face, this module asks you to propose a solution for maintaining Colorado's water supply. You will explore methods of conservation, of finding a new water supply and of recycling and/or reusing water.

Extension

Create an infographic defining the problem we face with water availability in Colorado and propose solutions.

Optional Technology Resource: http://piktochart.com/

Section 2: What Skills?

Preparing for the Task

TASK ENGAGEMENT: Ability to connect the task and new content to existing knowledge, literacy skills, and experiences.

TASK AND STUDENT BACKGROUND ANALYSIS: Ability to explain and paraphrase both the task's prompt and student background.

READING THE RUBRIC: Ability to set a learning goal, based upon student understanding of the rubric.

Reading Process

BEFORE READING> PREVIEWING THE TEXT> STOP AND JOT: The ability to activate existing background knowledge and connect to new content.

BEFORE READING> READING AN INTERACTIVE MAP> GRAPHIC ORGANIZER: Ability to read an interactive map and make connections to the problem.

ACTIVE READING> IDENTIFYING REASONS AND RESULTS> GRAPHIC ORGANIZER: Ability to draw conclusions from the text and categorize reasons and results.

AFTER READING>QUESTIONING> CSR QUESTIONS: Ability to ask questions following reading a text. BEFORE READING> PREVIEW TEXT FEATURES: Ability to preview text features in order to enhance comprehension.

ACTIVE READING> CENTRAL IDEA> ANNOTATION: Ability to determine the central ideas from the text. AFTER READING> REFLECTION> I USED TO THINK, BUT NOW I KNOW: Ability to reflect on previous knowledge and knowledge gained following reading.

HOW MUCH WATER DO WE HAVE AND HOW MUCH WATER DO WE USE?> CREATING A GRAPH: Ability to create a graph from data and determine the central ideas and trends.

BEFORE READING> DESALINATION> VIDEO/MODEL: Ability to describe how a scientific model works. **ACTIVE READING> CENTRAL IDEA> TEXT DEPENDENT QUESTIONS**: Ability to determine the central idea(s) of a text and answer text dependent questions.

AFTER READING>QUESTIONING>CSR QUESTIONS: Ability to ask questions following reading a text BEFORE READING> VIDEO PREVIEW>30 SECOND EXPERT: Ability to cite evidence from a video. ACTIVE READING> CENTRAL IDEA> TEXT DEPENDENT QUESTIONS: Ability to determine the central idea(s) of a text and answer text dependent questions.

AFTER READING>QUESTIONING>CSR QUESTIONS: Ability to ask questions following reading a text. **BEFORE READING> PREVIEWING THE TEXT> G.O.T.C.H.A. PREVIEW**: Ability to preview the text to enhance comprehension, create interest and build on prior knowledge.

ACTIVE READING> NOTE TAKING> CORNELL NOTES: Ability to determine the central idea(s) of a text and provide an accurate summary regarding methods of water recycling.

AFTER READING> CENTRAL IDEA> CONCEPT MAPPING: Ability to determine the central idea(s) of a text and create a concept map of ideas.

BEFORE READING> VIDEO INTRODUCTION> CLASS DISCUSSION: Ability to apply background knowledge to a concept.

ACTIVE READING> CENTRAL IDEA> HOSTED GALLERY WALK: Ability to determine the central idea(s) of a text and provide and accurate summary.

AFTER READING> ESSENTIAL VOCABULARY> VOCABULARY CONCEPT CARDS: The ability to analyze a word/concept and develop a definition using content from a scientific text.

ACTIVE READING> CITE TEXTUAL EVIDENCE>MULTIPLE TEXTS GRAPHIC ORGANIZER: Ability to cite relevant textual evidence that is aligned to a problem propose authentic and viable solutions.

Transition to Writing

SEMINAR: Ability to discuss ideas, opinions and evidence from the text to prepare for writing.

Writing Process

PLANNING THE WRITING> ESTABLISHING A CONTROLLING IDEA: Ability to develop and strengthen a claim statement.

PLANNING THE WRITING> CITING EVIDENCE: Ability to cite a direct quote or paraphrase the authors ideas. PLANNING THE WRITING> ALIGNING CLAIM, EVIDENCE AND REASONING: Ability to align claim, evidence and reasoning to strengthen argument.

PLANNING THE WRITING> FORMAT: Ability develop writing into the appropriate letter format.

DEVELOPMENT OF THE WRITING> INITIAL DRAFT: Ability to introduce and develop claims and counterclaims, supplying data and evidence for each, and creating an organization that establishes clear relationships among the claims, reasons and evidence.

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

FINALIZING THE WRITING> FINAL DRAFT: Ability to develop and strengthen writing that meets expectations as needed by revising and editing.

Section 3: What Instruction?

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
Dremeri				
Preparii	ng for the task			
Preparii 30 mins	TASK ENGAGEMENT: Ability to connect the task and new content to existing knowledge, literacy skills, and experiences.	HOOK! VIDEO AND CLASS DISCUSSION SWBAT describe orally and in writing some of the problems we face with water on Earth using content vocabulary (resource, availability, living things, contaminated, etc.)	Meets expectations if student • engages in discussion describing the problems we face on Earth with water citing relevant information related to the topic.	See 'Meet Me At' document to set students up for collaboration in this mini task and throughout the module. Students will find 4 different partners and write their names down on the different places in the science classroom. Throughout this module you may ask students to meet with a partner on this document. For example, you may say, 'meet with your eye wash station partner to discuss''. Start by asking students to reflect on what they already know about water as a resource by completing a quick write. Note* the topic 'water as a resource' is the title of their textbook. See attached for graphic organizer. Once students have spent approximately 5 minutes writing down their ideas, explain to students that they are going to be starting a new LDC module that is going to look the problems we face with water availability and different solution(s) they think will be the most impactful for Colorado. Explain to student that they will get a look at the actual teaching task in the future, but for now we are just activating our background knowledge and introducing the topic. Next, show students the trailer to "Last Call at the Casis" a documentary about water. You may want to show this video to student stwice and allow them time to write down their thoughts before meeting with a partner. https://www.youtube.com/watch?v=fLE3i92LkQk The full movie can be found here, but know that the movie is rated PG13. https://www.youtube.com/watch?v=zlgh1RCRbsI Also, there is a website with additional resources here. http://www.takepart.com/lastcall After watching the video ask student to meet with a partner using the 30-second expert protocol. See attached graphic organizer.

Standards:

SL.8.1 : Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8

3.3. : Earth's natural resources protimescales, while others can be ren	vide the foundation for hur ewed or recycled	man society's physical needs	Many natural resources are nonrenewable on hu
Additional Attachments: Science Meet Me At Sol-Second Expert: "Last Call at Last Call at the Oasis Official T Hook! Quick Write: "Water as a	nt the Oasis" Frailer #1 - Water Docum a Resource"	entary Movie (2012)	
13:3 TASK ENGAGEMENT: Ability to connect the task and new content to existing knowledge, literacy skills, and experiences. 14:4 A and experiences.	HOOK! INNER/OUTER CIRCLE DISCUSSION SWBAT to orally describe issues related to water as a resource using academic vocabulary (water source, renewable and nonrenewable resources, water shortage, human consumption, etc.).	Meets expectations if student • engages in a discussion accurately using academic vocabulary and citing evidence from the Water as a Resource unit of study.	 As a Do Now, project the following prompt for write: Think about all we have learned about water. Re in writing, on the following questions: How do yo water in your every day life? Who owns our wate How should water usage be regulated? How we change if a water shortage became a crisis? Divide the class in half. Arrange the two halv an inner circle and an outer circle, standing in an available large space. Students face each other temporary discussion partners. Present the que (attached) for short, open-ended partner discuss. Then direct students to walk in countering directi a circle until you tell them stop, at which point the should have a new, random discussion partner for next question. Time each discussion session (3 minutes), making sure that each partner has a cl to speak. Adjust timing as seems necessary for discussion and participation. Planning considerations: Language needs: sentence stems, intentional grouping (diverse inner-outer, balancing language abilities), academic vocab to include from prior up pacing adjustments, inserting think-time before discussion time, increasing discussion time (or decreasing for engaging pacing) Optional debrief: ask students to re-think the op questions and add to their original quick-write Up the rigor: Add follow-up questions, ask stude design questions for homework the night before Up the "fun factor": play music while students tra- circles a la musical chairs, possibly with a "water theme! http://www.songfacts.com/category- songs_with_bodies_of_water_in_the_title.php http://www.dennydavis.net/poemfiles/travel/wate/

Standards:

3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled

SL.8.1 : Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.

Additional Attachments:

	% Questions for Inner/Outer Circle				
	𝗞 Inside Outside Circle Quick ₩	rite			
25 mins	TASK AND STUDENT BACKGROUND ANALYSIS: Ability to explain and paraphrase both the task's prompt and student background.	BREAKING DOWN THE TASK: SHORT CONSTRUCTED RESPONSE SWBAT analyze the teaching task by paraphrasing, using verbs (read, write, cite, discuss, etc.).	 Meets expectations if student correctly paraphrases all portions of the task. effectively participates in a group discussion while paraphrasing the task. 	Begin by explaining why this task is important: You will receive assignments that require you to read a long text and write an essay response to a prompt all the way though college and beyond. Students should keep their job in mind while they are reading and remind themselves of the essay they will have to write, so when it comes time to write it they will have some ideas in their head. Today I am going to show you how to read an assignment prompt and really understand it.	
				I DO:	
				First introduce students to the teaching task and the student background. The task should be made visible to students in your classroom so that you can refer back to it during the module. The task and the background are also available to the students in their portfolio.	
				Model how to breakdown the prompt. On the overhead or document camera, project the organizer and complete the first row first box as an individual by doing a think aloud.	
				WE DO: When filling in the first row second box ask students to share their ideas and complete this portion together.	
				YOU DO: Allow students to complete all the "individual boxes" After students finish thinking individually, put students in small groups to share their individual ideas and create a group consensus on what each part of the task means.	
				Conclude with a whole group discussion, facilitated by the teacher, on any parts of the task that are still unclear to students. Tell students to hold onto this, and keep it in mind as they read. Remind them that it is their purpose for reading.	
				You may also choose to display this document on chart paper in the classroom to refer back to during the module.	
				Teacher will remind students to reread their task analysis throughout the module.	

Standards:

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.

SL.6.1 : Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

Additional Attachments:

% Teaching Task and Student Background

% Preparing for the Task: Task Analysis

50 mins	READING THE RUBRIC: Ability to set a learning goal, based upon student understanding of the rubric.	SHORT CONSTRUCTED RESPONSE: RUBRIC ANALYSIS SWBAT paraphrase the rubric in writing using rubric words and phrases (development, organization, understanding, etc.).	 Meets expectations if student accurately paraphrases the rubric and generates a graphic that connects. effectively collaborates with group members. 	 Teacher will display teaching task daily, reminding students of the end goal. Teacher will display rubric and hand out rubric to each student. Posters will be around the room titled reading/ research, development, organization, conventions, content understanding. I DO: Teacher will use a poster for "focus" read the rubric and then deconstruct, using kid friendly language. WE DO: Next teacher will ask 5 students to come into a circle with the poster for "Controlling Idea". They will read and teacher will guide them to make kid friendly language, adding a unique graphic to help remember each element of the rubric. YOU DO: Next each table group will have one poster (reading/research, development, organization, conventions, content understanding). Teacher will read each one and then hand them out. Students will work on putting the words in kid friendly language and generating a graphic. Students will then present their ideas to the whole class. WRAP UP: Hand out copies of the entire rubric to students will work on putting the agoal for themselves based off of the rubric. Ask students to put a star next to the portion of the rubric they feel most confident with and put a box around the portion of the rubric they would like support with. You may also choose to have students share this with their parent/guardian by sending the document home to be signed. To up the rigor Show students the sample letter from the writing process and have students socare the letter for specific scoring elements. You should choose 1-2 scoring elements to focus on. Ask students to highlight evidence in the sample paper that aligns to the scoring elements you have chosen. In addition to
				the scoring elements you have chosen. In addition to highlighting evidence, ask students to annotate the evidence using the language from the rubric.
	Standards:			
	RST.6-8.2 : Determine the central opinions. SL.6.1 : Engage effectively in a rai topics, texts, and issues, building o RST.6-8.1 : Cite specific textual ev	ideas or conclusions of a t nge of collaborative discus n others' ideas and expres ridence to support analysis	ext; provide an accurate sum sions (one-on-one, in groups, ssing their own clearly. s of science and technical text	mary of the text distinct from prior knowledge or and teacher-led) with diverse partners on grade 6 s.
	Additional Attachments: % LDC 6-12 Argumentative Rubr % Short Constructed Response:	ic Rubric Analysis		
Reading	Process			

15 mins BEFORE READING>

Meets expectations if

LIFELINE TO THE

For this mini task students will be reading the

	PREVIEWING THE TEXT> STOP AND JOT: The ability to activate existing background knowledge and connect to new content.	WEST: BRAINSTORM ("COLORADO RIVER RUNS DRY") SWBAT summarize in writing why the Colorado River is referred to as the 'lifeline to the west' using content vocabulary (resource, limited, etc.).	student accurately summarizes why the Colorado River is referred to as the 'lifeline to the west'.	 article "The Colorado River Runs Dry: Dams, irrigation and now climate change have drastically reduced the once-mighty river. Is it a sign of things to come?" from Smithsonian. There is one handout for all mini tasks associated with this article, before, during and after reading. Start by introducing the idea that the Colorado River is often referred to as "The Lifeline of the West" and that students are going to be exploring the reasons for this title prior to reading. Introduce the word 'lifeline' to students by showing them a completed Vocabulary Concept Card. Students will be making their own Vocabulary Concept Cards later in the module so this is an opportunity to introduce this strategy to them. Second, ask students to preview the article "The Colorado River Runs Dry" by examining the picture and subtitle. Finally, ask students to think about their knowledge of Colorado and stop and jot, why is the Colorado River referred to as "The Lifeline to the West"? Why is this an appropriate title? Before asking the class to share out their ideas, have students think pair share with a partner.
	Standards: 3.3. : Earth's natural resources protimescales, while others can be remulated in the second s	ovide the foundation for hur newed or recycled grade-appropriate genera important to comprehensi nge of collaborative discus n others' ideas and expres	man society's physical needs. I academic and domain-speci ion or expression. sions (one-on-one, in groups, sing their own clearly.	Many natural resources are nonrenewable on human fic words and phrases; gather vocabulary knowledge and teacher-led) with diverse partners on grade 8
	Additional Attachments: % "The Colorado River Runs Dry % "The Colorado River Runs Dry	/" Lifeline: Vocabulary C₀ /'' Before Reading Brains	oncept Card storm	
45 mins	BEFORE READING> READING AN INTERACTIVE MAP> GRAPHIC ORGANIZER: Ability to read an interactive map and make connections to the problem.	GETTING TO KNOW THE COLORADO RIVER: INTERACTIVE MAP TOUR AND O-W- L CHART (AMERICAN SOUTHWEST WATER CRISIS) SWBAT make observations and write questions, in writing, about different locations along the Colorado River using content vocabulary (Rocky Mountains, source of the river, mouth of the river, dam, etc.).	 Meets expectations if student makes observations and writes questions using content vocabulary. 	 Share with students the interactive map "American Southwest Water Crisis" Using the zoom feature, zoom out to show students the entire length of the Colorado, which encompasses 7 states. Ask students to click through the slideshow to get to know some of the major landmarks along the Colorado. For each image there are captions that can be minimized by clicking the down arrow. Ask students to be thinking about how the content they are learning connects back to the teaching task. Students will be completing an O-W-L chart to record their observations, wonderings and new content learned. If students are unfamiliar with this type of graphic organizer, model for them how to use it for the first location. This activity works best when students can access technology. This does not need to be 1:1 access. Students can share a computer and work in pairs.

	Standards:			
	RST.6-8.2 : Determine the central opinions.3.3. : Earth's natural resources pro-	ideas or conclusions of a t ovide the foundation for hu	ext; provide an accurate sum man society's physical needs.	mary of the text distinct from prior knowledge or Many natural resources are nonrenewable on human
	timescales, while others can be re	newed or recycled		
	Additional Attachments:			
	✤ American Southwest Water C ✤ American Southwest Water C	risis: Interactive Map and risis	I O-W-L Chart	
30 mins	Active READING> IDENTIFYING REASONS AND RESULTS> GRAPHIC ORGANIZER: Ability to draw conclusions from the text and categorize reasons and results.	risis REASONS AND RESULTS GRAPHIC ORGANIZER ("THE COLORADO RIVER RUNS DRY") SWBAT describe the causes and effects associated with the Colorado River running dry using cause and effect language (as a result of, may be due to, this lead toso, etc.).	Meets expectations if student • accurately describes the causes and effects of the Colorado River running dry using content vocabulary.	For this mini task students will be reading the article "The Colorado River Runs Dry. Dams, irrigation and now climate change have drastically reduced the once-mighty river. Is it a sign of things to come?" by Smithsonian. For this mini task students will start by annotate the text starring * the reasons and <u>underlining</u> the results. After reading students will complete a graphic organizer where they will record some of the reasons the Colorado River is running dry and describe the result(s). Start with a clean read by reading the entire text aloud to students while they follow along on their copy of the text. Annotation I do: To teach students the skill of annotation, model for them by stopping and doing a think aloud, showing students how to annotate the text for reasons and results. We do: Once you have modeled annotation, ask student to work with a partner for a small section of the text, continuing with annotation. Bring students back together and discuss their work prior to releasing them to read an annotate the rest of the text on their own. This ensures they are ready to work independently. You do: Students read the rest of the text on their own and continue to annotate. Following annotation, students will complete the reasons and results graphic organizer. Graphic Organizer I do: As you did previously, start by modeling for students how to complete the graphic organizer for the section titled 'Dams'. We do: Students work in partners to complete the section of the graphic organizer titled 'Irrigation'. Share with the deca ourseling and text on the in own and back to complete the graphic organizer for the section of the graphic organizer titled 'Irrigation'. Share
				have gathered the correct information. You do: Students work independently to complete the section of the graphic organizer titled 'Climate Change'.

	 3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled 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. Additional Attachments: 						
	"The Colorado River Runs Dry "The Colorado River Runs Dry	" " During Reading Anno	tation and Graphic Organize	er			
20 mins	AFTER READING>QUESTIONING> CSR QUESTIONS: Ability to ask questions following reading a text.	CSR QUESTIONS ("THE COLORADO RIVER RUNS DRY")) SWBAT generate questions, in writing, about environmental changes to the Colorado River citing evidence using question words (who, what, where, when, etc.).	Meets expectations if student • writes questions citing evidence from the text.	After reading "The Colorado River Runs Dry", students will write CSR questions using CSR question stems. There are three types of questions. 1. Right There Question is in ONE place in the text. You should be able to point to the answer and say, "It' right there!" 2. Think & Search Question is in at least TWO places in the text. You have to look in two or more different places to find the answer. 3. Author & You question is NOT ENTIRELY in the text. You have to think about what the author is telling you and what you already know. The answer to an Author & You question is in your head and in the text. For this question type ask students to write a question that connects to the teaching task. I do: Start by teaching students the different questions types and share with them some examples using the text. For example, Right There Question- How many miles does the Colorado River travel? 1,500 miles We do: Ask students to work with a partner to write questions. You do: Once students are ready, release them to work on their own. Once students have written both questions and answers to their questions, have them meet with a 'meet me at' partner to quiz each other using their questions. Ask students to bring the text with them to cite textual evidence when discussing their question/answer with their partner. As a whole class share out some of the questions and answers students wrote. For the Author and You question, ask students to explain the connection to the teaching task.			

Standards:

3.3. Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled

SL.8.1 : Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.

RST.6-8.1 : Cite specific textual evidence to support analysis of science and technical texts.

Additional Attachments:

% "The Colorado River Runs Dry" After Reading CSR Questions

	% CSR Question Starters				
20 mins	BEFORE READING> PREVIEW TEXT FEATURES: Ability to preview text features in order to enhance comprehension.	PREVIEW TEXT FEATURES ("HOW MUCH WATER DO WE HAVE AND HOW MUCH WATER DO WE USE?") SWBAT interpret United States Geologic Survey graphs/graphics using data analysis words (increase, decrease, diameter, etc.).	Meets expectations it student • accurately interprets graphs/graphics from the text.	 Students will read the article "How much water is there on, in, and above the Earth?" by the USGS. If students are not familiar with the United States Geologic Survey share with them their role in our government. "The United States Geological Survey (USGS, formerly simply Geological Survey) is a scientific agency of the United States government. The scientists of the USGS study the landscape of the United States, its natural resources, and the natural hazards that threaten it." Click the link below to learn more. http://www.usgs.gov/aboutusgs/ Before Reading Before reading ask students to preview the text features, figure 1: Where is Earth's water? and figure 2: How much water is there on, in and above the Earth? and answer the questions in the graphic organizer. Before releasing students to work on their own, project both of the graphics for students. Students will be viewing these graphics in their text sets in black and white; showing them the graphics in color and larger will be helpful to them when viewing their own. For the second graphic, figure 2: How much water is there on, in and above the Earth?, ensure that students are able to see all 3 spheres. After students answer the questions individually, have them meet with a partner to share their answers. Wrap up with a whole class discussion reviewing the graphics and answers to the questions. Before students begin to read tell them after reading they will be reflecting on the content that is new to them by reflecting on what they used to think and what they learned from the reading. They will using a strategy called 'I used to think, but now I know'. See the link below to learn more about this strategy. http://k20center.ou.edu/instructional-strategies/i-used-think-now-i-know/ 	
	Standards: RST.6-8.2 : Determine the central opinions. 3.3 : Earth's natural resources pro- timescales, while others can be ren	ideas or conclusions of a t wide the foundation for hur newed or recycled	ext; provide an accurate sum nan society's physical needs.	mary of the text distinct from prior knowledge or Many natural resources are nonrenewable on human	
	Additional Attachments: Solution the USGS Solution I used to think, but now I know Solution I know I know	v and how much water do	we use?" Before Reading (Graphic Organizer	
30 mins	ACTIVE READING> CENTRAL IDEA> ANNOTATION: Ability to determine the central ideas from the text.	ANNOTATION ("HOW MUCH WATER DO WE HAVE AND HOW MUCH WATER DO	Meets expectations is students • justify textual evidence	Students will read the article "How much water is there on, in, and above the Earth?" by the USGS. Start with a clean read and read the text aloud to	

	Standards: RST.6-8.2 : Determine the centropinions. 3.3 : Earth's natural resources partimetric for the statemetric of th	ral ideas or conclusions of a t	ext; provide an accurate sum man society's physical needs	a symbol, have students write marginal annotations explaining why they selected a section of text. In other words, ask students to provide commentary around why something is interesting or related to the teaching task. Depending on how well students did with the last annotation task, you may want to provide additional instruction. See example below. I do: Read aloud and model annotation using a think aloud. We do: Ask students to read and annotate with a partner. Pull the class back together and review a few student examples of annotation. You do: Release students when they are ready to read and annotate on their own.
	Additional Attachments:	, in, and above the Earth?	USGS (Reading)	
20 mins	AFTER READING> REFLECTION> I USED TO THINK, BUT NOW I KNOW: Ability to reflect on previous knowledge and knowledge gained following reading.	I USED TO THINK, BUT NOW I KNOW: REFLECTION ("HOW MUCH WATER IS THERE ON, IN, AND ABOVE THE EARTH?") SWBAT reflect on their learning, in writing, regarding water availability citing textual evidence using content vocabulary (source, saltwater, freshwater, etc.).	Meets expectations if student • reflects on their learning following reading the text citing textual evidence.	After Reading After reading students will complete the graphic organizer 'I used to think, but now I know' for the questions provided. Prior to releasing students to work on this, share with them an example of something you recently learned. For example, you might say something like, "I used to think that all deserts were hot, but now I know that some deserts like the Gobi desert can be cold. In the text is says temperatures in the Gobi desert can reach -44 degrees F." Modeling this for students sends the message that it is ok you did not know the answers before reading this article. When students complete the graphic organizer have them compare their answers with another student. Choose a 'meet me at partner' for them to discuss their take aways/new learning with. Following discussion with pairs, wrap up with a whole class discussion. Chart with the class some of the common responses.

timescales, while others can be renewed or recycled

	RST.6-8.1 : Cite specific textual evidence to support analysis of science and technical texts.						
	Additional Attachments: % I used to thinkbut now I know						
	% "How much water do we have	and how much water do	we use?" After Reading Gr	aphic Organizer			
20 mins	HOW MUCH WATER DO WE HAVE AND HOW MUCH WATER DO WE USE?> CREATING A GRAPH: Ability to create a graph from data and determine the central ideas and trends.	GRAPHING: HOW MUCH WATER DO WE HAVE AND HOW MUCH WATER DO WE USE? SWBAT orally draw conclusions from data about water on Earth using data analysis words (is greater than, is less than, etc.).	 Meets expectations if student accurately graphs data. summarizes data orally and draws accurate conclusions. 	 Following the reading "How much water is there on, in, and above the Earth?" by the USGS, have students complete the graphing activity. Depending on your school's policy and your students' graphing skills you may want to assign this activity for homework. Be sure to provide students with the 'Earth's Water' graphing page and the 'Earth's Water Sources' table page. Students will also need a pencil with an eraser and a colored marker or colored pencil. Remind students of the water cycle. You might say something like, "The amount of water in the world remains the same. Imagine water on Earth forever flowing from rivers into oceans, evaporating into the sky, and precipitating back into rivers. The water cycle never stops. The water you drank today could be the same water a dinosaur drank!" Read the graphing directions to students. "Pretend that the world's 1.4 TRILLION GALLONS of water was only 5 gallons, or 1,280 tablespoons. Below are 1,280 squares, representing all the water in the world. Using the table on the next page, EARTH'S WATER SOURCES, create a key, outline and label the total tablespoons of water in each source on Earth. COLOR in blue the amount of water available for human use." Depending on your students' graphing abilities, you may choose to walk students through the graphing process before releasing them to work on their own. Following the graphing activity, lead a discussion with students using the following questions. You may have students meet with a 'meet me at partner' prior to the whole class discussion. What can you conclude from the graph? How does this graph relate back to our teaching task? 			
	Standards:	andards:					
	RST.6-8.2 : Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowle opinions.						
	Additional Attachments:						
	% How much water do we have a $%$ How much water do we have a	and how much water do and how much water do	we use? Graphing Activity we use? Answer Key				
20 mins	BEFORE READING> DESALINATION> VIDEO/MODEL: Ability to	BUILDING A MODEL: HOW DOES DESALINATION	Meets expectations if student • accurately summarizes	Watch the video and create your own homemade Solar Water Distiller. This method will turn seawater into fresh water.			
	describe now a scientific model works.	SWBAT orally	the steps to create a				

		summarize how to make a homemade Solar Water Distiller using sequential words and phrases (first, and then, etc.).	solar water distiller.	 Also, see page 25 in the student text book, "Water as a Resource". Have students sequence the steps and describe the process of creating a Solar Water Distiller on their handout. Once this is complete have students work with a partner to check for understanding. Have students share their work with their partner and provide feedback.
	Standards: SL.8.1 : Engage effectively in a rai topics, texts, and issues, building of 3.3 : Earth's natural resources pro- timescales, while others can be ren	nge of collaborative discus in others' ideas and expres ovide the foundation for hur newed or recycled	sions (one-on-one, in groups, sing their own clearly. nan society's physical needs.	, and teacher-led) with diverse partners on grade 8 Many natural resources are nonrenewable on human
	Additional Attachments: Solar Water Distiller Homemade Solar Water Distill	er - turns dirty water/salt	water into clean drinking w	ater! - how to DIY
30 mins	ACTIVE READING> CENTRAL IDEA> TEXT DEPENDENT QUESTIONS: Ability to determine the central idea(s) of a text and answer text dependent questions.	TEXT DEPENDENT QUESTIONS ('DESALINATION: DRINK A CUP OF SEAWATER?') SWBAT explain, in writing, how desalination could be used to locate new sources of water using content vocabulary (sea water, fresh water, ppm, desalination plants, etc.).	Meets expectations if student • accurately describes how desalination could be used to find new sources of water using content vocabulary.	Start by reminding students that 97% of the Earth's water is sea water, but we cannot drink that water because it contains salt. Tell students today we are going to read about a process called desalination which converts salt water into fresh water. Although we may not be near an ocean in Colorado, remember that other states use our water. For example, we read that seven states that use water from the Colorado river. Imagine if those states could get their water from the ocean what that would mean for the Colorado river. You may also show students a map, clicking the link below, indicating the states that use water from the Colorado and their proximity to the ocean. "Think globally act locally!" Before reading watch the video below and write a class definition of desalination. Following the video have students read the text and answer the text dependent questions on the right hand side of the paper. Remind them of the purpose for reading. "How could desalination be used to increase the available water supply in the United States and in Colorado?" Depending on the needs of your students you may choose to group them or have them read individually. Following the reading, have students meet with a partner to share Depending on your students' needs you may also choose to share with them the attached illustrated dictionary as an optional support.

Standards:

3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled

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.						
	Additional Attachments:						
	 North America's largest seawa Desalination: Illustrated Dictio USGS: Desalination: Drink a c 	% North America's largest seawater desalination plant is ahead of schedule % Desalination: Illustrated Dictionary % USGS: Desalination: Drink a cup of seawater? Text Dependedent Questions					
15 mins	AFTER READING>QUESTIONING>CSR QUESTIONS: Ability to ask questions following reading a text	CSR QUESTIONS ("DESALINATION: DRINK A CUP OF SEAWATER?") SWBAT generate questions about desalination, in writing, citing evidence using question words (who, what, where, when, etc.).	Meets expectations if student • writes questions citing evidence from the text.	 After reading "Desalination, Drink a Cup of Sea Water", students will write CSR questions using CSR question stems. There are three types of questions. 1. Right There Question is in ONE place in the text. You should be able to point to the answer and say, "It's right there!" 2. Think & Search Question is in at least TWO places in the text. You have to look in two or more different places to find the answer. 3. Author & You question is NOT ENTIRELY in the text. You have to think about what the author is telling you and what you already know. The answer to an Author & You question is in your head and in the text. For this question type ask students to write a question that connects to the teaching task. I do: Remind students of the different questions types and share with them some examples using the text. We do: Ask students to work with a partner to write questions. You do: Once students are ready, release them to work on their own. Once students have written both questions and answers to their questions, have them meet with a 'meet me at partner' to quiz each other using their question/answer with their partner. As a whole class share out some of the questions and answers students wrote. For the Author and You question, ask students to explain the connection to the teaching task. 			
	 Standards: 3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled SL.8.1 : Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly. RST.6-8.1 : Cite specific textual evidence to support analysis of science and technical texts. 						
	Additional Attachments: % "Desalination: Drink a cup of seawater?" CSR Questions % CSR Question Sentence Stems						
10 mins	BEFORE READING> VIDEO PREVIEW>30 SECOND EXPERT: Ability to cite evidence	VIDEO PREVIEW: 30 SECOND EXPERT ("AQUIFER STORAGE	Meets expectations if student	For this mini task students will be reading the article "Aquifer Storage and Recovery" by Denver Water.			

	from a video.	AND RECOVERY") SWBAT cite evidence, in writing, describing the process of Aquifer Storage and Recovery using content vocabulary (groundwater, aquifer, recharge, etc.).	 accurately cites evidence describing the process of Aquifer Storage and Recovery. 	Before reading start by showing students the video "Aquifer Recharge" by the University of Nebraska. Use the 30 second expert protocol. This protocol was used in a previous mini task titled "Hook! Video and Class Discussion". Students will meet with a partner to discuss and share what they learned from the video.			
	Standards:						
	RST.6-8.1 : Cite specific textual ev 3.3. : Earth's natural resources pro timescales, while others can be ren	idence to support analysis vide the foundation for hur newed or recycled	of science and technical text nan society's physical needs.	s. Many natural resources are nonrenewable on human			
	Additional Attachments:						
	% 30 Second Expert: Aquifer Sto % University of Nebraska: Aquife	rage and Recovery er Recharge					
30 mins	ACTIVE READING> CENTRAL IDEA> TEXT DEPENDENT	TEXT DEPENDENT QUESTIONS	Meets expectations if student	Start with a clean read of the text, reading aloud while students follow along.			
	QUESTIONS: Ability to determine the central idea(s) of a text and answer text dependent questions.	("AQUIFER STORAGE AND RECOVERY") SWBAT explain, in writing, how aquifer storage and recovery could be used to find new sources of	 accurately describes how aquifer storage and recovery could be used to find new sources of water using content vocabulary. 	Next, have students read the text and answer the text dependent questions on the right hand side of the paper. Remind them of the purpose for reading. "How could aquifer storage and recovery be used to increase the available water supply in the United States and in Colorado?"			
		vocabulary (evaporation, groundwater, storage, surplus, drought, etc.).		Depending on the needs of your students you may choose to group them or have them read individually. Depending on your students needs you may also choose to share with them the attached illustrated			
				dictionary as an optional support. Following the reading, have students meet with a partner to share			
	Standards:						
	3.3. Earth's natural resources protimescales, while others can be rem RST.6-8.2 Determine the central opinions.	vide the foundation for hur newed or recycled ideas or conclusions of a to	nan society's physical needs. ext; provide an accurate sum	Many natural resources are nonrenewable on human mary of the text distinct from prior knowledge or			
	Additional Attachments:						
	 ✤ Denver Water: Aquifer Storage ✤ Denver Water: Aquifer Storage 	e and Recovery Study: III e and Recovery Study: Te	ustrated Dictionary ext Dependent Questions				
15 mins	AFTER READING>QUESTIONING>CSR QUESTIONS: Ability to ask questions following reading a text.	CSR QUESTIONS ("AQUIFER STORAGE AND RECOVERY") SWBAT generate questions, in writing, about how the process of Aquifer Storage and Recovery could be	Meets expectations if studentwrites questions citing evidence from the text.	 After reading "Aquifer Storage and Recovery", students will write CSR questions using CSR question stems. There are three types of questions. 1. Right There Question is in ONE place in the text. You should be able to point to the answer and say, "It's right there!" 2. Think & Search Question is in at least TWO places 			
		used to increase water					

		availability in Colorado		in the text. You have to look in two or more different
	citing evidence using question words (who, what, where, when, etc.).	citing evidence using		places to find the answer.
			3. Author & You question is NOT ENTIRELY in the text. You have to think about what the author is telling you and what you already know. The answer to an Author & You question is in your head and in the text. For this question type ask students to write a question that connects to the teaching task.	
				I do: Start by teaching students the different questions types and share with them some examples using the text.
				We do: Ask students to work with a partner to write questions.
				You do: Once students are ready, release them to work on their own.
				Once students have written both questions and answers to their questions, have them meet with a 'meet me at partner' to quiz each other using their questions. Ask students to bring the text with them to cite textual evidence when discussing their question/answer with their partner.
				As a whole class share out some of the questions and answers students wrote. For the author and you question, ask students to explain the connection to the teaching task.
	 3.3. : Earth's natural resources protimescales, while others can be ready and the second secon	ovide the foundation for hu newed or recycled ry" CSR Questions	man society's physical needs	. Many natural resources are nonrenewable on human
	Section Sentence Stem	IS		
20 mins	BEFORE READING> PREVIEWING THE TEXT>	GOTCHA PREVIEW ("WATER	Meets expectations if student	Preview the text using the G.O.T.C.H.A. strategy. See attached graphic organizer.
	to preview the text to enhance comprehension, create interest and build on prior knowledge.	SWBAT analyze text features, in writing, about the process of	 makes plausible predictions using text features. 	Students will preview the following textual elements and answer the questions in the attached graphic organizer.
		water recycling and make predictions using		Graphics
		causal words (such as,		Opening quote
		for example, concerning, etc.).		Titles
				Captions
				Headings
				Author & Sources
	Standards:			
	0.0 . Coutble national management			
	3.3. : Earth's natural resources protimescales, while others can be re-	ovide the foundation for hui newed or recycled	man society's physical needs	. Many natural resources are nonrenewable on human

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.

Additional Attachments:			
% Water Recycling: G.O.T.C.H.A	. Preview		
1 hr ACTIVE READING> NOTE TAKING> CORNELL NOTES: Ability to determine the central idea(s) of a text and provide an accurate summary regarding methods of water recycling.	CORNELL NOTES ("WATER RECYCLING") SWBAT summarize, in writing, the process of water recycling using content vocabulary (water treatment, potable, nonpotable, environmental benefits, etc.).	Meets expectations if student • completes notes with an essential question • key information is noted • questions posed (usually at least 3 and including one "why") • writes a summary which accurately answers the essential question.	 Using the text "Water Recycling and Reuse", use the Cornell notes strategy to increase your understanding of the content: * See attachment of Cornell note format The Cornell note method of note-taking relies uppuSE of the information to expand upon notes duri multiple reviews of the information. Cornell notes visually resemble "two-column" notes, but are very different in their application Cornell notes begin with an "Essential Question". This is often the lesson's content objective rephrased in question form The left-hand "skinny" column is reserved for question formulation AFTER noting information in the wider right-hand column. Main ideas and details may be delineated while taking notes on the right-side by underlining a heading and bulleting details underneath Students may wish to star key terms or ideas Cornell notes with Essential Question and explain various sections of notes (and how they differ from 2-column notes if students are familiar with that method) 2) Students should read the text and take down important information on the right side *You may wish to do frequent check-ins to give students time to check with a partner to compare not or to "catch up" (Reading may be done whole class, independently, or in partners) 3) After the initial note-taking, have students compare with another student (or series of students) to add information 4) Have students revisit their information on the right hand side. These questions any take different forms or serve different purposes: authentic questions are questions (which often star with "who") probing questions dig deeper into the subject (and ont know the answer and would like to find out they may be clarifying questions (which often star with "who") provide left-hand side (these often start with "what") *When deciding upon scaffolds, it is tempting to provide left-hand side (ulterse often start with "what")<!--</th-->

				 the enhanced comprehension strategy, it is preferred to guide the viewing/note-taking with main ideas by pre-determining those on the right hand side of the notes as sub-headings. *You may wish to have students share their questions with the class and answer them, point them in a research direction, or let them know the question will be addressed in a future reading, as you see fit. But the act of questioning is in and of itself a comprehension strategy, even if those questions go unanswered. 6) After reviewing notes for questions formulation, the final step is to summarize the lesson's information by answering the Essential Question from the top of the notes. An appropriate scaffold is to give a sentence starter which rephrases the essential question and place an expectation for how many details you wish to have included in the summary. (3-4 sentences).
	Standards:			
	3.3. : Earth's natural resources protimescales, while others can be rem RST.6-8.2 : Determine the central opinions.	ovide the foundation for hun newed or recycled ideas or conclusions of a t	man society's physical needs ext; provide an accurate sum	Many natural resources are nonrenewable on human mary of the text distinct from prior knowledge or
	Additional Attachments:			
	 Student Examples of Cornell 	Notes		
45 mins	AFTER READING> CENTRAL IDEA> CONCEPT MAPPING: Ability to determine the central idea(s) of a text and create a concept map of ideas.	CONCEPT MAPPING ("WATER RECYCLING") SWBAT compose a concept map, in writing, about water recycling using content vocabulary (water treatment, potable, non-potable, ecosystems, recharge groundwater, etc.).	Meets expectations if student • creates a concept map accurately defining and sharing key details about water recycling.	Explain to students what a concept map is and the purpose of creating one. You might say something like "A concept map is a way to organize learning in which you extract the most important ideas from the reading and relate them in a meaningful way on a "map." Each map will be unique and will reflect your individual style. Common to all maps will be the central topic (expressed in one or two words) written in the very center of the paper. I have provided this for you, "Water Recycling and Reuse: The Environmental Benefits". All other ideas are clustered around this central idea. The central concept branches out in several directions showing all relationships through linking phrases and arrows. Ideas that support the main concept are closer to the center than other ideas that are less related. Concept maps do NOT use complete sentences."
				See attached for a concept map handout to provide to your students. You may choose to further scaffold this concept map depending on their reading, writing and language abilities of your students. Students should use their Cornell Notes, from the
				previous mini task, to help them create their concept maps.
				Technology: Students can also create their concept map using online tools like Coggle It.
				https://coggle.it/

				Once students have created their concept maps you may choose to have students share their work and provide feedback by having them complete a gallery walk. During a gallery walk students will display their work to either a group or the whole class. Students walk around to view their peers work and give feedback to each other on sticky notes.
	Standards: 3.3. : Earth's natural resources pritimescales, while others can be readered by the standard stan	rovide the foundation for hu enewed or recycled ly grade-appropriate genera se important to comprehensi al ideas or conclusions of a t	man society's physical needs I academic and domain-spection or expression. ext; provide an accurate sun	s. Many natural resources are nonrenewable on human bific words and phrases; gather vocabulary knowledge nmary of the text distinct from prior knowledge or
	Additional Attachments: % Water Recycling: Concept Ma % Concept Mapping	ар		
45 mins	BEFORE READING> VIDEO INTRODUCTION> CLASS DISCUSSION: Ability to apply background knowledge to a concept.	WHAT IS WATER CONSERVATION? VIDEO AND CLASS DISCUSSION SWBAT give examples, in writing, of ways to conserve water using content vocabulary (consumption, energy, costs, carbon footprint etc.).	Meets expectations if student • gives examples in writing ways to conserve water.	Start by activating background knowledge by asking students to preview the word conservation. Read the following list of words (taken from the texts) to students aloud. • water • footprint • appliances • vegetarian • meat • electricity • irrigation • drip • farming • savings • high-efficiency • generate • consumption • power • landscape • pyramid Ask students to think about the words and write sentences that contain two or more words from the list. In other words, students will find connections between the words. This activity will help to prepare students to explore the concept of conservation. Students have a word cloud of the words on their handout. You may choose to have students work collaboratively or individually when crafting their sentences. Have students share out some of their sentences with the whole class. You may also choose to challenge students to include all of the words in 1-2 sentences. Following this activity watch the video "How Your T- Shirt Can Make a Difference".

				Ask students to first watch the video thinking about all of the different ways water is used for one t-shirt. The second time you watch the video ask students to think about what is means to conserve and how that concept is connected to a t shirt. Next, ask student to consider other ways we might conserve water. Have them stop and jot their ideas on the provided graphic organizer. Finally ask students to record any questions they may have following the video. Students may utilize their CSR Question sentence starters from earlier in the module.
	Standards:			
	3.3. : Earth's natural resources protimescales, while others can be rer L.8.6 : Acquire and use accurately when considering a word or phrase SL.8.1 : Engage effectively in a rat topics, texts, and issues, building of	ovide the foundation for hur newed or recycled grade-appropriate general important to comprehensi nge of collaborative discuss n others' ideas and expres	nan society's physical needs. I academic and domain-speci on or expression. sions (one-on-one, in groups, sing their own clearly.	Many natural resources are nonrenewable on human fic words and phrases; gather vocabulary knowledge and teacher-led) with diverse partners on grade 8
	Additional Attachments:			
	 % Preview: Conservation % What is water conservation? S % How Your T-Shirt Can Make a 	Stop and Jot Difference		
1 hr	ACTIVE READING> CENTRAL IDEA> HOSTED GALLERY WALK: Ability to determine the central idea(s) of a text and provide and accurate summary.	HOSTED GALLERY WALK: WATER CONSERVATION (MULTIPLE TEXTS) SWBAT summarize the central ideas and key details of a text about water conservation, in writing, using summarizing language (overall, for example, to conclude, problem, solution, etc.).	Meets expectations if student • accurately summarizes central ideas and key details from the text.	 For use with 4 texts: National Geographic: "Drip Irrigation Expanding Worldwide", Infographic Set: "Food Footprints", Union of Concerned Scientists: "Water for Electricity", and EPA Watersense Brochure: "Inside and Outside the Home". Each text presents a different aspect of the water scarcity problem and an accompanying possible solution. 1) Assign students to differentiated reading groups to read a different text in each group. <u>Grouping/Reading Assignment Considerations</u>: The EPA brochure is the least complex text (reading #1) The National Geographic article is the most complex (reading #2) The Union of Concerned Scientists text is of moderate complexity (reading #3) The infographic set will work well for students with number sense regarding proportions and measurements (reading #4a and #4b) *Levels of text complexity are only one consideration; they are not included to suggest homogeneous grouping necessarily. Heterogeneous groups with balanced math, literacy, speaking/listening, efficient student habits, language needs, and writing skills are just as important in considering assigning students to groups. 2) Direct students to read the texts in a shared reading style, annotating or taking notes to prepare for summarizing. They should be marking the text for key ideas and significant details around problems and solutions.



timescales, while others can be renewed or recycled

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.

Additional Attachments:

% Suggested Poster Lay-out

% Gallery Walk Graphic Organizer/Note-catcher

30 mins AFTER READING> ESSENTIAL VOCABULARY **VOCABULARY>** VOCABULARY CONCEPT CARDS: The ability to analyze a word/concept and develop a

CONCEPT CARDS (ALL TEXTS) SWBAT analyze, in writing, a word/concept

Meets expectations if student ...

• accurately defines a word/concept and uses the word/concept in

The purpose of the Vocabulary Concept cards are for students to understand the solutions presented in the text prior to determining the solution they would like to argue. For each concept card students will complete the following.

definition using content from a scientific text.	about water as a resource using content vocabulary (conservation, desalination, aquifer recharge, etc.).	context.	 Definitions: Students first write their own definitions based on their understanding of the word in context. They then can check their definition by looking in a dictionary or online. If they feel that a change needs to be made to their definition based on the dictionary definition or online resources, they should make that change. Characteristics or features: If appropriate, students write down a short list of characteristics for the words. Students might write synonyms and antonyms of a word, adjectives that describe a word, ideas associated with a word, etc. Examples from the text and/or personal experiences: If appropriate, students provide examples of the words on their concept cards. These can be in written or pictorial form. Personal sentences: Students write sentences using the words. There are a few options when determining when students will complete the Concept Cards. Students complete all of the cards after reading all texts. There are 4 Vocabulary Concept cards included in the student portfolio. Water Recycling Finding New Sources of Water Water Conservation Blank (optional)
--	---	----------	--

Standards:

3.3. Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled

L.8.6 : Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

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.

Additional Attachments:

% Vocabulary Concept Cards

40 mins ACTIVE READING> CITE TEXTUAL EVIDENCE>MULTIPLE TEXTS GRAPHIC ORGANIZER: Ability

to cite relevant textual evidence that is aligned to a problem propose authentic and viable solutions.

PROBLEM/SOLUTIONMeGRAPHICstuORGANIZER (ALL

TEXTS) SWBAT summarize, in writing, the pros and cons associated with different solutions for Colorado's water problem(s) using compare and contrast words (in the same Meets expectations if student...

 accurately summarizes pros and cons for different solutions The purpose of this graphic organizer is to have students organize their notes for all of the readings in one place. There are a few different options in terms of when to have students complete this notes sheet.

1. Students record their notes following each reading.

2. Students record their notes following each solution, water conservation, finding new sources of water and water recycling.

3. Students record their notes following all readings.

	way, on the other hand, etc.).	Use your judgment to determine which strategy will best support your students.
		Also, be sure to remind students that they many not fill out all of the boxes in the graphic organizer. For example, under "over consumption in the home" and "finding new sources of water" there no information provided in the readings. The idea is for students to see at a glance the big picture in terms of problems and solutions.
		Once students have completed this graphic organizer they will come back to this page in the future to annotate and prepare to organize their thoughts for writing.

Standards:

3.3. Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled

RST.6-8.1 : Cite specific textual evidence to support analysis of science and technical texts.

Additional Attachments:

% Ongoing Problem/Solution Graphic Organizer

Transition to Writing

1 hr	SEMINAR: Ability to discuss ideas, opinions and evidence from the text to prepare for writing.	SOCRATIC SMACKDOWN: CLASS DISCUSSION SWBAT orally justify their viewpoint on proposed solutions to address concerns around water in Colorado using causal words and phrases (because, for example, for instance, considering, etc.).	 Meets expectations if student supports their argument with facts and examples from the texts. utilizes discussion strategies (agree, disagree, question, use evidence, etc.) during seminar. 	During the game, teams of 4-6 students discuss texts and use textual evidence to make connections and ask thought-provoking questions. Students win points whenever they make constructive contributions to the discussion and lose points if they exhibit disrespectful behaviors, such as interrupting their teammates. By the end of game play, students have learned how to work together as teams and a class and contribute meaningfully to a discussion. Prior to playing the game, provide students with a list of text dependent questions to answer. See attached. It is imperative students come prepared to class with these questions answered. Students will also be responsible for adding new ideas gained from their classmates during the socratic smackdown to the second column on this page. Depending on the culture is your classroom, you may decide to modify this mini task to be more of a discussion. Decide if you want to put students in homogeneous or heterogeneous groups based on your own criteria. This may be a mini task where you may consider using speaking and listening data, in addition to reading and writing data, when grouping your students. You may also see the appendix for additional resources around grouping students. Have students arrange their desks in a "fishbowl" arrangement where they are all able to see each other. Teams will take turns sitting in the "fishbowl". The remainder of the class should be seated or standing around the "fishbowl" prepared to make observations.
------	---	--	--	--

Share the following documents with students. All of these documents are attached.

1. "Game Play Discussion Strategies" which details the point values for the game. The visuals here are also a great cue for students while they are participating in the Socratic Smackdown. Depending on your students familiarity with this type of discussion, you may decide to have students focus on one or two of the discussion strategies below rather than using all of them.

- Agree: "I agree... and..." to build on an argument. +1
- Disagree: "I disagree because..." to refute an argument. +1
- Question: Ask a probing question to get more details about someone's argument. +1
- Use Evidence: Use a quote from the text to support an argument. +2
- Devil's Advocate: Pose a question or situation that is counter to a person's argument. +2
- Connect: Link a person's argument with another person's previous statement. +2
- Distract: Distract team or class from discussion. -1
- Insult: Be disrespectful to another person during the discussion. -1
- Interrupt: Speak while another person is speaking.
 -1
- 2. "Rules Cheat Sheet" (for all students)
- 3. Rubric (for all students)

4. "Coach Card" (you determine which students complete this card)

5. "Score Card" (you determine which students complete this card)

6. "Instant Replay Card" (this is only for students who are participating in the "fishbowl".)

Process:

Choose a team to begin and ask the team to sit in the center "fishbowl". This team will have a 6-minute discussion (or Smackdown) based on the topic, text, or issue given earlier. Choose a question from the list of text dependent questions to get students started on the discussion. You may choose to ask different questions of different groups.

Using the Socratic Smackdown Scorecard, select students who will track points during the 6minute Smackdown. The first time the class plays the game the teacher can track points to model scoring using the document camera or Smart board.

Students who aren't scoring will complete the "Coach Card" during the Smackdown; if all students are scoring they will then complete the Coach Card after the Smackdown.

When 6 minutes is up, the teacher or a student will collect all of the Scorecards, determine the average score for each student in the discussion team, and then sum up the average scores to figure out the team score. If you have access to technology, you could have students enter their scores using clickers or a

Google form to streamline this process. After the Smackdown, the students in the ring will complete the "Instant Replay Card". After individual and team scores are revealed, the class will have a brief discussion to share thoughts from their Coach Cards. We encourage you to modify this mini task to suit the needs of your students. Below you will find a list of possible modifications. 1. Give students who are not participating in the smackdown sticky notes so that they can silently make suggestions to students who are participating. In other words, students can help their classmates out by providing suggestions on the sticky notes. 2. Add a counterclaim portion to the Socratic Smackdown. This is a great way to push rigor. Addressing a counterclaim is not a part of the Common Core standards until 8th grade. 3. To help minimize one person dominating the discussion, give students talking chips (pennies) that they must use in order to speak. If they run out of talking chips then they are not aloud to speak. 4. Provide students with additional sentence stems to use during the discussion. Choose which stems you would like students to focus on using prior to the smackdown. Giving students a list of sentence stems to use during the discussion can be overwhelming given the pace. This is why we recommend choosing a few to introduce at a time.

Standards:

3.3. Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled

L.8.6 : Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

SL.8.1 : Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.

RST.6-8.1 : Cite specific textual evidence to support analysis of science and technical texts.

Additional Attachments:

- % Additional Sentence Stems for Discussion (Teacher Resource)
- % Socratic Smackdown Questions
- **%** Student Resources Socratic Smackdown
- Socratic Smackdown Tutorial
- Socratic Smackdown

Writing Process

20 mins PLANNING THE WRITING> ESTABLISHING A CONTROLLING IDEA: Ability to develop and strengthen a claim statement.

THESIS (CLAIM) STATEMENT USING TVA

SWBAT develop and strengthen a thesis (claim) in writing about future water solutions for Colorado using Meets expectations if student...

• includes all formula elements within their claim.

I DO

- Review T+V+A with Students
 o T= topic
 - V= strong verb (action verb)
 - A= argument (the two solutions he/she would like to recommend)
 - Color code the components for students. Example: Topic= red, Verb= blue, and

content vocabulary (argument, solution [claim], etc.). Argument= green)

 Model for students using the hydraulic fracking example. When modeling the argument number the 2 solutions.

"Colorado should eliminate fracking for natural gas because it contaminates groundwater with thousands of dangerous chemicals, harming the environment and causing health problems amongst people who live near where fracking is taking place."

• Review the teaching task prompt. Make sure students have this to refer to as they write their claim statement.

Topic: Fracking

Verb: Eliminate

Argument:

1. contaminates groundwater with thousands of dangerous chemicals, harming the environment

2. causes health problems amongst people who live near where fracking is taking place.

WE DO

Use the examples below and have students color code it in pairs. Example: Topic= red, Verb= blue, and Argument= green) Remember for the argument ask students to number the solutions they are recommending. Review the answers as a whole class. Some of the examples may be missing components. Have students edit the thesis statements so that they contain all components.

- "Colorado should continue to utilize the process of hydraulic fracturing because is provides cleaner available energy, it reduces our dependence on foreign oil, and it can be done safely limiting the damage to the surface of the Earth."
- 2. "Americans should eliminate the regular consumption of fast food."
- "In Denver homeless people should be given access to services, such as regular food donations, public restrooms, and camping facilities, because it would improve life for all inhabitants of the city."
- 4. "Secondhand smoke should be banned from public places because it is just as harmful as smoking, it leads to a higher prevalence of cancer and heart disease, and people who inhale secondhand smoke are doing so without consent."
- 5. "It is too late to save earth."
- "Instead of drilling for oil in Colorado we should be focusing on ways to reduce oil consumption, such as researching renewable energy sources."

YOU DO

- Each student will create a thesis statement using the attached graphic organizer.
- Pair up students to review their claim statements by providing feedback on the quality, the effectiveness of addressing the prompt and its ability to meet all criteria.
- As a class, the teacher will highlight strong claim statements on the board or using the document

				 camera. Exit card: Write your name and claim statement on a notecard. Hand it to the teacher on your way out the door. Teacher will provide feedback to students on their claim statements. See attached for a list of verbs. This resource can be used as an optional support for students.
	Standards:			
	3.3. : Earth's natural resources protimescales, while others can be rem	ovide the foundation for hur newed or recycled	nan society's physical needs.	Many natural resources are nonrenewable on human
	rewriting, or trying a new approach WHST.6-8.4 : Produce clear and c audience.	, focusing on how well purp	e development, organization,	and style are appropriate to task, purpose, and
	Additional Attachments:			
	𝗞 Awesome Action Verbs			
	% T+V+A = Claim Statement			
20 mins	PLANNING THE WRITING> CITING EVIDENCE: Ability to cite a direct quote or paraphrase the authors ideas.	QUOTING AND PARAPHRASING: WHAT'S THE DIFFERENCE? SWBAT cite textual evidence about water solutions for Colorado in writing using paraphrasing and direct quotes using content vocabulary (water recycling, aquifer recharge, conservation, etc.).	Meets expectations if student • accurately quotes and paraphrases the text	In this mini task students are going to be learning about how to give an author credit for his or her ideas in their paper. When sharing others' ideas we can share a direct quote, paraphrase their statement into our own words, or summarize their ideas. For this mini task we are going to be focusing on quoting and paraphrasing. Share with students the document Quoting, Paraphrasing and Summarizing and The MLA Style Guidelines. Share with students the example contained within the practice handout. Ask students to pull some textual evidence from the text that they would like to use in their paper, approximately 4-6 statements. Have them practice both quoting and paraphrasing. Remember to have students decide to either use the direct quote or to paraphrase using the criteria on their handout. Depending on your students' needs, you may choose to have students work on this individually or in pairs. Be sure to stop and share examples with students on the Smart board and/or document camera. When students have finished the quoting and paraphrasing practice have them pair up with a 'meet me at partner to check each others work and provide feedback. Depending on your students level you may want to provide them with a list of quotes from the text to paraphrase. See attached.
	Standards:			

WHST.6-8.9 : Draw evidence from informational texts to support analysis, reflection, and research.

3.3. Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled

Additional Attachments:

	S Revider Evidence Examples					
	Scopy of Modern Language Association (MLA) Style Guidelines Overview					
	% Quoting, Paraphrasing, Summarizing					
15 mins	PLANNING THE WRITING> ALIGNING CLAIM, EVIDENCE AND REASONING: Ability to align claim, evidence and reasoning to strengthen argument.	ALIGNING CLAIMS, EVIDENCE AND REASONING: SORTING SWBAT orally justify the effectiveness of an argument, about water solutions for Colorado, by aligning claims, evidence and reasoning using causal language (because, due to the fact, for the simple reason that, etc.).	Meets expectations if student • accurately aligns claims, evidence and reasoning justifying their answer.	 Watch the video "My Dad is an Alien". Have students identify the claim and evidence presented by the girl in the video. Depending on the back ground knowledge your students have you may choose to model this portion of the lesson. Once students have a clear understanding of the claim and evidence presented ask them to choose two pieces of textual evidence that are the most scientific and measurable. Then ask them to develop reasoning to support the evidence. You may choose to have students work individually or in pairs. However, before moving on to the next piece ensure that students have time to connect with a partner to discuss their ideas. Share out as a whole class. Also ask students to discuss the following question. Even with all of the components of an argument, why might someone argue her argument illogical? This is a good place to circle back with students regarding scientific evidence and reasoning and how that is different from everyday conversations. In the next portion of this mini task, students, in groups of 3-4, will be sorting strips of paper aligning a claim, evidence and reasoning. You will need to cut up the strips of paper prior to class and clip them together. Tell student that in addition to sorting they will need to justify their reasoning. You may choose to orally assess student groups by asking them to share their reasoning for each claim or you could cold call on students to share specific claims. Finally, students will align claims, evidence and reasoning examples from the texts. Be sure to review the answers with students. Students can use this information in their letter. To further scaffold this activity, provide students with the column titles. 		
	 Standards: WHST.6-8.1 : Write arguments focused on discipline-specific content. 3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled WHST.6-8.9 : Draw evidence from informational texts to support analysis, reflection, and research. 					
	Additional Attachments:					
	% My dad's an alien					
	% Claims, Evidence, Reasoning Sorting Activity					
	% Aligning Claims, Evidence and Reasoning					
15 mins	PLANNING THE WRITING> FORMAT: Ability develop writing into the appropriate letter format.	LETTER FORMAT SWBAT identify in writing the different components of a letter	Meets expectations if student • correctly identifies all	Using the attached sample letter and the parts of a letter document, have student locate and annotate the parts of a letter. In addition, student should include marginal annotations explaining how they know.		

		conclusion, salutation, etc.).		 Part of a Letter Annotation Return Address-*star Date-circle Addressee's Address-box Salutation-underline Introduction-#1 Body Paragraphs-#2a and #2b Conclusion-#3 Closing-! explanation point 		
	Standards:					
	 WHST.6-8.4 : Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. 3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled 					
	Additional Attachments:					
	S Parts of a Letter					
	% Purdue Letter Format					
	% Sample Letter					
15 mins	PLANNING THE WRITING> FORMAT : Ability develop writing into the appropriate letter format.	WHAT'S AN ARGUMENTATIVE LETTER? SWBAT explain orally and in writing where they find claims, evidence and	Meets expectations if studentcorrectly identifies all claims, evidence and reasoning.	 Using the attached sample letter, have students identify the components below. Annotate in the following way. 1. underline claims, box in evidence, circle reasoning. 2. include marginal annotation explaining how you know. For example, this is a claim because 		
		reasoning in a sample letter using casual language (because, due to the fact, etc.).		See attached format for an argumentative letter. 1. Introduction- Who are you? What have you been learning about in this module? What would you like to recommend? (claim statement)		
				 Body paragraph 1- Define the problem. Cite at least one piece of evidence. Body paragraph 2. Share your first colution. Cite at 		
				least 2 pieces of evidence and share your reasoning.		
				4. Conclusion- restate your claim and ask for a call to action.		
				Once students have annotated the letter identifying claims, evidence and reasoning have them share with a partner using the following protocol.		
				Stand up hand up pair up x3		
				partner 1= claims		
				partner 2= evidence		
				partner 3= reasoning		
				When students meet with their partner have them use their marginal annotations to support the conversation.		
				Debrief as a whole class using the document camera.		
	Standards:					

	WHST.6-8.4 : Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.					
	 3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled 					
	Additional Attachments:					
	Shargumentative Letter: Paragraphs					
	% Sample Letter					
40 mins	PLANNING THE WRITING> FORMAT: Ability develop writing into the appropriate letter format.	STICKY NOTE ARGUMENT PLAN TEMPLATE LETTER SWBAT justify in writing (reasoning) how their evidence supports their claim (solution) regarding water availability and use in Colorado using causal language (because, due to the fact, which led to, etc.).	Meets expectations if student • Students will have 2 solutions (claims). • For every solution (claim) students will have 2 pieces of textual evidence that supports their proposed solution. • For all pieces of textual evidence students will elaborate, write a clear explanation (1-2 sentences), and include citations.	 Overview: 1. Using your claim statement identify two solutions for your letter. 2. Use sticky notes to record and place the following pieces within your Argument Plan: Two (2) pieces of textual evidence that support each solution. 1. For each piece of textual evidence you placed within your Argument Plan, record (on a sticky note) your reasoning, and place it in the Argument Plan. 2. Students should also include in text citations. WHY USE STICKY NOTES? Writing each piece of the argument on an individual sticky note will enable students to lift them off the Argument Plan and arrange them into an order in which they want to write them out. The sticky notes enable them to play with the structure of their argument in a flexible and kinesthetic way. NOTE: This effect can also be achieved electronically by typing within the boxes of the Argument Plan, and then using copy/paste onto another document to play with the organization of the pieces. I DO: MODELLING an example: Use the scenario of a person who forgot their backpack at home containing their homework. What should they do? Teacher models the process of placing three sticky notes on a table or a board, and recommending 2 solutions. WE DO: Place students into small groups of 3-4. Ask students to generate "mock" evidence for the solutions in the scenario above. And for each piece of textual evidence ask students to explain how the evidence supports their solution. YOU DO: Ask students to begin their Argument Plan by going back and looking through their notes and searching for evidence that supports their claim statement. They should have 4-6 pieces of evidence from the previous mini task where they were quoting and paraphrasing from the texts. Direct students to then use two (2) sticky notes to establish their two solutions. 		



WHST.6-8.1 : Write arguments focused on discipline-specific content.

Additional Attachments:

% Argumentative Letter: Structure and Content

% Argument Plan Water

1 hr DEVELOPMENT OF THE **INITIAL DRAFT** Meets expectations if Provide students with time to revisit their feedback WRITING> INITIAL DRAFT. SWBAT write an initial student... you provided on the argument plan and ask any Ability to introduce and develop draft complete with questions for clarification. • initial draft contains the claims and counterclaims, opening, development, • Have students use their argument plan and any following: supplying data and evidence for and closing; insert and other graphic organizers to write out their initial each, and creating an cite textual evidence. draft. Introduction: Who are organization that establishes Remind students that the argument plan should you? What have you clear relationships among the help organize their writing and to ensure that their been learning about in claims, reasons and evidence. topic sentence introduces the whole paragraph. this module? What would • You may also provide students with transition you like to recommend? words of phrases (optional support attached). (claim statement) Body paragraph 1: Define Encourage students to re-read prompt partway the problem. Cite at least through writing, to check that they are on track. one piece of evidence. Circulate around the room to respond to student Body paragraph 2: Share questions or provide feedback. your first solution. Cite at least 2 pieces of evidence and share your reasoning. Conclusion: restate your claim and ask for a call to action.

Standards: 3.3: Early is natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many natural resources are nonrenewable on human society's physical needs. Many needs on human society physical needs. Nonrenewable human society physical needs in needs in						
 Sa.: Earling natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenevable on human transaction, and style are appropriate to task, purpose, and audance. WHST-SA 1: Produce dear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audance. Madisonal Attachments: A Transition Words Marting Tear Park and the comments of the task three comments per page. The REVISION AND EDTING- PEER EDTING: Ability to refin the sequence of the task three comments per page. Stores and comments are page appropriate to task purpose, and appropriate to task purpose. Stores and purpose. Stores and purpose. Store evaluation of the performing the perfor		Standards:				
WHS1.63.1: With arguments focused on discipline-specific content. Additional Attachments: % Transition Words Image: Second Secon		3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled				
Image: Additional Attachments:: Stressition Words Image: Additional Attachments:: <th></th> <th colspan="4"> WHST.6-8.4 : Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. WHST.6-8.1 : Write arguments focused on discipline-specific content. </th>		 WHST.6-8.4 : Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. WHST.6-8.1 : Write arguments focused on discipline-specific content. 				
Image: System Statistics Words 1/17 REVISION AND EDTING- DEFE RETING: Ability to refin toxit, including content, lin or to re as appropriate to autience and purpose. SMALL PEER GOPU WORKSHOP: LETTER Meshs expactations if suddon Suddents. will be working in pairs. 3/18 REVISION AND EDTING- toxit, including content, lin or to re as appropriate to autience and purpose. SWAL PEER GOPU WORKSHOP: LETTER Suddents. will be working in pairs. 3/19 SWAF evaluate in mand dirates using working. Swap evaluate in graphic as appropriate to autience as appropriate to autience or constructive torice. Suddents. will be working in pairs. 3/10 Swap evaluate in graphic as appropriate to autience or constructive torice. Swap evaluate in constructive torice or his broad and tetter provides used to age the author to constructive techack for the respairad. Statents will be working in pairs. 3/10 Comments and letter provides used to a state as three comments and letter provides used to a state as three comments and tetter provides used to a state as three comments are brain in induces aspects of the letter respairation. - Read parteres tetter and addomments. Hey shapper to acht solution and ate about their explained. - It avoids broads suburg in graphic as provide the writer with specific possibilities or writers. - Ask oustions about solutions, word more that suborts active as appeired the the checkist to ensure that appeired the to write rive souperiod to advect the writer writer specific possibilites for evision. - It		Additional Attachments:				
 11/r REVISION AND EDITING- PEER EDITING: Ability to reine and purpose. SMALL PEER GROUP WORKSHOP: Encludes a cleast three or thought, language usage, and to comments a appropriate to audionce and purpose. SWAT evaluate in writing their peer's inappage (claim, evidence, reasoning, etc.). SWAT evaluate in writing their peer's inappage (claim, evidence, reasoning, etc.). Suberts will be working in pairs. Subdents werket on pairs. Subdents werket werket with a working in pairs. Subdents werket werket		% Transition Words				
	1 hr	REVISION AND EDITING> PEER EDITING: Ability to refine text, including content, line or thought, language usage, and tone as appropriate to audience and purpose.	SMALL PEER GROUP WORKSHOP: LETTER SWBAT evaluate in writing their peer's initial drafts using scientific argument language (claim, evidence, reasoning, etc.).	 Meets expectations if student includes at least three comments per page. questions are asked to prompt the writer to provide more details and to get the author to reflect on his/her own writing. comments and letter provides useful and constructive feedback for the writer. positive comments are explained. it avoids broad sweeping comments such as "Your writing is awesome," "Keep it up!" or "This draft is really good"it targets aspects of the letter targeted in during the revision process solutions, evidence and reasoning. 	 Students will be working in pairs. Step One: Go over checklist with students explaining that when they leave their sticky note comments, they should focus those comments on the items from the checklist. This provides them direction for their peer editing. Read partners letter and add comments, suggestions, and questions between the lines or in the margins. Please try to add <i>at least three comments</i> per page. Ask questions about solutions, evidence that supports each solution and also about their explanation/reasoning. Also, attempt to point out awkward phrases, confusing ideas, or otherwise unclear passages as you mark the writer's rough draft. This includes spelling and grammar issues that may distract the reader. After completing all the comments for the letter, please complete the checklist to ensure that your comments were focused. Step Two: Once you have read the entire letter and handmarked the letter, write a half page letter to the writer'; your goal should be to provide the writer with specific possibilities for revision. Make your letter as specific as possible so that the writer knows exactly which section of the letter you're addressing. In your responses, deal specifically their solutions, evidence and reasoning. Write your feedback in complete and clear sentences. 	

Literacy Design Collaborative

	 3.3.: Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled WHST.6-8.5: With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. RST.6-8.1: Cite specific textual evidence to support analysis of science and technical texts. Additional Attachments: % Peer Editing Check List 				
30 mins	FINALIZING THE WRITING> FINAL DRAFT: Ability to develop and strengthen writing that meets expectations as needed by revising and editing.	FINAL DRAFT SWBAT compose, in writing, a letter to a Colorado State Representative providing solutions to current problems with water use and availability in Colorado using content vocabulary (water recycling, water conservation, desalination, aquifer recharge, etc.).	 Meets expectations if student writes a letter that fits the "Meets Expectations" category in the rubric for the teaching task. 	None	
	Standards: 3.3. : Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled				
	 WHST.6-8.4 : Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. WHST.6-8.1 : Write arguments focused on discipline-specific content. 				

Instructional Resources

No resources specified

Section 4: What Results?

Student Work Samples

Advanced

High Student Work.pdf

Meets Expectations

Med:high Water Student Work.pdf

Approaches Expectations

Med:low Water Student Work.pdf

Teacher Reflection

Not provided

All Attachments

% "The Colorado River Runs Dry" (Reading) : https://s.ldc.org/u/8mlv9ahytty9xigmc2aztktw9

% American Southwest Water Crisis (Interactive Map/Picture Slideshow) : https://s.ldc.org/u/89xfcdpv34mco5vctftc1ecIm

 "How much water is there on, in, and above the Earth?" USGS (Reading) : https://s.ldc.org/u/8bpmyb80va1vor5qsuojgzw9a

Sinding New Supply: "Saline water: Desalination" USGS (Reading) : https://s.ldc.org/u/erd17j5py0uk811v7ffgjkn7c

% ArcGIS Colorado River Basins Maps : https://s.ldc.org/u/38ef27wyqjut41d5ojiq8la5m

[∞] Finding New Supply: "Aquifer Storage and Recovery Study" Denver Water (Reading) : https://s.ldc.org/u/znvzo4zu1mdg8zkj97bmd3ng

[∞] "Water Recycling and Reuse: The Environmental Benefits" EPA (Reading) : https://s.ldc.org/u/vb65dlwquni630k42evosrx4

Source Conservation: "Simple Steps to Save Water" EPA (Reading #1) : https://s.ldc.org/u/bkjukp51flqde3wo99cw9zajj

Source of the second se

https://s.ldc.org/u/4pqyggq5mv7pp1vzy193se41p

Source Conservation: "How it Works: Water for Electricity" (Reading #3) : https://s.ldc.org/u/7zhoh1fvujy5ybx8qmx2w1w31

% Water Food (Infographics) Barilla (Reading #4a) : https://s.ldc.org/u/4lw61z6sioc6zc17xpmecn6wz

 Conservation "What the World Eats" National Geographic (Reading #4b) : https://s.ldc.org/u/69e379hl3ojz91k7w7fo2n04j

% Optional* Water Footprint Calculator (Calculator) : https://s.ldc.org/u/4eo8joj75vgaqc96pg78qgoos

High Student Work.pdf : https://s.ldc.org/u/eh4siq8vxg5nmsqhe5un1gm19

Med:high Water Student Work.pdf : https://s.ldc.org/u/63l6f9hpvb82fx5sgbz8vxy6u

Med:low Water Student Work.pdf : https://s.ldc.org/u/962mi2twogk7k24fxw9ey057c