



**Literacy Design
Collaborative**

Weather Design Solutions

★ TASK ★ LADDER

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Prior to starting this module, students have been taught how to write a persuasive letter in their ELA class. In this module, students will be writing a letter to their local senator. This module will promote students' knowledge of weather related hazards as well as design solutions made for flooding, lightning, and tornadoes.

GRADES

3

DISCIPLINE

 **Science**

COURSE

Any

PACING

 **9hr**

Section 1: What Task?

Teaching Task

Task Template A3 - Argumentation

After researching informational text/s on specific design solutions, write a letter to your senator in which you explain your reasons for supporting or not supporting a mandate for one of the following design solutions: lightening rods, flood barriers, or storm shelters. Support your opinion with evidence from the text/s.

Standards

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

W.3.1

Focus

Write opinion pieces on topics or texts, supporting a point of view with reasons.

Alabama Course of Study: Science

Evaluate a design solution (e.g., flood barriers, wind resistant roofs, lightning rods) that reduces the impact of a weather-related hazard.

Focus

Alabama Course of Study: English Language Arts

RI.3.7

Focus

Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Texts

🔗 The High Cost of Underestimating Lightning

📖 Lightning by Seymour Simon

<p>http://www.amazon.com/Lightning-Seymour-Simon/dp/0060884355/ref=sr_1_1?ie=UTF8&qid=1456334721&sr=8-1&keywords=seymour+simon+lightening</p>

🔗 More Tornado Shelters? Not Necessarily

📖 Tornadoes by Seymour Simon

<p>http://www.amazon.com/Tornadoes-Seymour-Simon/dp/0064437914/ref=sr_1_1?ie=UTF8&qid=1456338164&sr=8-1&keywords=tornadoes+seymour+simon</p>

🔗 Billions on Flood Barriers Now Might Save New York City

📖 Floods by Michele Ingber Drohan

<p>http://www.amazon.com/Floods-Michele-Ingber-Drohan/dp/1404255796/ref=sr_1_1?ie=UTF8&qid=1456338393&sr=8-1&keywords=floods+by+drohan</p>

Student Work Rubric - Opinion Task - Grade 3

	Emerging	Approaches Expectations	Meets Expectations	Advanced
	1	2	3	4
Topic / Opinion	Response is off-topic or opinion is unclear.	Introduces the topic and a clear opinion, with an inconsistent focus on the opinion.	Introduces the topic and a clear opinion, maintaining a focus on the opinion	Introduces the topic and a clear opinion, maintaining a consistent focus on the opinion.
Use of Sources	Includes no details from sources related to the topic or prompt.	Includes few details from sources related to the topic or prompt.	Includes details from sources related to the topic and prompt.	Includes well-chosen details from sources related to the topic and prompt.
Development	Repeats opinion with no reasons.	Includes minimal reasons related to the opinion, or not all reasons are relevant or supportive .	Includes relevant reasons that support the opinion.	Explains relevant reasons and details that support the opinion.
Organization	Sentences are out of logical order or lack an evident structure.	Sequences sentences to state an opinion, supply reasons for the opinion, and provide a concluding statement. Uses simple linking words/phrases (e.g., because, and, also) to connect opinion and reasons.	Sequences sentences to introduce the topic , state an opinion, supply reasons for the opinion, and provide a concluding statement or section. Uses linking words/phrases (e.g., because, therefore , since , for example) to connect opinion and reasons.	Sequences sentences and organizes writing in paragraphs or sections that introduce the topic, state an opinion, supply reasons for the opinion, and provide a concluding statement or section. Consistently uses linking words/phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.
Conventions (general)	Major errors in standard English conventions appropriate to the grade level interfere with the clarity of the writing.	Errors in standard English conventions appropriate to the grade level sometimes interfere with the clarity of the writing.	Consistently applies standard English conventions appropriate to the grade level. Minor errors , while noticeable, do not interfere with the clarity of the writing.	Consistently applies standard English conventions appropriate to the grade level, with few errors . Attempts to use untaught conventions, appropriate to grade level.
Conventions (Grade 3 examples)	Uses simplistic word choice (e.g., plural and grade-level words) with some errors Uses capital letters inconsistently Uses commas, apostrophes rarely	Uses simple sentences and simple word choice (e.g., plural and grade-level words) Capitalizes first word in a sentence, "I," and some proper nouns consistently Uses commas, apostrophes, possessive nouns and contractions inconsistently	Uses simple and compound sentences with some errors Uses grade-level appropriate vocabulary words Capitalizes proper nouns, titles and sentences appropriately Uses commas, apostrophes, possessive nouns, and contractions	Uses simple and compound sentences Uses grade-level and above-grade-level vocabulary words to enhance writing Uses capital letters and apostrophes, possessive nouns, contractions consistently Attempts to use quotations or plural possessive
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

In third grade, we will study earth science and this includes studying a design solution that reduces the the impact of a weather related hazard. Remember we have already studied about weather phenomenons of flooding, lightening, and tornadoes. Now we will extend our study in applying these to design solutions.

Extension

Not provided

Section 2: What Skills?

Preparing for the Task

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

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

Reading Process

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

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

Transition to Writing

ENHANCING COMPREHENSION: Ability to identify the central point and main supporting elements of a text.

IDENTIFYING SIGNIFICANT ELEMENTS: Ability to begin linking reading results to writing task.

Writing Process

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

INTRODUCTORY PARAGRAPH: Ability to establish a claim and consolidate information relevant to task.

BODY PARAGRAPHS: Ability to construct an initial draft with an emerging line of thought and structure.

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

FINAL DRAFT: Ability to submit final piece that meets expectations.

Section 3: What Instruction?

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
Preparing for the Task				
40 mins	TASK ENGAGEMENT: Ability to connect the task and new content to existing knowledge, skills, experiences, interests, and concerns.	METEOROLOGIST VISIT Today we have invited a Meteorologist speak to you about different weather phenomenons.	Students will participate by using listening skills and discussion.	1. Invite all classes to hear a guest speaker, a local meteorologist. 2. The meteorologist will focus on discussing weather conditions familiar to our area to spark interest in students.
Standards: SL.3.3 : Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.				
15 mins	TASK ANALYSIS: Ability to understand and explain the task's prompt and rubric.	ANALYSIS OF TEACHING TASK PROMPT In your own words, what does the teaching task ask of you?	Students are engaged in the discussion.	1. Put the teaching task on the board. After researching informational text/s on specific design solutions, write a letter to your senator in which you explain your reasons for supporting or not supporting a mandate for one of the following design solutions: lightening rods, flood barriers or storm shelters. Support your opinion with evidence from the text/s 2. Ask students to analyze the teaching task using the TAP [Topic-Audience-Purpose] method: <ul style="list-style-type: none"> • "Can you tell me what the product is going to be?" (write a letter) • "What will the letter be about?" (persuasive letter supporting or not supporting a particular design solution) • "Who is the audience of this letter?" (a senator - Arthur Orr) • "What is the purpose of this letter?" (to explain) • "What are we going to explain?" (reasons for supporting or not supporting a mandate)
Standards: Identify conditions that result in specific weather phenomena, including thunderstorms, tornadoes, and hurricanes.				
Reading Process				
30 mins	ESSENTIAL VOCABULARY: Ability to identify and master terms essential to understanding a text.	RESEARCH OF ESSENTIAL VOCABULARY In your science journals today, define vocabulary words that we are learning and draw a picture.	Meets expectations if vocabulary words are written in science journal with a definition and illustration.	1. Vocabulary words: design solution, weather related hazard, impact, weather, benefit, disadvantage 2. The teacher will walk around the room and monitor student progress, answer questions and assist those who are struggling with the task. <ul style="list-style-type: none"> • Draw lines on your paper so that you have 6 equal sections. • Write one vocabulary word from the list on the board

				<p>in each section.</p> <ul style="list-style-type: none"> Using the books on the table, look for the vocabulary words. Read to learn about each word. Write about the vocabulary word and then draw a picture to demonstrate its' meaning. <p>3. Based on students' research, teacher will write definitions of vocabulary words on a chart. The chart will remain on the board for the duration of the module.</p>
	<p>Standards:</p> <p>Evaluate a design solution (e.g., flood barriers, wind resistant roofs, lightning rods) that reduces the impact of a weather-related hazard.</p>			
1 hr	<p>NOTE-TAKING: Ability to select important facts and passages for use in one's own writing.</p>	<p>CONTENT UNDERSTANDING AND NOTETAKING OF LIGHTNING RODS</p> <p>From each text, use a t-chart graphic organizer in your science journal to note the pros and cons of lightning rods for severe weather.</p>	<p>Students identify relevant elements from the texts and media provided.</p>	<p>Note: This first mini-task for note-taking will be modeled. Students will then go through the same process for next two note-taking mini-task, Storm Shelters and Flood Barriers.</p> <ol style="list-style-type: none"> Show video "How Lightning Forms". Show video "Lightning Rods Part 1". Discuss how lightning rods work from information in videos. Question for student understanding: <p style="padding-left: 40px;">What did lightning rods do to the cloud above?</p> <ol style="list-style-type: none"> From the discussion, model for students the pros and cons from video. Create a T chart (Networks Graphic Organizer in Student Handouts) under the Elmo while students write in their science journals. Teacher will model using bullets, labeling the note with a V for video reference. Model for students close reading of the text <i>The High Cost of Underestimating Lightning - New York Post</i>. List pros and cons on the T chart under the Elmo while students write in their science journals. Teacher will model using bullets, labeling the note with an A for article reference. Model for students close reading of the text <i>Lightning by Seymour Simon</i>. List pros and cons on the T chart under the Elmo while students write in their science journals. Teacher will model using bullets, labeling the note with a B for book reference.
	<p>Standards:</p> <p>RI.3.7 : Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).</p> <p>Identify conditions that result in specific weather phenomena, including thunderstorms, tornadoes, and hurricanes.</p>			
	<p>Additional Attachments:</p> <p>🔗 Seymour Simon's Lightning</p> <p>🔗 The High Cost of Underestimating Lightning</p>			

	<p>⚡ Lightning Rods Part 1</p> <p>⚡ How Lightning Forms</p> <p>⚡ Network Graphic Organizer</p>			
1 hr	<p>NOTE-TAKING: Ability to select important facts and passages for use in one's own writing.</p>	<p>CONTENT UNDERSTANDING AND NOTETAKING OF STORM SHELTERS</p> <p>From each text, use a t-chart graphic organizer in your science journal to note the pros and cons of storm shelters for severe weather.</p>	<p>Students identify relevant elements from the texts and media provided.</p>	<ol style="list-style-type: none"> 1. Show video "What is a Tornado?". 2. Show video "Storm Shelter Tour". 3. Discuss how storm work from information in videos. Question for student understanding. 4. Students will add pros and cons from video to T chart in their science journals. 5. Remind students to use bullets, labeling the note with a V for video reference. 6. Teacher and students will participate in a close reading of the text <i>More Tornado Shelters?</i> Students list pros and cons on the T chart in their science journals. 7. Remind students to use bullets, labeling the note with an A for article reference. 8. Teacher and students will participate in a close reading of the text <i>Tornadoes by Seymour Simon</i>. List pros and cons on the T chart in Science journals. 9. Remind students to use bullets, labeling the note with a B for book reference. <p>Note: As needed, teacher will model a class T-chart under the Elmo.</p>
<p>Standards:</p> <p>Identify conditions that result in specific weather phenomena, including thunderstorms, tornadoes, and hurricanes.</p> <p>RI.3.7 : Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).</p>				
<p>Additional Attachments:</p> <p>⚡ More Tornado Shelters?</p> <p>⚡ Seymour Simon's Tornadoes</p> <p>⚡ What is a Tornado?</p> <p>⚡ Storm Shelter Tour</p>				
1 hr	<p>NOTE-TAKING: Ability to select important facts and passages for use in one's own writing.</p>	<p>CONTENT UNDERSTANDING AND NOTETAKING OF FLOOD BARRIERS</p> <p>From each text, use a t-chart graphic organizer in your science journal to note the pros and cons of flood barriers for severe weather.</p>	<p>Students identify relevant elements from the texts and media provided.</p>	<ol style="list-style-type: none"> 1. Show video "The History of Hoover Dam." 2. Show video "How hydroelectricity works." 3. Discuss how flood barriers work from information in videos. Question for student understanding. 4. Students will create a T chart in their science journals and write pros and cons from the video. 5. Remind students to use bullets, labeling the note with a V for video reference. 6. Teacher and students will do a close reading of the

				<p>text <u>NYC Floodgates Pros and Cons</u> . List pros and cons on the T chart in their science journals.</p> <p>7. Remind students to use bullets, labeling the note with an A for article reference.</p> <p>8. Teacher and students will close read the text <u>Floods</u> by Michelle Ingler Drohan. List pros and cons on the T chart in their science journals.</p> <p>9. Students will use bullets, labeling the note with a B for book reference.</p> <p>Note: Some students may need help with finding pros and cons. When needed teacher will use a Group T-Chart.</p>
<p>Standards:</p> <p>Identify conditions that result in specific weather phenomena, including thunderstorms, tornadoes, and hurricanes.</p> <p>RI.3.7 : Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).</p>				
<p>Additional Attachments:</p> <p>🔗 Billions on Flood Barriers Now Might Save New York City</p> <p>🔗 Floods by Michele Drohan</p> <p>🔗 How hydroelectricity works</p> <p>🔗 The History of Hoover Dam</p>				
Transition to Writing				
30 mins	<p>ENHANCING COMPREHENSION:</p> <p>Ability to identify the central point and main supporting elements of a text.</p>	<p>DESIGN SOLUTIONS DISCUSSION</p> <p>Select the design solution for weather related hazards that you want to write about - lightning rods, flood barriers, or storm shelters.</p>	<p>Students will respond to the discussion to show understanding of the weather related hazard they have chosen - lightning rods, flood barriers, or storm shelters.</p>	<p>1. Join the other students that want to write about that particular design solution. Discuss the pros and cons of the particular design solution based on information from the texts.</p> <p>2. Encourage students to stay on topic and discuss design solutions based on the texts. Encourage all students to participate.</p> <p>3. Students will use their own notes. Students may add to their T chart with Pros and Cons.</p>
<p>Standards:</p> <p>RI.3.1 : Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.</p>				
30 mins	<p>IDENTIFYING SIGNIFICANT ELEMENTS: Ability to begin linking reading results to writing task.</p>	<p>T CHART</p> <p>Looking at your research findings, choose whether you feel that a design solution for the weather related hazard should be mandatory.</p>	<p>Students will demonstrate mastery of this skill if they participate in answering the prompt, either when speaking to the class or to their shoulder partner.</p>	<p>1. Teacher asks students to think about both sides of a design solution for weather phenomena.</p> <p>2. She asks students to share what they have learned about each side, creating a T chart on each at the front of the room for pros and cons.</p> <p>3. After hearing some responses, she will ask students to talk to their shoulder partner about their opinion.</p> <p>4. Teacher will make sure every student has a basic understanding of his or her opinion for the pros and cons of a design solution for weather phenomena.</p>

Standards:

W.3.1 : Write opinion pieces on topics or texts, supporting a point of view with reasons.**Writing Process**

30 mins

PLANNING THE

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

ORGANIZER

Complete a graphic organizer based on your notes and reading in which you state your claim, sequence your points, and note your supporting evidence.

- Complete the attached graphic organizer.
- Supports opening claim.
- Uses evidence from texts read earlier.

- Using the provided graphic organizer, explain and model how to use the graphic organizer for opinion writing.
- Invite students to generate questions in pairs about how the format works, and then take and answer questions.
- Student complete the organizer using notes from T chart.

Standards:

W.3.1 : Write opinion pieces on topics or texts, supporting a point of view with reasons.

Additional Attachments:

 **Opinion Graphic Organizer**

30 mins

INTRODUCTORY

PARAGRAPH: Ability to establish a claim and consolidate information relevant to task.

WRITING AN OPINION LETTER

Take your opinion graphic organizer and format your thoughts into a letter for Senator Arthur Orr.

- Writes a letter template to express opinion ideas.
- Provides direct answer to main prompt requirements.
- Establishes a controlling idea.
- Identifies key points that support development of argument.

- Show students the letter template. Have students add an address and heading.
- Discuss the thesis statement for the letter - main opinion idea they have chosen from their graphic organizer.
- Show students a completed letter and how it should look.

Additional Attachments:

 **Opinion Letter Template**

40 mins

BODY

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

INITIAL DRAFT

Write an initial draft complete with opening, development, and closing; insert and cite textual evidence.

- Provides complete draft with all parts.
- The letter should have a heading, address, and salutation.
- Supports the opening in the later sections with evidence and citations.

- Students will continue with the draft of the letter using the template for writing an opinion letter.
- Encourage students to re-read prompt partway through writing, to check that they are on track.

			<ul style="list-style-type: none"> The text is either for or against making the design solution for a weather-related hazard. 	
	Standards: W.3.1 : Write opinion pieces on topics or texts, supporting a point of view with reasons.			
30 mins	EDITING : Ability to proofread and format a piece to make it more effective.	EDITING Today we are going to edit our drafts using the Virtual Village model. You have done this many times before.	Expectations will be met if the student edits their report using the Virtual Village method.	1. Teacher will state the prompt. 2. Teacher will ask students to open their journals to the first draft. 3. Students will edit their draft using provided method previously used in reading/written language class.
	Standards: W.3.5 : With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.			
30 mins	FINAL DRAFT : Ability to submit final piece that meets expectations.	FINAL PIECE Turn in your complete set of drafts, plus the final version of your piece.	<ul style="list-style-type: none"> 	None
	Standards: W.3.5 : With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.			

Instructional Resources

No resources specified

Section 4: What Results?

Student Work Samples

No resources specified

Teacher Reflection

Not provided