

Landforms - Constructive or Destructive?



by Jan Powell

In this module, students will be writing articles for the school science magazine. This magaine is published twice per school year on a variety of topics. This promotes science in the school and community. Research will be done online with provided websites and articles. Other sites are also provided for online research.

Landforms included on the text list are located in Georgia, but teachers in different states could select local landfroms for their own list. Teachers can also include texts for differentiation. Mini-tasks in the module include strategies for students choosing texts based on their reading abilities.

GRADES

DISCIPLINE

COURSE

PACING

5

∆ Science

Any

① 7hr

Section 1: What Task?

Teaching Task

Task Template IE4 - Informational or Explanatory

After reading informational articles and websites, write an article for your school science magazine in which you analyze how understanding the creation of specific landforms contributes to an understanding of constructive and destructive processes. Support your response with evidence from the text/s. Include three specific details for landform from the texts in your response.

Standards

Georgia Science Performance Standards

S5E1 Focus

Students will identify surface features of the Earth caused by constructive and destructive processes.

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

RI.5.9

Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

W.5.2 Focus

Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Texts

LAND FORMATION - Constructive Forces, Folding, Faults, Magnitude and Effect, Volcanic Eruptions, Deposition of Sediment, Destructive Forces, Weathering, Erosion

Links_to_Georgia_Landforms.docx

Student Work Rubric - Informational or Explanatory Task - Grades 4-5

	Emerging	Approaches	Meets Expectations	Advanced		
	Expectations					
	1	2	3	4		
Topic / Main Idea	Introduces the topic and an unclear main idea.	Introduces the topic and a clear main idea with an inconsistent focus on the main idea.	Introduces the topic and a clear main idea with a consistent focus on the main idea.	Introduces the topic and a clear and specific main idea with a consistent focus on the main idea.		
Use of Sources	Includes few relevant details from sources.	Summarizes, paraphrases, or quotes relevant details from sources with minor inaccurate or incomplete elements. Includes a list of sources.	Summarizes, paraphrases, or quotes relevant details from sources. Includes a list of sources.	Summarizes, paraphrases, or quotes well-chosen details from sources. Includes a complete list of sources.		
Development	Includes minimal facts, definitions, details, and/or quotations related to the main idea, or that are loosely related to the main idea.	Includes relevant facts, definitions, concrete details, and/or quotations (as well as illustrations or multimedia when appropriate).	Includes relevant facts, definitions, concrete details, and/or quotations (as well as illustrations or multimedia when appropriate) that help develop the main idea.	Explains facts, definitions, concrete details, and/or quotations (as well as illustrations or multimedia when appropriate) that develop the main idea.		
Organization	Sequence of sentences or sections lacks a logical order or an evident beginning, middle, and end.	Sequences sentences and groups related information in paragraphs or sections, with a clear beginning, middle and end. Uses transitions (e.g., another, for example, also, because) to connect information.	Sequences sentences and groups related information logically in paragraphs or sections that introduce and develop the main idea, and provide a conclusion. Uses transitions (e.g., another, for example, also, because, in contrast, especially) to connect or compare information.	Sequences sentences and groups related information logically in paragraphs or sections that introduce and develop the main idea, and provide a unifying conclusion. Consistently and precisely uses transitions (e.g., another, for example, also, because, in contrast, especially) to connect or compare information		
Conventions	Major errors in standard English conventions appropriate to the grade level interfere with the clarity of the writing. Language use is inappropriate	Errors in standard English conventions appropriate to the grade level sometimes interfere with the clarity of the writing. Uses language and domain-specific vocabulary with minor errors .	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.		
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

This year we have been studying science about the earth. In this module we will extend our study to landforms and their composition. To help understand this concept, you will investigate specific landforms in the state of Georgia.

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

ANNOTATION: Ability to purposely identify facts and ask questions

VISUAL RESEARCH: Ability to examine evidence visually

TOPIC AND TEXT SELECTION: Ability to identify appropriate topic and texts.

GATHERING EVIDENCE: Ability to select facts/evidence to explain one's own writing

Transition to Writing

PREPARING FOR WRITING: Ability to begin linking reading results to writing task.

Writing Process

WRITING A MAGAZINE ARTICLE: Ability to identify characteristics of magazine article

OUTLINING THE WITING: Ability to organize the writing

INTRODUCTORY PARAGRAPH: Ability to construct an initial draft of opening paragraph with an

emerging line of thought and structure

BODY PARAGRAPHS: Ability to construct an initial draft of body paragraphs and conclusion relating

thoughts and evidence

PEER EDIT, REVISION, AND FINAL DRAFT: Ability to edit, revise from peer edits, and write final draft

Section 3: What Instruction?

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES		
Preparir	ng for the Task					
15 mins	TASK ENGAGEMENT: Ability to connect the task and new content to existing knowledge, skills, experiences, interests, and concerns.	PLANTING SEEDS While watching a video on forces of landforms, complete thoughts on the SEED organizer.	Completion of student SEED organizer during video. Adding thoughts during partner conversations Participation in class discussion	 Discuss with students the four categories that make up the printout. Show video, Adventures in Constructive and Desconstructive Forces. Students will complete as many thoughts as possible as they explore the content through the video. Allow them to discuss their findings with a partner. Lead a class discussion all of the students' "seeds" that they found through perusing the content. Once the content has been previewed and "seeds" have been planted for students to think about, students are ready to dive into the new content, keeping the thoughts and questions from the Seed Discussion in the back of their mind. 		
	Additional Attachments: SeedDiscussionGO.pdf Adventures in Constructive and Desconstructive Forces					
15 mins	TASK ANALYSIS: Ability to understand and explain the task's prompt and rubric.	TOPICAUDIENCEPURPOSE Look at the teaching task to determine the topic, audience, and purpose.	Students meet expectations if students: Participate in the discussion and complete handout.	 Teaching task is projected on the whiteboard and printed on student handout. Through questions from the teacher, students will identify the topic (landforms, constructive and deconstructive) Audience and Product will be identified (article for science magazine, your peers) Purpose of the task (verbs,content) will be determined (analyze how the creation of specific landforms contribute to an understanding of constructive and deconstructive processes) with special attention to verbs 		
	Additional Attachments: TAPPING_OUT_THE_PROMPT20150116-3-1upr0zp (1).docx Teaching Task AnalysisGO.docx					
15 mins	TASK ANALYSIS: Ability to understand and explain the task's prompt and rubric.	RUBRIC ANALYSIS In your group, read the definition for your groups assigned portion of the rubric. You will present the "Meets	Meets expectations if: Small group: • All students	 Teacher will display prompt daily, reminding students of the end goal Teacher will display rubric and hand out rubric to each student Teacher will highlight for element of "focus" or 		

Expectation" score definition to the class highligting verbs and using kid-friendly language.

participatingStudents work as a team

Individual:

- Students rephrasing rubric accurately using kidfriendly language
- Goals show understanding of prompt and rubric expectations
- the projected rubric and model how to read the rubric but only deconstructing "Meets Expectations" underlining the verbs and using kid-friendly language.
- 4. Next, teacher will assign small groups an element of the rubric to deconstruct
- Students will then present their rubric element to the class using their notes and smartboard.
- 6. Students will take notes on their own rubric/organizer as the groups present.

Additional Attachments:

Student Work Rubric 2-5 Version 3.0.docx

Reading Process

30 mins

ANNOTATION:

Ability to purposely identify facts and ask questions

ANNOTATING TEXT

Read the text and make annotations with a partner. Then, reflect with a partner to share your annotations.

- Students
 apply annotations to text to help determine meaning and to locate information by "marking up" the article.
- Students
 apply annotations
 to resolve
 questions, queries,
 and surprises.
- Students participate in class discussion.
- 1. Teacher models annotation of a informational text using the annotation bookmarks (attached in student handouts). Tell/remind students the benefit of annotating text while reading: annotations mark important or confusing ideas in the text -they are more effective than highlighting because the symbol you choose indicates why you marked the text.
- 2. Students then read the text, "LAND FORMATION Constructive Forces, Folding, Faults, Magnitude and Effect, Volcanic Eruptions, Deposition of Sediment, Destructive Forces, Weathering, Erosion" with a partner using the bookmarks.
- 3. Have a class discussion using the bookmarks as a guide.
- 4. Make a class chart of definitions of constructive processes and desconstructive processes with examples.

Additional Attachments:

LAND FORMATION - Constructive Forces, Folding, Faults, Magnitude and Effect, Volcanic Eruptions, Deposition of Sediment, Destructive Forces, Weathering, Erosion

Annotation Bookmark

15 mins

VISUAL

RESEARCH: Ability to examine evidence visually

VISUAL RESEARCH

In your group, examine pictures of Georgia landforms for evidence of constructive and destructive processes.

Students meet expectations by the following:

- 1. Participation in the group
- Group list of details of evidence expected form text
- 1. Teacher will give each group pictures of different Georgia landforms.
- 2. Ask students to use the information from the previous article/mini-task on constructive and destructive landforms to make a list of the evidence they find to prove the specific type of process.
- 3. Individual students will then write a statement

3. Individual statement identifying the process they expect to read about. identifying the landform Additional Attachments: Photos of Georgia Landforms.docx 10 mins **TOPIC AND TEXT CHOOSING LANDFORMS** Students will be able to 1. Teacher instructs students on "Five Finger **SELECTION**: Ability **IN GEOGIA** find texts from the Rule" for reading text using any short to identify appropriate Look at the list of Georgia provided list informational text.l topic and texts. landforms and pick one that 2. Students are introduced to nine Georgia follows the five finger rule and Landforms on "Links to Georgia Landforms" that might interest you. After handout (attached and in Texts in Module). you select the landform to Using this, students will choose a landform research, you will use the they are interested in researching. weblinks for articles and information to research. 3. Looking at one text under the landform, students use the Five Finger Rule for readability. 4. When a landform is found, student is ready for research. 5. Teacher aids students who have difficulty with this process. Peer groups or partners might be needed for some students. Additional Attachments: Links to Georgia Landforms.docx 5_finger_test_poster.gif % Lots of Great Ideas for Posters 1 hr **GATHERING CLOSE READING OF** A student who Students have identified the landform to

EVIDENCE: Ability to select facts/evidence to explain one's own writing

SCIENTIFIC TEXTS USING THE GIST METHOD

Now that you have identified your landform, you will research the weblinks under the landform and others at the bottom on the document. Use the GIST method and graphic organizer to summarize the articles.

demonstrates mastery of this skill will:

- Thoroughly and accurately complete the GIST strategy graphic organizer for chosen articles
- Be able to explain the main idea of the resources used and how it will help them in their scientific article

research in the previous mini-task. Web links on the previous document and others at the bottom will be utilized in the research.

Note to teacher: There are several variations to the GIST method. Attached under the Teacher Resources is an overview to the method used in this lesson as well as additional graphic organizer varying in level of depth and aesthetics.

Instruction:

- 1. Provide students with digital or hard copies of the GIST strategy graphic organizer.
- 2. Go over the graphic organizer explaining that they will be looking for the major details in the text (the 5 W's and H) and provide a short, 20 word summary of the text. This will allow them to write down any important facts and summarize the article so they can refer back to it later.
- 3. If needed, use a previous article to model the GIST method for the class.
- 4. Let students know, that while it is not required, they can insert direct quotes they may want to use directly on the graphic organizer.

Allow students to start working on filling out graphic organizers for previously found articles. Check in with teacher after each article to enable redirection and teaching if needed to individuals. 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. CCR.R.2: Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

Additional Attachments:

GIST Strategy Overview and Addt'l Graphic Organizers.pdf

Get the Gist Organizer.docx

20 mins

GATHERING EVIDENCE: Ability to select facts/evidence to explain one's own writing

LANDFORM NOTE-TAKING

Using your GIST organizer along with corresponding articles and websites, complete the note-taking guide.

Student meet expectations by:

- 1. Identifying three peices of evidence they will use in their article.
- 2. Evidence will explain why landform is constructive or deconstructive
- 1. Teacher passes out copy of Landforms Notetaking guide (attached)
- 2. Student will be guided to use the GIST notes along with the articles and websites to complete the evidence based note-taking guide.
- 3. Teacher will facilitate students to aid them in getting the evidence needed for writing article.

Additional Attachments:

Landforms Notetaking Guide.docx

Transition to Writing

15 mins

PREPARING FOR WRITING: Ability to begin linking reading results to writing task.

VISUAL RESEARCH COMPARED TO EVIDENCE FROM TEXTS DISCUSSION

Compare your first thoughts when you looked at pictures in the beginning of this module to what you found as evidence from the texts you

Participation in discussion

- 1. Teacher leads a discussion with students comparing visual evidence at the first of the module with evidence gained from reading texts using their lists, and final Landforms Note-taking guide.
- 2. Guide students in recognizing the true meaning of evidence...not what you think but what has been documented through reliable sources.

Writing Process

30 mins

WRITING A MAGAZINE ARTICLE: Ability to identify characteristics

of magazine article

HOW TO WRITE A MAGAZINE ARTICLE

As we read this article together, we are going to make a list of steps in writing a magazine article.

Students will meet expectations by:

- 1. Making an individual list of steps in writing a magazine article.
- 2. Contributing to the class list.
- 1. Teacher will project the article, How to Write a Magazine Article on the whiteboard.
- 2. With class, go through the steps, asking questions such as, "Have you mastered this step?" Students will answer yes to the following steps: *Formulate an idea; *Give your idea an angle; *Identify your market; *Research your article
- 3. Go over the remaining steps for the list and

interpretations before starting into the process of writing: *Create an outline; *Grab the reader's attention with a dynamic opening paragraph; *Proceed with writing the body of the text; *Compose your conclusion; *Revise your article; *Submit.

Additional Attachments:

% How to Write a Magazine Article

20 mins

OUTLINING THE WITING: Ability to organize the writing

STARS AND DOTS: BASIC OUTLINE

Create an outline to answer the central question based on your notes and class readings. Please state your controlling idea, sequence your points, and note your supporting evidence. Be sure to include at least three supporting details and evidence for each detail.

- Creates an outline.
- Identifies a controlling idea that is appropriately broad, relevant, and able to be proven.
- Supports the controlling idea with three distinct and relevant supporting details.
- Uses relevant evidence from text (quoted or paraphrased).

- Remind students when completing their outline, that all landforms researched must be in the article.
- 2. Provide students with a blank copy of an outline (see attachment in Student Handouts).
- 3. Be sure to discuss the following before students begin their outline:
- The outline is color-coded based on the colors on a traffic light.
- The "T" for topic sentence is listed in green to remind students that the topic sentence gets them going just as green means "go" on a traffic light.
- The "C" for concluding sentence is also listed in green because the conclusion should "go back" and remind the reader of the topic.
- On the left of the outline, the yellow stars represent the main ideas of each body paragraph (supporting details). Yellow is the chosen color because after giving the topic, students must "slow down" and explain their point.
- On the right of the outline, there are red dots which correspond with each yellow star. Red dots are for students to "stop" and give evidence from the text to support their main ideas.
- [Stars and dots can be added or taken away from the outline based on the needs of the task or ability of individual students.]
- Depending on your students, you may need to:
- Spend a separate day developing, discussing, and revising controlling ideas prior to completing this organizer.
- Model completing the organizer using a different task.
- If needed, teach a separate lesson on what counts as evidence, how to paraphrase and cite, and how to connect evidence to supporting details using reasoning.
- Guide students as they fill in the outline with their controlling idea, supporting details, and evidence.
- Note: The attached outline was adapted from the Step Up to Writing program. Visit the link under Teacher Resources to learn more about Step Up to Writing.

Standards:

CCR.W.1: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCR.W.5: Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

CCR.W.9: Draw evidence from literary or informational texts to support analysis, reflection, and research.

Additional Attachments:

Outline

% Step Up to Writing

30 mins

INTRODUCTORY PARAGRAPH: Ability to construct an initial

to construct an initial draft of opening paragraph with an emerging line of thought and structure

INTRODUCTION PARAGRAPH

Develop an effective and engaging introduction paragraph for your article incorporating a hook, explanation, and claim. Meets expectations if:

- Hook is engaging and relevant
- Explanation sucessfuly bridges hook and and claim.
- Claim is specific, well articulated, and the actual topic of the paper.
- 1. Using the handout, do a think aloud in which you walk through the steps to develop an introduction paragraph. Think about several hooks, and chose the best one (emphasizing that the first idea isnt always the best). Remind students mmediately after catching a reader's attention, make certain the point of the article or the theme is evident.
- 2. Allow students to complete the handout independently.
- 3. Finish with a share, either class wide or between partners.

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Standards:

CCR.W.5: Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

CCR.W.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Additional Attachments:

Writing an Effective Introduction.doc

1 hr

BODY PARAGRAPHS:

Ability to construct an initial draft of body paragraphs and conclusion relating thoughts and evidence

INITIAL DRAFT OF THE BODY

Write an initial draft of the body complete with facts with reasons and transition words and phrases.

- Provides complete draft with all parts.
- Supports the introduction in the later sections with facts and reasons.
- Make uses of the Outline Planner, "Three Stars", graphic organizer.
- Encourage students to re-read prompt partway through writing, to check that they are on track.

Lesson Plan:

- 1- Explain that they will be using the graphic organizer to write specific facts and examples from the text to support the focus and explain their thinking.
- 3- Model how to use the graphic organizer in order to write the Body Paragraphs.
- 4- Explain and Model the use and importance of indentation when beginning a new paragraph.
- 5- After the modeling, students are released to write their 1st body paragraph.
- 6- Students will check with a peer when their first

				paragraph is completed. Students having difficulty with the 1st paragraph will see the teacher. 7- After checking with a peer, students will confer with the teacher. 8- Continue writing the paragraphs. 9- Continue to meet with students having difficulty completing the process. Concluding Paragraph 1- Introduce the conclusion or closing by using the graphic organizer. 2- Model writing a closing or conclusion paragraph. 3- After modeling, students will find and underline the hook, the why is this important. 4- Students will write their own conclusions. 5- Students having difficulty with their conclusions will meet with the teacher.
40 mins	PEER EDIT, REVISION, AND FINAL DRAFT: Ability to edit, revise from peer edits, and write final draft	PEER EDITING, REVISION FOR FINAL ARTICLE Submit your revised essay following peer review activity.	Submission of revised essay as final product.	 Teacher will have students choose a partner and peer review each other's article. Have students then revise their article from peer review. Students will submit final draft.

Instructional Resources

No resources specified

Section 4: What Results?

Student Work Samples

No resources specified

Teacher Reflection

Not provided

All Attachments

LAND FORMATION - Constructive Forces, Folding, Faults, Magnitude and Effect, Volcanic Eruptions, Deposition of Sediment, Destructive Forces, Weathering, Erosion: https://s.ldc.org/u/5fnw7k6nav9paz3uyctgpvl8v

Links_to_Georgia_Landforms.docx: https://s.ldc.org/u/7ub5jpac7lw49v16ogd8i9tux