



Literacy Design
Collaborative

Pros and Cons of Different Map Projections

★ TASK

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GRADES

6 - 7

DISCIPLINE

 Social
Studies

COURSE

 Social
Studies 6

PACING

 N/A

Section 1: What Task?

Teaching Task

Task Template 19 - Informational or Explanatory

What are the positive and negative features of different types of map projections? After reading three different types of map projections (conical, cylindrical, and flat-plane), write an essay in which you explain the positive features of each map as well as any problems with the projection such as distortions, incorrect sizes, or a change to latitude and/or longitude. Support your discussion with evidence from the text(s).

Standards

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

RH.6-8.1

Cite specific textual evidence to support analysis of primary and secondary sources.

RH.6-8.2

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

RH.6-8.4

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

RH.6-8.5

Describe how a text presents information (e.g., sequentially, comparatively, causally).

RH.6-8.6

Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

RH.6-8.10

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

WHST.6-8.2

Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.

WHST.6-8.4

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

WHST.6-8.5

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.

WHST.6-8.9

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

WHST.6-8.10

Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Colorado Academic Standards for Social Studies

2.1.

Use geographic tools to solve problems

2.1.b.

Collect and analyze data to interpret regions in the Western Hemisphere

2.1.c.

Ask multiple types of questions after examining geographic sources

Texts

 **Different Types of Maps**

 **Flat Plane Map Projection**

 **Conic Map Projection**

 **Cylindrical Map Projection**

 **PEAL notes**

 **Note taking form**

 **Frayar Model**

Student Work Rubric - Informational or Explanatory Task - Grades 6-8

	Emerging	Approaches Expectations	Meets Expectations	Advanced
	1	2	3	4
Controlling Idea	Presents an unclear or unfocused controlling idea.	Presents a general controlling idea that addresses the prompt , with an uneven focus .	Presents and maintains a clear controlling idea that addresses all aspects of the prompt.	Presents and maintains a clear and specific controlling idea that addresses all aspects of the prompt and takes into account the complexity of the topic .
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 controlling idea. Inconsistently cites sources.	Includes details, examples, and/or quotations from sources that are relevant to the controlling and supporting ideas . Consistently cites sources with minor formatting errors .	Includes well-chosen details, examples, and/or quotations from sources that support the controlling 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 controlling idea .	Thoroughly and accurately explains ideas and source material, using reasoning to support and develop the controlling idea.
Organization	Lacks an evident structure. Makes unclear connections among ideas, concepts, and information.	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 ideas, concepts, and information .	Groups and sequences ideas logically to develop the controlling idea and create cohesion . Uses varied transitions to clarify the relationships among ideas, concepts, and information.
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 to 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

In this module, we will explore different types of map projections or flat maps. Most flat maps, like those in our textbook or on the internet- are presented as factually correct. People see a map and believe that it is a perfect representations of a place. Flat maps are incredibly useful geographic tools and reading maps is an important life skill. However, flat maps are not perfect and cannot be. While they provide great information, they also lie and distort the truth. We will look at several different maps and examine in what ways they are truthful or untruthful.

Extension

Not provided

Section 2: What Skills?

Preparing for the Task

BRIDGING CONVERSATION > ACTIVATING PRIOR KNOWLEDGE: Have groups brainstorm everything they think they know about maps-what information they provide or not provide.

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

Reading Process

PRE-READING > TEXT PERUSING: Ability to identify appropriate texts.

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

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

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

POST-READING > SHARE AS A GROUP: Articulating beliefs among group members.

Transition to Writing

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

Writing Process

PLANNING > PLANNING THE WRITING: Ability to develop a line of thought and text structure appropriate to an informational/explanatory task.

DEVELOPMENT > INTRODUCTORY PARAGRAPH: Ability to establish a controlling idea and consolidate information relevant to task.

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

DEVELOPMENT > CONCLUDING PARAGRAPH: Students will write a concluding paragraph that addresses the why behind the prompt which is what they will keep in mind when looking at different map projections.,

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

REVISION, EDITING, AND COMPLETION > EDITING: Ability to proofread and format a piece to make it more effective.

REVISION, EDITING, AND COMPLETION > 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				
20 mins	BRIDGING CONVERSATION > ACTIVATING PRIOR KNOWLEDGE: Have groups brainstorm everything they think they know about maps- what information they provide or not provide.	SHORT RESPONSE ON T-CHART Jot down your thoughts to the following questions in your interactive notebook: <ol style="list-style-type: none"> 1. What information do maps provide? 2. What information do maps either leave off? 3. Can maps be incorrect? How? After 2 minutes of individual brainstorming, have the group come back together and discuss their answers to 1, 2, and 3 using a whip around. Then hand out butcher paper to put their best ideas on a t-chart (leave the right side available later). On the left side put as a title "What we think we know about the information maps provide and if they are correct".	No Scoring	<ul style="list-style-type: none"> • Individual brainstorming • Group discussion and creation of "What I think I know" • Post in hallway and have kids peruse what one another said aka a gallery walk
Standards: SL.6.1.C : Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.				
30 mins	TASK AND RUBRIC ANALYSIS > TASK ANALYSIS: Ability to understand and explain the task's prompt and rubric.	BULLETS In your own words, what are the important features of a good response to this prompt?	No Scoring	<ul style="list-style-type: none"> • Share examples of compare/contrast organizational structure from teacher model. • Identify or invite students to identify key features of examples. • Pair students to share and improve their individual bullets. • Create a classroom list: Choose one student to share a few ideas on the board, and ask others to add to it.
Standards: RH.6-8.6 : Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts). RH.6-8.5 : Describe how a text presents information (e.g., sequentially, comparatively, causally).				

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Reading Process				
10 mins	PRE-READING > TEXT PERUSING: Ability to identify appropriate texts.	LABEL MAPS For each text, label the continents, oceans and directions so we can make comparisons.	<ul style="list-style-type: none"> Identifies author, title, publisher, date, and any other needed information (for example, the volume for a periodical or the editor for an anthology). Includes reasonable evidence that work is credible and/or worthy of study. 	<ul style="list-style-type: none"> Provide citation guide and discuss why each element of citation is needed. Ask students to brainstorm what makes an author credible and/or worthy of study. Provide access to research sources for students to assess the texts. Note: for an “after researching” task, add teaching and time for students to select the texts they will use.
	Standards: RH.6-8.7 : Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.			
50 mins	ACTIVE READING > ESSENTIAL VOCABULARY: Ability to identify and master terms essential to understanding a text.	VOCABULARY LIST Hand out copies of the Frayer model. Have students complete Frayer models for the following vocabulary words: latitude, longitude, scale, hemisphere, map projection, region, continent, and ocean.	<ul style="list-style-type: none"> Lists appropriate phrases. Provides accurate definitions. 	<ul style="list-style-type: none"> After scoring, ask some students to share definitions of terms that others overlooked or misunderstood. After scoring, be willing to provide direct instruction or guide a close reading if needed to work through a key phrase most students missed.
30 mins	ACTIVE READING > NOTE-TAKING: Ability to select important facts and passages for use in one's own writing.	NOTES From each text, answer the questions in the following order: 1) What is the center of the map? Infer what the author's purpose is by putting this item in the center? 2) Compare the sizes of the continents. Which continents are the largest and which ones are the smallest? Does it change from map to map? 3) What are the lines on each map? How are they different from map to map? 4) Look at the location and angle of each continent. What is different about the	<ul style="list-style-type: none"> Identifies relevant elements. Includes information to support accurate citation (for example, page numbers for a long text, clear indication when quoting directly). 	Show students how to make a t-chart in their interactive notebooks. Guide them through the first map with the set of questions. Then have them in groups do the second map together. Have the individual groups check off their progress with the teacher. Then have them use their partners to work through the third map. As a class debrief after the third map.

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		<p>placement of each continent? What about the shape of each continent? Look at all 7.</p> <p>5) Wrap the map around your ball. What do you notice? Is there any part of the map that does wrap correctly around the ball? What does this mean for the accuracy of the map?</p>		
	<p>Standards:</p> <p>RH.6-8.2 : Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.</p>			
10 mins	<p>POST-READING > ENHANCING COMPREHENSION: Ability to identify the central point and main supporting elements of a text.</p>	<p>SHORT REFLECTIVE ENTRY FOR EACH TEXT What is the author trying to accomplish? Which parts of the text show you that?</p> <p>Have students show using their tennis balls and maps how they got their answers.</p>	<ul style="list-style-type: none"> Answers questions with credible response. 	<ul style="list-style-type: none"> Invite students to brainstorm ways to figure out any author's intent. Invite students to share and discuss their answers for each text. After the discussion, allow them to add to their entries.
15 mins	<p>POST-READING > SHARE AS A GROUP: Articulating beliefs among group members.</p>	<p>DEFINITION AND STRATEGIES Share the pros and cons of the various map projections with two different partners around the room. Be ready to use the tennis ball to demonstrate your ideas.</p>	<ul style="list-style-type: none"> Provides both pro and cons. Can show where they got their answers b using the ball for demonstration purposes. 	<ul style="list-style-type: none"> Discuss respect for others' work to assemble evidence and create texts. Model how we use the ball to prove our thoughts.
Transition to Writing				
10 mins	<p>BRIDGING CONVERSATION > IDENTIFYING SIGNIFICANT ELEMENTS: Ability to begin linking reading results to writing task.</p>	<p>BULLETS In a t-chart format write everything you heard and discovered about the pros and cons of the different map projections.</p>	No scoring	<ul style="list-style-type: none"> Silent reflection.
30 mins	<p>BRIDGING CONVERSATION > IDENTIFYING SIGNIFICANT ELEMENTS: Ability to begin linking reading results to writing task.</p>	<p>GROUP BRAINSTORMING Add the pros and cons to the t-charts in your interactive notebooks.</p>	None	<p>For the first body paragraph: Teacher models thinking and has students write it down on their own chart.</p> <p>For the second body paragraph: Have students do it in pairs or in table groups while teacher walks around checking for understanding.</p> <p>For the third body paragraph: Students do it individually.</p>
Writing Process				

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40 mins	PLANNING > PLANNING THE WRITING: Ability to develop a line of thought and text structure appropriate to an informational/explanatory task.	OUTLINE/ORGANIZER Transfer the information from the t-chart to a PEAL (purpose, evidence, analysis, link) style bullet notes.	<ul style="list-style-type: none"> Creates an outline or organizer. Supports controlling idea. Uses evidence from texts read earlier. 	<ul style="list-style-type: none"> Teach students what PEAL is and how to outline using that organization. Invite students to generate questions in pairs about how the format works, and then take and answer questions.
15 mins	DEVELOPMENT > INTRODUCTORY PARAGRAPH: Ability to establish a controlling idea and consolidate information relevant to task.	OPENING PARAGRAPH Write an opening paragraph that includes a controlling idea and sequences the key points you plan to make in your composition.	<ul style="list-style-type: none"> Writes a concise summary statement or draft opening. Provides direct answer to main prompt requirements. Establishes a controlling idea. Identifies key points that support development of the controlling idea. 	<ul style="list-style-type: none"> Offer several examples of opening paragraphs including a teacher created model. Ask class to discuss what makes them strong or weak. Review the list that students created earlier to identify needed elements (from Cluster 1, skill 2).
1 hr	DEVELOPMENT > 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.	<ul style="list-style-type: none"> Provides complete draft with all parts. Supports the opening in the later sections with evidence and citations. 	<ul style="list-style-type: none"> Encourage students to re-read prompt partway through writing, to check that they are on track.
20 mins	DEVELOPMENT > BODY PARAGRAPHS: Ability to construct an initial draft with an emerging line of thought and structure.	WRITING: CONCLUDING PARAGRAPHS Not Provided	Not Provided	Not Provided
50 mins	REVISION, EDITING, AND COMPLETION > REVISION: Ability to refine text, including line of thought, language usage, and tone as appropriate to audience and purpose.	MULTIPLE DRAFTS Refine composition's analysis, logic, and organization of ideas/points. Use textual evidence carefully, with accurate citations. Decide what to include and what not to include with a partner using the partner feedback page provided. Then write up in each section what you plan to modify and add. Once you're done, bring your completed feedback page up to the teacher for a	<ul style="list-style-type: none"> Provides complete draft with all parts. Supports the opening in the later sections with evidence and citations. Improves earlier edition. 	<ul style="list-style-type: none"> Model useful feedback that balances support for strengths and clarity about weaknesses. Assign students to provide each other with feedback on those issues. Have each student have 2 copies of their essay- one for their partner to mark up and one for themselves to read aloud. Have students share their feedback to one another and write it down on their sheets.

		writing conference BEFORE you start your final draft.		
	<p>Standards:</p> <p>RH.6-8.1 : Cite specific textual evidence to support analysis of primary and secondary sources.</p> <p>RH.6-8.4 : Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.</p> <p>RH.6-8.5 : Describe how a text presents information (e.g., sequentially, comparatively, causally).</p>			
	<p>Additional Attachments:</p> <p> Feedback Sheet</p>			
1 hr	<p>REVISION, EDITING, AND COMPLETION > EDITING: Ability to proofread and format a piece to make it more effective.</p>	<p>CORRECT DRAFT Revise draft to have sound spelling, capitalization, punctuation, and grammar. Adjust formatting as needed to provide clear, appealing text.</p>	<ul style="list-style-type: none"> Provides draft free from distracting surface errors. Uses format that supports purpose. 	<ul style="list-style-type: none"> Briefly review selected skills that many students need to improve. Especially consider pronoun usage, run on or incomplete sentences, and coordinating conjunctions) Teach a short list of proofreading marks. Assign students to proofread each other's texts a second time.
	<p>Standards:</p> <p>W.7.2.C : Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.</p> <p>W.6.3.C : Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.</p> <p>W.6.5 : 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.</p>			
10 mins	<p>REVISION, EDITING, AND COMPLETION > FINAL DRAFT: Ability to submit final piece that meets expectations.</p>	<p>FINAL PIECE Turn in your complete set of drafts, plus the final version of your piece.</p>	<ul style="list-style-type: none"> Fits the “Meets Expectations” category in the rubric for the teaching task. 	None

Instructional Resources

Student Handout

 **Student Brainstorming Sheet**

Section 4: What Results?

Student Work Samples

Advanced

 **Map Projections #1**

Meets Expectations

 **Map Projections #2**

Approaches Expectations

 **Map projections #3**

Teacher Reflection

Not provided

All Attachments

- 🔗 Different Types of Maps : <https://s ldc.org/u/2ad8pdu8hkkvgssvs01oc3m2y>
- 📄 Flat Plane Map Projection : <https://s ldc.org/u/e9mc1uultu5f8ibbuc94wuz4p>
- 📄 Conic Map Projection : <https://s ldc.org/u/6kytn6q07jfd433zw2mlrowl7>
- 📄 Cylindrical Map Projection : <https://s ldc.org/u/dpryd3j5krnmwfb8cn77l85e>
- 📄 PEAL notes : <https://s ldc.org/u/bzuegfw8bzvw9bm2exlb2isw1>
- 📄 Note taking form : <https://s ldc.org/u/d35h9jmkdw1qd2dj5cwwwmzm3c>
- 📄 Frayer Model : <https://s ldc.org/u/6b4e8pqzml9skb2ye6d60t5zf>
- 📄 Map Projections #1 : <https://s ldc.org/u/d72psirhfzpdn7zbxm12gotu7>
- 📄 Map Projections #2 : <https://s ldc.org/u/c2lhtjxpfsjnowt4j0zk5r9ov>
- 📄 Map projections #3 : <https://s ldc.org/u/bhfrq8a6fikvb1yjh0o7rsijt>
- 📄 Student Brainstorming Sheet : <https://s ldc.org/u/754irvpnmnqatskdsxvti4ir4c>