

Integrated Thematic Unit: Grade 6 - Theme 6

New Frontiers: Oceans and Space:

Based on Houghton Mifflin ELA Theme Concept and Connected to Social Studies Standards

GATE Staff: David Manier, Lyn Olson, Ted Altenberg

Stage 1 - Desired Results for Universal Access

HM Theme Concept:

The uncharted frontiers of oceans and space offer new challenges.

Cross-Curricular Goals or Standards:

CA Science Standards Grade Six:

7. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the concept in the other three strands, students should develop their own questions and perform investigations. Students will:
 - 7.a. Develop a hypothesis
 - 7.b. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes and binoculars) to perform tests, collect data and display data.

HM Reading Skill/Cognitive Tasks:

Cause and Effect

- Understand that the reason why something happens is the cause, and what happens as a result is the effect.
- Identify cause-and-effect relationships that are directly and indirectly stated.

Following Directions

- Evaluate directions in a text
- Read and follow written directions

Categorize and Classify

- Identify categories of things that are similar
- Classify information according to categories

Drawing Conclusions

- Use facts and details from the selection to come to an understanding of something not directly stated in the text
- Analyze details to draw conclusions
- Support details with logical thinking

HM Writing Workshop:

Persuasive Essay: An essay that convinces the reader to think or act in a particular way

Summary: *New Frontiers* includes both fiction and non fiction selections that explore the uncharted and exciting frontiers of ocean and space. Challenges and obstacles are viewed as a necessity to achieve both personal growth and scientific knowledge. Wonder, the joy of discovery and experiencing the unimaginable are all themes considered throughout the selections.

Prerequisites:

- Skills of independent work
- Students should be pre-assessed for reading level
- Students should be pre-assessed for the reading comprehension skills taught in this unit.

Integrated Thematic Unit: Grade 6 - Theme 6: New Frontiers

<p>Essential Understandings:</p> <ol style="list-style-type: none">1. A passion for the unknown and exploration can lead to scientific discovery.2. Cooperation and determination can lead to personal growth as well as scientific discovery.3. Meaningful questions and conducting careful investigations lead to scientific knowledge of unexplored space and oceans.	<p>Essential Questions:</p> <ol style="list-style-type: none">1. Why do people seek out challenges?2. What is the value of exploring the unknown?3. How might advances in science and technology affect society?
<p>Students will know:</p> <ul style="list-style-type: none">• A deeper understanding of the science behind science and space exploration• Curiosity and a willingness to look beyond accepted knowledge are important in science	<p>Students will be able to:</p> <ul style="list-style-type: none">• Identify Cause and Effect• Compare and Contrast information located within a selection• Categorize and classify information• Draw conclusions

Stage 2 - Assessment Evidence for Universal Access

HM Theme:

_____ SCOE Test **OR** _____ Houghton Mifflin Theme Skills Test

Anthology Selections:

<p>_____ Selection Tests (Teachers' Resource Blackline Masters)</p>	<p>_____ Reading Response Journals</p>
<p>_____ "Think About the Selection" pg. 564 pg. 588 pg. 610 pg. 634</p>	<p>_____ Daily Log</p>
<p>_____ Assessing Skill per selection:</p> <ul style="list-style-type: none"> • Practice Book OR • Skill Performance Task (TE Teachers' Resource Tab) <p>Suggested Activities:</p> <p>R11 Science Puzzles R13 How Do You Get There? R13 Category Clue</p>	<p>_____ Other</p>

Summative Performance Task: Based on Essential Understandings

_____ Writing to Inform

_____ Presenting to Inform

Suggested Prompt (for writing or presenting to inform):

Write a personal narrative about a personal goal and how you imagine yourself accomplishing it.

Key Criteria:

_____ Criteria Cards for each product

_____ Assessment Cards for each product on Extension Menu (see page 8)

_____ Writing to Inform and Presenting to Inform Rubrics

Other Evidence:

_____ Daily Log of Extension Work and Reading Log

_____ Self Evaluation Checklist

_____ Task commitment and engagement when working independently

_____ Peer Reviews

Stage 3 - Learning Plan for Universal Access

Launch the Theme – 2 Days:

- Building connections to text, academic language and Essential Understandings of the HM Theme
- HM Theme Matrix
- GLAD Strategies
 - Focus and Motivation:

 - Input:

 - Guided Oral Practice:

Teach the Theme - 2 Days:

- Read the selection, allowing advanced students to work at their own pace.
- Reading Comprehension Skill Lessons (before, mid, after anthology read)
- Check for Comprehension with “Responding: Think About the Selection” in student book
- **Extension Menu** of Learning Activities: *Practice and Application*
- **Performance Task:** Bringing together of HM selections, Target Page, Theme Matrix, research and Extension Menu projects.
- Presented as a written piece or a presentation:
- HM Theme Matrix
- GLAD Strategies
 - Focus and Motivation:

 - Input:

 - Guided Oral Practice:

Closure and Evaluation – 2 Days:

- HM Theme Matrix
- GLAD Strategies:
 - Closure/Evaluation

- Theme Performance Task: Presentation to Audience
- SCOE Test **OR** Theme Assessment Test

Differentiation / Universal Access

Student Role

1. Students choose from an **Extension Menu** of Learning Activities/Products that integrates Social Studies, Science and or Art with Reading Theme and Reading Skills.
2. Students apply their learning from Extension Menus into a **Performance Task**:
 - Writing to inform (use rubric)
 - Presenting to inform (use rubric)
3. Students keep track of progress in **Daily Log of Extension Work and Reading**
4. Students work independently, sign **Independent Study Agreement**
5. Students help find research resources to learn more about the essential understandings and essential questions found on the **Target Page**
6. Students complete **Self-Evaluation Checklist** at end of theme.

Teacher Role

1. Model, Teach and Practice the use of product criteria for various subjects and purposes before asking students to be independent.
2. Teach students to do their own record keeping
3. Review and monitor the skills of independent work i.e. time management
4. Teacher checks in with Extension Menu students regularly to scaffold learning and check on organization of materials
5. Teacher provides clear directions, criteria and rubrics for Extension Menus
6. Teacher provides clear directions, criteria and rubrics for Performance Tasks
7. Teacher helps find research resources to support the essential understandings and essential questions found on the **Target Page**

Theme 6-6: New Frontiers ~ Extension Menu

Name _____

Due Date _____

Directions: Choose 3 activities in a row as you would in Tic-Tac-Toe

<p>1. <u>Chart</u></p> <p>Create a chart that categorizes and classifies the differences and similarities between the earth and Mars.</p> <ul style="list-style-type: none"> • Be sure to use at least 2 or more sources • Draw conclusions from you chart about the requirements for human habitation of Mars. 	<p>2. <u>Radio Report</u></p> <p>Write and record a radio report based on the facts and details from the story <i>Out There</i>. As a reporter, analyze details and facts from the story as you attempt to draw conclusions about what may have happened to captain of <i>Lotta Fun</i>.</p>	<p>3. <u>Timeline</u></p> <p>Make a timeline detailing the chronological events that occurred in the story <i>Out There</i>. Dates and times maybe fabricated, though events should occur directly from the story. Be sure to include cause and effect relationships of events that occurred within the story</p>
<p>4. <u>Journal Entry</u></p> <p>Pretend that you are a scientist on board the <i>Alvin</i> (Beneath deep Waters).</p> <ul style="list-style-type: none"> • Write at least three journals entries describing and explaining your adventures. • Analyze your observations and draw conclusions on what you have seen. • Be sure to you scientific facts from <i>Beneath deep Waters</i> and from at least one other scientific source. 	<p>5. <u>Poem</u></p> <p>MOON GAME</p> <p>I am the moon and I play a game I don't always look the same. Sometimes I'm round, a silver sphere. Sometimes just half of me seems to be here. Sometimes I'm a crescent, shaped like a smile. Sometimes I surprise you and hide for a while! Look up in the sky for my friendly light— What shape will I be when you see me tonight?</p> <p>Copy, illustrate, memorize, and recite this poem, and explain the science behind the phases of the moon.</p>	<p>6. <u>Game</u></p> <p>Create a board game based on the information you learned from <i>The Adventures of Sojourners</i>.</p> <ul style="list-style-type: none"> • Your game should include information on Mars, Pathfinder and Sojourner • Your game should also include elements of cause and effect. Directions must be clear and explicit.
<p>7. <u>Travel Brochure</u></p> <p>Design a travel brochure to persuade tourist to take a trip on a deep sea trip on a submarine such as <i>Alvin</i>.</p> <ul style="list-style-type: none"> • Be sure to categorize and classify information in a logical and easy to read way. • Facts should be obtained from <i>Beneath Blue Waters</i> and from at least one other source. 	<p>8. <u>Map</u></p> <p>Create a map of the Monterey Bay ocean floor.</p> <ul style="list-style-type: none"> • Use the internet as a resource as you conduct your research. • Be sure to include a legend. • Your may should accurately indicate ocean depths and underwater features such as canyons. 	<p>9. <u>Poster</u></p> <p>Design and create a cause and effect poster based on the events that happened to Franklin R. Chang-Diaz as he worked towards his goal of becoming an astronaut.</p> <ul style="list-style-type: none"> • Be sure to include facts starting with childhood and ending with his mission aboard the space shuttle Columbia.

Matching Assessment for Extension Menus 6-6: New Frontiers

<p>1. <u>Chart</u></p> <p><input type="checkbox"/> Follows Chart Criteria Card</p> <p><input type="checkbox"/> Clearly lists at least 5 similarities and 5 differences between the earth and Mars</p> <p><input type="checkbox"/> Two or more sources cited at the bottom of the chart</p> <p><input type="checkbox"/> On a separate piece of paper- draw several conclusions (based on your chart) about the requirements for human to inhabit Mars</p> <p><input type="checkbox"/> Chart includes color illustration</p> <p>Total: _____</p>	<p>2. <u>Radio Report</u></p> <p><input type="checkbox"/> Follows Radio Report Criteria Card</p> <p><input type="checkbox"/> Lasts between 3-5 minutes</p> <p><input type="checkbox"/> Clearly includes 5 or more facts from the story</p> <p><input type="checkbox"/> Report ends with conclusion that you have drawn (based on facts from the story) of what may have happened to the captain of <i>Lotta Fun</i></p> <p><input type="checkbox"/> Report practiced several times before being recorded or given in front of an audience (class)</p> <p>Total: _____</p>	<p>3. <u>Timeline</u></p> <p><input type="checkbox"/> Follows Timeline Criteria Card</p> <p><input type="checkbox"/> Includes at least seven facts/event from the story (written with detail)</p> <p><input type="checkbox"/> Each fact/event includes a date and time</p> <p><input type="checkbox"/> Each event/fact includes a colored illustration</p> <p><input type="checkbox"/> The events/facts must demonstrate a cause and effect relationship between them</p> <p>Total: _____</p>
<p>4. <u>Journal Entry</u></p> <p><input type="checkbox"/> Follows Journal Criteria Card</p> <p><input type="checkbox"/> Includes at least three journal entries (each a minimum of 1 page, hand written)</p> <p><input type="checkbox"/> Each entry describes and explains your observations using rich descriptive language</p> <p><input type="checkbox"/> Analyze your observations and draw conclusions (one per entry)</p> <p><input type="checkbox"/> Includes at least 2 scientific facts per entry</p> <p>Total: _____</p>	<p>5. <u>Poem</u></p> <p><input type="checkbox"/> Poem is copied neatly; illustration is neat, colorful and attractive</p> <p><input type="checkbox"/> Poem is copied accurately with no errors</p> <p><input type="checkbox"/> Illustration matches the content of the poem</p> <p><input type="checkbox"/> Poem is recited from memory with expression</p> <p><input type="checkbox"/> Clearly explain the science behind the phases of the moon (following the recitation of poem)</p> <p>Total: _____</p>	<p>6. <u>Game</u></p> <p><input type="checkbox"/> Follows Game Criteria Card</p> <p><input type="checkbox"/> Game includes at least 20 questions</p> <p><input type="checkbox"/> Questions include information on Mars, Sojourner and Pathfinder</p> <p><input type="checkbox"/> At least 5 questions contain elements of cause and effect</p> <p><input type="checkbox"/> Written directions are clear and explicit</p> <p>Total: _____</p>
<p>7. <u>Travel Brochure</u></p> <p><input type="checkbox"/> Follows Brochure Criteria Card</p> <p><input type="checkbox"/> Brochure is logically organized, includes title and subtitles</p> <p><input type="checkbox"/> Includes detailed descriptions of at least 5 things a person might see or experience on their adventure</p> <p><input type="checkbox"/> At least 7 facts are included (from at least 2 different sources)</p> <p><input type="checkbox"/> At least 3 illustrations or pictures</p> <p>Total: _____</p>	<p>8. <u>Map</u></p> <p><input type="checkbox"/> Follows Map Criteria Card</p> <p><input type="checkbox"/> List at least 2 different internet resources that you used to gathered information/data</p> <p><input type="checkbox"/> Map is in color and on a sheet of paper 11"x14" or larger</p> <p><input type="checkbox"/> Map includes detailed legend</p> <p><input type="checkbox"/> Accurately includes features such as ocean depths and canyons</p> <p>Total: _____</p>	<p>9. <u>Poster</u></p> <p><input type="checkbox"/> Follows Poster Criteria Card</p> <p><input type="checkbox"/> Poster is divided in half (one side cause, the other effect)</p> <p><input type="checkbox"/> Starts with childhood and ends with Franklin R. Chang-Diaz's flight on Discovery</p> <p><input type="checkbox"/> Each cause and effect include a brief yet thorough description (at least five of each)</p> <p><input type="checkbox"/> Includes at least one colored illustration</p> <p>Total: _____</p>

Name _____

Date _____

Choice # _____

Points earned _____

Choice # _____

Points earned _____

Choice # _____

Points earned _____

Total points:

Points earned _____

Grade _____

Thematic Matrix: Grade 6 Theme 6: New Frontiers

Essential Questions:

1. Why do people seek out challenges?
2. What is the value of exploring the unknown?
3. How might advances in science and technology affect society?

← Elements of the essential understanding →

Topic of Study	Context & Setting (Place & Time)	Dreams & Goals	Actions	Outcomes
The Adventures of Sojourner				
Franklin R. Chang-Diaz				
Beneath Blue Waters				
Out There				

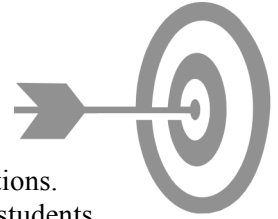
Enduring Understanding:

Name _____

Due Date _____

Target
Page

HM Theme 6-6: New Frontiers



Cross-Curricular Goals or Standards:

CA Science Standards Grade Six

7. Scientific progress is made by asking meaningful questions and conducting careful investigations.

As a basis for understanding this concept and addressing the concept in the other three strands, students should develop their own questions and perform investigations. Students will: 7a. Develop a hypothesis 7.b Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes and binoculars) to perform tests, collect data and display data.

<p>Essential Understandings:</p> <ol style="list-style-type: none">1. Scientific discovery requires determination, knowledge and a willingness to face challenges.2. A passion for the unknown and exploration can lead to scientific discovery.3. Cooperation and determination can lead to personal growth as well as scientific discovery.	<p>Essential Questions:</p> <ol style="list-style-type: none">1. Why do people seek out challenges?2. What is the value of exploring the unknown?3. How might advances in science and technology affect society?
<p>Students will know:</p> <ul style="list-style-type: none">• A deeper understanding of the science behind science and space exploration• Curiosity and a willingness to look beyond accepted knowledge are important in science	<p>Students will be able to:</p> <ul style="list-style-type: none">• Identify Cause and Effect• Compare and Contrast information located within a selection• Categorize and classify information• Draw conclusions