

# Grade 4 Social Studies

## Module 2

### The New Nation's Westward Expansion (1790-1830)

## Module Goal

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The goal of this module is to provide information that will help educators increase their knowledge of grade-appropriate social studies concepts, knowledge, and skills to support effective planning or modification of their existing social studies instructional units for students with significant cognitive disabilities. The module includes important concepts, knowledge, and skills for the following instructional unit:

- The New Nation’s Westward Expansion (1790 – 1830)

## Module Objectives

The content module supports educators’ planning and implementation of instructional units in social studies by:

- Developing an understanding of the concepts and vocabulary that interconnect with information in the module unit.
- Learning instructional strategies that support teaching students the concepts, knowledge, and skills related to the module unit.
- Discovering ways to transfer and generalize the content, knowledge, and skills to future school, community, and work environments.

The module provides an overview of the social studies concepts, content, and vocabulary related to The New Nation’s Westward Expansion (1790 – 1830) and provides suggested teaching strategies and ways to support transference and generalization of the concepts, knowledge, and skills. The module does not include lesson plans and is not a comprehensive instructional unit. Rather, the module provides information for educators to use when developing instructional units and lesson plans.

The module organizes the information using the following sections:

- I. Social Studies Academic Standards and Related Alternate Assessment Targets and Underlying Concepts;
- II. Connecting Concepts;
- III. Vocabulary and Background Knowledge information, including ideas to teach vocabulary;
- IV. Overview of Unit’s Content;
- V. Universal Design for Learning (UDL) Suggestions;
- VI. Transfer and Generalize Concepts, Knowledge, and Skills;
- VII. Concepts and Vocabulary Multi-Age Planning: Grades Three through Five; and
- VIII. Tactile Maps and Graphics.

## Section I

### Social Studies Academic Standards and Related Alternate Assessment Targets and Underlying Concepts

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It is important to know the expectations for each unit when planning for instruction. The first step in the planning process is to become familiar with the identified academic standards and related Alternate Assessment Targets (AATs) and Underlying Concepts (UCs) covered in the module. The AATs are specific statements of knowledge and skills linked to the grade-specific social studies academic standards. The

UCs are basic key ideas or concepts linked to specific AATs. UCs are a basis for developing a more complex understanding of the knowledge and skills represented in the AAT and should not be taught in isolation. It is important to provide instruction on the AAT along with the UC in order to move toward acquisition of the same concepts, knowledge, and skills.

Table 1 includes the grade 4 academic standards and related AATs and UCs addressed by this module. While only the academic standards targeted for the Tennessee Comprehensive Assessment Program/Alternate (TCAP/Alt) are included, instruction on additional standards will aid in student understanding. Standards that are not included still represent important content for students to master. Therefore, the AATs and UCs included in the table do not cover all of the concepts that can be taught to support progress and understanding aligned to the standards.

The Tennessee Social Studies Academic Standards include the following codes:

- |               |                |
|---------------|----------------|
| C – Civics    | H – History    |
| E – Economics | P – People     |
| G – Geography | TN – Tennessee |

**Table 1. Social Studies Academic Standards and Related AATs and UCs <sup>1</sup>**

| Academic Standards  | Alternate Assessment Targets (AAT)  | Underlying Concepts (UC)  |
|---|---|---|
| <b>The New Nation’s Westward Expansion (1790 – 1830)</b>  |   |   |
| <p><b>4.45</b> Label and locate the Territory South of the River Ohio (Southwest Territory) on a map, identify its leaders, and explain how it was the first step to statehood, including William Blount, John Sevier, Rocky Mount, and the Treaty of Holston. (GPTN)</p>     | <p>Identify the states of the Southwest Territory (Mississippi, Kentucky, Tennessee, and Alabama) on a historical map.</p>                    | <p>Identify the location of Tennessee on a historical map.</p>                          |
| <p><b>4.47</b> Detail the events, struggles, success and main people of the exploration of the Louisiana Purchase and map the routes across the continent, including the Corps of Discovery, Lewis and Clark, Sacagawea, Zebulon Pike, and John Frémont. (GHP)</p>            | <p>Identify successes (i.e., finding natural resources, mapping new areas, establishing trade) related to exploration by Lewis and Clark.</p> | <p>Identify reasons why people explored the western United States.</p>                  |
| <p><b>4.48</b> Use concrete words, phrases, and sensory details to convey the experiences of settlers on the overland trails to the West, including location of the routes; purpose of the journeys; the influence of the terrain, rivers, vegetation, and climate. (CEG)</p> | <p>Identify ways geography and climate affected the experience of settlers on the overland trails to the West.</p>                            | <p>Identify how travelers adapt to conditions (e.g., weather) while traveling west.</p> |

| Academic Standards   | Alternate Assessment Targets (AAT)  | Underlying Concepts (UC)   |
|--|---|--|
| <p><b>4.56</b> Analyze the impact of the Indian Removal Act on the Cherokee, detail their resistance to being removed, and map the movement west, including: (C, G, H, TN)<br/>Treaty of New Echota<br/>John Ross<br/>Trail of Tears</p> | <p>Identify how the Indian Removal Act affected the American Indians.</p> | <p>Identify on a historical map where the Cherokee people lived before and after the Indian Removal Act.</p> |

<sup>1</sup> Instruction is not intended to be limited to the concepts, knowledge, and skills represented by the AATs and UCs listed in Table 1.

## Section II

### Connecting Concepts

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Grade-level social studies content includes Connecting Concepts, concepts that connect information between different people, places, events, and time periods. Helping students make connections between these types of concepts and new content information supports comprehension of the concepts, knowledge, and skills as well as transference and generalization (see Section VI: Transfer and Generalize Concepts, Knowledge, and Skills for more information). Connecting Concepts that are specific to this module connect to content within the module as well as across modules and across grades.

A Connecting Concept is a common link between multiple standards and units of study. The Connecting Concepts, by being revisited and linked to multiple units of study, become a strong foundation of understanding and support students in learning new concepts. For example, understanding reasons and challenges of exploring and moving to new places is a Connecting Concept that applies to early European explorers, American colonists, westward explorers, etc. Some Connecting Concepts may apply across multiple content areas and instructional emphases (e.g., the main idea of a story might be cooperating with others).

#### Teaching Connecting Concepts

The following strategies, pulled from the principles of UDL (CAST, 2011), are ways in which to teach Connecting Concepts to help students understand the concepts and make connections between different curricular content. During instruction, highlight:

- patterns (e.g., When students are learning about an explorer, remind them of the common reasons and challenges that other explorers encounter.),
- critical features (e.g., Provide pictures representing information on key explorations.),
- big ideas (e.g., People moving west affected the American Indians already living there.), and
- relationships (e.g., Make the connection between Lewis and Clark’s success in finding natural resources and students finding something new in a park, the classroom, or a book.).

For example, when working with historical political boundaries maps, emphasize the common features among different maps. In addition, build connections between familiar and new information (e.g.,

connect a map of Tennessee showing the students' location to a map displaying the Southwest Territory).

The following are **Connecting Concepts** for this Content Module: The New Nation's Westward Expansion (to 1790-1830).

**Students understand:**

- how to think spatially and use a variety of maps and map tools (e.g., compass rose, legend)
- how to interpret a variety of information (e.g., resources, economics, cultural, historical) on maps
- how to interpret physical and political features on a variety of maps
- reasons and challenges of exploring and moving to new places
- ways America grew and developed over time
- how expansion of the settlers in America affected American Indians
- importance of people's actions in history
- how geography and climate affect exploration
- types of goods and services
- how goods and services are exchanged
- the importance of trading/exchanging goods and services
- benefits, reasons, and ways groups cooperate

**Connecting Concept Resources:**

Grant Wiggins talks about "big ideas" in this article.

[http://www.authenticeducation.org/ae\\_bigideas/article.lasso?artid=99](http://www.authenticeducation.org/ae_bigideas/article.lasso?artid=99)

This site provides examples and printable versions of graphic organizers for social studies that can be modified to meet students' needs.

<https://walch.com/samplepages/050078.pdf>

National Geographic has a variety of map skills for elementary students that help with spatial thinking.

<http://education.nationalgeographic.org/map-skills-elementary-students/>

Interactive Sites for Education provides interactive map activities to help students understand how to read maps. <http://interactivesites.weebly.com/maps--direction.html>

Econedlink site has a goods and services lesson with drag-and-drop activities.

<http://www.econedlink.org/teacher-lesson/642/Goods-Services>

Teaching History has a video explaining historical thinking to teachers.

<http://teachinghistory.org/historical-thinking-intro>

The American Historical Association shares the "five C's of historical thinking."

<https://www.historians.org/publications-and-directories/perspectives-on-history/january-2007/what-does-it-mean-to-think-historically>

## Section III

### Vocabulary and Background Knowledge

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Vocabulary is critical to building an understanding of social studies concepts, knowledge, and skills. The vocabulary words that students gain through experiences provide ways for students to comprehend new information (Sprenger, 2013). Students can better understand new vocabulary when they have some background knowledge to which they can make connections. In addition, learning new vocabulary increases students' background knowledge. Therefore, it is important to teach vocabulary purposely when introducing new concepts, knowledge, or skills (e.g., identifying exploration routes on a map) and in the context of the specific content (e.g., teach the term "territory" in the context of using a political boundary map).

This module includes two types of vocabulary words, both equally important to teach. The first type, **general vocabulary words**, labels groups of words that address different people, places, events, and time periods. For example, understanding the meaning of the word "natural resource" helps students to connect many different natural resources, where they are found, how they are traded, exported, etc. The second type of vocabulary word, **specific content words**, represents groups of words that address a specific person, group of people, place, event, or time period. Specific content words are typically proper nouns, such as Sacagawea, and connect to general words. Providing instruction on general words provides background knowledge when introducing corresponding or related specific words.

#### Key Vocabulary for Instructional Units

Table 2 and

Table 3 contain lists of key general vocabulary words and specific content words that are important for the units in this module. Each general vocabulary word should be taught to the student using a student-friendly description of what the word means, an example of the word, and a historical example, as appropriate.

Teach the specific content vocabulary using a student-friendly description of the word meaning and a possible connection to a general vocabulary word. Do not teach memorization of vocabulary words; instead place emphasis on understanding the word. For example, a student should be able to give examples of different climates rather than defining the term, climate.

**Table 2. General Vocabulary Words**

**General Vocabulary** – words that generalize to different people, places, events, and time periods.

Describe the word and provide examples (e.g., Settler is someone who moves to a new place and plans to stay there. A family who moved to Tennessee and plans to stay there have settled in Tennessee.).

|               |                    |             |
|---------------|--------------------|-------------|
| • act         | • geography        | • services  |
| • adapt       | • goods            | • settler   |
| • benefit     | • historical map   | • southwest |
| • climate     | • natural resource | • statehood |
| • conditions  | • overland trail   | • struggle  |
| • cooperation | • politician       | • success   |
| • exploration | • rights           | • territory |
| • explorer    | • route            | • trade     |

**Table 3. Specific Content Words**

**Specific Content Words** – words that are specific to content (e.g., person, place, event).

Describe the word and make the connection to a Connecting Concept when possible (e.g., Trail of Tears is the route along which the United States government forced several tribes of American Indians to move from their homelands to the west. It shows how the expansion of the settlers in America affected American Indians.).

|                      |                        |
|----------------------|------------------------|
| • Alabama            | • North America        |
| • American Indians   | • Pacific Ocean        |
| • Cherokee           | • Rocky Mount          |
| • Corps of Discovery | • Sacagawea            |
| • Indian Removal Act | • Southwest Territory  |
| • John Frémont       | • Tennessee            |
| • John Ross          | • Trail of Tears       |
| • John Sevier        | • Treaty of Holston    |
| • Kentucky           | • Treaty of New Echota |
| • Louisiana Purchase | • William Blount       |
| • Meriwether Lewis   | • Zebulon Pike         |
| • Mississippi        | • William Clark        |
| • Missouri River     |                        |

### Ideas to Support Vocabulary Learning

Table 4 includes ideas and examples for teaching vocabulary in a way to build conceptual understanding of the words.

**Table 4. Ideas to Teach Vocabulary Effectively (Marzano, 2004)<sup>1</sup>**

| Ideas   | Examples  |
|---|---|
| Explain, describe, and/or give examples of the vocabulary word rather than formal definitions.  | Describe and provide an example of benefit, “A benefit is something that helps you or someone else. Having a playground at school is a benefit.”  |
| Have students restate the vocabulary word in their own words. Take this opportunity to help students connect new vocabulary, especially general vocabulary, to prior knowledge. | Have students tell what a politician does. Support students by providing pictures, asking questions that can be answered with yes/no responses, one word responses, phrases, and/or with use of an alternative and augmentative communication (AAC) system.         |
| Have students represent vocabulary words in a variety of ways (e.g., pictures, symbols, graphic organizers, or pictographs).  | Have students complete graphic organizers by adding words, pictures, or objects that describe or provide examples of the word. Provide support as needed (e.g., help from peer or adult, viewing model, using AAC, etc.). (See Figure 1. Example graphic organizer) |

| Ideas   | Examples  |
|---|---|
| <p>Provide multiple exposures to vocabulary words in a variety of ways. This does not suggest mass trials, rather distributed trials in different ways or contexts. Reference <a href="http://projectlearn.net.org/tutorials/learning_trials.html">http://projectlearn.net.org/tutorials/learning_trials.html</a> for information on learning trials.</p> | <ul style="list-style-type: none"> <li>• Expose students to words by incorporating vocabulary into daily activities such as talking about the climate and geography and how it affects what we do (e.g., The spring weather conditions or climate is rainy in the South so an umbrella may be needed.).</li> <li>• Read books or watch videos related to the climate and geography (e.g., <a href="https://www.youtube.com/watch?v=VHgyOa70Q7Y">https://www.youtube.com/watch?v=VHgyOa70Q7Y</a>).</li> <li>• Have students match pictures of clothing to appropriate climate on a climate map.</li> <li>• Discuss the climate and geography of local places and compare to places that Lewis and Clark explored.</li> </ul> |
| <p>Ask students to discuss the vocabulary words with each other.</p>  | <ul style="list-style-type: none"> <li>• Have students use their preferred mode of communication to share their favorite word and explain why with each other.</li> <li>• Have students share representations (e.g., pictures) of their favorite content-related word with each other.</li> </ul>   |
| <p>Play vocabulary word games with students.</p>  | <ul style="list-style-type: none"> <li>• Have students sort vocabulary words into person, place, or thing.</li> <li>• Have students match a description or representative picture to a word.</li> <li>• Have students select the word using their communication system (e.g., dual switch).</li> </ul>  |
| <p>Have students watch a dramatization or have them act out the vocabulary term.</p>  | <p>Have students act out exploring, having success, experiencing challenges, trading, etc.</p>  |

<sup>1</sup> Refer to Section V, Universal Design for Learning (UDL) Suggestions for additional instructional strategies.

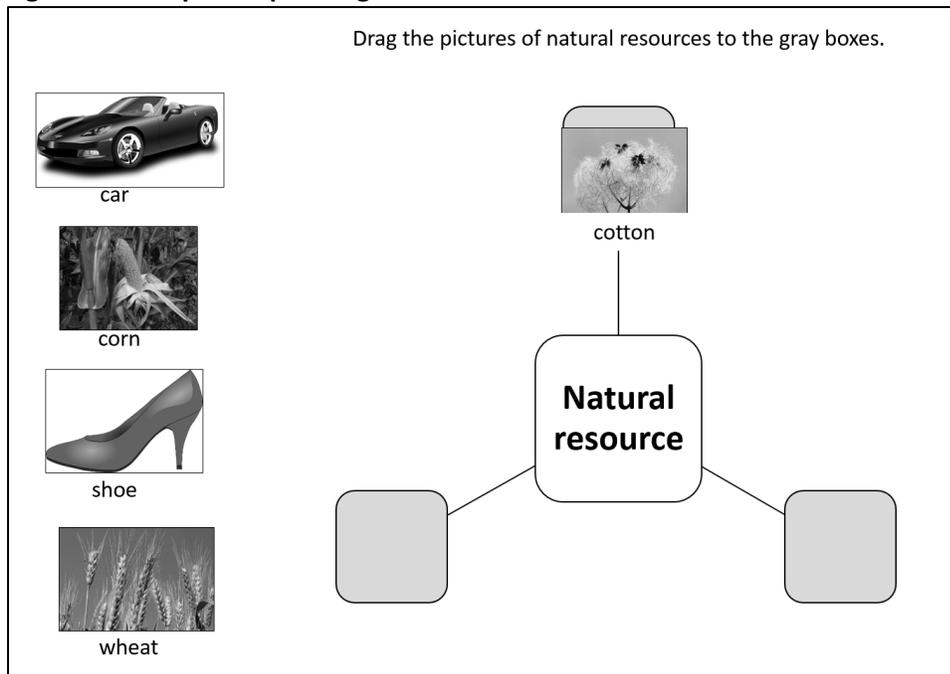
### Vocabulary Example

To build an understanding of the word, “natural resources,” have students complete a graphic organizer. Educators may need to support, modify, or adapt steps as needed for individual students. For example, a student may use pictures or pictures mounted on thick cardboard to ease manipulation; another student may use objects; and another student may complete a digital version. See Figure 1 for an example created in a slide show that allows the student to drag and drop pictures of natural resources to cells connected to the term. Two National Center and State Collaborative (NCSC) resources are available and may prove helpful for vocabulary instruction:

- Use systematic instruction as described in the NCSC Instructional Guide. <https://wiki.ncscpartners.org>

- Reference ideas in the NCSC Vocabulary and Acquisition Content Module.  
<https://wiki.ncscpartners.org>

**Figure 1. Example Graphic Organizer**



### **Vocabulary Resources:**

Vocabulary.com provides explanations of words using real-world examples. Once signed in, an educator can create word lists for students. <http://www.vocabulary.com/>

Text Project provides Word Pictures that are free for educators to use. It includes word pictures for core vocabulary and various content areas including science and social studies. This link will take you to the Word Pictures page where you can select the category of words you want to use.

<http://textproject.org/classroom-materials/textproject-word-pictures/>

Education Place provides a variety of graphic organizers to be used for vocabulary instruction that are free to print and copy. <http://www.eduplace.com/graphicorganizer/index.jsp>

Directions and link to creating an online memory game that can be used for vocabulary or concepts.

[https://www.youtube.com/watch?v=XwNAX26J\\_oQ](https://www.youtube.com/watch?v=XwNAX26J_oQ) and <http://matchthememory.com/>

## **Section IV**

### **Overview of Unit's Content**

This section of the module contains additional content and references to support educators' understanding and instruction of the instructional units. The information reflects important content to address the AATs and to build students' knowledge, skills, and abilities; however, it is not exhaustive and should be expanded upon as needed.

**Unit – The New Nation’s Westward Expansion (1790 – 1830):** *Students trace the colonization, immigration, and settlement patterns of the American people from 1789 to the mid-1800s.*

**Content:**

Southwest Territory

- Southwest Territory and the states it encompassed
- Leaders and concepts of the Southwest Territory
  - William Blount
  - John Sevier
  - Rocky Mount
  - Treaty of Holston
- Location of states of the Southwest Territory on a historical map

Louisiana Purchase

- Events, struggles, and successes of the exploration of the Louisiana Purchase
- Key people and groups of people in the exploration of the Louisiana Purchase
  - Corps of Discovery
  - Meriwether Lewis
  - William Clark
  - Sacagawea
  - Zebulon Pike
  - John Frémont
- Maps of routes Lewis and Clark traveled across the continent

Settlers on the overland trails

- Reasons that people explored the western United States
- Experiences of settlers traveling on the overland trails to the West
- The effect of geography and climate on the traveling settlers and how they adapted

Indian Removal Act and the Cherokee

- The Indian Removal Act and the Cherokee, including
  - Treaty of New Echota
  - John Ross
  - Trail of Tears
- The routes on map indicating the Trail of Tears the Cherokee followed as they moved west

**Unit Content Resources:**

Maps and Map Skills:

- PBS provides an interactive map that explores territories, routes, native lands, etc. from 1790 to 1850. <http://www.pbslearningmedia.org/resource/rttt12.soc.ush.westexp/westward-expansion-17901850/>
- The National Parks Service has story maps that show the flora, fauna, geology, and historic sites that Lewis and Clark discovered. <https://www.nps.gov/lecl/planyourvisit/maps.htm>
- This site has a simple map showing the Cherokee Trail of Tears routes. <http://fivecivilizedtribes.weebly.com/gallery.html>

#### Southwest Territory:

- Tennessee4me has information on the Southwest Territory and a few pictures.  
[http://www.tn4me.org/article.cfm/era\\_id/3/major\\_id/26/minor\\_id/82/a\\_id/266](http://www.tn4me.org/article.cfm/era_id/3/major_id/26/minor_id/82/a_id/266)
- The Tennessee Encyclopedia of History and Culture provides information on the Southwest Territory. <https://tennesseeencyclopedia.net/entry.php?rec=1236>
- Papers of the War Department 1784 to 1800 has links to original documents and a short summary of each.  
<http://wardepartmentpapers.org/searchresults.php?searchClass=fulltextSearch&fulltextQuery=Southwest+Territory>
- Teach Tennessee History provides information on Treaty of Holston, William Blount, and others.  
[http://www.teachtnhistory.org/index.cfm/m/104/Content\\_Essays](http://www.teachtnhistory.org/index.cfm/m/104/Content_Essays)

#### Louisiana Purchase and Explorers:

- Scholastic provides a lesson plan on Lewis and Clark that includes a hands-on activity and recordings.  
<http://www.scholastic.com/teachers/lesson-plan/lewis-clark-grades-3-5>
- Ducksters has information on Westward Expansion and the Louisiana Purchase.  
[http://www.ducksters.com/history/westward\\_expansion/louisiana\\_purchase.php](http://www.ducksters.com/history/westward_expansion/louisiana_purchase.php)
- This YouTube video tells the story of Lewis and Clark, showing the challenges and successes of their exploration. <https://www.youtube.com/watch?v=BUtnlh26aOY>

#### Settlers on Overland Trails to the West:

- Eduplace has information regarding settlers on the Great Plains in the early 1800s.  
[https://www.eduplace.com/ss/socsci/books/content/ilessons/52/ils\\_gr5c\\_u4\\_c07\\_l2.pdf](https://www.eduplace.com/ss/socsci/books/content/ilessons/52/ils_gr5c_u4_c07_l2.pdf)
- This site provides information on Pioneer Life.  
[http://www.factsfornow.scholastic.com/article?product\\_id=nbk&type=0ta&uid=10676833&id=a2023250-h](http://www.factsfornow.scholastic.com/article?product_id=nbk&type=0ta&uid=10676833&id=a2023250-h)
- Encyclopedia.com has information on life on the overland trails from the 1830s to the 1860s.  
[http://www.encyclopedia.com/topic/Overland\\_Trail.aspx](http://www.encyclopedia.com/topic/Overland_Trail.aspx)

#### Trail of Tears:

- Ducksters has information on American Indians and Trail of Tears.  
[http://www.ducksters.com/history/native\\_americans/trail\\_of\\_tears.php](http://www.ducksters.com/history/native_americans/trail_of_tears.php)
- This site provides information on the Cherokee tribe and the Trail of Tears.  
<http://www.warpaths2peacepipes.com/history-of-native-americans/trail-of-tears.htm>

## Section V

### Universal Design for Learning (UDL) Suggestions

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The three principles of UDL guide development of instruction, instructional materials, and assessments to provide the widest range of students with access to learning. Students with significant cognitive disabilities, especially students with visual and/or hearing impairments and students with complex communication needs, require additional scaffolds, adaptations, and modifications to access content and support learning. The three principles of UDL establish a framework for providing these. UDL provides guiding principles to create instructional materials and activities in a flexible manner to address the needs of different types of learners. Additionally, the flexibility allows for further individualization. Table 5 provides strategies for the UDL Principle I, **Multiple Means of Representation**: presenting

information in a variety of ways to address the needs of different types of learners. Table 6 provides strategies for the UDL Principle II, **Multiple Means of Action and Expression**: providing a variety of ways for students to interact with the instructional materials and to demonstrate understanding. Table 7 provides strategies for the UDL Principle III, **Multiple Means of Engagement**: providing a variety of ways to engage and motivate students to learn.

These strategies can assist all students in understanding the basic concepts. Some of the examples include adaptation ideas for students with vision, hearing, and/or physical limitations. Each example has a code to indicate when it includes specific adaptation ideas for these needs:

**V** = visually impaired (low vision, blind, or deaf-blind)

**H** = hearing impaired (deaf, hard of hearing, or deaf-blind)

**P** = physical disability (limited use of hands)

**Table 5. Instructional strategy ideas using the UDL Principle: Multiple Means of Representation**

| <b>Multiple Means of Representation</b>  |   |
|--|---|
| <b>Strategies</b>  | <b>Examples</b>   |
| Introduce information through a multi-sensory approach (e.g., auditory, visual, tactile).          | <p>Create a tactile map (see Section VIII. Tactile Maps and Graphics and view this video clip — <a href="https://www.youtube.com/watch?v=kpvzEqioXbw&amp;index=4&amp;list=PLK-fetQX3thAmezvcM_elzpkHN6kKDeQo">https://www.youtube.com/watch?v=kpvzEqioXbw&amp;index=4&amp;list=PLK-fetQX3thAmezvcM_elzpkHN6kKDeQo</a>) showing the historical Southwest Territory. <b>V</b></p> <p>Play sounds of and present pictures or representative textures of animals that Lewis and Clark discovered (e.g., mountain lion <a href="https://www.youtube.com/watch?v=e3TP13W8Qew">https://www.youtube.com/watch?v=e3TP13W8Qew</a>, American bison <a href="https://www.youtube.com/watch?v=WC5jzOBt3JE">https://www.youtube.com/watch?v=WC5jzOBt3JE</a>, prairie dog <a href="https://www.youtube.com/watch?v=sEvNg2WiRQI">https://www.youtube.com/watch?v=sEvNg2WiRQI</a>). <b>V</b></p> |
| Model content through pictures, dramatization, videos, etc.  | Watch a video about Lewis and Clark, showing the challenges and successes of their exploration. <a href="https://www.youtube.com/watch?v=BUtnlh26aOY">https://www.youtube.com/watch?v=BUtnlh26aOY</a>   |
| Present information using modified graphic organizers (e.g., simplified organizers with pictures). | <p>Use a KWHL to help students make connections between what they already <b>Know</b>, <b>What</b> they want to know, <b>How</b> they can find out, and finally, what they <b>Learn</b>. (slide show explaining the use of the KWHL chart and how it was made accessible for students with significant cognitive disabilities: <a href="http://www.cehd.umn.edu/nceo/teleconferences/tele14/CourtadeFlowers.pdf">http://www.cehd.umn.edu/nceo/teleconferences/tele14/CourtadeFlowers.pdf</a>). <b>V/H/P</b></p> <p>Have students complete a cause-and-effect graphic organizer to show how the Indian Removal Act affected the American Indians.</p>  |
| Provide appropriate and accessible text on the content for students to listen to or read.          | <p>Paraphrase information from a web page (e.g., <a href="http://textcompactor.com/">http://textcompactor.com/</a>).</p> <p>Provide digital text in which pages can be turned using an adapted switch. <b>P</b></p>   |

|                                |  |
|--------------------------------|--|
| Teach information using songs. | <p>Create a song or cheer for a westward explorer showing struggles and/or accomplishments.</p> <p>Play and sing the youtube Lewis and Clark: Explorer Style (Gangnam Style Parody) — <a href="https://www.youtube.com/watch?v=NB1GQRVG9Fc">https://www.youtube.com/watch?v=NB1GQRVG9Fc</a>.</p> |
|--------------------------------|--|

**Table 6. Instructional strategy ideas using the UDL Principle: Multiple Means of Action and Expression**

| <b>Multiple Means of Action and Expression</b>   |  |
|--|--|
| <b>Strategies</b>  | <b>Examples</b>  |
| Use assistive technology to allow students to interact with the instructional materials and content. | <p>Create an activity that allows a student to activate a slide presentation such as Microsoft PowerPoint using a single-switch. (e.g., <a href="http://www.ohioslha.org/pdf/Convention/2008%20Handouts/CL1-Martin-Browne.pdf">http://www.ohioslha.org/pdf/Convention/2008%20Handouts/CL1-Martin-Browne.pdf</a>). <b>P</b></p> <p>Have students access the computer using an adaptive keyboard (e.g., Intellikeys, <a href="https://www.ablenetinc.com/intellikeys-usb">https://www.ablenetinc.com/intellikeys-usb</a>; Bigkeys, <a href="http://www.bigkeys.com/">http://www.bigkeys.com/</a>; low vision keyboard; etc.). <b>P/V</b></p> |
| Present instructional materials in a manner that provides optimal access.                            | <p>Place printed text and pictures on a slant board. <b>V/P</b></p> <p>Place pictures of different geography and climate conditions that westward settlers would have faced on small three-dimensional blocks and then have students place on a map on top of corresponding pictures. <b>P</b></p> <p>When there is not an established sign for a person, place, or event, finger spell it and then create a sign that is meaningful to students. Use the sign with consistency. <b>H</b></p>  |
| Provide voice output devices for students to select the correct answer.                              | <p>Record yes and no on a dual voice output switch and ask students yes and no questions about content. <b>V/P</b></p> <p>Have students use three switches with generic labels (e.g., a, b, c; red, blue, green; or three different textures) to which they listen and then select the correct answer. <b>V/P</b></p>  |
| Provide simulation activities.   | <p>Have students participate in a living museum (e.g., <a href="http://www.carolhurst.com/subjects/history/livinghistory.html">http://www.carolhurst.com/subjects/history/livinghistory.html</a>). Provide an interpreter. <b>H</b> Pre-record the information and have students use a switch or other assistive technology device to play the recording for the audience. <b>P</b></p>  |
| Create a picture, three-dimensional model, or digital graphic organizer.                             | <p>Have students create and explore a tactile timeline for westward expansion between 1790 and 1830 (e.g., adapt ideas from <a href="http://www.perkinselearning.org/activity-bank/tactile-timelines">http://www.perkinselearning.org/activity-bank/tactile-timelines</a>) and refer to Section VIII. Tactile Maps and Graphics. <b>V</b></p>  |

**Table 7. Instructional strategy ideas using the UDL Principle: Multiple Means of Engagement**

| <b>Multiple Means of Engagement</b>                               |  |
|---|--|
| <b>Strategies</b>   | <b>Examples</b>  |
| Provide a schedule and visual timer.                              | Have students use a mini schedule or a first-then schedule for each content instructional session. Provide a schedule with tangible symbols. <b>V/P</b><br>Have students select the next activity on the schedule and set the timer or visual timer to indicate how long the student has before a break. |
| Vary the challenge and amount of information presented at a time. | Have students identify preparation and challenges to travel in different weather and to different places. Then talk about the challenges that settlers faced when traveling west.  |
| Make connections to topics or activities that are motivating.     | Share a prototype of a toy or game that children living in the historical time of the content standards would have experienced. Compare it to a similar modern toy or game.  |
| Allow choices as possible.  | Allows students to choose where to sit or a sensory item to hold during instruction.   |
| Provide opportunities to work collaboratively with peers.         | Provide opportunities for students to work in a general education classroom with peers when learning how to read historical maps or have peer tutors come into the special education classroom to work on a map project.   |
| Teach student self-regulation skills.                             | Provide students communication symbols to request a break or express feelings and model how to use them appropriately.<br>Develop and provide a cue to help students know when to request a break or an activity that allows them to stay calm.  |

**UDL Resources:**

The National Center on Universal Design for Learning has a plethora of information on UDL and examples and resources.

[www.udlcenter.org](http://www.udlcenter.org)

Symbaloo is a free online tool that allows an educator to create bookmarks using icons. It is easy to create and allows an educator to provide students links to sources of information that can be used for specific instructional units.

[www.symbaloo.com](http://www.symbaloo.com)

This site provides a brief description of Symbaloo and multiple ways to use the online tool.

<https://www.theedublogger.com/2014/04/09/11-ways-to-use-symbaloo-in-the-classroom/>

Perkins School for the Blind provides information on using tangible symbols to increase communication, create personal schedules, and provide choices.

<http://www.perkinselearning.org/videos/webcast/tangible-symbols>

Autism Classroom Resources provides information on first-then schedules.

<http://www.autismclassroomresources.com/visual-schedule-series-first-then/>

This site has instructions for several graphic organizers that can be used in social studies.

[file:///C:/Users/jclay/Downloads/Social\\_Studies\\_Graphic\\_Organizers.pdf](file:///C:/Users/jclay/Downloads/Social_Studies_Graphic_Organizers.pdf)

## Section VI

### Transfer and Generalize Concepts, Knowledge, and Skills

For learning to be meaningful for all students, including students with significant cognitive disabilities, it is important to intentionally make connections to future content, real-world application, and college and career readiness skills. For example, understanding how actions such as displacing the American Indians affected the American Indians can help students understand how their actions affect others.

Additionally, the instruction of social studies concepts, knowledge, and skills may be the catalyst to developing other areas such as needed communication skills, reading/listening comprehension, age-appropriate social skills, independent work behaviors, and skills in accessing support systems. Table 8 provides instructional ideas to help transfer and generalize concepts, knowledge, and skills and suggests opportunities to embed other skills into instruction.

**Table 8. Transfer and Generalization Ideas**

| Area                                       | Instruction  | Opportunity to Embed Skills  |
|--|--|--|
| <b>Communication</b>                       | While teaching vocabulary, make connections to real-life or future opportunities to use the words (e.g., understanding climate-related words and applying to appropriate dress). | Use the context of the content area instruction to increase language skills, work on articulation, or access alternative and augmentative communication (AAC) systems.   |
| <b>Reading and Listening Comprehension</b> | Provide information through reading books and articles on Lewis and Clark when working on reading/listening comprehension.   | Provide practice on communication skills when students are answering questions about the book or article. Provide practice on fine motor skills by having the student use a trackball to perform drag-and-drop functions on online activities. |
| <b>Age-Appropriate Social Skills</b>       | Make connections between the Connecting Concepts and real-life experiences showing how they can help students make decisions (e.g., the benefits of cooperation).                | Provide opportunities to work alongside same-age peers during social studies instruction to practice age-appropriate social skills.  |
| <b>Independent Work Behaviors</b>          | Encourage and reinforce independent completion of tasks to build independent work skills (e.g., completing a map activity).  | Use positive behavior supports to encourage and reinforce independent work skills during social studies activities.<br><br>Have students work on range of motion while working on independent tasks.   |

|  |   |  |
|--|---|--|
| <b>Skills in Accessing Support Systems</b> | Encourage students to ask for assistance appropriately from peers and adults when working on the content. | Use this time to have the student work on appropriate behavior and communication skills. |
|--|---|--|

## Section VII

### Concepts and Vocabulary Multi-Age Planning: Grades Three through Five

Multi-age planning requires that instructional decisions address the span of the grade levels of the students in the class. Recognizing the Connecting Concepts and the General and Specific Vocabulary that apply to multiple units within and across a grade span provides information to teach concepts that build a foundation for specific curricular content (i.e., specific people, places, events, and time periods). This section illustrates the grade-level **Connecting Concepts** and the **General and Specific Vocabulary** across grades. This view (see Tables Table 9 – Error! Reference source not found.) allows educators of multi-age and multi-grade classrooms to address the same or similar concepts and vocabulary to all students along with the specific curricular content.

**Table 9. Physical and Human Geography Concepts and Vocabulary**

| <b>Physical and Human Geography</b>  |  |   |
|--|--|---|
| <i>Geographical features and the spatial organization of people and places impact different stages in the history of culture and civilization. Maps and other representations of places and regions convey the influence of geography on economic development, discovery, and use of resources by various cultures and civilizations.</i>  |  |   |
| <b>Grades 3 – 5 AATs and UCs</b>   | <b>Concepts</b>  | <b>Vocabulary</b>   |
| <p><b>AAT:</b> Identify the relative position of two major cities or countries to each other using a compass rose (i.e., east, west, north, or south of the other). (3.3)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify a map legend or compass rose on a map.</li> </ul> <p><b>AAT:</b> Identify major physical features including mountains, plains, deserts, rivers, gulfs, or seas using information from a physical map of North America. (3.4)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify a map or diagram representing home, school, and community.</li> </ul> <p><b>AAT:</b> Identify Canada, Mexico, or the United States on a map of North America. (3.18)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify the location of the state of Tennessee on a map of the southeastern United States.</li> </ul> <p><b>AAT:</b> Use a map to find the location of major physical features (e.g., Mississippi River, Appalachian Mountains, and Gulf of Mexico) in the United States. (3.22)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify the location of a school, library or park using information from a community map.</li> </ul> <p><b>AAT:</b> Use a map to find the location of major physical features (e.g., Alps, Gibraltar, Arctic Ocean, and Mediterranean Sea) of the continent of Europe. (3.42)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify bodies of water on a world map.</li> </ul> | <p><b>Understand:</b></p> <ul style="list-style-type: none"> <li>• how to think spatially and use a variety of maps and map tools (e.g., compass rose, legend)</li> <li>• how to interpret physical and political features on a variety of maps</li> <li>• how to interpret a variety of information (e.g., resources, economics, cultural,</li> </ul> | <p><b>General:</b></p> <ul style="list-style-type: none"> <li>• adapt</li> <li>• bodies of water</li> <li>• climate</li> <li>• coast</li> <li>• community</li> <li>• compass rose</li> <li>• conditions</li> <li>• continent</li> <li>• country</li> <li>• desert</li> <li>• east</li> <li>• explorer</li> <li>• globe</li> <li>• gulf</li> <li>• lake</li> <li>• landforms</li> <li>• legend</li> <li>• map</li> <li>• mountain</li> <li>• north</li> <li>• ocean</li> </ul> |

|   |  |  |
|---|--|--|
| <p><b>AAT:</b> Use a map to identify major physical features (e.g., Nile River, Sahara, Kilimanjaro, Indian Ocean, and Cape of Good Hope) on the continent of Africa. (3.49)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify land masses on a world map.</li> </ul> <p><b>AAT:</b> Explain factors that helped people move and live west of the Appalachian Mountains (e.g., Daniel Boone and Wilderness Trail). (4.20)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify why it was important for long hunters to find a safe way across the Appalachian Mountains.</li> </ul> <p><b>AAT:</b> Identify ways geography and climate affected the experience of settlers on the overland trails to the West. (4.48)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify how travelers adapt to conditions (e.g., weather) while traveling West.</li> </ul> | <p>historical)<br/>using maps</p> <ul style="list-style-type: none"> <li>• how geography and climate affect exploration</li> </ul> | <ul style="list-style-type: none"> <li>• overland trail</li> <li>• physical feature</li> <li>• plain</li> <li>• river</li> <li>• route</li> <li>• scale</li> <li>• sea</li> <li>• south</li> <li>• west</li> </ul> <p><b>Specific:</b></p> <p>Grade 3:</p> <ul style="list-style-type: none"> <li>• Atlantic Ocean</li> <li>• Africa</li> <li>• Alps</li> <li>• Appalachian Mountains</li> <li>• Arctic Ocean</li> <li>• Canada</li> <li>• Cape of Good Hope</li> <li>• Europe</li> <li>• Gibraltar</li> <li>• Gulf of Mexico</li> <li>• Indian Ocean</li> <li>• Kilimanjaro</li> <li>• Mediterranean Sea</li> <li>• Mexico</li> <li>• Mississippi River</li> <li>• Nile River</li> <li>• North America</li> <li>• Pacific Ocean</li> <li>• Sahara</li> <li>• South America</li> <li>• United States</li> </ul> <p>Grade 4:</p> <ul style="list-style-type: none"> <li>• Appalachian Mountains</li> <li>• Daniel Boone</li> <li>• Wilderness Road/Trail</li> </ul> |
|---|--|--|

**Table 10. Culture Concepts and Vocabulary**

| <b>Culture</b>  |   |   |
|---|---|---|
| <i>Advancement and growth of human culture and civilization relates to development of literature, the arts, science, mathematics, and engineering in times past and present, and affects how people live in particular places.</i>  |   |   |
| <b>Grades 3 – 5</b>   | <b>Concepts</b>   | <b>Vocabulary</b>   |
| <p><b>AAT:</b> Use a graphic organizer to identify information about important inventors (e.g., Thomas Edison, Alexander Graham Bell, and George Washington Carver) including the effects on American society. (5.37)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify uses of important discoveries (e.g., light bulb, telephone, improving soils) in today’s world.</li> </ul> <p><b>AAT:</b> Identify important music events in Memphis. (5.64)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify an example of how Tennessee was important to popular music (e.g., Memphis as the birthplace of rock and roll music).</li> </ul> | <p><b>Understand:</b></p> <ul style="list-style-type: none"> <li>• the effect of new developments on people’s lives</li> <li>• how people and places can affect art, such as music</li> </ul> | <p><b>General:</b></p> <ul style="list-style-type: none"> <li>• invention</li> <li>• inventor</li> <li>• music</li> <li>• popular</li> <li>• rock and roll music</li> <li>• society</li> </ul> <p><b>Specific:</b><br/>Grade 5:</p> <ul style="list-style-type: none"> <li>• Alexander Graham Bell</li> <li>• Elvis Presley</li> <li>• George Washington Carver</li> <li>• Memphis</li> <li>• Tennessee</li> <li>• Thomas Edison</li> </ul> |

**Table 11. Economics Concepts and Vocabulary**

| <b>Economics</b>   |  |  |
|--|--|--|
| <i>Human and physical capital, natural resources, and technology on a local and global scale impact production, distribution, and consumption of goods and services. Decisions about how to use resources influence the welfare of individuals and societies.</i>  |  |  |
| <b>Grades 3 – 5</b>  | <b>Concepts</b>  | <b>Vocabulary</b>  |
| <p><b>AAT:</b> Identify differences in how goods (i.e., something that can be seen or touched, used or consumed; physical) and services (i.e., something that is provided or someone does for you; intangible) are exchanged. (3.26)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify examples of goods or services.</li> </ul> <p><b>AAT:</b> Answer explicit questions about the major imports or exports from a European country using a chart, graph or resource map. (3.44)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify an agricultural or manufactured product.</li> </ul> <p><b>AAT:</b> Answer explicit questions about the major imports or exports from an African country using a chart, graph or resource map. (3.52)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify a country’s natural resources using a resource map of an African country.</li> </ul> <p><b>AAT:</b> Identify reasons (e.g., trade, discoveries of riches) for early explorations of the Americas. (4.4)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify why people move to new places (e.g., jobs, family, schools).</li> </ul> <p><b>AAT:</b> Identify how cooperation benefited the colonists and the American Indians (e.g., fur trade and peace treaties). (4.10)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify benefits of people sharing (e.g., traditions and knowledge).</li> </ul> <p><b>AAT:</b> Identify successes (e.g., finding natural resources, mapping new areas, establishing trade) related to Lewis and Clark’s exploration. (4.47)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify reasons why people explored the western United States.</li> </ul> <p><b>AAT:</b> Contrast the economies of the North and South prior to the Civil War. (5.2)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify differences in the North’s and South’s resources in the early 1860s.</li> </ul> | <p><b>Understand:</b></p> <ul style="list-style-type: none"> <li>• basic economics</li> <li>• types of goods and services</li> <li>• the importance of trading/exchanging goods and services</li> <li>• how goods and services are exchanged</li> <li>• reasons for importing or exporting</li> <li>• types of imports and exports and the countries that exchange goods</li> <li>• reasons people explore</li> <li>• reasons and challenges of exploring and moving to new places</li> <li>• benefits, reasons, and ways groups cooperate</li> <li>• ways America grew and developed over time</li> <li>• types of economies and the effects of change in an economy (e.g., jobs, where people live, what they spend money on, etc.)</li> </ul> | <p><b>General:</b></p> <ul style="list-style-type: none"> <li>• barter</li> <li>• city</li> <li>• economy</li> <li>• exchange</li> <li>• exports</li> <li>• farm</li> <li>• goods</li> <li>• imports</li> <li>• industry</li> <li>• money</li> <li>• natural resource</li> <li>• services</li> <li>• suburbs</li> <li>• trade</li> <li>• treaties</li> <li>• war</li> </ul> <p><b>Specific:</b></p> <p>Grade 3:</p> <ul style="list-style-type: none"> <li>• Africa</li> <li>• Europe</li> </ul> <p>Grade 4:</p> <ul style="list-style-type: none"> <li>• American Indians</li> <li>• Meriwether Lewis</li> <li>• Missouri River</li> <li>• North America</li> <li>• Pacific Ocean</li> <li>• William Clark</li> </ul> <p>Grade 5:</p> <ul style="list-style-type: none"> <li>• Civil War</li> <li>• Great Depression</li> <li>• North (section during Civil War)</li> </ul> |

## Economics

*Human and physical capital, natural resources, and technology on a local and global scale impact production, distribution, and consumption of goods and services. Decisions about how to use resources influence the welfare of individuals and societies.*

**AAT:** Identify changes to the economy (e.g., from farming to industry and mechanization) in the South or in Tennessee following the Civil War. (5.27)

- **UC:** Identify an example of industry (e.g., Coca Cola bottling, mining on the Cumberland Plateau, or coal and iron processing) or agriculture in Tennessee.

**AAT:** Explain how changes in jobs (e.g., less jobs and different types of jobs) during the Great Depression affected how people lived. (5.49)

- **UC:** Identify the importance of jobs for individuals or a community.

**AAT:** Identify the key events during the Civil Rights Movement (i.e., actions of Dr. Martin Luther King, Jr. and Rosa Parks). (5.65)

- **UC:** Identify a struggle during the Civil Rights Movement (i.e., segregation on buses and use of public facilities).

- South (section during Civil War)
- World War II

**Table 12. Civics and Politics Concepts and Vocabulary**

| <b>Civics and Politics</b>   |   |  |
|--|---|--|
| <i>Responsible and effective citizens understand structures of power and authority and the principles they reflect; their role within a community, a nation, and the world; and develop civic efficacy. Connections to the past and the way governments, principles, and traditions have developed impact current societies.</i>   |   |  |
| <b>Grades 3 – 5</b>  | <b>Concepts</b>   | <b>Vocabulary</b>  |
| <p><b>AAT:</b> Identify the roles of different branches of government (e.g., making the laws, enforcing the laws or determining if the laws are fair). (3.28)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify the purpose of classroom rules (e.g., stay safe).</li> </ul> <p><b>AAT:</b> Identify how the Declaration of Independence contributed to the development of American Democracy by breaking the colonies away from England. (4.28)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify the Pledge of Allegiance as an expression of American democracy.</li> </ul> <p><b>AAT:</b> Identify the role of Tennessee in granting women the right to vote. (5.46)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Demonstrate an understanding that citizens make choices by voting.</li> </ul> | <p><b>Understand:</b></p> <ul style="list-style-type: none"> <li>• the structure and purpose of government and its relationship to democracy and citizenry</li> <li>• how the United States of America became an independent country and a democracy</li> <li>• citizens of the United States have rights and responsibilities</li> </ul> | <p><b>General:</b></p> <ul style="list-style-type: none"> <li>• democracy</li> <li>• government</li> <li>• laws</li> <li>• responsibility</li> <li>• rights</li> <li>• vote</li> </ul> <p><b>Specific:</b></p> <p>Grade 3:</p> <ul style="list-style-type: none"> <li>• executive branch</li> <li>• judicial branch</li> <li>• legislative branch</li> <li>• United States</li> </ul> <p>Grade 4:</p> <ul style="list-style-type: none"> <li>• Declaration of Independence</li> </ul> <p>Grade 5:</p> <ul style="list-style-type: none"> <li>• Perfect 36</li> <li>• women’s suffrage</li> </ul> |

**Table 13. History: Change, Continuity, and Context Concepts and Vocabulary**

| <b>History: Change, Continuity, and Context</b>  |   |  |
|--|---|--|
| <i>Historical events, the processes of change and continuity over time, the context within which events occur, and the significance of the contributions by individuals from various ethnic, racial, religious, and socioeconomic groups impact the development of civilizations and societies around the world.</i>   |   |  |
| <b>Grades 3 – 5</b>  | <b>Concepts</b>   | <b>Vocabulary</b>  |
| <p><b>AAT:</b> Identify reasons (e.g., religious freedom, economic opportunity, better life) for which people came to the colonies. (4.18)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify challenges with moving to a new place.</li> </ul> <p><b>AAT:</b> Identify causes of the American Revolution (e.g., Stamp Act and taxes on tea). (4.23)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify why the colonists were not happy.</li> </ul> <p><b>AAT:</b> Identify the states of the Southwest Territory (Mississippi, Kentucky, Tennessee, and Alabama) on a historical map. (4.45)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify the location of Tennessee on a historical map.</li> </ul> <p><b>AAT:</b> Identify how the Indian Removal Act affected the American Indians. (4.56)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify on a historical map where the Cherokee people lived before and after the Indian Removal Act.</li> </ul> <p><b>AAT:</b> Identify differences between East Tennessee and West Tennessee regarding the issue of secession. (5.6)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify reasons why Tennessee seceded from the Union.</li> </ul> <p><b>AAT:</b> Explain the importance of the role Abraham Lincoln, Jefferson Davis, Frederick Douglass, or Clara Barton had during the Civil War. (5.12)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify a main role of a leader in a community.</li> </ul> <p><b>AAT:</b> Explain the importance of Sam Watkins’ documentation of the events of the Civil War. (5.15)</p> <ul style="list-style-type: none"> <li>• <b>UC:</b> Identify what it was like to be a Tennessee soldier in the Civil War.</li> </ul> | <p><b>Understand:</b></p> <ul style="list-style-type: none"> <li>• reasons and challenges of exploring and moving to new places</li> <li>• causes of disagreements and conflict between countries and groups of people</li> <li>• ways America grew and developed over time</li> <li>• how expansion of the settlers in America affected American Indians</li> <li>• importance of people’s actions in history</li> </ul> | <p><b>General:</b></p> <ul style="list-style-type: none"> <li>• acts</li> <li>• colonies</li> <li>• document</li> <li>• economics</li> <li>• freedom</li> <li>• jobs</li> <li>• politician</li> <li>• religion</li> <li>• revolution</li> <li>• rights</li> <li>• secession</li> <li>• taxes</li> </ul> <p><b>Specific:</b></p> <p>Grade 4:</p> <ul style="list-style-type: none"> <li>• Alabama</li> <li>• American Indians</li> <li>• American Revolution</li> <li>• England</li> <li>• Indian Removal Act</li> <li>• Kentucky</li> <li>• Mississippi</li> <li>• Southwest Territory</li> <li>• Stamp Act</li> <li>• Tennessee</li> </ul> <p>Grade 5:</p> <ul style="list-style-type: none"> <li>• Abraham Lincoln</li> <li>• Civil War</li> <li>• Clara Barton</li> <li>• East Tennessee</li> <li>• Frederick Douglass</li> <li>• Jefferson Davis</li> <li>• Sam Watkins</li> <li>• West Tennessee</li> </ul> |

## Section VIII

### Tactile Maps and Graphics

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The maps and graphics guidelines will help create tactile versions of instructional maps, diagrams, models, and timelines to use with students who are blind or deaf-blind. The tactile maps and graphics may be beneficial to other students as well. A tactile graphic is a representation of a graphic (e.g., picture, drawing, diagram, map, etc.) in a form that provides access through touch. It is not an exact copy of the graphic. The section provides basic guidance and links to more comprehensive resources.

#### Importance of Tactile Maps and Graphics

It is important to provide tactile graphics for young readers (BANA, 2011). It helps students understand and gain information when presented with science and social studies concepts, knowledge, and skills. Science instruction often presents diagrams (e.g., water cycle) and two-dimensional models of living and nonliving things (e.g., model of cell) to teach the related concepts. Social studies instruction often uses maps and timelines to illustrate where and when people existed and events occurred. The following guidance includes information to build upon when creating tactile graphics.

#### Tactile Graphic Guidance

1. **Determine need for graphic:** When encountering graphics in instructional materials, determine if the graphic is essential to understanding the concept. The Braille Authority of North America (2010) provides a decision tree to help in this determination. It can be accessed online at [www.brailleauthority.org/tg/web-manual/index.html](http://www.brailleauthority.org/tg/web-manual/index.html) by selecting “Unit 1 Criteria for Including a Tactile Graphic.”
2. **Consult with the local educator trained to work with students with visual impairments.**
3. **Determine the essential information in the graphic.** Read the surrounding information and the caption to determine which information in the graphic to exclude. For example, a map to illustrate location of key countries would not need state lines and capital cities and may not need all of the surrounding countries.
4. **Reduce unnecessary detail in the graphic.** Identify details that are not necessary for interpreting the information in the graphic. For example, a model of the water cycle may show crevices on the mountains, leaves on a tree, and waves in an ocean. Eliminate unnecessary details, as they are difficult to interpret tactilely.
5. **Remove frames or image outlines if they serve no purpose.** Ensure that all lines are necessary (e.g., line that indicates a body of water), and remove any that are not.
6. **Modify the size of the graphic.** Modify the graphic as needed to reduce clutter and allow a blank space between adjacent textures. Additionally, consider the size of the student’s hand.
7. **Use solid shapes as feasible.** When solid shapes do not clearly represent the information, use clear solid lines.
8. **Systematically teach exploration and interpretation of tactile graphics.** Systematic instruction and repetition are important when teaching a student to understand a tactile graphic. Pairing the tactile graphic with a 3-dimensional object may help (e.g., pair a raised line drawing of a pencil, an example of goods, with a pencil).

## **Specific Graphic Type Guidance**

Following is information for specific types of graphics that may support instruction in science and social studies.

### **Graphic Organizers/Concept Maps**

- It is best to present information to compare or make connections in a tactile graphic. A tactile graphic presents the information in a spatial display and aids in comparison better than a list.

### **Diagrams/Models**

- Limit the number of areas, lines, and labels. Having more than five makes interpretation difficult.
- Consider pairing a tactile graphic with a 3-dimensional model.

### **Timelines**

- Present timelines in the same direction every time (i.e., horizontal or vertical).

### **Maps**

- Distinguish water from land using a consistent background texture for the water.
- Align the direction of the compass rose arrows with the lines of longitude and latitude on the map.

## **Creating Tactile Graphics**

Following are some ways to create tactile graphics. Additional information can be found at [www.tactilegraphics.org](http://www.tactilegraphics.org).

### **Commercial products:**

- Capsule paper or swell paper – print
- Thermoform

### **Textured shapes can be made from:**

- Sticky back textured papers found at craft stores
- Corrugated cardboard
- Fabric with texture (e.g., corduroy, denim)
- Silk leaves
- Cork
- Felt
- Vinyl
- Mesh tape (used for drywall)
- Sandpaper

### **Raised lines can be made from:**

- Glue (best not to use water-based glue)
- Wax pipe cleaners

## Resources

Creating Tactile Graphics, created by the High Tech Center Training Unit, provides basic principles of tactile graphics, characteristics of good tactile graphics, the planning process, guidelines for designs, and more. [http://www.htctu.net/trainings/manuals/alt/Tactile\\_Graphics.pdf](http://www.htctu.net/trainings/manuals/alt/Tactile_Graphics.pdf)

The Texas School for the Blind and Visually Impaired provided basic principles for Preparing Tactile Graphics, element arrangement on a tactile graphic, resources for preparing quality graphics, etc. <http://www.tsbvi.edu/graphics-items/1465-basic-principles-for-preparing-tactile-graphics>

Perkins School for the Blind has short videos that explain the importance of tactile graphics and information on spatial relationships and graphic literacy, moving from models to graphics, and strategies for reading tactile graphics. <http://www.perkinselearning.org/videos/webcast/teaching-tactile-graphics>

## References

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