Grade 7 Social Studies
Content Module

World History and Geography:
The Middle Ages to the Exploration of the Americas

Module Goal

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 units:

- East Asia (400–1500s CE): The Silk Road trade routes and protection provided by the Mongols brought about an increase in trade and communication between Europe and Asia. Marco Polo's travels along the Silk Road increased Europe's interest in Chinese culture and obtaining goods from China.

- Southwest Asia and North Africa (400–1500s CE): Long-distance overland routes and ocean routes increased trade between Asia, Africa, and Europe. These routes enabled the exchange of many types of goods and ideas.

- West Africa (400–1500s CE): Cities in the kingdoms of Ghana, Mali, and Songhai were centers of trade and culture. These kingdoms became rich from trading many goods (e.g., gold and salt) and by controlling trade through taxation. Ghana, Mali, and Songhai were known for architecture, universities, libraries, and trade in books.

- Middle Ages in Western Europe (400–1500s CE): Western Europe includes major landforms (e.g., Alps) and borders major bodies of water (e.g., Atlantic Ocean, Mediterranean Sea), which are represented on physical maps of Europe. During the Middle Ages, the Black Death (i.e., Bubonic Plague) spread along trade routes from Asia to Europe, killing about one-third of the population in Europe and causing a decrease in the worldwide population.

- Early Modern Europe (1400–1700s CE): The Renaissance brought innovations in art styles to Europe (e.g., realism, focus on the individual and nature). Art impacts society by communicating ideas and affecting emotions. Important Renaissance artists included Leonardo da Vinci and Michelangelo. Johannes Gutenberg invented a printing press with movable parts. The printing press allowed many books to be produced quickly, so more people were able to have access to books.

- Indigenous Civilizations of the Americas (400–1500s CE): North America includes major landforms (e.g., Appalachian Mountains, Great Plains) and includes or borders major bodies of water (e.g., Atlantic Ocean, Caribbean Sea, Mississippi River, Pacific Ocean), which are represented on physical maps of the Western Hemisphere. The Southeast and Plains North American Indians lived in two different regions. The regions in which they dwelled influenced their culture (e.g., housing and clothing).

- The Age of Exploration (1400–1700s CE): Advances in ship design made traveling easier for European explorers who were looking for new lands to find riches, trade goods, and establish new trade routes. Christopher Columbus reached the Americas and inspired others to explore and establish colonies. Hernando de Soto helped conquer Peru, explored the southeastern United States, and became the first European to cross the Mississippi River. Ferdinand Magellan sought a western route to Asia, discovered the Straits of Magellan, and was the first European to cross the Pacific Ocean. One of his ships was the first European ship to sail around the world.

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 units.

- Learning instructional strategies that support teaching students the concepts, knowledge, and skills related to the module units.

- 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 World History and Geography: The Middle Ages to the Exploration of the Americas 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. Tennessee Social Studies Standards and Related Knowledge and Skills Statements (KSSs) and Underlying Concepts (UCs);

II. Connecting Concepts;

III. Vocabulary and Background Knowledge information, including ideas to teach vocabulary;

IV. Overview of Units' Content;

V. Universal Design for Learning (UDL) Suggestions;

VI. Transfer and Generalize Concepts, Knowledge, and Skills;

VII. Concepts and Vocabulary Multi-Age Planning: Grades Six through Eight; and

VIII. Tactile Maps and Graphics.

Section I

Tennessee Social Studies Standards and Related Knowledge and Skills Statements and Underlying Concepts

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 Knowledge and Skills Statements (KSSs) and Underlying Concepts (UCs) covered in the module. The KSSs are specific statements of knowledge and skills linked to the grade-specific social studies academic standards. The UCs are entry-level knowledge and skills that build toward a more complex understanding of the knowledge and skills represented in the KSSs and should not be taught in isolation. It is important to provide instruction on the KSSs along with the UCs to move toward acquisition of the same knowledge and skills.

P – Politics/Government

T – Tennessee

Table 1 includes the Grade 7 Tennessee Social Studies Standards and related KSSs and UCs addressed by this module, World History and Geography: The Middle Ages to the Exploration of the Americas and organizes them by the units of study. While only the social studies 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 KSSs 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 Standards include the following codes:

C – Culture
E – Economics
G – Geography
H – History
P – Politics/Government
T – Tennessee

Table 1. Tennessee Social Studies Standards and Related KSSs and UCs [1]

Academic Standards	Knowledge and Skills Statement (KSS)	Underlying Concept (UC) of the Academic Standard
East Asia (400–1500s CE)		
7.06: Summarize the effects of the Mongolian empires on the Silk Roads, including the importance of Marco Polo's travels on the spread of Chinese technology and Eurasian trade.	**7.06.a:** Ability to identify the Silk Roads as trade routes between Asia and Europe **7.06.b:** Ability to recognize the significance of the Silk Roads to trade between Asia and Europe (e.g., many types of goods and ideas were exchanged) **7.06.c:** Ability to identify that trade and communications increased between Europe and Asia during the time of the Mongolian empires (e.g., the Mongols protected travelers on the Silk Roads) **7.06.d:** Ability to recognize that Marco Polo's travels increased interest in Chinese culture and in obtaining goods from China	**7.06.UC:** Recognize that people trade goods to get the things they need or want.
Southwest Asia and North Africa (400–1500s CE)		
7.20: Analyze the development of trade routes throughout Asia, Africa, and Europe and the expanding role of merchants.	**7.20.a:** Ability to recognize that the development of overland routes increased long-distance trade **7.20.b:** Ability to recognize that the development of ocean trade routes increased trade between Asia, Africa, and Europe	**7.20.UC:** Recognize that people traveled on land and across water to conduct trade.

Academic Standards	Knowledge and Skills Statement (KSS)	Underlying Concept (UC) of the Academic Standard
	7.20.c: Ability to recognize the significance of trade routes (e.g., they enabled the exchange of many types of goods and ideas)	
West Africa (400–1500s CE)		
7.23: Analyze the growth of the kingdoms of Ghana, Mali, and Songhai, including cities such as Djenne and Timbuktu as centers of trade, culture, and learning.	**7.23.a:** Ability to identify Ghana, Mali, and Songhai as West African kingdoms **7.23.b:** Ability to recognize that cities in the kingdoms of Ghana, Mali, and Songhai were centers of trade and culture **7.23.c:** Ability to recognize the significance of trade to Ghana, Mali, and Songhai (e.g., became rich from controlling trade; traded many goods including gold and salt) **7.23.d:** Ability to recognize the significance of culture in Ghana, Mali, and Songhai (e.g., architecture, universities and libraries, trade in books)	**7.23.UC:** Recognize that conducting trade will cause the population of cities to grow.
Middle Ages in Western Europe (400–1500s CE)		
7.27: Identify and locate geographical features of Europe, including: Alps, Atlantic Ocean, English Channel, Mediterranean Sea, Influence of the North Atlantic Drift, North European Plan, Ural Mountains.	**7.27.a:** Ability to locate major land forms (i.e., Alps) on a physical map of Europe **7.27.b:** Ability to locate major bodies of water (i.e., Atlantic Ocean, Mediterranean Sea) on a physical map of Europe	**7.27.UC:** Identify the representation of a landform or a body of water on a physical map.
7.36: Describe the economic and social effects of the spread of the Black Death (i.e., Bubonic Plague) from Central Asia to China, the Middle East, and Europe, and its impact on the global population.	**7.36.a:** Ability to recognize that the Black Death (i.e., Bubonic Plague) spread along trade routes from Asia to Europe **7.36.b:** Ability to identify the effect of the Black Death (i.e., Bubonic Plague) on the population (e.g., about one-third of the population in Europe died; the world population decreased)	**7.36.UC:** Recognize a way the plague changed life in the Middle Ages.

Early Modern Europe (1400–1700s CE)		
7.43: Explain the development of Renaissance art, including the significance of: Leonardo da Vinci, Michelangelo, William Shakespeare, Systems of patronage.	**7.43.a:** Ability to recognize how art affects society (e.g., communicates ideas, affects emotions) **7.43.b:** Ability to recognize innovative ideas and attitudes that were represented in Renaissance art (e.g., realism, a focus on the individual, and nature) **7.43.c:** Ability to recognize the contributions of Renaissance artists (i.e., Leonardo da Vinci, Michelangelo)	**7.43.UC:** Recognize that art (e.g., paintings, sculptures) is an important part of society.
7.44: Analyze Johannes Gutenberg's printing press and William Tyndale's translation of the Bible into the English language as vehicles for the spread of books, growth of literacy, and dissemination of knowledge.	**7.44.a:** Ability to identify a contribution of Johannes Gutenberg (i.e., the invention of the printing press) **7.44.b:** Ability to identify the influence of the printing press on early modern Europe (e.g., enabled the spread of books)	**7.44.UC:** Recognize that an invention can improve the lives of people.
Indigenous Civilizations of the Americas (400–1500s CE)		
7.53: Identify and locate the geographical features of the Americas, including: Andes Mountains, Appalachian Mountains, Atlantic Ocean, Caribbean Sea, Central Mexican Plateau, Great Plains, Gulf of Mexico, Mississippi River, North America, Pacific Ocean, Rocky Mountains, South America, Yucatan Peninsula.	**7.53.a:** Ability to locate major landforms (i.e., Appalachian Mountains, Great Plains) on a physical map of North America **7.53.b:** Ability to locate major bodies of water (i.e., Atlantic Ocean, Caribbean Sea, Mississippi River, Pacific Ocean) on a physical map of North America or a physical map of the Western Hemisphere	**7.53.UC:** Ability to identify North America and South America on a physical map.
7.54: Explain the impact of geographic features on North American Indian cultures (i.e., Northeast, Southeast, and Plains), including clothing, housing, and agriculture.	**7.54.a:** Ability to locate the homelands of the Southeast and Plains North American Indians on a map **7.54.b:** Ability to recognize the cultures (i.e., housing and clothing) of the Southeast and Plains North American Indians **7.54.c:** Ability to identify differences in the cultures (i.e., housing and clothing) of the Southeast and Plains North American Indians	**7.54.UC:** Recognize a characteristic of a North American Indian culture.

The Age of Exploration (1400–1700s CE)		
7.59: Identify the significance of the voyages and routes of discovery of the following explorers by their sponsoring country: England: Henry Hudson; France: Jacques Cartier; Portugal: Vasco da Gama, Bartolomeu Dias; Spain: Christopher Columbus, Hernando de Soto, Ferdinand Magellan, Amerigo Vespucci.	**7.59.a:** Ability to recognize why explorers made sea voyages (e.g., advances in ship design made travel easier; they wanted to explore new lands to find riches, trade goods, and new trade routes) **7.59.b:** Ability to identify the contributions of Christopher Columbus (i.e., reached the Americas; his voyages led to further exploration and colonization) **7.59.c:** Ability to identify the contributions of Hernando de Soto (i.e., helped conquer Peru; explored the southeastern United States; first European to cross the Mississippi River) **7.59.d:** Ability to identify the contributions of Ferdinand Magellan (i.e., sought a western sea route to Asia; discovered the Straits of Magellan; first European to cross the Pacific Ocean; one of his ships was the first European ship to sail around the world)	**7.59.UC:** Recognize that explorers traveled across the sea to learn about new lands.

[1] Instruction is not intended to be limited to the concepts, knowledge, and skills represented by the KSSs and UCs listed in Table 1.

Section II

Connecting Concepts

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 for more information). Connecting Concepts that are specific to this module connect to content across the units 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 the students in learning new concepts. For example, understanding the importance and effects of land and sea routes on trade, migration, and colonization is a Connecting Concept that applies to overland routes (i.e., the Silk Road) used for trade between Asia and Europe, overland and ocean trade routes between Asia, Africa, and Europe, ocean trade routes explored by early European explorers, etc. Some Connecting Concepts may apply across multiple content areas (e.g., reading) and instructional emphases (e.g., An article might be about Christopher Columbus.).

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., Point out patterns on a map, in the shape of a graph, or a repeating pattern on a chart.),
- critical features (e.g., Provide explicit cues or prompts such as highlighting that help students to attend to the important features.),
- big ideas (e.g., Present and reinforce the "big ideas" that students should take and apply throughout their lives.), and
- relationships (e.g., Make the connection between the unit concepts and how they apply to the students' lives.).

Following are **Connecting Concepts** for this Content Module, World History and Geography: The Middle Ages to the Exploration of the Americas.

Students understand:

- how to think spatially and use a variety of maps
- how to interpret physical and political features on a variety of maps to locate major landforms and bodies of water
- importance of land and sea routes on trade, migration, and colonization
- reasons for and the effect of new developments, technology, and inventions on people's lives in the past and present
- how learning, art, architecture, and literature affect people's lives
- the effect of exchanging goods on people living in different places (e.g., new products, diseases, etc.)
- the importance and benefits of trading/exchanging goods and services

- how goods and services are exchanged
- how inventions and new techniques affect production and distribution of goods and services
- importance of people's actions in history

Connecting Concept Resources[2]

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

- School is Easy has information on teaching young children about maps.
  https://www.schooliseasy.com/2016/02/teaching-young-children-about-maps-to-help-their-learning-development/

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

Section III

Vocabulary and Background Knowledge

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., exploration) and in the context of the specific content (e.g., teach the terms "trade route," "voyage," and "Ferdinand Magellan" in the context of early European exploration).

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 "gold" helps students to connect to the different goods traded between Asia, Africa, and Europe. 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 "Renaissance," and connect to general words (e.g., realism, art, and individual). 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 identify "gold" as something traded instead of memorizing a definition of "gold."

Table 2. General Vocabulary Words

General Vocabulary—words that generalize to different people, places, events, and time periods. Describe the word (e.g., A colony is where a group of people live. Those people still have strong connections to their homeland.) and provide examples (e.g., Spain had colonies in North America.).

• architecture	• empire	• paper
• books	• explorer	• physical map
• camel	• gold	• population
• caravan	• gunpowder	• printing press
• coal	• homeland	• realism (in art)
• colony/colonization	• individual	• route
• communicate/communication	• invention	• silk
• culture	• ivory	• tax/taxes
• desert	• landform	• technology
• ebony	• modern	• university
• emotion	• mountains	• voyage

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 general vocabulary word and a Connecting Concept when possible (e.g., Johannes Gutenberg "invented" the "printing press" that helped more people gain access to "books." Johannes Gutenberg's printing press is an example of how inventions and new techniques affect production and distribution of goods and services.

• Africa	• Great Plains	• Pacific Ocean
• Alps	• Hernando de Soto	• Peru
• Appalachian Mountains	• Johannes Gutenberg	• Plains American Indians
• Asia	• Leonardo da Vinci	• Renaissance
• Atlantic Ocean	• Mali (kingdom)	• Sahara Desert
• Black Death	• Marco Polo	• Silk Road
• Bubonic Plague	• Mediterranean Sea	• Songhai (kingdom)
• Caribbean Sea	• Michelangelo	• South America
• China/Chinese	• Middle Ages	• Southeast American Indians
• Christopher Columbus	• Mississippi River	• Straits of Magellan
• Europe	• Mongolian empires	• West African kingdoms
• Ferdinand Magellan	• Mongols	
• Ghana (kingdom)	• North America	

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)[1]

Ideas	Examples
Explain, describe, and/or give examples of the vocabulary word rather than formal definitions.	• "A voyage is a trip across the sea. Early European explorers could make long sea voyages because they developed better ships."
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.	• Realism in art is represented by drawings and paintings of real-life events and objects. Artists try to make people and objects look realistic. The painting we saw in art class of a bowl of fruit is an example of realism in art.
Have students represent vocabulary words in a variety of ways (e.g., pictures, symbols, graphic organizers, or pictographs).	• Ask students to complete a graphic organizer about vocabulary words related to the Renaissance (see Figure 1 for an example). [Individualization idea: Provide help from a peer or adult, copy from a model, complete a digital version using an adapted mouse, etc.]
Provide multiple exposures to vocabulary words in a variety of ways. This does not suggest mass trials, but rather distributed trials in different ways or contexts. Reference http://projectlearnet.org/tutorials/learning_trials.html for information on learning trials.	• Talk about resources and goods traded in West Africa (e.g., salt, gold, and books) and the way they are currently used in today's world (e.g., The people in West Africa traded books. Today we can buy books, trade with a friend, or check one out of the library.). • Watch a video about West African kingdoms (e.g., https://www.youtube.com/watch?v=pmWqa8yEtP8). • Have students read about European explorers. [Individualization idea: Provide adapted books that have built in text-to-speech (e.g., Christopher Columbus http://bookbuilder.cast.org/view.php?op=view&book=70272&page=1O).] • Have students move pictures of modes of transportation (e.g., walking, camel, ships) along trade routes used in medieval Asia, North Africa, and Europe).
Ask students to discuss the vocabulary words with each other.	• Have students use their mode of communication to use a word in a sentence or choose a sentence that uses the word correctly. [Individualization idea: Have students use their preferred mode of communication or a combination of

Ideas	Examples
	communication modes (e.g., pointing, activating a recorded message on a switch, etc.)]
	• Have students share representations (e.g., pictures) of their favorite word with each other.
Play vocabulary word games with students.	• Have students practice vocabulary using online flashcards that include images and audio descriptions (e.g., https://quizlet.com/158829621/renaissance-flash-cards/).
	• Have students complete word wall activities (e.g., http://www.readingrockets.org/content/pdfs/World_Walls_-_A_Support_for_Literacy_in_Secondary_School_Classrooms.pdf).
Have students watch a dramatization or have them act out the vocabulary term.	• Act out trading by a caravan.

[1] Refer to Section V, Universal Design for Learning (UDL) Suggestions for additional instructional strategies.

Vocabulary Example

Ask students to complete a graphic organizer about vocabulary words related to the Renaissance (see Figure 1 for an example). [Individualization idea: Provide help from a peer or adult, copy from a model, complete a digital version using an adapted mouse, etc.] 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
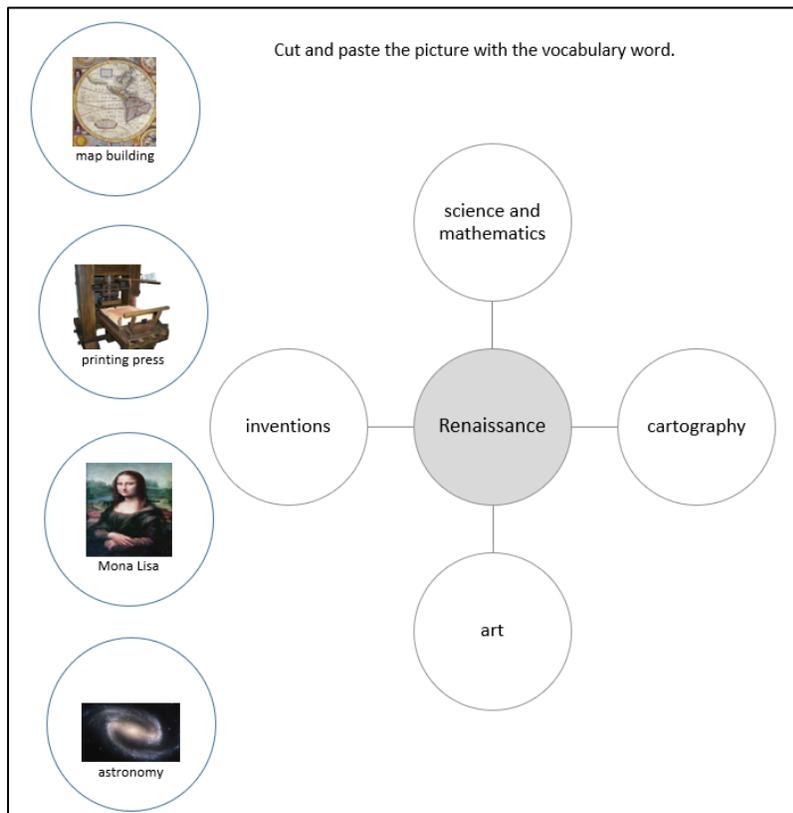
Vocabulary Resources

- 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/

- TextProject 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

Section IV

Overview of Units' 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 KSSs and to build students' knowledge, skills, and abilities; however, it is not exhaustive and should be expanded upon as needed.

Unit 1—East Asia (400–1500s CE)

Content

- Reasons people trade goods

- Trade between Asia and Europe

- Trade routes (i.e., Silk Roads)

- Exchange of goods and ideas obtained by traveling the Silk Roads (e.g., silk, paper, books, gunpowder, etc.)

- Benefits of trade between Europe and Asia during the time of the Mongolian empires:

  o increased communications

  o protected trade routes

- Benefits of Marco Polo's travels:

  o increased interest and spread of Chinese culture to Europe

  o Chinese goods brought to Europe

Unit 2—Southwest Asia and North Africa (400–1500s CE)

Content

- Overland trade routes between Southwest Asia and North Africa in the Middle Ages:

  o increased long-distance trade

  o crossed mountains and deserts

  o used camel caravans

  o traded many types of goods (e.g., luxury goods that were higher quality and more technologically advanced goods)

  o exchanged ideas (e.g., religious beliefs)

- Ocean trade routes between Asia, Africa, and Europe in the Middle Ages:

  o increased trade

  o enabled many types of new goods and ideas to be exchanged

Unit 3—West Africa (400–1500s CE)

Content

- Increase in population of cities caused by trade

- West African kingdoms of Ghana, Mali, and Songhai

- Ghana, Mali, and Songhai—Centers of trade and culture

    o   rich by controlling trade from taxes on goods

    o   traded many goods (e.g., gold, salt, and ivory)

    o   significance of culture (e.g., architecture, universities, libraries, trade in books of theology, history, and science)

Unit 4—Middle Ages in Western Europe (400–1500s CE)

Content

- Major landforms in Europe (e.g., Alps)

- Major bodies of water bordering Europe (e.g., Atlantic Ocean and Mediterranean Sea)

- Use of physical maps to locate European landforms and bodies of water

- Black Death (i.e., Bubonic Plague):

    o   spread across trade routes from Asia to Europe

    o   decreased world population (about one-third of the population in Europe died)

Unit 5—Early Modern Europe (1400–1700s CE)

Content

- Importance of art (e.g., paintings, sculptures):

    o   communicates ideas

    o   affects emotions

- Renaissance artists:

    o   Leonardo da Vinci

    o   Michelangelo

- Renaissance art:

    o   introduced innovative ideas and attitudes (e.g., realism, focus on the individual and nature)

    o   increased awareness of nature

    o   revived classical learning

- Contribution of the printing press by Johannes Gutenberg (e.g., made printing books easier, enabled the spread of books)

Unit 6—Indigenous Civilizations of the Americas (400–1500s CE)

- Major landforms in North America (e.g., Appalachian Mountains, Great Plains)

- Major bodies of water associated with North America (e.g., Atlantic Ocean, Caribbean Sea, Mississippi River, Pacific Ocean)

- Use of physical maps to locate landforms and bodies of water associated with North America

- Location of homelands of the Southeast and Plains North American Indians

- Culture (e.g., types of housing and clothing) of Southeast and Plains North American Indians

- Effects on culture because of the regional locations of the Southeast and Plains North American Indians

Unit 7—The Age of Exploration (1400–1700s CE)

Content

- Advances in ship design made sea voyages easier

- Reasons for the sea voyages:
  - looking for riches in new lands
  - finding new trade routes
  - trading goods

- Benefits of sea voyages and early exploration for European countries:
  - own new land/formation of colonies
  - new trade opportunities
  - riches from the new lands

- Christopher Columbus:
  - reached the Americas
  - inspired further exploration and colonization

- Hernando de Soto:
  - helped conquer Peru
  - explored the southeastern United States
  - first European to cross the Mississippi River

- Ferdinand Magellan:
  - sought a western sea route to Asia
  - discovered the Straits of Magellan
  - first European to cross the Pacific Ocean
  - one of his ships was the first European ship to sail around the world

Unit Resources

East Asia (400–1500s CE)

- This site has information on Marco Polo and the Silk Road.
  https://www.mrnussbaum.com/explorers/marcopolo/

- History.com has a video and information on Marco Polo.
  https://www.history.com/topics/exploration/marco-polo

- This site provides information on the Silk Road and how it connected people and cultures.
  https://festival.si.edu/2002/the-silk-road/the-silk-road-connecting-peoples-and-cultures/smithsonian

- The Field Museum has a lesson plan and links to online exhibits on the Silk Road.
  https://www.fieldmuseum.org/sites/default/files/silk_road_activity.pdf

- The China Institute has a unit on the exchange of goods and ideas along the Silk Road.
  http://www.chinainstitute.cieducationportal.org/cimain/wp-content/themes/chinainstitute/pdfs/education/fromsilktooil_pdf5.pdf

- This site has a lesson plan on the Silk Road. https://notallthosewhowanderinhistory.wordpress.com/lesson-plans/middle-ages-unit/the-silk-road-lesson-plan/

Southwest Asia and North Africa (400–1500s CE)

- This site has a detailed map of medieval trade routes. https://merchantmachine.co.uk/medieval-trade-routes/

- Fact Monster has information on trading in medieval Africa.
  https://www.factmonster.com/dk/encyclopedia/history/medieval-africa

- Ducksters has information on trade routes between Africa, Europe, and Asia.
  https://www.ducksters.com/history/africa/trade_routes_of_ancient_africa.php

- The Met has information on trade in Southwest Asia and North Africa.
  https://www.metmuseum.org/toah/hd/ince/hd_ince.htm and https://www.metmuseum.org/toah/hd/coin/hd_coin.htm

- This site has information on trade and exchange in the medieval Islamic world.
  https://www.sanleandro.k12.ca.us/cms/lib07/CA01001252/Centricity/Domain/991/Trade%20and%20Exchange.pdf

West Africa (400–1500s CE)

- This site has a plethora of information on West Africa. http://www.socialstudiescms.com/africa

- Lumen Learning has information on the kingdoms of Ghana, Mali, and Songhai
  https://courses.lumenlearning.com/boundless-worldhistory/chapter/west-african-empires/

- This site has information on the kingdoms of Ghana, Mali, and Songhai. https://about-history.com/ghana-mali-and-songhai-three-of-the-greatest-western-african-trading-states/

- Ducksters has information on the kingdoms of Ghana, Mali, and Songhai.
  https://www.ducksters.com/history/africa/

- This site has an activity-based lesson plan on the kingdoms of Ghana, Mali, and Songhai. http://score.rims.k12.ca.us/score_lessons/medieval_african_kingdoms/

- The British Museum has pictures and information on historical West Africa. https://www.britishmuseum.org/explore/themes/hajj/the_journey/routes/the_african_route/west_africa.aspx

Middle Ages in Western Europe (400–1500s CE)

- National Geographic has information on and images of the geographic features of Europe. https://www.nationalgeographic.org/encyclopedia/europe-physical-geography/

- Quizlet had flashcards on the geographic features of Europe. https://quizlet.com/13145454/geographic-features-of-europe-flash-cards/

- Geology.com has a physical map of Europe. https://geology.com/world/europe-physical-map.shtml

- History.com has information and a video on the Black Death in Europe in the 14th century. https://www.history.com/topics/middle-ages/black-death

- Khan Academy has information on the Black Death. https://www.khanacademy.org/humanities/world-history/medieval-times/disease-and-demography/a/disease-and-demograpy

- EDSITEment has a lesson plan on the Black Death. https://edsitement.neh.gov/lesson-plan/path-black-death

Early Modern Europe (1400–1700s CE)

- Annenberg Learner has information and interactive resources on the Renaissance and printing. http://www.learner.org/interactives/renaissance/index.html

- Mr. Donn's site has information on the Renaissance, Michelangelo, Leonardo da Vinci, and Gutenberg's printing press. https://worldhistory.mrdonn.org/renaissance.html

- Mr. Roughton's site has lecture notes and activities on the Renaissance. http://www.mrroughton.com/renaissance

- This site has information and lesson plans about Leonardo da Vinci. https://www.mos.org/leonardo/

- Ducksters has information on Michelangelo. https://www.ducksters.com/biography/artists/michelangelo.php

- Biography Online has information on Johannes Gutenberg. https://www.biographyonline.net/business/j-gutenberg.html

Indigenous Civilizations of the Americas (400–1500s CE)

- Annenberg Learner has a physical features map of the United States. https://www.learner.org/interactives/historymap/sea.html

- This site has a unit on physical geography that includes a section on the major physical features of North America. https://www.cvisd.org/site/handlers/filedownload.ashx?moduleinstanceid=11814&dataid=15873&FileName=Physical%20Geography%20of%20the%20Continents.pdf

- American Rivers has information on the Mississippi River. https://www.americanrivers.org/river/mississippi-river/

- Britannica has information on the Caribbean Sea. https://www.britannica.com/place/Caribbean-Sea

- Britannica has information on the Appalachian Mountains. https://www.britannica.com/place/Appalachian-Mountains

- This site has information on the North American Indian tribes including their cultures, clothing, and housing. https://www.warpaths2peacepipes.com/indian-tribes/

- Khan Academy has information on the Southeast and Plains American Indian cultures. https://www.khanacademy.org/humanities/us-history/precontact-and-early-colonial-era/before-contact/a/southeast-indian-culture and https://www.khanacademy.org/humanities/us-history/precontact-and-early-colonial-era/before-contact/a/plains-indian-culture

- Mr. Donn's site has information on the Plains American Indians. https://nativeamericans.mrdonn.org/plains.html

- This site has information on American Indians by regions. http://nativeamericanadventures.weebly.com/

The Age of Exploration (1400-1700s CE)

- Texas Gateway has information on the exploration and colonization of America. https://www.texasgateway.org/resource/exploration-and-colonization-america

- Prezi has a slide show on the causes and effects of European exploration in America. https://prezi.com/jipcz0kmt4q0/causes-and-effects-of-european-exploration-in-america/

- The Mariners' Museum and Park has information on:

    o Christopher Columbus. https://exploration.marinersmuseum.org/subject/christopher-columbus/

    o Hernando de Soto. https://exploration.marinersmuseum.org/subject/hernando-de-soto/

- Ferdinand Magellan. https://exploration.marinersmuseum.org/subject/ferdinand-magellan/

- This site has an abstract of the journal written by Columbus's biographer that tells about finding land. http://www.eyewitnesstohistory.com/columbus.htm

- History.com has a video and information on Hernando de Soto. https://www.history.com/topics/exploration/hernando-de-soto

- All About Explorers has information on:

    o Christopher Columbus. https://www.allaboutexplorers.com/explorers/columbus/

    o Hernando de Soto. https://www.allaboutexplorers.com/explorers/desoto/

    o Ferdinand Magellan. https://www.allaboutexplorers.com/explorers/magellan/

- This site has activities on the age of exploration. http://theartoflearning-bermingham.blogspot.com/2012/01/age-of-exploration.html

Section V

Universal Design for Learning (UDL) Suggestions

Three principles of the UDL—multiple means of representation, multiple means of action and expression, and multiple means of engagement—guide development of instruction, instructional materials, and assessments to provide access to learning to the widest range of students. A well-designed lesson using the principles of UDL reduces the need to make accommodations and modifications. However, some students with significant cognitive disabilities, especially students with visual and/or hearing impairments, physical disabilities, and students with complex communication needs, may require additional scaffolds, adaptations, and modifications to access content and support learning. UDL's three guiding principles guide educators in creating instructional materials and activities in a flexible manner to address the needs of different types of learners. Utilizing the three principles of UDL as a framework when designing instruction allows for individualization when needed. Table 5 provides strategies and examples 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 and examples 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 and examples for the UDL Principle III, **Multiple Means of Engagement**: providing a variety of ways to engage and motivate students to learn.

The strategies and examples provided in Tables 5 through 7 are based on UDL principles and can assist all students in understanding the basic concepts. The strategies and examples, as well as individualization ideas, should serve as a catalyst for ideas that can be individualized to meet the needs of each student. Some of the examples include activities that work exceptionally well for students with vision, hearing, and/or physical limitations as well as all students. Each example has a code to indicate when it includes specific ideas or activities that meet 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

Multiple Means of Representation	
Strategies	**Examples**
Introduce information through a multi-sensory approach (e.g., auditory, visual, tactile).	Share a chart showing the wealth, culture, etc., of each West African kingdom (e.g., https://www.murrieta.k12.ca.us/site/handlers/filedownload.ashx?moduleinstanceid=9479&dataid=49791&FileName=African%20Empires%20chart.docx). [Individualization idea: Add pictures to each section of the chart. Display the chart on the wall and refer to it throughout the unit on the West African kingdoms.] Show a video on the West African kingdoms' trade routes (e.g., https://www.youtube.com/watch?v=716wpDGPTCI). [Individualization idea: Provide objects (e.g., salt, gold, sand, etc.) mentioned in the video for students to explore when watching the video.] Show images of: • Michelangelo's works (e.g., https://www.michelangelo-gallery.org/the-complete-works.html?pageno=1) and • ships used by Europeans to explore the Americas (e.g., http://www-labs.iro.umontreal.ca/~vaucher/History/Ships_Discovery/). [Individualization idea: Describe the images in detail, pointing out the style features representing the Renaissance.] **V**
Model content through pictures, dramatization, videos, etc.	Show videos on: • Gutenberg's printing press (e.g., https://www.youtube.com/watch?v=DJpJL2YzCOc), • the Great Plains North American Indians (e.g., https://www.youtube.com/watch?v=_lC1BVzxKSU or https://www.youtube.com/watch?v=DtfwCljzg7g), • the Southeast North American Indians (e.g., https://www.youtube.com/watch?v=fZvtJqcHjNM), and • the Mississippi River (e.g., https://www.youtube.com/watch?v=f8qcYbswzRk). As a class, create a travel poster or presentation on travel to the medieval kingdoms of Ghana, Mali, or Songhai (e.g., http://score.rims.k12.ca.us/score_lessons/medieval_african_kingdoms/).

Present information using graphic organizers and models.	Share a timeline of the Silk Road (e.g., http://www.silk-road.com/artl/chrono.shtml) or Marco Polo's travels (e.g., https://www.wliw.org/marcopolo/2008/10/30/timeline-marco-polos-journey/118/). [Individualization idea: Place the times on a clothesline or string and supplement with pictures and objects.] **V**

Use a KWHL to help students make connections between what they already **K**now, **W**hat they want to know, **H**ow they can find out, and finally, what they **L**earn (slide show explaining the use of the KWHL chart and how it was made accessible for students with significant cognitive disabilities: http://www.cehd.umn.edu/nceo/teleconferences/tele14/CourtadeFlowers.pdf). **V/H/P** |
| Provide appropriate and accessible text on the content for students to listen to or read. | Listen to recordings of text about:
- trade routes, camels in Africa (e.g., https://www.ducksters.com/history/africa/trade_routes_of_ancient_africa.php),
- Michelangelo (e.g., http://www.vatican.va/various/cappelle/sistina_vr/index.html), and
- Johannes Gutenberg (e.g., https://www.ducksters.com/biography/johannes_gutenberg.php).

Have students explore terms and definitions on the West African kingdoms (e.g., https://quizlet.com/57300077/ghana-mali-and-songhai-flash-cards/). [Individualization idea: Have students use an adapted mouse to click on the speaker icon to listen to the text.] **P**

[Individualization idea: Adapt the readability of articles and grade-level text books to increase access. (e.g., https://teachinghistory.org/teaching-materials/teaching-guides/23560).] |
| Teach information using songs. | Have students listen to songs about:
- the Silk Road (e.g., https://www.youtube.com/watch?v=p7-PMOVSACQ) and
- the West African kingdoms (e.g., https://www.youtube.com/watch?v=6Vnu8pL8KPs). |

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

Multiple Means of Action and Expression	
Strategies	**Examples**
Use technology/assistive technology to optimize student access and interaction with the instructional materials and content.	Have students explore an interactive map of the Silk Road (e.g., http://virtuallabs.stanford.edu/silkroad/SilkRoad.html). [Individualization idea: Provide students with an adapted keyboard or mouse as needed to explore the map.] **P**
	Have students print a message using an online version of Gutenberg's printing press (e.g., https://www.hrc.utexas.edu/exhibitions/permanent /gutenbergbible/kids/printer/#top). [Individualization idea: Provide a model message for students to copy.]
	Have students explore a 360-degree view of Michelangelo's paintings in the Sistine Chapel (e.g., https://www.360cities.net/image/the-sistine-chapel). [Individualization ideas: Demonstrate the functions of the site (e.g., scrolling up, down, left, and right; using the plus sign to zoom in and minus sign to zoom out). Use a touch screen.]
Allow for instructional materials that can be modified to provide access.	Provide printed articles and books. [Individualization idea: Place the articles and books on a slant board.] **V/P**
	Provide an online article about Hernando de Soto (e.g., https://www.biography.com/people/hernando-de-soto-38469). [Individualization idea: Have the students use a screen reader.] **V**
	Have students share information on the Renaissance presented as a photo essay. [Individualization idea: Provide an array of photos and preprinted labels from which students can select for the essay. Make tactile versions of the pictures or provide representative objects.] **V**
	Provide a blank map of Europe for students to color and label landforms and bodies of water (e.g., http://www.freeworldmaps.net/europe /blank_map.html). [Individualization ideas: Provide an adapted holder for markers or bingo daubers. Provide preprinted labels from which students can select.] **P**
	[Individualization idea: 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 newly created sign with consistency.] **H**
Provide multiple means for students to make choices and select answers.	Record correct answers and distractors on a voice output multiple message switch(s) and have students answer questions using the switch. **V/P**
	Place answer choices on an eye gaze board for the student to select from. **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. **V/P**
Provide simulation activities.	Have students participate in a history mystery regarding the Black Death (e.g., http://www.mrroughton.com/history-mystery-labs/house-london). [Individualization idea: Partner with same-age general education peers to complete the activity.]

	Role play the Bubonic Plague (e.g., http://teacherlink.ed.usu.edu/ tlresources/units/Byrnes-S2000/Symons/bubonic.htm) to hypothesize the cause of the plague. [Individualization idea: Provide a student's dialogue on a voice-recorded switch.] **P**
Provide graphic organizers and templates.	Have students complete a timeline of European explorations. [Individualization ideas: Use images of the explorers and the types of ships they sailed.] Have students explore interactive maps showing physical features of North America (e.g., https://www.learner.org/interactives/historymap/sea.html or https://online.seterra.com/en/vgp/3452). Have students explore an interactive map showing North American Indian tribes, their diets, homes, cultures, etc. (e.g., https://www.mrnussbaum.com /nativeamericans/).

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

Multiple Means of Engagement	
Strategies	**Examples**
Provide a schedule and visual timer.	Have students select the next activity on their personal schedules and set a visual timer to indicate how long students have before break time. Have students use a mini-schedule for specific activities (e.g., http://autismcircuit.net/tool/mini-schedule). Have students check off each step of a task as completed. [Individualization idea: Have students use a built-up pencil holder.] **P**
Vary the challenge and amount of information presented at a time.	Introduce a big idea or broad concept (e.g., explorers and exploration) before giving more specific information (e.g., European explorers and exploration of the Americas). Provide information in short blocks of time, gradually increasing the instructional time.
Make connections to topics or activities that are motivating.	Make connections between modern medical techniques and mathematics (e.g., surgery, medical textbooks, concept of zero) and their beginnings in ancient India.
Allow choices as possible.	Allow students to choose a Renaissance artist to research. Allow students to set their individual academic and behavioral goals with assistance as needed.
Provide opportunities to work collaboratively with peers.	Provide opportunities for students to work in a general education classroom with peers when learning about the Renaissance or have peer tutors come into the special education classroom to work on creating a picture map (e.g., https://support.google.com/maps/answer/2622947?co=GENIE.Platform%3DDe or https://www.scribblemaps.com/create/#/lat=36.879620605027014&lng=-40.78125&z=3&t=hybrid) about Marco Polo's travels.
Teach student self-regulation skills.	Provide students with communication symbols to request a break or express feelings and model how to use them appropriately. Develop and provide a cue to help students know when to request a break or an activity that allows them to stay calm. Introduce a big idea or broad concept (e.g., inventions) before giving more information on specific Mesopotamian inventions. Modify the school-wide behavior system to make it accessible for the students.

UDL Resources

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

- 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

- Natural Reader provides a free online text-to-speech reader. https://naturalreaders.com/

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, explain how the student can use maps in their daily lives to determine the location of animals at the zoo, to navigate a walkthrough of exhibits in a museum, or to find transportation to work and stores in the future. In addition, 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 suggested opportunities to embed other skills into instruction.

Table 8. Transfer and Generalization Ideas

Area	Instruction	Opportunity to Embed Skills
Communication	While teaching vocabulary, make connections to real-life or future opportunities to use the words (e.g., discussing a topic with co-workers and friends).	Use the context of the content area instruction to increase language skills, work on articulation, or access alternative and augmentative communication (AAC) systems.
Reading and Listening Comprehension	Provide information through reading books and articles on trade between Asia, North Africa, and Europe when working on reading/listening comprehension.	Provide practice of communication skills when students are answering questions about the book or article. Provide practice of fine motor skills by having a student use a trackball to perform drag-and-drop functions on online activities. Provide practice of crossing midline to turn pages on an adapted book (e.g., thick tabs added to pages).
Age-Appropriate Social Skills	Make connections between the Connecting Concepts and real-life experiences showing how students can independently find a needed bus route (e.g., how to think spatially to use a map).	Provide opportunities to work along same-age peers during social studies instruction to practice age-appropriate social skills (e.g., waiting and taking turns).
Independent Work Behaviors	Encourage and reinforce independent completion of tasks to build independent work skills (e.g., completing a checklist).	Have students self-monitor when completing tasks. Have students use personal schedules and mini-schedules during content instruction.

| Skills in Accessing Support Systems | Encourage students to ask appropriately for assistance 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 Six through Eight

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 9–13) 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

Physical and Human Geography		
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.		
Grades 6-8 KSSs and UCs	**Concepts**	**Vocabulary**

• **6.06.a:** Ability to identify the effect of geography and climate on the civilization that lived in the Fertile Crescent (e.g., seasonal rains and river flooding provided fertile soil; the ability to irrigate fields allowed large crops to be grown; plentiful food and the mild climate allowed many animals to live in the area)
• **6.06.b:** Ability to identify why an area in ancient Mesopotamia was known as the Fertile Crescent (e.g., a green land where many plants grew due to the rich soil and occasional rain; a crescent-shaped region curved like a quarter-moon shape)
   o **6.06.UC:** Recognize geographic features in the region of ancient Mesopotamia (i.e., Tigris and Euphrates Rivers, Mediterranean Sea, Persian Gulf, Zagros and Caucasus Mountains).
• **6.40.a:** Ability to recognize the geographical features of ancient Greece (e.g., mountainous terrain, the Mediterranean Sea)
• **6.40.b:** Ability to identify how the geographical features of ancient Greece affected the development of Greek colonies in the regions around the Mediterranean Sea (e.g., needing agriculturally productive land made having colonies desirable; having access to the sea made traveling to found colonies easier)
   o **6.40.UC:** Recognize that a geographical area can have different geographic features (e.g., mountains, sea).
• **6.52.a:** Ability to identify the important geographic features of ancient Rome (e.g., located next to a river; had access down the river to the Mediterranean Sea; protected by hills and mountains; had good farmland and a mild climate)
	Understand:
	• how to think spatially and use a variety of maps
	• how to interpret physical and political features on a variety of maps
	• how geography and climate affect exploration
	• how geography affects where people live, trade, and travel
	• how geography affects growth of a society
	• how geography affects a region's economy
		General:
		• agriculture
		• ancient
		• civilization
		• climate
		• colony
		• crescent shape
		• crops
		• dock
		• economic
		• explorer
		• fertile
		• flood
		• found/founded
		• geographic features
		• goods
		• homeland
		• irrigate/irrigation
		• ocean
		• physical map
		• products
		• protect/protector
		• region
		• route
		• seasonal
		• settle/settler/ settlement
		• soil
		• trade
		• voyage

Physical and Human Geography		

• **6.52.b:** Ability to identify the benefits of the geographic features of ancient Rome (e.g., fresh water from the river; easy access to routes used for trade and to expand the empire; protection from invasion or attack; easy to grow crops such as grains, olives, grapes and other fruit)
     ○ **6.52.UC:** Recognize that having good farmland and easy access to trade routes helped ancient Rome be a successful civilization.
• **7.20.a**: Ability to recognize that the development of overland routes increased long-distance trade
• **7.20.b**: Ability to recognize that the development of ocean trade routes increased trade between Asia, Africa, and Europe
• **7.20.c.** Ability to recognize the significance of trade routes (e.g., they enabled the exchange of many types of goods and ideas)
     ○ **7.20.UC**: Recognize that people traveled on land and across water to conduct trade.
• **7.23.a**: Ability to identify Ghana, Mali, and Songhai as West African kingdoms
• **7.27.a**: Ability to locate major land forms (i.e., Alps) on a physical map of Europe
• **7.27.b**: Ability to locate major bodies of water (i.e., Atlantic Ocean, Mediterranean Sea) on a physical map of Europe
     ○ **7.27.UC**: Identify the representation of a landform or a body of water on a physical map.
• **7.53.a**: Ability to locate major landforms (i.e., Appalachian Mountains, Great Plains) on a physical map of North America
• **7.53.b**: Ability to locate major bodies of water (i.e., Atlantic Ocean, Caribbean Sea, Mississippi River, Pacific Ocean) on a physical map of North America or a physical map of the Western Hemisphere
     ○ **7.53.UC**: Ability to identify North America and South America on a physical map.
• **7.54.a:** Ability to locate the homelands of the Southeast and Plains North American Indians on a map
• **7.59.a**: Ability to recognize why explorers made sea voyages (e.g., advances in ship design made travel easier; they wanted to explore new lands to find riches, trade goods, and new trade routes
• **7.59.b**: Ability to identify the contributions of Christopher Columbus (i.e., reached the Americas; his voyages led to further exploration and colonization)
• **7.59.c**: Ability to identify the contributions of Hernando de Soto (i.e., helped conquer Peru; explored the southeastern United States; first European to cross the Mississippi River)
• **7.59.d**: Ability to identify the contributions of Ferdinand Magellan (i.e., sought a western sea route to Asia;
	• the importance of land and sea routes on trade, migration, and colonization	**Specific**:
		• Africa
		• Alps
		• Appalachian Mountains
		• Asia
		• Atlantic Ocean
		• Caucasus Mountains
		• Christopher Columbus
		• Euphrates River
		• Europe
		• Fertile Crescent
		• Ghana
		• Great Plains
		• Greece
		• Hernando de Soto
		• Jamestown
		• Mali
		• Mediterranean Sea
		• Mesopotamia
		• Mississippi River
		• North America
		• Pacific Ocean
		• Persian Gulf
		• Peru
		• Plains American Indians
		• Rome
		• Songhai
		• Southeast American Indians
		• Thirteen Colonies
		• Tigris River
		• Straits of Magellan
		• West African kingdoms
		• Western Hemisphere
		• Zagros Mountains

Physical and Human Geography		

discovered the Straits of Magellan; first European to cross the Pacific Ocean; one of his ships was the first European ship to sail around the world)
    ○ **7.59.UC**: Recognize that explorers traveled across the sea to learn about new lands.
• **8.01.a**: Ability to identify descriptions of the location where Jamestown was founded (e.g., surrounded by water on three sides, easy to defend, deep water for docking ships)
    ○ **8.01.UC**: Recognize that the English wanted a settlement in North America.
• **8.08.a**: Ability to recognize that the Thirteen Colonies were located on the east coast of North America
• **8.08.b**: Ability to identify the Thirteen Colonies on a map
    ○ **8.08.UC**: Recognize that the Thirteen Colonies were English settlements in North America.		

Table 10. Culture Concepts and Vocabulary

Culture
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.

Grades 6-8 KSSs and UCs	Concepts	Vocabulary

• **6.16.a:** Ability to recognize that people living in ancient Egypt had polytheistic religious beliefs (i.e., believed in many gods)
• **6.16.b:** Ability to identify why the ancient Egyptians built pyramids (i.e., tombs for pharaohs and their possessions; represented the wealth and power of the pharaohs and Egypt)
  o **6.16.UC:** Recognize that ancient civilizations had different religious beliefs.
• **6.30.a:** Ability to identify medical advances from ancient India that are used in the world today (e.g., medical textbooks and methods of treating diseases and injuries; study of the body to understand how it works; performing surgery)
• **6.30.b:** Ability to identify advances in mathematics from ancient India that are used in the world today (e.g., the Hindu-Arabic number system; the concept of zero)
  o **6.30.UC:** Recognize an important use of medicine or mathematics in today's world.
• **6.49.a:** Ability to recognize that the Acropolis was an important part of Athens (e.g., located on a hill, known for important architecture and art, had many temples)
• **6.49.b:** Ability to recognize the purposes of the buildings of the Acropolis (i.e., used for religious ceremonies and festivals)
• **6.49.c:** Ability to identify that the Parthenon was a large temple on the Acropolis
• **6.49.d:** Ability to identify the purposes of the Parthenon (e.g., a religious center; a place built to honor Athena, the Greek goddess of wisdom and protector of Athens; a city treasury)
  o **6.49.UC:** Recognize that Greek cities used buildings for different purposes.
• **6.57.a:** Ability to identify how the creation of aqueducts helped support the growth of ancient Rome (e.g., delivered water to cities and towns; provided water for public baths, fountains, homes, businesses, farms, and gardens)
• **6.57.b:** Ability to identify the importance of the Colosseum (e.g., represented the power of the emperors and the Empire; provided a place for people to gather and enjoy themselves; the construction used new inventions and techniques)
• **6.57.c:** Ability to identify how the creation of roads helped expand the Roman Empire (e.g., roads were easy
	Understand:
	• reasons for and effects of new developments, technology, and inventions on people's lives in the past and present
	• how learning, art, architecture, and literature affect people's lives
	• how roads help a civilization grow
	• purpose and significance of buildings and places
	• the effect of exchanging goods on people living in different places (e.g., new products, diseases, etc.)
	• reasons people move to different places
	• different groups of people have different cultures, religions, and ideas
		General:
		• architecture
		• belief
		• ceremony
		• city
		• clothing
		• communicate/ communication
		• construction
		• culture
		• disease
		• economic
		• emotion
		• emperor
		• expand
		• festival
		• fort
		• god/goddess
		• invention
		• library
		• mathematics
		• medical
		• nature
		• political
		• possession
		• printing press
		• protect/protector
		• public
		• pyramid
		• realism (in art)
		• religion
		• road
		• social
		• soldier
		• surgery
		• temple
		• textbooks
		• tomb
		• trade
		• travel/traveler
		• university
		• wealth
		• western

Culture		

to travel on and lasted a long time; roads were protected to keep travelers safe; roads connected all parts of the large empire; soldiers could travel quickly to protect different parts of the empire)
  ○ **6.57.UC:** Recognize that ancient Rome was a society that developed innovative ideas and inventions.
• **7.23.d**: Ability to recognize the significance of culture in Ghana, Mali, and Songhai (e.g., architecture, universities and libraries, trade in books)
  ○ **7.23.UC:** Recognize that conducting trade will cause the population of cities to grow.
• **7.43.a:** Ability to recognize how art affects society (e.g., communicates ideas, affects emotions)
• **7.43.b**: Ability to recognize innovative ideas and attitudes that were represented in Renaissance art (e.g., realism, a focus on the individual, and nature)
• **7.43.c**: Ability to recognize the contributions of Renaissance artists (i.e., Leonardo da Vinci, Michelangelo)
  ○ **7.43.UC**: Recognize that art (e.g., paintings, sculptures) is an important part of society.
• **7.44.a:** Ability to identify a contribution of Johannes Gutenberg (i.e., the invention of the printing press)
• **7.44.b:** Ability to identify the influence of the printing press on early modern Europe (e.g., enabled the spread of books)
  ○ **7.44.UC:** Recognize that an invention can improve the lives of people.
• **7.54.b:** Ability to recognize the cultures (i.e., housing and clothing) of the Southeast and Plains North American Indians
• **7.54.c:** Ability to identify differences in the cultures (i.e., housing and clothing) of the Southeast and Plains North American Indians
  ○ **7.54.UC**: Recognize a characteristic of a North American Indian culture.
• **8.01.c:** Ability to identify factors that contributed to the success of Jamestown (e.g., built a fort for protection, developed peaceful relations with the American Indians, learned how to grow corn)
• **8.49.b**: Ability to recognize that one goal of westward expansion was to spread the traditions (e.g., political, social, and economic) of the United States
		• wisdom
		• zero
		Specific:
		• Acropolis
		• aqueduct
		• American Indians
		• Athena
		• Athens
		• Colosseum
		• Egypt
		• Ghana
		• Greece
		• Greek
		• Hindu-Arabic number system
		• India
		• Jamestown
		• Johannes Gutenberg
		• Mali
		• Parthenon
		• pharaoh
		• Plains Indians
		• polytheistic
		• Renaissance
		• Rome
		• Songhai
		• Southeast Indians
		• United States

Table 11. Economics Concepts and Vocabulary

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.		
Grades 6-8 KSSs and UCs	**Concepts**	**Vocabulary**

• **6.38.a:** Ability to identify reasons for the creation of the Silk Road (e.g., to obtain Chinese goods)
 • **6.38.b:** Ability to recognize that the Silk Road enabled countries from ancient China to Europe to exchange ideas, cultural influences, inventions, and other goods (e.g., silk, spices, gold, tea)
 • **6.38.c:** Ability to identify that people from China and Europe wanted to trade because each wanted products the other had (e.g., Europe had linen, glass, gold, and silver; China had silk, porcelain, tea, spices, and paper)
    o **6.38.UC:** Recognize why groups of people want to trade (e.g., have products each other wants, want products not available in their area; want to gain wealth).
 • **7.06.a:** Ability to identify the Silk Roads as trade routes between Asia and Europe
 • **7.06.b**: Ability to recognize the significance of the Silk Roads to trade between Asia and Europe (e.g., many types of goods and ideas were exchanged)
 • **7.06.c.** Ability to identify that trade and communications increased between Europe and Asia during the time of the Mongolian empires (e.g., the Mongols protected travelers on the Silk Roads)
 • **7.06.d**: Ability to recognize that Marco Polo's travels increased interest in Chinese culture and in obtaining goods from China
    o **7.06.UC**: Recognize that people trade goods to get the things they need or want.
 • **7.23.b**: Ability to recognize that cities in the kingdoms of Ghana, Mali, and Songhai were centers of trade and culture
 • **7.23.c**: Ability to recognize the significance of trade to Ghana, Mali, and Songhai (e.g., became rich from controlling trade; traded many goods including gold and salt)
 • **8.01.b**: Ability to recognize that trade with American Indians (e.g., corn for beads, metal tools) helped the settlers survive during Jamestown's early years
 • **8.37.a**: Ability to recognize technological advances during the American Industrial Revolution (i.e., the use of interchangeable parts, the development of the American factory system)
 • **8.37.b**: Ability to recognize the contributions of individuals to the American Industrial Revolution (i.e.,
	Understand:
	 • types of goods and services
	 • the importance and benefits of trading/exchanging goods and services
	 • how goods and services are exchanged
	 • benefits, reasons, and ways groups cooperate
	 • how natural resources affect a community
	 • how inventions and new techniques affect production and distribution of goods and services
	 • how inventions and new techniques affect people's jobs and way of life
	 • gaining new land can improve economic stability
		General:
		 • city
		 • communicate/ communication
		 • culture/cultural
		 • economy/ economics
		 • expand
		 • goods
		 • interchangeable
		 • invention
		 • linen
		 • metal tools
		 • porcelain
		 • power-driven machinery
		 • product
		 • rural
		 • salt
		 • settle/settler/ settlement
		 • silk
		 • spices
		 • trade
		 • western
		
		 Specific:
		 • American factory system
		 • American Indians
		 • American Industrial Revolution
		 • Asia
		 • China/Chinese
		 • Eli Whitney
		 • Europe
		 • Ghana kingdom
		 • Mali kingdom
		 • Marco Polo
		 • Mongolian empires
		 • Mongols

Economics		
Eli Whitney's use of interchangeable parts, Samuel Slater's development of the American factory system - **8.37.c**: Ability to identify the significance of the use of interchangeable parts (i.e., could produce large numbers of parts quickly at a lower cost, made repair and replacement of parts easier) - **8.37.d**: Ability to identify the significance of the factory system (i.e., power-driven machinery produced goods more quickly and at lower costs than goods could be produced in homes or small shops; people moved from rural areas to cities to find jobs, the economy grew) o **8.37.UC**: Recognize that goods were produced in factories during the Industrial Revolution. - **8.49.c**: Ability to identify that westward expansion provided economic opportunities (e.g., people could own good land, find gold, have a better life)		- Samuel Slater - Silk Road - Songhai kingdom

Table 12. Civics and Politics Concepts and Vocabulary

Civics and Politics		
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.		
Grades 6-8 KSSs and UCs	**Concepts**	**Vocabulary**
6.04.a: Ability to identify that a key characteristic of civilizations is the presence of a stable form of government (e.g., to maintain law and order for its citizens) **6.04.b:** Ability to identify that a key characteristic of civilizations is a stable social structure (e.g., social classes that developed from people doing different jobs) **6.04.c:** Ability to identify that a key characteristic of civilizations is a stable food supply (e.g., the ability to grow and provide enough food for people to eat) **6.04.d:** Ability to identify that a key characteristic of civilizations is a form of writing (e.g., to keep records of economic transactions and daily events, to allow news or ideas to be preserved for other people or carried to distant places) **6.04.UC:** Recognize why rules are important in a society. **8.23.a**: Ability to identify the Preamble as the part of the Constitution that describes the purposes of the federal government **8.23.b**: Ability to recognize that the principles in the Constitution establish a democracy and protect the rights of the people **8.23.c**: Ability to identify some of the principles in the Constitution (i.e., the separation of powers, checks and balances) **8.23.d**: Ability to identify the separation of powers as the principle that divides the powers of the government into three branches (i.e., executive, judicial, legislative) to prevent any branch from becoming too powerful **8.23.e**: Ability to identify checks and balances as the principle that gives each branch of government the power to check or limit the actions of the other two branches to prevent any branch from becoming too powerful **8.23.UC**: Recognize that the Constitution established the national government of the United States **8.68.a**: Ability to recognize that the 13th Amendment abolished slavery in the United States **8.68.b**: Ability to recognize that the 14th Amendment made former slaves citizens of the United States	**Understand:** - importance of a form of writing to a civilization - how the political and social structure of a civilization benefits its people - the structure and purpose of government and its relationship to democracy and citizenry - citizens of the United States have rights and responsibilities	**General:** - abolish - abolitionist - characteristic - checks and balances - citizen - civilization - democracy - economic - federal government - food supply - form of writing - government - power - protect/protection - rights - separation of powers - slave/slavery - social structure - stable - vote **Specific**: 13th Amendment 14th Amendment 15th Amendment - African American men - Executive branch - Judicial branch - Legislative branch - Preamble to the U.S. Constitution - U.S. Constitution

Civics and Politics		
• **8.68.c**: Ability to recognize that the 14th Amendment states the laws give equal protection to everyone, including former slaves • **8.68.d**: Ability to recognize that the 15th Amendment granted the right to vote to African American men o **8.68.UC** Recognize that amendments were made to the U.S. Constitution to guarantee rights for former slaves.		

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

History: Change, Continuity, and Context
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.

Grades 6-8 KSSs and UCs	Concepts	Vocabulary

• **6.24.a:** Ability to identify reasons why the Kingdom of Israel split into two kingdoms (e.g., harsh leadership by the king; economic hardships; unequal treatment of the tribes; only some tribes supported the king)
• **6.24.b:** Ability to recognize the consequences of the breakup of the Kingdom of Israel (e.g., two weaker, smaller kingdoms that were less able to defend themselves)
  o **6.24.UC:** Recognize that the Kingdom of Israel was established by the ancient Israelites.
• **7.36.a**: Ability to recognize that the Black Death (i.e., Bubonic Plague) spread along trade routes from Asia to Europe
• **7.36.b**: Ability to identify the effect of the Black Death (i.e., Bubonic Plague) on the population (e.g., about one-third of the population in Europe died; the world population decreased)
  o **7.36.UC**: Recognize a way the plague changed life in the Middle Ages.
• **8.15.a:** Ability to recognize that the colonists opposed many British taxes (e.g., taxes on tea, glass, paper)
• **8.15.b:** Ability to recognize examples of conflict between the colonists and the British (e.g., The Boston Massacre, 1770, The Boston Tea Party, 1773)
• **8.15.c:** Ability to identify British taxes that were major causes of the American Revolution (i.e., The Stamp Act, 1765, The Townshend Acts, 1767)
  o **8.15.UC:** Recognize that unpopular British laws helped cause the American Revolution.
• **8.20.a**: Ability to recognize that the Continental Army had to deal with many problems (e.g., lack of food, clothing, equipment, training, and money)
• **8.20.b**: Ability to identify battles of the American Revolution (i.e., Battle of Saratoga, Battle of Yorktown)
• **8.20.c**: Ability to recognize the significance of battles (i.e., Battle of Saratoga, Battle of Yorktown)
  o **8.20.UC**: Recognize that the American colonists formed an army to fight against the British.
• **8.43.a**: Ability to identify leading abolitionists (i.e., Frederick Douglass, Harriet Tubman)
• **8.43.b**: Ability to recognize how Frederick Douglass supported abolition (e.g., gave speeches, wrote
	Understand
	• causes of disagreements and conflict between countries and groups of people
	• causes and consequences of the division of a kingdom or country
	• ways groups of people advocate for rights and freedom
	• importance of people's actions in history
	• importance of leaders to guide change
		General:
		• abolish
		• abolitionist
		• battle
		• colony/colonist/ colonization
		• commander
		• economic
		• equipment
		• general
		• population
		• route
		• tax
		• trade
		• training
		Specific:
		• American Revolution
		• Army of Northern Virginia
		• Asia
		• Battle of Gettysburg
		• Battle of Saratoga
		• Battle of Shiloh
		• Battle of Yorktown
		• Black Death
		• Boston Massacre, 1770
		• Boston Tea Party, 1773
		• British
		• Bubonic Plague
		• Civil War
		• Confederate Army
		• Continental Army
		• Europe
		• Frederick Douglass
		• General Ulysses S. Grant
		• Harriet Tubman
		• Israel/Israelites
		• Kingdom of Israel
		• Middle Ages

books, published the abolitionist newspaper the North Star, supported equal rights for everyone)		• North Star newspaper
• **8.43.c**: Ability to recognize how Harriet Tubman supported abolition (e.g., helped slaves escape to the North)		• Northern Kingdom/Israel
o **8.43.UC**: Recognize that a movement to end slavery in the United States helped slaves gain their freedom.		• Robert E. Lee • Southern armies • Southern Kingdom/Judah
• **8.49.a**: Ability to recognize that Manifest Destiny was the idea that the United States should continue to expand until the country covered North America from the Atlantic Ocean to the Pacific Ocean		• Stamp Act, 1765 • Townshend Acts, 1767 • Tribes of Israel • Union Army
o **8.49.UC**: Recognize that people in the United States moved west to find new lands and new opportunities.		
• **8.63.a**: Ability to identify Civil War battles (i.e., Battle of Shiloh, Battle of Gettysburg)		
• **8.63.b**: Ability to identify the significance of Civil War battles (i.e., Battle of Shiloh, Battle of Gettysburg)		
• **8.63.c**: Ability to identify leaders of the Civil War (i.e., General Ulysses S. Grant of the Union Army; General Robert E. Lee of the Confederate Army)		
• **8.63.d**: Ability to identify contributions by General Ulysses S. Grant (e.g., leader of the Union Army, won important battles, led the Union Army to victory)		
• **8.63.e**: Ability to identify contributions by General Robert E. Lee (e.g., commander of the Army of Northern Virginia, won many battles, defeated larger Union armies, commander of all Southern armies)		
o **8.63.UC**: Recognize that generals lead armies in a war.		

Section VIII

Tactile Maps and Graphics

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, 2010). It helps students understand and gain information when presented with social studies concepts, knowledge, and skills. 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 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 graphic of landforms 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. In addition, 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 T-shirt, an example of clothing as a need, with a T-shirt).

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.

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), and
- Sandpaper.

Raised lines can be made from:

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

Resources

- The American Foundation for the Blind provides basic principles for preparing tactile graphics. http://www.afb.org/info/solutions-forum/electronic-files-and-research-work-group/tactile-graphics/345

- The Texas School for the Blind and Visually Impaired provides 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

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