Chapter 14

Thematic Units
LEARNER OBJECTIVES

At the conclusion of this chapter

YOU SHOULD BE ABLE TO

1. Explain the value of teaching with thematic units.
2. Develop a thematic unit.
3. Use a variety of formats for thematic units to meet the needs of your students.
4. Plan for flexibility and for responding to student interest.
5. Identify the following terms that are defined or explained in this chapter:
   integrated curriculum 546  thematic unit 545  topical unit 545

NCTE/IRA Standards addressed in this chapter

STANDARD 1. Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures in the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.

STANDARD 2. Students read a wide range of literature from many periods in many genres to build an understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) of human experience.

STANDARD 7. Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

STANDARD 8. Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.
M

S. JUDD chooses Lynne Cherry’s A River Ran Wild as the focus of her thematic unit on the environment. The book tells the story of an idyllic American Indian settlement along the banks of the Nash-a-way River, the occupation of the land by English settlers, the Industrial Revolution that caused the river to become polluted, and the subsequent cleansing of the river. She is aware that this book covers historical periods in the development of our country, as well as environmental issues, so she finds it to be a good blend of social studies and science. After reading the book to the class, she leads a discussion about the issues involved and relates the contaminated river to the pollution of a nearby creek. The students become excited about the issues, and Ms. Judd begins recording their ideas in the form of a semantic map. As students categorize and label the ideas on the map, five subtopics become obvious (see Figure 14.1). Ms. Judd then asks the students to sign up for their first and second choices of subtopics to investigate. She forms groups from their preferences, and the students eagerly begin their work.

What’s happening here?

The book provides a stimulus for creating interest in the environment. By relating the polluted river to the local creek, Ms. Judd helps the students see the relevance of the story to their own environment. Through the discussion, they become actively involved in the issues and want to know more. The semantic map enables Ms. Judd to assess the students’ present knowledge, and it provides an organizational framework for the unit with related items already identified in each category. After the lively discussion and creation of the web, most students are ready to choose a subject for further investigation. By giving students choices, Ms. Judd allows them to pursue individual inquiries within the required curriculum.
Thematic units provide you with organizational plans for teaching a single topic or theme in depth. Instead of being limited to textbook coverage, students have opportunities to plunge into subjects that cross curricular boundaries and to discover new ways of learning. They use all sorts of resource materials—print and nonprint texts, the computer, and the community—to seek answers to their inquiries, and they present their findings in unique ways. Thematic units open an entirely new way of learning to students who have been bound by traditional lecture and textbook instruction.

In this chapter, we present an explanation of thematic units and contrast them with topical units and integrated curriculum. The benefits of thematic units are presented, and plans for selecting appropriate themes, developing and implementing them, and evaluating student progress are given. The second part of this chapter includes sample
Overview of Thematic Units

**THEMATIC UNITS** are frameworks for organizing content and learning experiences around topics or themes that cross curricular boundaries (Cooper, 1997; Shanahan, 2000). They provide a way for integrating language arts and relevant content areas, and they can be constructed in a variety of ways around many types of concepts or ideas. They may arise from students' inquiry, although the grade-level curriculum may determine the subject to some extent. They begin with a topic, which is expanded into a theme or purpose worthy of investigation. As students immerse themselves in the topic through reading and discussion, subtopics emerge. The classroom vignette at the beginning of the chapter shows how a book can be the hub of a thematic unit.

**Understanding Thematic Units**

Because thematic units can be constructed in a variety of ways around many topics, they offer students opportunities to explore areas of interest in depth. Instead of viewing subjects narrowly, they become aware of connections among the disciplines. Students investigate various aspects of the theme, seek answers, and often discover solutions to authentic problems. Kettel and Douglas (2003, p. 48) state, “Single theme multiple text instruction helps students understand the theme from a variety of perspectives.” Because some students have trouble responding to multiple texts, the use of picture books, rather than chapter books, can be helpful when multiple-text units are first introduced. Kettel and Douglas (2003) also encourage the use of other print materials, such as textbooks, magazines, newspapers, and the Internet. Reading such materials and having discussions and reflective writing based on the materials, comparing the information in different sources, and responding to open-ended questions about the theme all enhance understanding.

Since they generally cross curricular areas during a large portion of the school day, thematic units differ from topical units (Sawyer & Sawyer, 1993). **Topical units** usually cover a topic within a single subject, such as focusing on measurement in mathematics class. Although thematic units typically spill over into different subject areas, they seldom connect naturally with every subject. Teachers should use the unit in only those areas where there are logical connections and avoid forcing contrived connections. Subjects that do not fit into the theme can be taught in a more traditional manner.

Thematic units provide more than factual information related to curricular objectives; they help students acquire meaning, develop attitudes, and direct their own learning. They enable students to develop an understanding of their social and physical worlds as they interact with others.
In his discussion of integrated curriculum, Beane (1997) points out that it differs from thematic units in that curriculum boundaries are blurred or disappear entirely as students become involved. An integrated curriculum is centered around personal and social issues that are collaboratively planned and implemented by teachers and students, without regard for content areas. Examples of topics include “Living in the Future,” “Conflict,” “Change,” and “Who Am I?” Even though thematic units recognize different content areas and connections among them, many also stress issues of personal and social significance that are the essence of an integrated curriculum. Figure 14.2 shows the four major aspects of curriculum integration, according to Beane (1997).

Values of Thematic Units

Educators see many advantages for using thematic units as students become active participants in the authentic, meaningful experiences these units offer. The following list identifies some of the benefits of thematic units.

- **Social collaboration:** Students work with each other and the teacher on selecting, planning, and implementing thematic units. They learn to communicate effectively, accept differences of opinion, and create joint projects.

![Figure 14.2 Aspects of Integrated Curriculum](links/abllongman.com/roe1e)

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Explanation</th>
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<tbody>
<tr>
<td>Integration of experiences</td>
<td>People’s experiences create their perceptions, beliefs, values, and ideas about themselves and their world. Reflections from these experiences help them deal with problems, issues, and situations as they arise.</td>
</tr>
<tr>
<td>Social integration</td>
<td>A major purpose for schools is to provide common or shared educational experiences for young people of diverse backgrounds and characteristics in order to create classroom communities.</td>
</tr>
<tr>
<td>Integration of knowledge</td>
<td>Individuals use whatever knowledge is appropriate for addressing a situation or problem intelligently without regard for content area designations.</td>
</tr>
<tr>
<td>Integration as a curriculum design</td>
<td>The curriculum is based on issues and problems of social and personal significance in the real world. Projects and activities involve application of knowledge for authentic purposes.</td>
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</tbody>
</table>
Meaningful learning: Thematic units that deal with issues of personal and social significance are more meaningful to students than isolated practice of skills.

Learning skills: Skills learned in the context of purposeful activities help students see their application to actual situations and recognize their usefulness.

Cultural diversity: Social interactions enable students from different backgrounds to appreciate each other’s characteristics as they collaborate on projects. Electronic collaboration on the Internet often helps to achieve the goal of cultural diversity.

In-depth investigation: Students have time and opportunity to pursue subjects of interest through research, experimentation, and discovery.

Choice: Thematic units offer students choices instead of whole-class assignments. Students may usually choose projects that interest them, ways to conduct investigations, students with whom to work, and the formats for their final reports or projects.

Language development: Students use all forms of language purposefully as they investigate their themes. Language is integrated with content areas in authentic ways.

Connections: Instead of isolating subjects artificially, thematic units enable students to become aware of natural connections across the curriculum. Students realize that they need to cross curricular boundaries to solve problems and define issues.

Brain compatibility: Recent research indicates that the brain processes information more effectively through patterns and connections than through fragmentation. The more that knowledge is unified, the better the brain functions (Beane, 1997).

Developing a Thematic Unit

Much careful thought and planning go into developing a thematic unit. Selecting the topic, developing relevant activities and projects, locating resources, and evaluating student learning are major considerations. Thematic units may last only a few days or extend as long as ten weeks, depending partly on the students’ level of interest and partly on the breadth and depth of the topic.

Selecting a Theme

When selecting a theme, consider many factors, including the students’ developmental levels, their areas of expressed interests, curriculum requirements, and compatibility with standards. Establish learning goals and your rationale—the reason this theme is important for students to understand. Also consider the significance or worthiness of the theme in terms of social or personal growth. Although themes about teddy bears...
From observing your students, you should be aware of what they are able to do, the extent of their prior knowledge, and their interests. Choose a theme that is within their grasp but also challenges them to go beyond their present levels. Consider their interests, and, when possible, let them help select the theme so that they feel a sense of ownership. Your school may expect you to follow the curriculum guide and meet certain standards, so you may be somewhat limited in your choices.

Each class can select its own theme, but in many cases the same themes are found at a particular grade level because teachers are using the same curriculum. Elinor Ross met with a team planning a unit that involved all of the third-grade teachers in a school, including the media specialist and the physical education teacher. Together, they were planning the next thematic unit and considering how each of them could contribute. They developed an overall plan but realized that each class might go in a different direction, depending on the students’ inquiries and responses. In another school, all of the children from kindergarten through grade 6 were investigating the theme of peace, but each class was pursuing the theme in a different way. One sixth-grade class focused on inner peace, which led to a study of health issues that cause stress.

Planning and Implementing a Thematic Unit

After selecting the theme, you may want to assess students’ prior knowledge by using a semantic map or the K-W-L procedure (see Chapters 7 and 12). Once you know their levels of understanding, you can begin to plan the unit. With your students, identify some big questions to stimulate exploration and discovery. Pose some real-world problems that have no easy solutions. Let inquiry be a driving force as you plan your unit.

As you work with students in planning and developing the unit, consider the questions in Figure 14.3. Involve students in each step of the thematic unit, from helping to select the theme to developing and implementing it. You may want to ask them to
Developing a Thematic Unit

brainstorm possible activities and then add ideas of your own to provide a well-rounded unit (Brazee & Capelluti, 1995). Consider which activities will be initiating, ongoing, culminating, or evaluative. Initiating activities should spark interest and motivate students to become involved. Ongoing activities may evolve as you move through the unit, and the culminating activity (or activities) should pull together learning experiences and result in some form of creative presentation, such as a project, play, exhibit, or demonstration. Evaluation occurs as you observe student participation, read journals or other documents, peruse

**Figure 14.3 Questions to Consider in Planning and Developing a Unit**

1. How will I establish appropriate learning goals with my students?
2. How can I involve students in the planning?
3. What big questions should I be asking them?
4. How can our theme mesh with the curriculum for this grade?
5. How compatible is our theme with the standards?
6. What literature is appropriate to use with this theme?
7. What information is available on the Internet?
8. How can I accommodate students of diverse backgrounds?
9. How will I be sure that each student is working up to capacity level?
10. Am I providing authentic, meaningful activities and projects?
11. Where will I find the resources I need?
12. Can I find materials that are suitable for different ability levels?
13. How can I involve the community? Can we help them, or can they help us?
14. Will other teachers and the support staff be able to work with us?
15. How can this unit cross into different curricular areas?
16. How well does this theme relate to students’ needs, concerns, and interests?
17. How will I evaluate what the students have learned?
students’ portfolios, and observe their final projects. Students at times may work individually, with partners, in groups, or as a whole class. Although you should have in mind an overall plan for the thematic unit, the plan needs to be flexible enough to respond to students’ interests and input as the unit progresses.

Using Resources

RESOURCES MUST include more than textbooks and encyclopedias, although both provide valuable information. Ask your students to brainstorm where to search for answers to the big questions. They may have some excellent ideas and know of resources that you can’t even imagine. They may have artifacts to share, relatives with expertise, or experiences that bring depth and meaning to the theme. Your media specialist may be able to provide your class with videotapes, different genres of literature, photographs, puppets, and displays to enhance your unit. From teaming with other teachers, you may discover other resources that can be shared.

Your community can also be a great resource, with students both learning from the community and giving back to it. The historical society, the Chamber of Commerce, and banks may have maps, historical documents, information about places and events, and promotional brochures. Visits to nursing homes cheer patients but also enable students to view a different side of life. Resource people, such as firefighters, police officers, and computer specialists, can visit schools to provide information and demonstrations. People from different parts of the world give new insights...
into cultural differences. With your class, think about what resources are available in your community to support your theme. In the classroom vignette on environment at the beginning of the chapter, children became interested in how to reclaim their own creek and contacted city officials.

**Classroom Assessment for Thematic Units**

You may use rubrics or rating scales to evaluate student performance during thematic units. You may construct and administer tests over the content or require research papers from older students. In many cases, however, you will evaluate performance by observing student participation and response, by examining portfolios and other written work, and by judging the quality of the final product.

**SUMMARY**

Thematic units are frameworks for in-depth study of topics that cross the curriculum but still recognize subject area boundaries. They differ in these ways from topical units that are limited to a single subject area for a brief part of the day and from integrated curriculum that deals with major concepts and disregards curricular boundaries. Thematic units have many advantages, including social collaboration, connections among subjects, and brain compatibility.

Selecting a theme is critical, for it must be developmentally appropriate, fit into curriculum and standards guidelines, be worthy of extended investigation, and appeal to students. Planning should involve the students from the onset of the unit, and an opening K-W-L or semantic map activity helps you assess students’ existing knowledge about the theme focus. Although activities and projects are roughly planned, you must respond to student interest and be flexible enough to change direction if so indicated. Evaluation is ongoing and generally occurs as you observe student participation, examine written work, and evaluate major projects.

Several examples of organizational webs for thematic units and complete units that teachers can use as starting points or models for developing their own units appear at the end of this chapter. These cover different grade levels and offer a variety of formats.
Discussion Questions

1. If your media center has limited holdings, how can you find the resources you need to develop your thematic unit? What other options do you have?

2. If you have ELLs, how will you make sure that they participate in group work and not rely on native English speakers to speak for them?

3. Should students be allowed to use the Internet to locate information? Does your school have a rule about student use? Is undesirable material blocked from access?

4. How does an integrated curriculum differ from a thematic unit? Could a thematic unit ever be the same as an integrated curriculum? If so, how?

5. If you are in a departmentalized situation, how can you develop a thematic unit? How can you involve other teachers and get their cooperation?

Suggested Activities

1. Consider the class you are teaching or the grade you would prefer to teach. If you are currently teaching, what is the range of achievement levels within that class? How do you know, or how can you find out? List the kinds of resources that are available for these levels.

2. Choose a topic that interests you. Develop five “big questions” that might motivate students to seek answers.

3. Select the thematic unit format that you like best in this chapter. Why do you prefer it? What are its special features? Would you add anything to it? If so, what?

4. Given the theme of environment, how many different directions might it take? List the topics that could naturally develop from this theme. Would the grade level make a difference in how the theme might develop? If so, in what ways?

5. Create your own design for a thematic unit. Think of what is most important to you and how you would proceed.

References


multiple texts: A theme approach incorporating the best of children’s literature. *Voices from the Middle, 11*, 43–49.


The sample thematic webs and units in this section address different grade levels and a variety of themes. They are here as models for teachers to use, but ideally each teacher will develop unique units for each particular group of students. There is not one correct way to plan and implement units, and these units show different approaches and degrees of documentation that teachers have taken.

**Sample 1**

**Web for Cross-Curricular Thematic Unit on the U.S. Flag**

Sample 1 is an organizational web of activities to use in a unit on the flag. The unit is designed for fourth grade. The activities for the unit reach across curricular areas. For a teacher who is working from her own web, the degree of detail here may be sufficient to guide classroom activities.

**Sample 3**

**Thematic Unit on Humpback Whales**

Sample 3 is a thematic unit about humpback whales, appropriate for grades 2–5. This unit provides detailed activities and resources, including fiction and nonfiction literature, audio and video recordings, photographs, computer software, and virtual field trips. It also suggests both teacher-directed and student-directed activities.

**Sample 2**

**Thematic Unit on Energy**

Sample 2 is an example of a theme study on energy that extends across a number of subject areas and involves a wide variety of resources. This thematic unit is a broad overview that focuses on major ideas and concepts. Detailed lists of resources and activities will develop as the unit progresses. This unit is most appropriate for grades 4–8.

**Sample 4**

**Cross-Curricular Library Literature Unit on Jane Yolen’s Works**

Sample 4 is a cross-curricular library literature unit that can be adapted for use with students in grades 2–8. The unit focuses on the works of Jane Yolen, and the activities are categorized under different genres of literature and different subjects in the curriculum.
Thematic Unit on 
*Maniac Magee*

Sample 5 is a thematic unit that uses the novel *Maniac Magee* to focus instruction across the curriculum for grades 5–8. Both fiction and nonfiction resource books are used in this unit.

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Thematic Unit on 
Pioneers

Sample 8 is a thematic unit on pioneers. The unit is appropriate for grades 4–8 in its current form, but it could easily be adjusted for use in higher or lower grades. The unit spans a number of curricular areas, and it makes use of resource books, artifacts, websites, and a videotape. There are varied activities to engage the students who learn in different ways.

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Thematic Unit on 
Biomes of the World

Sample 6 is a thematic unit for the area of science that has biomes of the world as its focus. It is appropriate for grades 6–8. It features active learning and a mixture of concrete and vicarious learning activities.

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Thematic Unit on 
Insects and Spiders

Sample 9 is a thematic unit on insects and spiders. It is designed for pre-kindergarten through third grade. The unit includes both teacher-directed and student-directed activities, and these activities engage the children's senses. Resources are drawn from both informational books and works of fiction, as well as videos, computer software, photographs, audiotapes, and virtual field trips on the Internet.

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Thematic Unit on 
the American Revolution

Sample 7 is a thematic unit for the area of social studies that focuses on the American Revolution. It is appropriate for the middle grades, especially grades 4 and 5. This unit incorporates a variety of literature selections, as well as a video on the topic.

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Thematic Unit on 
*Holes*

Sample 10 is for a thematic unit based on the book *Holes*. It is organized around students choosing related questions to answer. It is appropriate for grades 7 and 8.
Web for Cross-Curricular Thematic Unit on the U.S. Flag

Source: Holly Mills and Sabrina Cagle, Graduate Students, Tennessee Technological University, Cookeville, TN. Used with permission.
Thematic Unit on Energy

**Topic**
Energy

**Theme**
To become aware of some sources and effects of various types of energy

**Big Questions**
- What alternatives are there to traditional energy sources? How do they work?
- How do we get energy that we can use? Can we store it to use later? How can we conserve it?
- What kinds of energy are found in our solar system? Find examples.
- Trace the use of energy from early civilizations to the present. What might the future hold in terms of energy resources and production?

**Overview of Content**
- *Science concepts:* energy sources (wind, sun, water, fossil fuels, nuclear energy, geothermal energy)
- *Social issues:* pollution, radiation, conservation, recycling, depletion of resources
- *Mathematical calculations:* relative cost and efficiency of energy sources; units for measuring energy
- *Health:* effects of using various types of energy on humans (radiation, clean air, acid rain, asphyxiation)

**Processes**
- Surveying home and school for energy conservation opportunities
- Interviewing resource people and writing reports
- Using textbooks, reference materials, the Internet, and other media
- Participating in oral presentations (debates, panel discussions, reports)
- Conducting experiments on energy efficiency
- Discovering and suggesting solutions for local energy problems
- Keeping records of observations on energy consumption with charts, graphs, and diagrams
- Making illustrated books on energy
Building models related to energy sources and utilization
Writing government representatives about energy concerns

Resources
Trade books: fiction (Letting Swift River Go by Jane Yolen), biography (Benjamin Franklin: The New American by Milton Meltzer), and science books (The Way Things Work by David Macaulay)
Reference materials (encyclopedias, textbooks, almanacs, atlases)
Resource people (power distributors, conservation officials)
Writing materials (notebooks, binders, graph paper, index cards)
Computers (Internet, word processing, e-mail correspondence)
Local newspapers
Government pamphlets and publications

Evaluation
Written project reports
Oral presentations
Tests over concepts
Completion of projects or experiments
Theme

The humpback whale, an endangered species, is a large mammal with many interesting features.

Grade levels

2–5

Duration

Approximately two weeks, depending on extent of student interest

Learner Objectives

The learner will

1. Develop an appreciation for humpback whales.
2. Gain understanding of environmental threats to humpback whales.
3. Acquire knowledge about characteristics and lives of humpback whales.
4. Compare and contrast whales with fish.
5. Understand how whales communicate with each other.

Activities

Initiating Activity

Read Humphrey, the Lost Whale: A True Story by Wendy Tokuda, and/or show the video with the same name. This is the story of Humphrey, the humpback whale, who was stranded in the Sacramento River near San Francisco in 1985 and how he was rescued. He was also stranded in San Francisco Bay in 1990. Arouse curiosity about whales by asking

- How would a whale get stranded?
- How could a whale be rescued?
- What do you think happens to Humphrey after he is rescued?
- Can you find on a map where Humphrey was stranded?

Tell the students that they will be learning much more about humpback whales.
Teacher-Directed Activities

1. Investigate Adopt-a-Whale programs. Ask students how to raise money to adopt a whale. An adopter gets photos of the whale, the whale’s biography, an adoption certificate, an audio CD of unique humpback whale calls, and a one-year subscription to the newsletter Flukeprints. (Information is available at http://www.whalecenter.org/adopt.htm.)

2. Play a recording of a whale song. Ask students to guess what they are hearing. Lead a discussion of how whales communicate through their songs. Let the students imitate some whale songs. (See audio resources for websites that give whale sounds.)

3. Have students contribute ideas for making a Venn diagram to compare a fish and a whale. Point out similarities and differences concerning how they swim, how they breathe, how their young are born, and the kind of skin they have. Also, make a Venn diagram to compare the flukes (horizontal parts of the tail) of a whale with the tail fins of a fish.

4. Encourage students to investigate why the humpback whale is an endangered species and what can be done to save it. They may contact Greenpeace (http://whales.greenpeace.org), the International Wildlife Coalition (http://www.iwc.org), the Center for Coastal Studies (http://www.coastalstudies.org), and the Marine Conservation Biology Institute (http://www.mcbi.org) for information. Discuss the issues involved in commercial whaling and saving the whale.

5. Ask students to find the size of a typical humpback whale.

6. Let students choose three to five of the following activities. To avoid having all students choose the same activities, make a sign-up sheet with a limited number of students for each activity. Provide time for them to share what they have done and learned.

Student-Directed Activities

Sign up for the activities you prefer. Use reference materials, Internet sites, and other resources to get the information you need. You may work individually, with a partner, or in a small group. Complete each activity that you choose and put your work in your portfolio.

1. Make a chart comparing humpback whales with other whales in terms of size, weight, places where found, and special characteristics. How does the humpback whale compare to a school bus or an eighteen-wheeler?

2. Humpback whales make the most famous sounds, which are sung only by the males (Simon, 1989). To make sounds using bottles of water, pour water in increments of 1/8 cup into eight identical bottles. Blow across the tops of the bottles and notice how the pitch varies. Try to make a tune.

3. What happens when a whale “blows”? How do whales use their blowholes to breathe? How do you breathe? How do fish breathe? Some whales can hold their breath for over an hour. Get someone to time how long you can hold your breath.

4. Learn about the history of whaling. What is a harpoon? How is it used? After a whale is killed, how is it brought on board a ship? What happens to the whale on a ship? Make a flow chart, a time line, or another type of graphic organizer showing the process of harpooning and processing a whale.

5. Whales are covered with fatty tissue called blubber beneath their skin. How does blubber help the whale? Find out why whales were hunted for their blubber and how it was used. Make a list of other products that come from whales.

6. A newly born humpback whale is 12 to 14 feet long. Ask your parents how long you were when you were born. If you are working individually, use this length. If you are working with...
a partner or in a group, compute the average birth length. Make a drawing on newsprint comparing your birth length or average length with that of the humpback whale. Also, mark the size of an average fully grown person (just under 6 feet) on your drawing.

7. Get a map of the world and cut out tiny shapes representing whales. Put the map on a bulletin board and place a whale shape wherever whales are found. You may want to label the kind of whale that is found in each location.

8. The International Whaling Commission banned all commercial whaling, beginning in 1985. Why did they do this? Is the ban being enforced all over the world? Find out at http://www.iwcoffice.org and share your findings with the class.

9. Some whales migrate. Why do they migrate, and where do they go? Trace their routes on a map.

10. Keep a portfolio of your investigations and activities about whales. Organize it, make a table of contents, illustrate parts of it, and make it available for others to see.

11. Write a journal entry as one of the following: a child on a whale-watching expedition, a whale enjoying its typical daily activities, or a person on a whaling vessel on a day when a whale is harpooned.

12. Debate the positive and negative aspects of commercial whaling. Study the issues and be prepared to support your views and respond to members of the other team.

13. Read three books about whales. You may use those listed as resources or find other books about whales. Discuss the books with a group of other students or write reviews of them.

14. Dramatize the story of Humphrey. Someone plays the part of Humphrey, and others are concerned spectators and rescuers.

15. Make a mural of a pod (group or school) of whales in the sea. Find out what sea plants and creatures are likely to be present in the background.

16. Create a diorama of a scene featuring a humpback whale. Use clay to mold the whale and suspend it from the top of the box. Create other sea creatures and plants to put in your diorama.

17. Dramatize people on a commercial fishing boat as they harpoon a whale, haul it on board, and process it.

18. Study the movements of whales. They breach, or jump almost clear out of the water, and then crash down. They swim with up-and-down pushes of their flukes (tail fins), and they use their paddle-like flippers for turning and balancing. They dive to great depths to search for food. They sleep by resting near the surface. Act out these movements in the gymnasium or on the playground.

**Culminating Activity**

Make a class semantic map with students contributing what they have learned about whales. From the topic “Humpback Whales,” let students choose their preferred subtopics, and divide them into groups according to the preferences. Give each group a reasonable amount of time to develop a project related to their subtopic. Depending on their developmental levels, students might choose to draw pictures or murals, make scrapbooks, create an annotated bibliography, give a dramatic presentation, write and illustrate a story from a whale’s point of view, debate the issue of whale hunting, or create a Microsoft PowerPoint presentation.
Cross-Curricular Connections

Language arts: nonfiction and fiction books, written and oral reports, portfolios, dramatizations, new vocabulary, websites, audio- and videotapes, journal entries, debates, reference materials

Science: living things and the environment, breathing through blowholes, comparison of mammals and fish, features of whales, sound-making in water

Mathematics: problem solving, comparisons of sizes and weights, averages, statistics, distances of migration, amounts of food and water intake

Social studies: history and processes of the whaling industry, issue of saving a species versus serving an industry

Geography: locations of whales, migratory paths, water temperatures in different locations

Visual arts: making murals, scrapbooks, dioramas, illustrations, clay models, and other representations of humpback whales

Music: listening to and imitating whale songs, creating tunes with bottles containing varying amounts of water

Physical education: moving as whales: breaching, swimming, diving, and resting

Evaluation

Evaluation can occur in a variety of ways, including the following.

1. Observation of completeness, accuracy, and presentation of culminating activity
2. Observation of class participation during activities
3. Observation of thoroughness, neatness, and organization of portfolio
4. Teacher-made test over facts about whales and/or understanding of their endangered status
5. Student-teacher conferences for discussions that reveal understanding and appreciation of whales
6. Self-evaluation of effort and knowledge acquired

Resources and Materials

Nonfiction Books


**Fiction Books**


**Videotapes and Videodiscs**

*Encounters with whales of the St. Lawrence.* (1996). Montreal, Quebec, Canada: Animavision. Film on video. 52 minutes.

*The magnificent whales.* (1988). Smithsonian. VHS.

*To save a whale.* (1989). The Blue Frontier Series. Bennett Marine Video. 30 minutes. VHS.

**Computer Software and CD-ROMs**


**Photographs**


**Audiotapes**

*Whale sounds, cries, howls, whistles, and songs.* http://dkd.net/whales/wsounds.html. Gives whales’ cries, howls, songs, and whistles; also sounds of a humpback whale feeding.

**Field Trips**

Whale-watching trips all over the world available at Whale Watching Web.  
http://www.physics.helsinki.fi/whale

Virtual whale watching. http://www.whalewatch.ca

**Sources**


Various Internet sites.
Cross-Curricular Library Literature Unit on Jane Yolen’s Works

By Holly Mills

Fairy Tales, Folktales, and Legends
- Dove Tale
  The Emperor and the Kite
  Research the origin of this folktale.
  The Girl in the Golden Bower
  The Girl Who Loved the Wind
- Rainbow Rider
  Explore alternate theories for the creation of our world and human beings, other than creationism and evolution. Share findings with the class.
- The Seeing Stick
  Read a biography of Louis Braille or Helen Keller and write a brief report about that person.
- Sky Dogs
  Locate other tales of Native American folklore that attempt to explain the existence of some beings.

Fantasy/Science Fiction
- Twelve Impossible Things Before Breakfast
- The Pit Dragon Trilogy (Dragon’s Blood, Heart’s Blood, A Sending of Dragons)
- Sword of the Rightful King
- The Faery Flag
  Submit a short fantasy or science fiction story. All submissions will be bound and kept in the library’s collection.
- The Young Merlin Trilogy (Passager, Hobby, Merlin)
  Read Passager, along with Children of the Wolf (also by Yolen). Visit the website www.feralchildren.com and write a brief summary of one other case of feral children.

Families
- All those Secrets of the World
- Grandad Bill’s Song
- Owl Moon
  Share a favorite happy or sad family moment.

Science
- Before the Storm
  Find out how thunderstorms happen and why they are more common in the summer. OR Write about the hottest summer day you can remember. Use lots of adjectives and descriptions to make us feel the heat.
- Bird Watch
  Locate information about your favorite bird and write a brief “bird biography.”
- Honkers
  What is the normal migratory pattern of Canadian geese?
- Welcome to the Green House (Ice House, River of Grass, Sea of Sand . . .)
  Research a member of the flora or fauna mentioned in the book and tell the class what you learned.

Fiction
- Armageddon Summer
- Girl in a Cage and Queens’ Own Fool
  Read and compare these two family powers.

History/Social Studies
- The Devil’s Arithmetic
  Locate a nonfiction book on the Holocaust. Compare the details of this book with those in the novel. Does the novel seem authentic?
- Encounter
  You are Christopher Columbus. Write a letter to the Taíno boy telling him how you feel after reading his side of the story.
- Letting Swift River Go
  Research the flooding of the south by TVA. Were the details similar to this story? Why, or why not?
- The Mary Celeste: An Unsolved Mystery from History
  Read the story and answer the questions relating to the theories. What is your theory?

Language Arts Rhyme Time
- All in the Woodland Early: An ABC Book
- A Sip of Resop
- Beneath the Ghost Moon
- How Do Dinosaurs Say Good Night?
- The Ballad of the Pirate Queens
- The Three Bears Holiday Rhyme Book
  Write a poem about your favorite animal, place, or holiday.
Overview

This unit will be taught during scheduled library time for classes ranging from grades 2 to 8. The content of this unit will be adapted for each grade level with which it is used, choosing only age-appropriate material from the possibilities that follow. Because this unit will be taught in a library, an author study is appropriate. However, many of the activities, though centered on research or information, can be used by classroom teachers in connection with content area studies. Students will be studying the author Jane Yolen, who has published more than 130 books. Unlike many authors, her books have covered multiple (nearly all) genres of literature and all grade levels, making her an ideal author for a cross-curricular study.

Objectives

Note: TLW stands for “The learner will.”

■ TLW become familiar with the author Jane Yolen and her various works.
■ TLW participate in research relating to some of Jane Yolen’s material.
■ TLW participate in group discussions and literature circles centered on some of Jane Yolen’s material.
■ TLW utilize the library resources to find information relating to Jane Yolen's works, as dictated by chosen activities.
■ TLW be an active participant in discovery learning by choosing appropriate activities to complete.

Description of Activities

Fairy Tales, Folktales, and Legends

1. The Emperor and the Kite
   Students who choose this activity will read this folktale and then conduct library print and electronic resources research to determine its origin. Results will be handwritten in short paper form (one page).

2. Rainbow Rider
   Students who choose this activity will explore alternate theories for the creation of our world and human beings. Students must use library print and electronic resources to find this information, and they must look for views other than those of creationism and evolution.

3. The Seeing Stick
   Students who choose this activity will choose to read a biography of either Louis Braille or Helen Keller. A brief written report will be required.

4. Sky Dogs
   Students who choose this activity will locate other tales of Native American folklore that attempt to explain the existence of certain beings in our world. Students will orally share their findings during library time.

Families

Students choosing to participate in this activity will share happy family moments or sad family moments. Students will be encouraged to share any interesting family traditions, such as the one described in Owl Moon. This discussion will take place in a small group.
Fantasy/Science Fiction
1. Students may choose to submit short original fantasy or science fiction stories. All submissions will be read to the class by the authors, and with the authors’ approval, submissions will be cataloged and held as part of the library’s collection.

2. *Passager* and *Children of the Wolf*
   Students who choose this activity will read the books *Passager* and *Children of the Wolf*, which share a theme of feral children. Students will compare, in single paragraphs, the circumstances of the feral children in these stories. In addition, the students will access the website http://www.feralchildren.com and write a brief summary of one other case of a feral child.

Fiction
1. *Armageddon Summer*
   Students will be required to participate in a literature circle discussion of this book. Reading logs will be kept and insights will be shared during circle time.

2. *Girl in a Cage and Queen’s Own Fool*
   Students choosing this activity will read these two novels and compare, in a short paper, the two ruling powers in the books.

History/Social Studies
1. *The Devil’s Arithmetic*
   Students choosing this activity will read this book and then locate a nonfiction book about the Holocaust with which to compare it. Students will be asked if the novel seemed authentic and if the details in the books were comparable. Findings will be shared during a group discussion.

2. *Encounter*
   Students choosing this activity will take the persona of Christopher Columbus. They must write a letter to the Taino boy telling him how they feel after reading his side of the story.

3. *Letting Swift River Go*
   Students choosing this activity will research the flooding of same areas by TVA. Students must address whether any of the details with TVA were similar to the details in the story and be able to explain how and why.

4. *The Mary Celeste: An Unsolved Mystery from History*
   Students choosing this activity will read the book and answer the questions relating to the theories in the back of the book. Students will be encouraged to state their own theories or take positions for theories in the book.

Just for Fun
This arm of the unit contains more of the nonsense or silly works by Yolen. Students will not be required to participate in any activities but may wish to participate in singing rounds during the last day of the author study.
**Language Arts Rhyme Time**

Students choosing to read from this section and participate in this activity will write poems about their favorite animal, place, holiday, or topic of their choosing. Poems will be compiled for a poetry keepsake book to be kept in the classroom.

**Science**

1. *Before the Storm*
   Students choosing this activity will read this book and then find out how thunderstorms happen and why storms are more common during the summer months, or students may choose the book and write brief narratives of the hottest day they can remember. Emphasis here will be on descriptive words and creativity.

2. *Bird Watch*
   Students choosing this activity will locate information via the library’s print and electronic resources on favorite birds or especially interesting birds. Findings will be written in brief (one page or less) “bird biographies” to be shared with the class.

3. *Honkers*
   Students choosing this activity will seek information regarding the normal migratory patterns of Canadian geese.

4. *Welcome to the . . . (Series)*
   Students choosing this activity will choose one of the four books from the series to read. Each student will then research one member of the flora or fauna present in the chosen book that is of interest, and they will share their findings orally with the class.

Most activities will be initiated in the library setting. Any activity requiring written work may be worked on in the library but will also be combined with language arts classroom work.

Students will sign contracts designating which books will be read and in which activities they will be participating. The librarian’s emphasis will be placed on reading for enjoyment, understanding the diverse works one author can have, and appreciation of the enrichment activities offered in each section.

This study should take at least one month, but it could become a nine-week unit.
Thematic Unit on Maniac Magee

- Language Arts
  - Author Study of Jerry Spinelli
  - Legends
  - Design of Candy Bar

- Math
  - Calories Burned Walking and Running
  - Heart Rate Under Different Conditions

- Art
  - Muscles and Tendons
  - Types of Knots

- Science
  - Classification of Zoo Animals
  - Racial Prejudice
  - Homelessness

- Social Studies
  - Map Reading
  - Literacy
  - Sense of Family

- Physical Education
  - Research on Fast Runners

- Research on Major League Baseball Players

- Letter Writing

- Figurative Language

- Character Comparisons and Contrasts

- Journal Writing
Grade levels
5–8

Goal
To use the novel *Maniac Magee* by Jerry Spinelli as a literature focus for learning across the curriculum.

Learner Objectives
Note: TLW stands for “The learner will.”
TLW apply units of measurement in mathematics to real-life problems.
TLW explain the functions of the muscles and tendons in the body.
TLW tie various knots and tell the functions of different knots.
TLW be able to classify zoo animals into scientific categories.
TLW participate in discussions about prejudice, homelessness, sense of family, and literacy issues related to the book.
TLW demonstrate an ability to read maps.
TLW do research on fast runners and major league baseball players and write papers on each topic.
TLW participate in discussions on Jerry Spinelli’s books and his writing style.
TLW describe the attributes of a legend.
TLW compare and contrast the Beale and McNab families and analyze Maniac Magee’s character.
TLW write effective letters about real-life situations.
TLW write journal entries that record predictions about the plot of the core book and personal reactions to the content.
TLW recognize and use new vocabulary words, including figurative expressions.

Plot Summary
Jeffrey Magee, a twelve-year-old orphan, arrives in Two Mills, a town divided into the East End for black people and the West End for white people. He quickly earns the nickname of Maniac because he is different. His amazing feats become legendary. He can run faster than anyone else and win athletic events against older kids. He is also able to view black people and white people as the same.

Curriculum Connections
The organizational web shows the curriculum connections for *Maniac Magee*. Sample activities with challenging questions from various areas of the curriculum follow.

Math
(a) Find the number of calories burned per hour when people walk or run. Record your heart rate when at rest, when walking, and when running. How does it change? How does running increase heart rate and help burn calories? (b) Measure the distance around a walking track. How many feet, yards, and meters are there? What percentage of a mile is the track?
Science
(a) Find out how muscles, tendons, and ligaments enable people to run. What is the difference between voluntary and involuntary muscles? (b) Invite a Boy Scout leader to demonstrate knot tying and learn to tie and untie different kinds of knots. How are knots used for different purposes? (c) Plan a field trip to a zoo. How are zoo animals classified?

Social Studies
(a) Research the history of prejudice by reading about Rosa Parks, Martin Luther King, Jr., and others who have fought for racial equality. How did these people demonstrate courage? (b) Research issues of homelessness. How did Jeffrey deal with homelessness? Was his approach reasonable in real life? (c) Discuss illiteracy. What causes illiteracy? Are there illiterate people in your neighborhood? How could you help them become literate? What are some good books to use for helping people learn to read? (d) Locate on a map of Pennsylvania places that are mentioned in the book. Create an imaginary map of Two Mills that shows places important to the story.

Physical Education
(a) Research famous runners, including Wilma Rudolph, Jackie Joyner-Kersee, Jesse Owens, and Edwin Moses. What makes a runner fast? What are some speed records set by these runners? (b) Read about major league baseball players. What makes them great? What are their batting averages?

Language Arts
(a) Read some other books by Jerry Spinelli (see Resource Books). What do you notice about his style of writing? What makes him a popular author with students? (b) Many of Maniac’s acts are legendary. Give some examples of Maniac’s legendary acts. Read some legends or tall tales about American heroes, such as Paul Bunyan (see Resource Books). (c) Read about the McNab and Beale families. Compare them by making a Venn diagram or a T chart. (d) Do a character analysis or make a character map of Maniac. (e) Look for examples of onomatopoeia in Maniac Magee. (Examples: crunch, fizz, hiss, slurp, sizzle) (f) Look for similes in the book, and write some. (Examples: Maniac is as speedy as . . . ; Mars Bar is as mean as . . . ) (g) Look for metaphors in the book (comparisons without the word like or as), and write some. (h) Create an illustrated dictionary with onomatopoeia, similes, metaphors, and new vocabulary words. (i) Write letters to the local paper about problems in the community, such as homelessness, prejudice, and illiteracy. What solutions might you suggest? (j) Keep a journal for writing predictions and reactions as you read. In your journal, answer these questions: How can uncontrollable events change and affect the way you feel about life? Why did Maniac want someone who would care about him and accept him for who he was?

Art (with writing, math, and physical education)
(a) Design an original candy bar wrapper. Include weight (both metric and traditional U.S.), calories, vitamins, minerals, other nutritional information, and price. Write a rationale for creating the candy bar and reasons for including the ingredients. (b) Design a poster of a famous runner or baseball player.

Assessment
Rubrics given to students in advance will enable them to understand how they will be assessed on various activities. By knowing the expectations for each activity, students are challenged to meet the highest requirements.
Resource Books

Folktales and Tall Tales

Balczak, B. (2003). *Paul Bunyan (Tall Tales).* Minneapolis: Compass Point.

Contemporary Realistic Fiction


Nonfiction


Biography


Other Books by Jerry Spinelli


Source: Ideas from "Maniac Magee: A Literature Study" by Rebecca Reed, Graduate Student, Tennessee Technological University, Cookeville, TN. Used with permission.
# Thematic Unit on Biomes of the World

**Unit:** Biomes of the World — a study of interactions between living things and their environment

## Resources

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<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>What has already been produced in this area?</td>
<td>Schlessinger Media Biome Videos: deserts, forests, marine, freshwater, ecosystems, grasslands, tundra</td>
</tr>
<tr>
<td>What materials are available to us?</td>
<td>“Project Wild” — interdisciplinary environmental &amp; conservation education program</td>
</tr>
<tr>
<td>Do we need to do any reading about the topic?</td>
<td>Eyewitness science books, videos</td>
</tr>
<tr>
<td>Do we know any “experts” in the area?</td>
<td>Wesley Woods Environmental Camp (Smoky Mtns.) — will take 3 day/2 night field trip there</td>
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<td>Knoxville Zoo outreach program</td>
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## Understandings

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<tr>
<td>What do we hope children will understand about their social or physical world by the end of this unit?</td>
<td>TLW investigate biomes of the world</td>
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<td>TLW investigate how living things interact with one another &amp; with non-living elements of their environment</td>
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<td></td>
<td>TLW understand the nature of symbiotic relationships</td>
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<tr>
<td></td>
<td>TLW examine competitive relationships w/in an ecosystem</td>
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<tr>
<td></td>
<td>TLW recognize relationships within food chains</td>
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<td>TLW understand how organisms are adapted for surviving in certain environments</td>
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## Tuning In/Preparing to Find Out

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<th>Answer</th>
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<tr>
<td>How can we engage children in this topic?</td>
<td>KWL chart (ongoing) about biomes</td>
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<tr>
<td></td>
<td>Ask, “What determines the type of plants &amp; animals that thrive in an area?”</td>
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<td></td>
<td>Read throughout “There’s An Owl In The Shower” by Jean Craighead-George</td>
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<tr>
<td></td>
<td>Schlessinger Media Biome Videos</td>
</tr>
<tr>
<td></td>
<td>“What’s It Like Where You Live?” Website</td>
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<td></td>
<td><a href="http://www.brainpop.com">www.brainpop.com</a> — ecosystem short video</td>
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## Investigating

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<th>Answer</th>
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<tr>
<td>How can we organize that will enable children to gather new information about the topic?</td>
<td>Students will view teacher-made symbiosis Power Point (C)</td>
</tr>
<tr>
<td>How can we help to FOCUS their investigations?</td>
<td>Explore NASA Earth Observatory website; record information pertaining to assigned biome for future reference during project (G, I)</td>
</tr>
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## Tuning In/Preparing

| (C - Class, G - Groups, I - Individuals)                                  | (thru’ art/craft, drama, language, music, movement, math, etc.)         |
|                                                                         | Students may choose to create a Power Point to explain one of the 3 types of symbiosis |
|                                                                         | Students may choose to convey information in the form of a skit, diorama, posters or report, etc. |

*Data charts will be completed at each level of study*
### Year Level: 6  
**Duration of Unit:** 3 — 5 weeks  
(...../...../..... to ...../...../.....)

<table>
<thead>
<tr>
<th>Tuning In/Preparing</th>
<th>Investigating</th>
<th>Sharing &amp; Explaining</th>
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| Discuss food chains within a forest ecosystem  
Discuss & view video — Animal Adaptations; read section in text pertaining to & other various sections of picture books; information books | (C - Class, G - Groups, I - Individuals)  
Dissect owl pellets (C, G, I); reconstruct 1 skeleton from pellet; label according to chart and classify  
Arrange for Knoxville Zoo outreach program to visit — “Animals In Action” — observe animals in action & explore adaptations for movement (C) | Discuss findings; how many & what types of creatures were found w/in the pellet  
— Create hypothetical adaptations for an imaginary creature  
— Describe creature’s environment & means of movement & survival  
— Creative writing story about creature and habitat  
— Create 3-D creature |

### Sharing & Explaining to Make Connections

| How can we assist children to pull it all together?  
What curriculum processes would help here? (Art, drama, language...?)  
How can we see if they are making connections? | — Students will create a “Biome In A Box” (shoebox or larger) depicting characteristics — biotic/abiotic of assigned biome; one food chain must be represented.  
— Students will research biome, present findings to the class via posters, dioramas, skits, diagrams and the presentation of the biome in a box (in groups). |

### Reflection and Action

| How can we empower children to act on what they have learned? | — After attending Wesley Woods Environmental Camp, students may become “Honorary Stewards of the Earth” by pledging to do more conservation awareness activities at home.  
— Students will adopt a zoo animal at the Knoxville Zoo. The “Flat-Pak Adoption” kit for $35 includes adoption certificate, animal facts, Wild Wonders magazine & helps to pay for food for an animal at the zoo. |

### Related Experiences / Student Assessment / Notes:

| “Oh Deer” game from Project Wild program — allows students to see the cycle of deer populations in an ecosystem. | Teacher and Student Assessments will be completed at end of group project — following a rubric for the presentation (teacher assessed) and a self-evaluation rubric for the group & individual student — all 3 are considered when calculating final grade. |

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Source: Tera Witcher, Graduate Student, Tennessee Technological University, Cookeville, TN. Used with permission.
Thematic Unit on the American Revolution

**Unit:** American Revolution: Causes and Effects and 1st Major Battles of the War

| **Resources** | **Books:** Yankee Doodle by Gary Chalk  
The Boston Tea Party by Klingel and Noyed  
The Eve of Revolution by Barbara Burt  
The Boston Massacre by Allison Draper  
Revolutionary War by Scott Marquette  
Lexington and Concord by Deborah Kent  
Paul Revere’s Ride by Lucia Raatma  
The Declaration of Independence by Stuart Kallan  
Revolutionary War on Wednesday by Mary Pope Osborne  
**Video:** School House Rock  
**Magazine:** Cobblestone Magazine  
**Poetry:** Phyllis Wheatly, “The Midnight Ride of Paul Revere” by Longfellow  
**Songs:** “Yankee Doodle”  
**Technology:** Kid Pix CD-ROM  
**Websites:** www.historyplace.com  
www.americaslibrary.gov

| **Understandings** | **TLW list causes for the Revolutionary War.**  
**TLW discuss the battles of Lexington and Concord.**  
**TLW explain the importance of Paul Revere’s Ride.**  
**TLW sing songs and read poetry related to the time period.**  
**TLW explore the Declaration of Independence.**  
**TLW list and discuss the effects of the war and explain how they affect our lives today: Articles of Confederation, Constitution, Bill of Rights.**

| **Tuning In/Preparing to Find Out** | **Make a semantic map together about things they think are related to the Revolutionary War.**  
**Ask each child to complete a K-W-L chart about the topic. Discuss with the class.**  
**Sing “Yankee Doodle” — discuss vocabulary in the song.**  
**Create a reference table with books and materials that can be used.**

| **Investigating** | **What experiences can we organize that will enable children to gather new information about the topic? How can we help to FOCUS their investigations?**

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<thead>
<tr>
<th><strong>Tuning In/Preparing</strong></th>
<th><strong>Investigating</strong></th>
<th><strong>Sharing &amp; Explaining</strong></th>
</tr>
</thead>
</table>
| **Ask children what things they think of when they hear the words “Revolutionary War.”**  
**Discuss the things they know and make a list of things they want to find out about.**  
**In the song “Yankee Doodle,” what does it mean by “Stuck a feather in his hat and called it macaroni?”**  
**Write down possible causes for the war.** | **(C - Class, G - Groups, I - Individuals)**  
**C - Read Revolutionary War on Wednesday.**  
**C - Read Lexington and Concord.**  
**C/G - Teacher will read Paul Revere’s Ride to class.** | **(tho’ art/craft, drama, language, music, movement, math, etc.)**  
**Respond to literature in a journal. Record feelings, questions, and ideas. Draw pictures too!**  
**Discuss the importance of the battles. Draw a map and label these places.**  
**Students will act it out.**

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<thead>
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<tbody>
<tr>
<td>Let students create a word board to collect new words throughout the unit.</td>
<td>(C - Class, G - Groups, I - Individuals)</td>
<td>Write a report and create a poster to share with the class.</td>
</tr>
<tr>
<td>I - Choose an important person from the time period to research. (Use Internet sources.)</td>
<td></td>
<td>Jigsaw the groups so members can be the expert and share with the other groups.</td>
</tr>
<tr>
<td>G - Students will explore causes of the war. (1 cause per group)</td>
<td></td>
<td>Write and illustrate a poem about Rev. War.</td>
</tr>
<tr>
<td>C - Read poems by Phyllis Wheatly.</td>
<td></td>
<td>Make posters with the facts. Discuss its meaning.</td>
</tr>
<tr>
<td>C - Read Declaration of Independence.</td>
<td></td>
<td>Create informational big books to share with class.</td>
</tr>
<tr>
<td>G - Investigate effects of the war &amp; impact on today.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C - Watch School House Rock Video.</td>
<td></td>
<td></td>
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</table>

**Sharing & Explaining to Make Connections**

How can we assist children to pull it all together?  
What curriculum processes would help here? (Art, drama, language...?)  
How can we see if they are making connections?

1. Make timelines of major events from the unit.  
(Whole class)

2. Using the timeline as a guide, write a summary about the Revolutionary War, its causes and effects. (Individual)

3. Students will write a paragraph explaining how this war has shaped our lives today.

**Reflection and Action**

How can we empower children to act on what they have learned?

Write letters to American troops in Iraq.  
(Think about how we are standing up for our freedom.)

**Related Experiences / Student Assessment / Notes:**

1. Students will revise the original semantic map on an individual basis.

2. Students will complete their K-W-L charts from the beginning of the unit.

3. Using the graphic organizers from 1 & 2, students will create a slide show with 5 facts they learned. Presentations will be shared with the class.

Source: Michelle South, Graduate Student, Tennessee Technological University, Cookeville, TN. Used with permission.
Sample

Thematic Unit on Pioneers

Objectives

1. To learn about the everyday lives of pioneers
2. To learn about the homes in which pioneers lived
3. To learn about the food pioneers ate and how they prepared and preserved it
4. To learn about the modes of transportation that the pioneers used
5. To discover other interesting facts about the pioneers from reading, listening, and viewing

Materials

Resource books and media, artifacts, writing and art materials. Most of these resources are designed for grades 4–8. The books marked (P) are accessible to primary-grade children. These books also have much information that would be useful for older students, and can be especially helpful for use with struggling readers.

- Resource books


- **Video**
  

- **Websites**
  
  http://www.monroe.lib.in.us/childrens/frontierbib.html
  
  http://library.thinkquest.org/6400
  
  http://www.kidinfo.com/American_History/Pioneers.html
  
  http://www.isu.edu/~trinmich/Oregontrail.html

- **Artifacts**
  
  Tallow candles; iron kettles; earthenware jugs; tin lanterns; early textbooks; quilts; tools; period clothing

- **Writing and art materials**
  
  Drawing paper; construction paper; pencils; markers; crayons; pastels; tempera paint; brushes; plain white paper; computer with printer; materials for dioramas, such as popsicle sticks, glue, yarn, scraps of cloth

- **Outline maps of the United States**

**Introductory Procedures**

Choose from these activities ones that work best for your students.

1. Read aloud a selection from *Stories of Young Pioneers in Their Own Words.*

2. With the students, create a semantic web based on words and concepts that students know about pioneers. It might resemble the following.
3. Fill out the K (Know) and W (Want to Learn) sections of a K-W-L chart with the students.

4. In collaboration with the students, record objectives for the unit. These might include the following.
   a. To find out how pioneers lived their daily lives
   b. To learn how pioneers traveled and where they settled
   c. To discover how pioneers coped with hardships
   d. To find out about pioneer children: their school, work, and play

**Unit Activities**

Choose from these activities ones that work best for your students.

1. View the videotape *Forgotten Journey* and discuss the revelations about pioneer life in the videotape.

2. Divide the class into research groups to study such topics as education during pioneer days, home life of pioneer children, and travel conditions for pioneers. Let the students visit the media center, as well as your resource book area, to find books and materials about their topics. Help them find the material, take notes on it, organize it, and write reports on it to share with the other students.

3. Provide a map of the United States so that students can mark routes of early pioneers. Have them identify hazards for each route (for example, mountains and rivers) and compute the mileage.

4. Read aloud or let students read *Jericho’s Journey*, if you have it in a class set. It tells about moving from Tennessee to Texas in 1852 so a family can make a fresh start.

5. As students read about pioneer days, have them record words and expressions that are different from those that people use today. The students should give the meaning (perhaps with an illustration) on a separate page for each expression. At the end of the unit, ask a group of students to alphabetize the expressions, eliminate duplications, write a title page, make a cover, and “publish” a dictionary of pioneer language.
6. Have each student assume the identity of a pioneer and write a fictional journal of his or her adventures.

7. Teach students folk songs and ballads sung during the pioneer period, such as “Home on the Range,” “Cindy,” “Sweet Betsy from Pike,” and “I Ride an Old Paint.” Make an audio-recording of them.

8. Teach children to do folk dances and provide tapes or records of fiddle music to accompany the dances.

9. If possible, find a resource person to help the students with such projects as soap and candle making, quilting, and making corn husk dolls.

10. Have students form literature circles to read different Little House books by Laura Ingalls Wilder. As a follow-up activity, have each group select a scene to dramatize.

11. Have students participate in literature circles for another set of books they choose from the resource list for which you have multiple copies. Let them choose a way to share information from their books with students in the other circles.

12. Let students make a time line that shows when different regions of the country were settled.

13. Have students identify problems of frontier life and decide how they would solve them. Examples include preserving food, replacing a broken wagon wheel, and building a home.

14. Let students select aspects of pioneer life and compare them with life today. After a discussion, ask the students to write summaries of the advantages of each lifestyle.

15. Have students plan a menu and prepare food for a lunch that the pioneers might have eaten. Include such foods as corn pone, molasses, squash, tea, baked beans, and dried apples. Let them make butter by shaking whipping cream in a tightly covered jar and adding salt. Then let them eat the lunch.

16. Divide the students into groups according to regions where pioneers settled. Ask the students to investigate ways that the environment affected the lives of the pioneers.

17. Have students investigate conflicts between Native Americans and pioneers over territorial rights and present a debate or panel discussion on relevant issues.

18. Let students create art projects in such forms as dioramas of typical log cabins, murals of pioneer villages, and models of covered wagons.

19. Have students role-play such situations as deciding what to take on a long journey, moving away from friends, and adapting to a new life on the frontier.

**Culminating Activities**

Choose from these activities ones that work best for your students.

1. Make a class newspaper that could have been written during pioneer days. Features might include the following.
   a. Dangerous criminals wanted
   b. Classified advertisements for help wanted, guides wanted, and land for sale
   c. News stories about government policies related to acquiring land and establishing communities
d. Editorials about advantages or disadvantages of moving into unsettled territories

e. Illustrated advertisements about new products, such as medicines that supposedly heal any disease

2. Let small groups of students develop PowerPoint or mPower presentations about segments of the unit. Let them share these presentations with other classes.

3. Guide the students in planning a program for other students or parents. They may wish to distribute copies of the newspaper, display their work, sing folk songs, do folk dancing, present reports, serve refreshments (pioneer food), and dress in period costumes.

**Evaluation**

1. Observe students’ study in progress.

2. Return to the K-W-L chart that was started at the beginning of the unit and have the students fill in the L (What I Learned) portion. Consider the accuracy of their answers.

3. Return to the objectives set at the beginning of the unit. With the students, decide whether the objectives have been met or further study is needed.

4. Analyze the chosen culminating activities using a rubric.
Thematic Unit on Insects and Spiders

Grade levels
PreK–3

Goal
To understand how insects and spiders can help us or harm us

Learner Objectives
1. To understand the life cycles of insects and spiders
2. To know how spiders and insects are alike and different
3. To learn the body parts of insects and spiders
4. To see connections between ant and human communities
5. To identify some insects and spiders

Challenge Questions
1. How can insects and spiders help us? How can they harm us?
2. How are spiders and insects alike? How are they different?
3. How can flies walk upside down?
4. How do fireflies (lightning bugs) flash their lights?
5. Why do mosquito bites itch?
6. How do bees fly?
7. Where do butterflies come from?
8. How do spiders spin webs?

Learning Center Resources:
With the help of the media specialist, set up a learning center about insects and spiders. Change the center so that it reflects what you are currently investigating. Include materials such as the following.
1. Magazines, including *National Geographic Kids*, *Ranger Rick*, and *Your Big Backyard*
2. Books (look under Resources)
3. Commercially available live insects (Insect Lore at 1-800-LIVE BUG or e-mail at customerservice@insectlore.com has many live insects available, including ant, butterfly, and ladybug kits; praying mantises; silkworms; and millipedes.)
4. Writing materials, including colored pencils, markers, notebooks, paper, and paper stapled together in booklets for writing and recording information
5. Posters, charts, and models on insects

**Cross-Curricular Connections**

*Geography*
What are the locations of specific types of insects and spiders? Where do mosquitoes breed? What climates are best for insects and spiders?

*Social studies*
How can insects and spiders help or harm us? For example, how much damage do locusts do? How can spider webs help us?

*Math*
How can we measure spider webs? How big and small are some insects and spiders? How much do they grow? How many legs do centipedes have? How long does it take for different stages of life cycles (use calendar)? How can we show information about insects and spiders on a graph?

*Art*
How can we represent different insects by using clay, crayons, pipe cleaners, egg cartons, and other materials?

**Initiating Activities:**
Bring in several clear jars with small holes in the lids, each containing an insect or nonpoisonous spider for students to observe. Place a magnifying glass nearby. Ask them to tell or write everything they can find out about the insect or spider.

Make a semantic map by getting the children to tell you what they know about insects and spiders from their observations and prior experiences. Organize their contributions into categories, as shown on the next page.

**Ongoing Activities**
You may choose from the following activities, modify them to suit your needs, or add other activities—especially those suggested by the children.

1. Read E. B. White's *Charlotte's Web* aloud, a chapter at a time, during the unit. Discuss each chapter and make predictions about what might happen next.
2. At the top of a chart, write “Words about Insects and Spiders.” During the unit, add words and their meanings to the chart as children encounter new words.
3. Take an “observation walk” around the outside of the school and look for the following.
a. A spider spinning a web
b. An ant pulling something or building an anthill
c. The colors of butterflies
d. Unusual bugs and what they are doing

After returning to the classroom, ask students to discuss and then record their observations in an ongoing journal. Repeat the walk at intervals to observe, discuss, and record changes. For example, if a spider is observed spinning a web, let the children measure the diameter of the web and count the strands on each visit.

4. Divide the class into groups to study different kinds of insects and spiders. (Insect types might include bees, butterflies, ants, grasshoppers, and beetles.) Guide each group in developing a project to present to the class. (Projects might include making a diorama of a scene with plastic insects and spiders, drawing and labeling a large diagram of the insect, writing and illustrating a booklet, and dramatizing lives of or stories about insects and spiders.)

5. On the top of a poster board or chart paper, write “Kinds of Insects and Spiders.” Let the children cut out or draw pictures of different kinds of insects and spiders, glue them onto the chart, and label them.
6. Help the children build a wire mesh or screened cage and put soil, twigs, and grass in it. Place a harmless spider or an insect, such as a grasshopper, in the cage so that the children can observe it. Encourage them to name their pet spider or insect and write stories about it.

7. Set up an ant colony from a kit (see Learning Center Resources) so that children can observe activities within the colony. Help them understand the roles of ants and compare them to roles of humans in communities.

8. Keep center activities going so that children have opportunities to identify different kinds of insects and spiders, trace their life cycles, and answer challenge questions.

**Special Activities**

1. Invite a resource person to come to class and discuss how insects and spiders can both help and harm us. The resource person might be a beekeeper, a biologist, or a representative from the Farm Bureau or Department of Agriculture.

2. Read *Fireflies for Nathan* by Shulamith Oppenheim, the story of a young boy and his love for fireflies. While visiting his grandparents, he gathers fireflies and places them in a jar. Relate the story to children’s experiences with fireflies and discuss what causes luminescence.

3. Read aloud Simms Taback’s *There Was an Old Lady Who Swallowed a Fly* and/or Mary Howitt’s *The Spider and the Fly*. Since both story poems lend themselves to dramatization, help children act them out. Verna Aardema’s *Why Mosquitoes Buzz in People’s Ears* is a good legend to dramatize by letting the children play the roles of the different animals. Discuss whether these stories are real or make-believe. Have students give reasons, based on their class discoveries.

4. Let students make models of insects and spiders from clay, pipe cleaners, and other materials. The children can write labels with brief descriptions for each insect or spider. Example: Make a caterpillar from an egg carton (one row of egg cups for each child), pipe cleaners, and roly-poly eyes. Glue eyes on head, attach short antennas, punch holes in body, and thread pipe cleaners through for legs. Have class compute how many supplies are necessary to make enough caterpillars for everyone (math connection).

5. Compare spiders and insects by using a Venn diagram or other graphic organizer that shows similarities and differences between the two. With the students make a large drawing of a spider and another of an insect, showing the body parts and labeling them.

6. **Author Study of Eric Carle and his books about insects and spiders:** Most children love Eric Carle’s books, which combine fact and fiction. Children can learn about Eric Carle and how he creates his books by going to [http://www.eric-carle.com](http://www.eric-carle.com). They can write their own books based on the patterns they observe in Carle’s texts. They can also learn to make collages from cutouts of their own tissue paper paintings in order to illustrate their books.

**Text Set of Eric Carle Books for this Unit**


*The honeybee and the robber.* (1981). New York: Scholastic. The brave honeybee saves the day (with pop-ups and movables).

The very clumsy click beetle. (1999). New York: Philomel. The beetle clicks as it learns to land on its feet (clicking sound from computer chip).


Other Resources for Eric Carle


Culminating Activities

Choose one or more of these activities or invent your own.

1. Let students create imaginary insects and spiders. Each child draws an insect or spider, labels its parts, names it, and describes it. The children may want to write stories about their insects or spiders. Compile their work and publish it for the class to see.

2. Have the children create a class dictionary of insects and spiders by writing and illustrating a page for each insect or spider, alphabetizing the pages, and publishing the dictionary as a class reference.

3. Help students make a grid or chart of the characteristics of various insects and spiders. Have them identify characteristics, such as senses, body parts, colors, shapes, and number of legs.

4. Allow children to present their projects to the rest of the class.

5. Return to the questions asked at the beginning of the unit to see if the students can answer them. Provide review and reteaching if necessary.

Evaluation

In preschool and kindergarten, observation is the key to assessing progress. It is also important in grades 1, 2, and 3, but in these grades you may also consider children’s written work, completion of projects, work samples, tests, and presentations.

Resources

Fiction Books


Howe, J. (1987). I wish I were a butterfly. San Diego: Gulliver. (cricket who wants to be a butterfly)


Taback, S. (1997). There was an old lady who swallowed a fly. New York: Viking. (silly poem about lady who swallows different things)


**Informational Books**


**Other Resources**

1. “Nearly Wild Garden” for butterflies, a magic carpet 12” by 38”. This is a mat with over two thousand seeds of plants to attract butterflies. Roll it out and water it. Send order to New Holland, P.O. Box 335, Rockport IL 62370.


Dear ____________________,

Welcome to Camp Green Lake! While you are here, you will be expected to “dig holes” in order to enhance your reading skills.

Read over this contract. Each acceptably completed activity or answered question is worth 2 points. When you finish digging a hole (completing the activity or answering the question), color the hole beside it with a green colored pencil or highlighter. If the “hole” has been dug satisfactorily, I will initial it. If it is not initialed, you will have to keep digging until it is acceptable, or you may select another hole to dig by answering a different question.

You may stop when you have successfully earned 76 points, which means that you have successfully answered 38 questions. After you have answered 38 questions satisfactorily, you may stop “digging” when your parent signs here: ________________________________.

Here are the conditions of your contract:

■ You may dig only at Camp Green Lake (in the classroom) until you have permission to work at home.
■ Write page numbers in your answers and refer to the text.
■ All holes must be dug in complete sentences.
■ Holes must be “dug” on your notebook paper, not the contract.
■ Sloppy digging (writing) will not be acceptable.
■ Your “shovel” must be a pencil or blue or black ink pen.
■ Unlike Stanley and the other boys, you are not allowed to spit in the holes!
■ Holes will be inspected daily so that I can monitor your progress and help you if you need it.
■ All holes must be dug by the end of reading period on Wednesday, Nov. 13.
■ Digging is hard, but there are treasures to be found! Some holes may be very valuable to you! Small treats or privileges can be earned while you are digging at Camp Green Lake, so take pride in your work!

I hope you have a pleasant stay! Thank you in advance for your hard work and positive attitude!

Sincerely,

Mrs. Bigford
1. “If you take a bad boy and make him dig a hole every day in the hot sun, it will turn him into a good boy.” Do you agree or disagree with this statement? Write a 1-2-3-2-3 paragraph that explains.

2. The protagonist in a story is the main character or hero of the story. Who is the protagonist in Holes?

3. The antagonist(s) can be any thing or character that works against or opposes the protagonist. Name as many antagonists as you can think of that worked against the protagonist.

4. The setting of the book is the time and place where the story happens. What is the setting of the book?

5. The climax is the element of literature where the major events in the book change course and the reader can predict how the story will turn out. What is the climax in the book Holes?

6. List the 5 major events of the book in chronological order.

7. Why did Stanley and his family have such bad luck? When did their fortune change?

8. Describe Stanley’s character at the beginning of the book, the middle of the book, and at the end. Explain what traits changed and what traits stayed the same.

9. Stanley was wrongly accused of a crime and went willingly to the detention center. Would you have been as cooperative as Stanley? Wh,y or why not? Explain in a 1-2-3-2-3 paragraph.

10. There are several one-sentence paragraphs found throughout Holes. In most writing, it is unacceptable to write paragraphs like this. Why does Louis Sachar use this technique in his writing? Furthermore, why is he allowed to do this?

11. Barf Bag had been one of the boys in the group before Stanley arrived. Imagine the experiences Barf Bag could have had that made him so miserable and to have caused him to earn his nickname. In character as Barf Bag, write a letter to your parents before you go to dig your last hole.

12. Is Clyde “Sweet Feet” Livingston a real baseball player? Prove his existence or nonexistence.

13. Stanley had been tortured by a bully named Derrick Dunne. What are your opinions on bullies and how Stanley dealt with Derrick? How should bullies be dealt with in school?

14. Why do you think the boys spit in their holes once they were dug?

15. Research these, and explain whether or not they were real: yellow spotted lizards in Texas, the invention of the motor or engine before the turn of the twentieth century, botulism, the use of leeches as a cure.

16. List as many reasons as you can think of as to why Holes is an appropriate title for the book. Try to come up with at least 3.

17. Create explanations as to why each boy had the nickname he did.

18. Go through the book and select 10 chapters to give appropriate but mysterious chapter titles.

19. Pretend that you are Stanley after his ordeal at Camp Green Lake is over. He has become famous and is now well known. For what is he now well-known? Prepare a speech that Stanley would give to seventh graders in schools across the country. Write the speech and deliver it to your classmates. You may use props as you deliver your speech.
20. What are some examples of foreshadowing that let us know that the warden was descended from Trout Walker and his wife?

21. Complete the graphic organizers.

22. Summarize the 3 stories found in Holes, and explain how they all were related to each other.

23. Explain how “God’s Thumb” could have been a symbol of good fortune and inspiration for Stanley during his trek across the lake.

24. Research the medicinal powers of the onion. Was there any truth to Sam’s claim that the onion was a kind of cure-all for ailments?

25. In the book, what lessons do you think the author wanted the reader to understand?

26. Explain the character of Mr. Pendanski. Is he likeable throughout the book? Do you think his personality was the same throughout the book, or did it change? Write 1-2-3-2-3 paragraphs to support your opinion. Use passages and page numbers from the book.

27. “Myra’s head is as empty as a flower pot.” What is this kind of comparison called? Find two other examples from the book. Give page numbers as to where these can be found.

28. On page 24, Stanley had felt as though he was “holding destiny’s shoes.” How does this sentence foreshadow the events in the remainder of the book?

29. What passages from the book would indicate that digging holes does indeed “build character”? What passages would show that it has a negative effect on character?

30. Stanley Yelnats is a palindrome. What are 5 other examples of a palindrome?

31. On page 94, how does the author let the reader know that Zero had dug Stanley’s hole while he was with the warden?

32. What are two ways that onions saved Stanley and Zero from death?

33. Describe the character of Zero.

34. Why do you think the author chose to have some of the characters be African Americans? Did this fact make the events in the book more meaningful? Why, or why not?

35. On page 99, why is the print different?

36. What is the first hint that Stanley and Zero had ancestors who knew each other?

37. On page 186, we find out that Stanley likes himself. How do you think his experiences at Camp Green Lake made him feel better about himself?

38. Zero says that he and his mother always took what they needed when he was little. He did not know that this is stealing. Should children be held responsible for their actions if their parents have not taught them differently? Why, or why not?

39. Write down your thoughts and questions about the events in the book on sticky notes. Be sure to include page numbers. Stick these onto a sheet of notebook paper.

40. Where and when do the 3 stories in Holes take place?

41. Why do you think Camp Green Lake went dry?

42. What is fate? What is destiny? Are they synonyms or antonyms?
43. On page 161, what was so humorous about the conversation concerning Mary Lou?
44. On page 233 at the end of the book, who was sitting with Hector?
45. Why do you suppose the author began to call Zero “Hector” instead of “Zero.”
46. On page 209, explain how Stanley came to be “in the snow.”

Words in Context
Use your book to explain the meanings of these words in context.

47. (p. 8) “He looked out the window at the vast emptiness.”
   (p. 8) “Stanley’s father was smart and had a lot of perseverance...”
   (p. 11) “The land was barren and desolate.”
   (p. 17) “The boys glanced wearily at Stanley...”
   (p. 24) “...holding destiny’s shoes...”
   (p. 30) “Madame Zeroni hated to see Elya so forlorn”
   (p. 34) “...when the dirt was in the ground, it was compacted.”
   (p. 35) “He couldn’t afford to dawdle.”
   (p. 39) “He grimaced as he...”
49. (p. 74) “...the shovels were locked up at night, presumably...”
   (p. 90) “It’s only toxic while it’s wet.”
   (p. 91) “...Mr. Sir’s pain seemed to recede.”
   (p. 92) “His body writhed in agony.”
   (p. 121) “Kate could see her rummaging through the cabin.”
50. (p. 193) “His voice was dry and raspy...”
   (p. 197) “They climbed down into adjacent holes...”
   (p. 218) “He is no longer in your jurisdiction.”
   (p. 230) “...the answers tend to be long and tedious.”
   (p. 232) “...it neutralizes odor causing fungi...”

Source: Towanna Bigford, Seventh Grade Teacher, Irving College Elementary School, McMinnville, TN. Used with permission.