

Mapping Skills and Activities with Children's Literature

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ABSTRACT

In the primary grades, maps are useful tools to help the young reader put stories into perspective. This article presents 18 quality children's books that contain maps or lessons about maps, as well as activities to use in the classroom to teach map skills. A table is included with ratings of the usability of the maps.

Key Words: *map, children's literature, map skills, cross-curricular instruction*

In the primary grades, maps are useful tools to help the young reader put stories into perspective and to develop a sense of place. They are particularly helpful when the story describes a foreign or imaginary land. Place and space are important in describing the setting of a book. Sometimes the author may not include a map, but the words convey a mental image that can easily be translated into a map. Even kindergarten students can understand the basic concepts of a map created through literary images.

In my early years as an elementary teacher, my school district had no formal curriculum for geography (or social studies) in the primary grades, so much of what I taught I learned through participation in workshops sponsored by the Louisiana Geography Education Alliance (LaGEA). The Alliances in each state were created by the National Geographic Society in order to foster a grassroots movement of geography education across the country. Teacher consultants were trained in geography content and workshop presentation skills and sent back to their districts to introduce colleagues to hands-on geography education lessons.

Similarly, I encountered lesson ideas at conference presentations from organizations including the National Council for Geographic Education (NCGE). At the conference workshops and the Alliance institutes, I was introduced to different genres of children's literature that included maps or introduced map skills. Over the years, I collected many more books that I reviewed in professional journals or learned about from colleagues. This article presents annotations of children's literature that could be used to teach map skills, suggestions for activities that could be done with each book, and ratings for the maps located in each book. The ratings will be ranked by one to five stars, with five indicating the highest ranking of the usability of the maps. These books are not recommended as the sole means of teaching geography, but rather as a point of departure to peak the interest of students in viewing the world from different perspectives. Table 1 presents a summary of the map ratings and map skills that could be taught with each book.

DEVELOPING MAPPING SKILLS: MAP ELEMENTS AND INTERPRETATION OF MAPS

For primary students, one of the first steps in mapping skills is to become familiar with several types of maps. Standard I of the national geography standards indicates that students should be able to use maps and other geographic representations, tools, and technologies to acquire, process, and report information. *Me on the Map* (Sweeney 1996) begins with the place the young learner is most familiar with and branches out to include the world. In this introduction to maps and geography, a young girl shows readers herself on a map of her room, the map of her house, the map of her street, a street map of the town, a state map (Kansas), all the way to her country on a map of the world. Then the process is reversed until the girl is back in her room. For an activity in the classroom, use a series of printed maps and stickers and have the students indicate their own locations beginning with the school, the neighborhood, the town, the county, the state, the country, the continent, and ending with the globe. The maps in this book garner a four-star rating.

Another book to map the familiar, yet also introduce map symbols, is *Mapping Penny's World* (Leedy 2000). After learning the elements of a map at school, Lisa draws maps at home, starting with her bedroom. With the help of her dog Penny, Lisa includes all the things that people will need to read the

Table 1. Summary of map ratings and map skills.

Book	Map Rating	Map Skills	Geography Standard	Suggested Grade Level
Map Skills				
	****	Location from neighborhood to world	1	1-2
	*****	Elements of a map; creating maps	1	2-3
	*****	History of maps; includes variety of maps	1	2-3
	****	Definitions of map terms	1	2-3
	*****	How to use, draw, and understand maps; includes contour lines and map projections	1	3-4
Map Activities				
	**	Location of ingredients on world map; global perspective	3	3-4
		No maps; location of food ingredients; global perspective	3	3-4
	**	Time zones; global perspective	3	2-3
		No maps; panoramic views	2	1-2
	****	Map perspectives; spatial connections; aerial views	2	K-1
Maps of Imaginary Places				
	*****	Following directional clues and determining grid points; spatial connections	1	3-4
	***	Location of exotic places, panoramic views; spatial connections	1	5-6
		No maps; creating an imaginary island	3	2-3
Photographs and Satellite Images				
		Reading satellite imagery and remote sensing; spatial connections	1	5-6
		Reading satellite imagery	1	2-3
Maps of Water Bodies				
	***	Panoramic view; following a route	1, 2	3-4
	***	Location; panoramic views	1, 2	3-4
	****	Following a route; spatial connections	1	5-6

NOTE: The author thanks geographer Scott Dobler at Western Kentucky University for his evaluation of the maps and skills in this list of children's literature.

map, such as a scale and a key to the symbols she has used. Lisa then has the idea to map Penny's world. She includes maps of Penny's hideouts, routes to Penny's friends, hiking trails in the park, favorite places in the neighborhood, and Penny's imaginary trip around the world. The maps in this book are more detailed than in the previous book and introduce how maps can demonstrate more than just

place location. A good activity for students would be to map routes for going to the cafeteria, practicing a fire drill, or going home after school. The maps in this book receive a five-star rating.

Maps & Globes (Knowlton 1985) chronicles the history of mapmaking, from scratches in the sand to clay maps and stick chart maps. This book also includes simple expla-

nations of how to read maps and globes and introduces many different kinds of maps. Topographic and elevation maps are neatly illustrated in this *Reading Rainbow* book. There are several activities mentioned in the book, including measuring scale with a ruler or with a string. This book rates five stars for map activities, skills, and usage. Another activity to go along with this book is to make a globe from a large grocery bag. Fill the bag with newspaper, tape the top closed, and shape in a rounded form. Paint the globe with blue poster paint then tear brown paper to form continents. Glue the continents on the bag after the paint dries.

In the tradition of *Cat in the Hat* by Dr. Seuss, *There's a Map on My Lap!: All About Maps* (Rabe 2002) introduces different kinds of maps (city, state, world, topographic, temperature, terrain, and others) and the tools geographers use to read them. The words are in rhyme and include a glossary at the end of the book. Scale, legend, latitude, longitude, compass rose, and grid are illustrated, with rhymed explanations simple enough for the primary child to grasp the concepts. This engaging book earns four stars. The style would be easy to duplicate in an activity that required students to use rhyme to define other terms and tools.

Maps and Mapping (Taylor 1993) is more content specific with explanations of how to use, draw, and understand maps. Concepts include scales, symbols, contour lines, angles, latitude and longitude, map projections, compass directions, aerial photographs, grids, and satellite photographs. Many activity suggestions are included in this book, such as peeling an orange to show the inaccuracies of a flat map as compared to a globe, or how to make a compass. The variety and usage of maps in this book earn a five-star rating.

MAP ACTIVITIES: LOCATION AND PERSPECTIVES

Once students learn the basic map skills, they can create maps of places they have read about or places they have been. Many of the concepts in these next few books relate to Standard III of the national geography standards: How to Analyze the Spatial Organization of People, Places, and Environments on Earth's Surface.

An excellent book to map is *How to Make an Apple Pie and See the World* (Priceman 1996). When the market is closed, a young girl travels around the world to collect the ingredients to make an apple pie. She takes a steamboat to Italy to gather semolina wheat, a train to France to get an elegant egg, a boat to Sri Lanka to peel bark from the kurundu tree to make cinnamon, a ride to England for fresh milk from a cow, a banana boat to Jamaica to cut sugar cane, and a parachute to Vermont to pick apples. Bonus pieces include a map of the world and a recipe for apple pie. An interesting activity would be to have students bring in their favorite recipes and determine where in the world the ingredients might come from. Following the format of the book, students could create their own books and maps of how to make a particular food. This book receives a two-star rating for the map.

Another book to map, *Bread, Bread, Bread* (Morris 1989), introduces breads from other cultures (e.g., tortillas, baguettes, and chappatties) in 16 different places around the world. At the end of the book is a list of the countries and the types of breads represented in the photographs. An activity of mapping can lead to discussions of how the breads get to markets in the United States or other countries, after which students could trace routes on a world map. This book has no maps and therefore is not rated.

Somewhere in the World Right Now (Schuett 1995) opens with a two-page spread of a world map with time zones and an explanation of the system of standard times. Although places described in the book are already marked on the map, students could identify regions or hemispheres, as well as the time for each image in the story. To encourage further work with time zones, students could examine political and geographical boundaries in one country and how they affect the selection of the time zones. This book is assigned a two-star rating for the maps.

Another mapping activity is to have students look at locations from a different perspective. The Caldecott book, *The Fox Went Out on a Chilly Night* (Spier 1961), presents various panoramic views of a town and countryside as the fox goes out to find supper for his hungry children. The book is based on the old folk song of the same name. The illustrations are not translated into maps but only present a view of various areas from the song.

In a similar manner, *As the Crow Flies* (Hartman 1993) uses simple words and pictures to describe different geographical areas from the perspectives of an eagle, a rabbit, a crow, a horse, a gull, and the moon. All maps are joined together to present "The Big Map" at the end of the story, earning this book a four star rating. To incorporate Standard II of the national geography standards (How to Use Mental Maps to Organize Information About People, Places, and Environments in a Spatial Context), have students imagine they are stuck to the ceiling of a room in their house and must draw a map of the location of all objects in the room from this viewpoint.

In the classroom, students could make a grid of the room by using yarn, meter sticks, tape, and number or letter cards. One team of students would tape the letter cards a meter apart across the front and back walls of the room in the longitude positions. The other team would tape the number cards down the side walls of the room for the latitude positions. The cards would be connected by yarn to form a grid. The students could then draw a "bird's-eye" view of the room and place objects on the correct location of the grid (AIMS Education Foundation 1994).

MAPS OF IMAGINARY PLACES

The Once Upon A Time Map Book (Hennessey 1999) includes maps of *Neverland* with Peter Pan, *Wonderland* with Alice, *Land of Oz* with Dorothy, *Aladdin's Kingdom* with the Genie, *Enchanted Forest* with Snow White, and the *Giant's Kingdom* with Jack. There is a key and a series of instructions so that young readers can follow paths to

hidden treasures while learning the basics of map reading. Each map is quite detailed and includes a legend and a compass rose. The instructions to find the treasures include following directional clues, as well as reading grid points, and merits this book a five star rating.

Buried Blueprints: Maps and Sketches of Lost Worlds and Mysterious Places (Schleh 1999) has 14 detailed drawings accompanied by one-page narratives that offer historical and literary background about places of myth, legend, and literature. The elaborate sketches portray such places as the Seven Cities of Gold, King Arthur's Camelot, Count Dracula's castle, the Garden of Eden, and Atlantis. The premise is that the book is based on the travels of Albert Lorenz, and even includes a magnifying glass to use while exploring the intricate details of each page. Although the idea of the book is intriguing, the few maps in the book are lost within detailed drawings. However, the sketches do initiate spatial thinking, thereby awarding this book a three-star rating.

Students can create their own imaginary places after reading *Where the Wild Things Are* (Sendak 1988). Maurice's mother calls him a "wild thing" and banishes him to his room without supper. Maurice travels a night and a day, in and out of a year, to reach an island where he can become king of the wild things. In this lesson idea from LaGEA teacher consultant, Shelley R. Williams, students create an imaginary island based on a theme, such as "Pizza Island." Each island must have at least six geographic features named to represent the theme. For example, the island may feature the "Pepperoni Swamp," the "Tomato Sauce River," the "Thick Crust Volcano," the "Cheesy Plains," the "Anchovy Tundra," and "Jalapeno Bay." Even the ocean surrounding the island should be named to fit in with the theme. Students need to develop a map key, a compass rose, and a scale, as well as a title for their get-away island.

PHOTOGRAPHS AND SATELLITE IMAGES

Seeing Earth from Space (Lauber 1990) presents Earth photographs taken by astronauts and images from satellite data. From the salt flats in Iran, to a typhoon over the Pacific, to the Tifernine Dunes in Algeria, space photography demonstrates a way in which scientists can use images to track storm systems, predict weather, or study crop conditions. Lauber explains remote sensing, infrared and radar imaging, and offers an interpretation of the Landsat images. The book prompts readers to consider the need to protect and treasure planet Earth and become conservation stewards of the environment. In keeping with Standard 1 of the National Geography standards (using maps and other geographic representations, tools, and technologies to acquire, process, and report information), have students download current images from the NASA website <http://visibleearth.nasa.gov/> and practice interpreting the data.

For the younger grade level, *The Adventure of Echo the Bat* (Butcher and Broadhurst 2001) incorporates Landsat

images into the story of a bat migrating through the habitats of Arizona. The pop-up pictures on the imagery encourage students to examine perspective, pattern, color, texture, and shape. Students can enjoy seeing satellite images of their own communities by using <http://www.earth.google.com>.

MAPS OF WATER BODIES: RIVERS AND LAKES

In the book *Three Days on a River in a Red Canoe* (Williams 1981), students can follow the red canoe down the river in the adventures of Mother, Aunt Rosie, and two children. This book includes several maps of the river trip and interesting tips for camping. It could serve as the initiative for an environmental study unit or the initiative for an introduction to Geographic Information Systems GIS. The map at the beginning of the book presents an overall view of the river, while a later map features a close up of a particular area. This book's maps receive a three star rating.

A River Ran Wild (Cherry 1992) is based on the true story of the restoration and renewal of the Nashua River in New England. This beautifully illustrated book includes maps and various aerial views of the river valley. The book begins with the settlement of Native Americans, discusses the arrival of the English, the development of industrialization, and pollution. The book concludes with the successful effort to clean up the river and restore its wildlife. The 1500 and 1900 year maps on the endpapers, which include a timeline, help to place the events in context and earn this book a three star rating.

A Caldecott Honor Book originally written in 1941, *Paddle-to-the-Sea* (Holling 1969) describes the story of a Native American boy who carves a wooden canoe and writes an inscription that the canoe is trying to find the quickest route to the sea. He then sets the canoe on a snow bank near a river that eventually leads into Lake Michigan. The canoe spends four years on the water, being picked up by loggers, fishermen, and families before finally making it to the sea. Maps of each of the Great Lakes are included on most pages and a map of the journey is included at the end of the story, warranting this book a four star rating.

There are a number of lesson plans on the Internet that involve rivers (e.g., 1217 on the National Geographic *Xpeditions* website: <http://www.nationalgeographic.com/xpeditions>). Christopher Stanton from the Vermont Geographic Alliance shared the following lesson at a teacher summer institute in Washington, D.C. Draw a river through the center of a long sheet of butcher paper with a lake at one end. Assign sections of property along the river bank to students and give them the opportunity to determine if they will use the land for agriculture, recreation, or business purposes. Have students draw their plans from an aerial viewpoint. Cut small pieces of colored paper to represent different sources of pollution (e.g., black for oil runoff from parking lots or green for nitrogen from lawn fertilizer). As each student explains how they have chosen to use their property, the class decides what impact the property owners have on the river and add small

amounts of colored paper to represent pollution. Ask each student to place a personal item (e.g., watch, pen, ring) in the river and wash everything down to the lake. Students will then see that some pollutants (personal items) can be traced back to an exact point and other pollutants cannot be traced back to one point. Have the students examine their own state's river systems and determine what human influences might affect the environment.

CONCLUSION

With the demands of No Child Left Behind (NCLB), geography is often not perceived as an essential element in the everyday curriculum. Integrating reading and geographic mapping skills would greatly benefit students and encourage cross-curricular instruction. Other geographic skills could easily be taught with literature. For example, students could create a "Five Themes" book report identifying the location of the story, the place and region, what human-environment interactions occurred, and what movement occurred.

In this age of budget crunches that affect school districts, it is beneficial to know that quality children's literature exists and can be utilized to teach geography mapping skills. School librarians often welcome suggestions for book orders and may get many of these books if asked. Generally, the books described in this article use maps to the best advantage for young readers and are readily available at most book stores.

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