

Strategy 7

Developing Map Skills

NEIGHBORHOOD EXPLORATION

"You know what I wonder about, Lorelei?" shared Alton. "I worry that I will get lost on my way to school. I worry that I will get lost in this big school building."

"I saw my dad look up something on the Internet, and it told him how to get from my house to New Jersey. He said he would not get lost because now he had directions and a map so we could get to Grandma's really quick," answered Lorelei.

"I guess we could ask the teacher how to make a map so we would not get lost on our way to school or in this big building. What do you think, Lorelei?" responded Alton.

Developing map skills in elementary students can help them as they explore and understand their own neighborhood and school. Sunal and Haas (2005) maintain that "one of the best ways to learn the definition of a map is to make your own maps" (p. 313). These same authors advise teachers to assist the youngest learners by exposing them to maps with few symbols and having them create their own simple maps. The reading and creating of maps should inspire elementary students to think of themselves not only as part of their neighborhood but also as part of a community, the nation, and the world.

Parker (2009) identifies five different skills essential for understanding maps and mapping: (1) directional orientation, (2) map scales, (3) place location, (4) location expression, and (5) map symbols. Directional orientation refers to whether a learner understands the concepts of near and far as well as north, south, east, and west. When asked to point to the north, many elementary students point above their heads and point to the south as the floor. Teachers need to clarify directional orientation as it applies to a flat map. Map scales relate to the fact that mathematics is an essential skill relating to producing a scale—that is, translating something from a larger size to a smaller one. Place location for younger students relates to helping them see how the places they already know can be represented on a map. For older elementary students, place location refers to using a grid to locate locations by identifying coordinates. Location expression means that learners are able to reference one locale to another. In other words, where is the school in relation to

their home? Where is their best friend's home in relation to their home? Finally, young learners need to be taught how the sites and locations that they know can be transformed into symbols that make sense to them on a map representation.

Asking elementary school students to create their own maps of the places they know can help them understand all of the map skills that they need to know. This exploration can be as expansive as exploring their own neighborhood or be as personally relevant as mapping their school, classroom, home, or a room in their home.

Sources: National Council for the Social Studies, 1994; National Council of Teachers of English and International Reading Association, 1996.

Curriculum Standards for Social Studies

- Strand III: People, Places, & Environments
- Strand IV: Individual Development & Identity

Standards for the English Language Arts

The research process and completing their own maps will build vocabulary as well as support reaching comprehension skills. Students researching historic maps and conducting research to create their own maps will support reading comprehension as well as building new vocabulary.

- Standard 3: Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound–letter correspondence, sentence structure, context, graphics).
- Standard 4: Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- Standard 10: Students whose first language is not English make use of their first language to develop competency in the English language arts and to develop understanding of content across the curriculum.

Technology Connection

Most of us have discovered that online mapping programs can be a great help in locating local addresses or even planning a trip across the country. Students may decide to compare their map with those available on the Internet. They may want to map out a fantasy trip in line with other topics of study.

Please visit
www.sagepub.com/Imelberstudy
 for the updated National Council of
 the Social Studies standards.

KEY THEMES

- Making observations of known places
- Translating personal observations to generalizations
- Communicating observations to others
- Analyzing data to create maps

MATERIALS

Construction paper
Gridded paper (for older students)
Markers/pencils/colored pencils
Pads
Clipboards

PROCEDURES

This activity involves learners exploring known places. More important, it involves the production of maps that are related to students' own needs and experiences. The teacher should decide, depending on the age of the students and the location of the school, which explorations are most relevant and possible as well as how simple or complex the maps produced by the learners should be. Students should then be paired or grouped. Pairing or grouping works well for this activity when learners are asked about what they are interested in exploring and mapping, and teachers assign groups based on these indications. The contents of the map to be produced will be based on what has already been taught. For example, younger students should concentrate on directions (north, south, etc.) and map symbols (such as drawing a flag to represent their school). Location expression is also important for these learners to consider the concepts of "near," "far," "next to," and so forth. Older learners should construct their maps not only to include the ideas considered by younger learners but also to indicate scale and place location. Grid paper will facilitate production of maps that include number and letter grids.

Before beginning their explorations, students should be exposed to reading, analyzing, and talking about maps related to what they are studying in social studies. Students can compare and contrast maps from different time periods or different types of maps. Teachers should also model the construction of a map or have the class create a map collaboratively. An ideal way to construct this model map is to have learners individually draw a map of their classroom and then collaborate to produce a class map of the room.

Teachers can then lead the class on a map walk. Mapping the school can begin at a central location, such as a memorial plaque indicating when the school was built, and end at their classroom. Students can decide on what symbols will indicate offices, the lunch room, the gym, and so forth. They can also be given freedom as to what they decide is relevant for them to indicate on their maps (see Figure 7.1 on p. 53). The maps can be constructed as students walk, or the walk can be an opportunity for pre-drawing and the students' maps can be refined back in the classroom.

Map walking does not have to be confined to the school building. After getting the required permissions, teachers can extend the walk to the school's neighborhood, a local park, or another relevant community location.

GRADE-LEVEL MODIFICATIONS**K–2nd Grade**

This age group can begin their mapping by working with their families to create a map of their home. This might be of their room, another room in their home, or even the entire house. This family involvement will help all students create a product that they are proud of and that is personally relevant to them, even those who have difficulty writing or

drawing. Teachers can also create a basic map of the street where the school is located and use this device to teach the concepts of relative location—near, far, and so forth. Creating the map based on the map walk can be a whole-class activity guided by the teacher’s drawing. Also, this map can be created on a felt board so that learners can physically place pieces to represent streets, the school, and locations that they as a class think are important.

3rd Grade–5th Grade

This activity can be presented as an interdisciplinary activity for students of this age group. After appropriate instruction, math concepts such as drawing to scale can be a required element to be included on the finished map. In addition, the map walk can be amplified to include a math walk in which students look for relevant math concepts. They can be asked to record ideas such as:

- How many steps does it take to get from one location to another?
- How many math shapes (triangles, trapezoids, etc.) did they see?

Teachers can first demonstrate and then require learners to include these interdisciplinary connections on their maps. Further classroom discussion can include geometric concepts as students identify streets that are parallel or perpendicular to each other.

6th Grade–8th Grade

Constructing a grid of letters and numbers as the basic structure for student maps can be a challenging yet relevant approach for this age group. This gridding allows them to understand how to locate significant places, such as hospitals, and how to travel from one point to another. These learners can also be asked to construct maps with a purpose or audience in mind. They could draw maps for people new to their town or for their younger brothers or sisters. Furthermore, they could be challenged to consider how to construct maps for individuals with low vision. The importance of clear and descriptive titles can also be a required focus for this age group.

- What exactly does the map contain?
- Why was the map created?
- What does what the map indicate about the group of students who created it?
- What does it tell the reader about what the creators considered important?

MEETING THE NEEDS OF ENGLISH LEARNERS

Teachers need to be sure that directions for completion of the activity are well understood. Vocabulary terms and concepts, such as gridding, need to be demonstrated and displayed. Visual guidance, such as large, teacher-created maps, can be used to model each concept of mapping that the students are required to know. In addition, all students in the class can be required to incorporate languages other than English in their map legends, street names, and place names.

MEETING THE NEEDS OF STUDENTS WITH SPECIAL NEEDS

How the maps are created and what the maps look like can be easily tailored to meet the needs and abilities of diverse learners. Some may choose to produce their maps with the aid of computers. Others can dictate what they would like to create to a peer or

adult helper. A map handout can be provided with larger print or more details to further guide learners with low vision.

ASSESSMENT SUGGESTION

At the conclusion of the activity, students will be able to:

- Understand important concepts relating to map reading
- Apply these concepts to creation of a local map that is relevant to themselves, their classmates, and other community members

Students' maps can be assessed using a simple yes/no rubric centered on teachers' expectations and what is developmentally appropriate for the learner and age group. This rubric should be shared with learners prior to the assignment so that they understand fully the criteria and requirements.

Possible rubric for third- to fifth-grade map:

	Yes	No
Map clearly shows locations that the group considers important.		
Map shows that students understood all map concepts learned in class.		
Map is drawn to scale.		
The symbols on the map are clearly explained by the map's legend.		
Map can be used easily by classmates to identify places or to go from location to location.		

Children's Literature Connection

Although these books are not specifically about map making, they can be used by teachers as a way to demonstrate the importance of and interactions of people, places, and environments. In addition, students, as they read, can construct maps of the main characters' journeys.

Fort Chipewyan Homecoming: A Journey to Native Canada

By Morningstar Mercredi

ISBN: 0822597314

This is the true story of a mother journeying with her son to Canada to introduce him to her culture. It is a photo-documentary that can help learners see the connection of people and environment and also can help them examine the complexity of parent and child relationships.

Grandfather's Journey

By Allen Say

ISBN: 0547076800

This beautifully illustrated book has become a classic to use to talk to young students about the meaning of home and places and the immigrant experience.

In the Woods: Who's Been Here

By Lindsay Barrett George

ISBN: 0688161634

This engaging book is appropriate for the younger learners. Teachers can use it as a guideline to make interdisciplinary connections with social studies and science walks.

Quick Fact

In the 1400s, Prince Henry of Portugal founded a school for sea captains so that they could study the best maps available at the time. This ruler has become known as Prince Henry the Navigator because historians consider the school he founded and the maps he collected as essential for the exploration of the world and early European travels to North America.

FIGURE 7.1 Exploring the School Sample Data Sheet 3rd–5th, 6th–8th

On the walk . . .

Our walk begins at the plaque that tells about when our school was built. List three facts contained on this plaque.

1. _____
2. _____
3. _____

How will you show this location on your map?

As we continue our walk, decide as a group which three other locations you will include on your map. Tell why these locations are important.

We want to include: _____ because . . .

We want to include: _____ because . . .

We want to include: _____ because . . .

(Continued)

FIGURE 7.1 (Continued)

3rd–5th, 6th–8th

As we walk, decide how you will indicate distance or scale on your map.

Back in the classroom . . .

What symbols will you use for your map?

_____ = _____

_____ = _____

_____ = _____

_____ = _____

What materials will you use to create your map?

How will you all work together to complete your map?

Preparing to present . . .

Get ready to present your map to your class. Talk about what you learned from this experience and how this might help you complete another map project in the future. What are some other maps you'd like to create?

REFERENCES

- National Council for the Social Studies. (1994). *Expectations of excellence: Curriculum standards for social studies*. Washington, DC: Author.
- National Council of Teachers of English and International Reading Association. (1996). *Standards for the English language arts*. Urbana, IL: National Council of Teachers of English.
- Parker, W. C. (2009). *Social studies in elementary education*. Upper Saddle River, NJ: Prentice Hall.
- Sunal, C. S., & Haas, M. E. (2005). *Social studies for the elementary and middle grades: A constructivist approach* (2nd ed.). Boston: Allyn & Bacon.