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I Do, We Do, You Do: Teaching Map Skills in Early Grades

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"Here's our state!" Courtney, a first-grade student attending a university laboratory school for students with mild learning disabilities in Texas, eagerly identifies a familiar place on a simple United States desk map she is exploring. Courtney's student teacher[1] has prepared an explicit lesson plan for a map skills unit focusing on the geographic theme of location according to the state's social studies standards. Today, Courtney and her classmates will work with various maps to practice using cardinal directions, which were introduced in a previous lesson.

Student identifies Texas on a desk map.

The purpose of this article is to explore the importance of teaching map skills to children in Kindergarten–Grade 2 (K–2) and to describe key tenets of *explicit instruction* as one approach to doing so. Explicit lessons that use an *I do, we do, you do* scaffolded approach to instruction are effective for teaching children with or without learning disabilities. Classroom teachers who are familiar with explicit instruction may frequently use the model for reading and math instruction while overlooking its potential for teaching geography skills. The benefits of using explicit instruction to teach map skills include setting students up for success with ample opportunities to practice and supporting growth in spatial thinking.

Why Teach Map Skills?

It may seem obvious that the ability to read, use, and interpret maps is a fundamental life skill in the world today. Consider various experiences in unfamiliar places (e.g., office buildings, mass transit, hiking trails) where locating your position relative to where you are headed depends on a map. Even global positioning systems (GPS) that provide step-by-step directions to specific addresses require users to apply geographic reasoning. Children need to learn about maps, what they are for, what they represent, and how to create and use them.

K–2 students can be taught to use and create simple maps of familiar places.[2] These kinds of activities not only develop children's confidence with and understanding of geography; they also promote a special type of thinking called *spatial thinking*. Spatial thinking has three main components: "concepts of space, tools of representation, and processes of reasoning. It is the concept of space that makes spatial thinking a distinctive form of thinking."[3] For example, you use spatial thinking to locate items in your kitchen, follow a diagram to assemble an object with multiple parts, and recognize that some students are taller than others. Research has shown that spatial thinking is associated with academic success, learning, remembering, and problem-solving.[4]

Spatial thinking is necessary for children to understand that maps use symbols to represent locations of people, places, and objects. This type of thinking is developmental.[5] The ability to think about locations, characteristics of different places, and relationships among those places begins to develop in infancy as very young children become familiar with their surroundings. Spatial thinking grows over time and with practice.[6] Preschoolers who build with blocks and assemble puzzles are learning spatial skills that can later be applied to map-making.

Geographic knowledge in spatial terms—the "whereness" of places—is foundational to developing the kinds of geographic thinking and reasoning that are needed to understand the world and its interconnectedness.[7] Therefore, K–2 students need ample opportunities to practice spatial thinking. Geography professor Sara Bednarz recommends that spatial thinking "should not be considered an add-on to an already full curriculum, but rather a necessary foundation to building intellectual capacity in all learners."[8]

For children in grades K–2, strengthening spatial thinking by creating and using maps to identify and examine locations, patterns, and places in the world is associated with Dimension 2, Applying Disciplinary Concepts and Tools, of the College, Career, and Civic Live (C3) Framework for geography. Additionally, map skills are directly connected to NCSS themes of ❸ **PEOPLE, PLACES, AND ENVIRONMENTS** and ❾ **GLOBAL CONNECTIONS**, as well as the National Geography Standards.[9]

Maps can be instrumental in helping children contextualize *where* historical, cultural, and current events have taken place; many interdisciplinary connections can be made by teaching about, with, and through maps.[10] For example, a first-grade inquiry titled "Family" published on the C3 Teachers website asks the compelling question, "How can families be the same and different?"[11] The inquiry's three supporting questions focus on what families look like, what families do, and what families do together. This inquiry could be expanded to include geographically focused supporting questions such as: Where does my family live? How do location and place affect what families do together? Where does my family come from? Why do some families travel to other places? The lesson presented in this article can be used to teach foundational map reading skills that can help K–2 students contextualize information related to the topic of families, as well as other social studies topics.

Explicit Instruction

Explicit instruction is an evidence-based approach to teaching characterized by a sequence of intentionally designed supports with practice and feedback that guides students through the learning process.[12] Research has shown that explicit instruction can be applied in many grade levels and subjects, and the method is particularly beneficial for students with disabilities.[13]

Archer and Hughes offer a list of six teaching practices for explicit instruction that includes review, presentation of the lesson, guided practice, corrections and feedback, independent practice, and weekly and monthly reviews.[14] Another approach is Fisher and Frey's *I do, we do, you do* structured teaching framework (see Table 1), which aligns to principles of explicit instruction: teachers should state a clear purpose for learning and model skills/techniques, offer teacher-assisted (guided) practice with feedback, and gradually engage students in independent practice. Collaborative practice (i.e., "you do it together"), where students practice with each other, is an additional pedagogical tool in this framework.[15] As the activities in this article demonstrate, the *I do, we do, you do* approach can easily be applied to map skills instruction.

Using the *I Do, We Do, You Do* Framework with Maps

An effective way to plan a lesson with the *I do, we do, you do* approach is to start by stating a clear, standards-based learning objective. Beginning with the outcome in mind—what you want students to be able to know and do—can help teachers decide how to break the task into small sequential steps. This section offers an explicit lesson used with first graders for the following learning objective: The students will use cardinal directions to locate states on a United States political map. The first graders who participated in this lesson were introduced to a compass rose during a prior lesson. Although this lesson used student desk maps and a classroom smart

Table 1. **Summary of Explicit Instruction Components in the *I Do, We Do, You Do* Model**

Structured Teaching Framework Stages[1]	**Elements of Explicit Instruction**[2]
Explain	Review prior knowledge.
	Provide a clear description of the lesson outcomes and why the lesson is relevant for students.
I Do	Break the task down into small steps.
	Demonstrate the task while talking students through each step using clear, direct language.
	Use examples and non-examples.
We Do	Guide students to practice the task along with you until they can complete the task with few or no errors.
	Offer correction and reteaching as needed using clues, prompting, and specific feedback; Gradually remove supports as students are successful.
You Do	Provide affirmative or corrective feedback as needed during initial independent practice.
	Allow students to practice the task until they demonstrate fluency, or repeated success.

1. Douglas Fisher and Nancy Frey, *Better Learning through Structured Teaching: A Framework for the Gradual Release of Responsibility*, 3rd ed. (Alexandria, VA: Association of Supervision and Curriculum Development, 2021).
2. Anita L. Archer and Charles A. Hughes, *Explicit Instruction: Effective and Efficient Teaching* (New York: Guilford Press, 2011).

Table 2. **Texas Standards Connected to Map Skills***

Kindergarten	**The student is expected to:** (3C) identify and use geographic tools…including maps and globes. (14D) create and interpret visuals, including pictures and maps.
Grade 1	**The student is expected to:** (3B) locate places using the four cardinal directions. (4) create and use simple maps of the home, classroom, school, and community; and locate and explore the community, Texas, and the United States on maps and globes. (17D) create and interpret visual and written material.
Grade 2	**The student is expected to:** (3A) identify and use information on maps and globes using basic map elements such as title, cardinal directions, and legend. (4B) locate places…on maps and globes. (15A) gather information about a topic using a variety of…sources such as…maps. (16F) create written and visual materials such as…maps…to express ideas.

*Texas Admin. Code § 113.11–13 (2018).

board, printed copies of simple U.S. political maps, atlases, or other maps may be used.

Explain

The first stage of an explicit lesson is to review what students already know, explain what they will learn during this lesson, and describe why the lesson is important. For the first-grade lesson objective to use cardinal directions, the student teacher began by saying,

> Let's look back at the compass rose we made during our previous lesson, which shows the four cardinal directions and how to arrange them in relation to each other. [Show a compass rose.]
>
> I will name each cardinal direction as I point to it on the compass rose. Watch me and listen as I read: *north, east, south, west*.
>
> Earlier, we learned a trick to remember the cardinal directions in order by saying, "Never eat soggy waffles": Never (north), Eat (east), Soggy (south), Waffles (west).
>
> Together, let's repeat the names of the cardinal directions in order: *north, east, south, west*.
>
> Today, you will learn how to use the four cardinal directions on a map of the United States to find several states in our country.
>
> Knowing how to use directions on a map can help you figure out how to get to or find another place. Knowing how to use directions on a map of the United States can help you learn about where you live and where people in other states live.

I Do

During the *I do* phase, the teacher demonstrates how to do the skill in a series of clear steps while describing each step aloud. Importantly, several examples should be provided in this way alongside non-examples or incorrect outcomes. Begin with very easy examples and, if needed, model more challenging examples. The student teacher's lesson continued:

> First, let's look at this simple map of the United States on our class smart board. You will be given a map just like this one in a few minutes.
>
> I will tape four note cards around the outside edges of the map to label the four cardinal directions in the same order in which we learned them.
>
> Watch me place the *north* card here just above the map, the *east* card on the right side of the map, the *south* card underneath the map, and the *west* card on the left side of the map. Placing the cardinal direction cards around the map will help me learn to use those directions to locate places on the map.
>
> Next, watch how I can use our direction cards to help me travel from one state to another state.
>
> Here is Kansas—I will point to it. Some of you have visited the state of Kansas before. Watch me trace my finger around the border of Kansas.
>
> Let's imagine I have my car in Kansas, and I want to visit a friend who is in a state that is just to the north of Kansas. I will find the direction card labeled *north* [point to it] and move my finger from Kansas toward the top of the map, toward the north. The first state that I find north of Kansas is Nebraska. Watch me use my finger again to trace a line that starts in Kansas and goes north. Nebraska

is north of Kansas.

Next, let's imagine that I have another friend located in the state that is just to the east of Kansas. Watch me find the direction card labeled *east* on the map so I will know which direction to move my finger. I will start with my finger in Kansas and move it in a straight line toward the east. The first state that I come to is Missouri. Missouri is east of Kansas.

The student teacher continued modeling how to find adjacent states to the south and west of Kansas. This same process can be used with any state that is surrounded by other states that are easy to locate with cardinal directions. Once Colorado was identified as a state located to the west of Kansas, the student teacher modeled a more challenging imaginary road trip by traveling two states to the west of Kansas, landing in Utah. Continuing with this example, the children were shown that the farther in one direction they traveled, the more states they passed through.

As a non-example, the student teacher traced their finger in the wrong direction, heading east when the goal was to travel west. Talking the children through the process of problem-solving by orienting them to the direction cards around the map can help them with accuracy.

At this stage and during guided practice, the student teacher anticipated students' questions about states located with intermediate directions (e.g., northeast, southwest). The student teacher knew that a simple explanation about intermediate directions could be provided, perhaps with a statement that they would be learning more about those during another lesson.

We Do

We do involves rehearsing with students to give them opportunities to practice the skill that was modeled during the *I do* phase. The goal in this phase is to offer enough practice, correction, and feedback so students experience success with assistance and gain confidence with the skill. As practice continues, teacher assistance is gradually withdrawn. For this lesson, this phase involved the student teacher saying,

Let's practice using cardinal directions to locate some other states. You will use your own desk maps to practice with me.

First, let's work together to label the cardinal directions around the edges of your desk maps.

Next, let's point to each cardinal direction on our maps and say the words together, in the order we learned them: *north*, *east*, *south*, *west*.

I have already shown you how I used cardinal directions to find states near Kansas.

This time, let's start in the state of Texas. [Point to Texas on your map and wait for students to find it on their desk maps.] Imagine that I wanted to travel to a state that is east of Texas. I can see where east is labeled on my map, here on the right side. Put your finger in Texas and trace a straight line toward the east while I do the same on our smart board. We are in Louisiana! Louisiana is east of Texas.

Next, let's see if we can find a state that is north of Texas. Use a finger to trace a straight line from Texas toward the north. What is the first state we find that is north of Texas? How many other states are north of Texas? Let's count them together…

You Do

This phase involves continued practice with a partner or individually. Students should be given enough opportunities to practice so they experience repeated success with the skill on their own. During the *You do* phase, the teacher should offer positive feedback and check for understanding as needed. For example, the teacher could say, "You correctly found two states that are to the west of Tennessee. How did you figure that out?"

Corrective feedback should include specific guidance. For example,

You are so close to finding a state that is to the west of Tennessee. Let's review where the west is on our map. Can you point to the label that says *west*? Put your finger on Tennessee and trace a line toward the west. Stop when you see a state that is west of Tennessee. Point to that state's name. Arkansas—correct!

The *You do* phase allows teachers to determine whether students met the lesson objective. The first graders who were guided through the *I do, we do, you do* process to learn how to use cardinal directions to find states on a U.S. map were given a list of questions to answer on their own using cardinal directions. The questions were very similar to the prompts used during the *I do* and *We do* phases of the lesson; the student teacher had intentionally set the first graders up for success by having ample opportunities to practice with guidance. By the end of the lesson, these first graders could correctly identify states to the north, east, and west of a given state along the Gulf Coast. The assessment also gave students opportunities to identify states they had visited or knew about, which made the assignment personally meaningful. One first grader proudly announced that her grandmother lives two states north of her home state, demonstrating accurate use of cardinal directions and interest in her personal connection to the lesson.

Additional Recommendations for Teaching Map Skills

Some teachers believe there is not enough time during the school day to teach geographic skills. However, lessons that teach children to use/create maps do not need to take a lot of class time. Depending on students' prior knowledge and the complexity of the standard you are teaching, many map lessons can be completed in 15–20 minutes. (See Table 2 for K–2 standards related to map skills in Texas.) Furthermore, not all map activities require the full *I do, we do, you do* process. For example, teachers can use Google Earth, classroom wall maps, and other kinds of maps to show students the relative and absolute locations of places they are exposed to during reading, science, history, and discussions about current events. Similarly, review and guided practice with map concepts can be offered throughout the day. Examples are puzzles requiring spatial thinking, construction activities with blocks, position word games such as I Spy or Simon Says, and read alouds that refer to specific geographic regions or locations.

One way to make the most of the time you have to teach about maps and with maps is to cultivate students' curiosity about maps. Developmentally appropriate maps that are simple to interpret will naturally spark children's interest, especially when the maps show familiar or interesting places such as their own classroom, community, state, or a nearby playground, park, or zoo. Like the first graders described in the opening vignette who eagerly identified their own state before their map lesson began, it is recommended that students have opportunities explore a new map on their own for a few moments before instruction begins. Even if students cannot yet interpret the legend or read the words, allowing them to investigate maps prior to instruction can help students settle into the lesson once their initial excitement has been expressed. See the sidebar on this page for a list of websites that contain free resources for teaching map skills to students in early grades.

Conclusion

The explicit *I do, we do, you do* instructional framework is a valuable instructional approach for teaching early map skills to young children. By providing young students with carefully planned, sequential map exercises that they observe, practice using (with support), then execute independently, teachers can promote geographic understanding while cultivating broader skills in spatial thinking. These skills, in turn, will enrich children's understanding of geographic themes to help them contextualize what they are learning in other social studies disciplines and core subjects.

Notes

1. Student teachers were enrolled in the author's social studies methods course where the *I Do, We Do, You Do* process was introduced along with the activities described in the sample lesson. The student teachers then co-wrote explicit geography lesson plans, revised them after receiving feedback, and taught the lessons to students at the university's laboratory school for children with mild learning disabilities.
2. David Sobel, Mapmaking with Children: Sense of Place Education for the Elementary Years (Portsmouth, NH: Heinemann, 1998).
3. National Research Council (NRC), *Learning to Think Spatially* (Washington, DC: National Academies Press, 2006), ix.
4. Sarah Witham Bednarz, "Geography's Secret Powers to Save the World," *The Canadian Geographer* 63, no. 4 (2019): 520–529.
5. NRC, *Learning to Think Spatially*.
6. Eugene Geist, "Let's Make a Map: The Developmental Stages of Children's Mapmaking," *YC Young Children* 71, no. 2 (2016): 50–55; Philip J. Gersmehl and Carol A. Gersmehl, "Spatial Thinking by Young Children: Neurologic Evidence for Early Development and 'Educability,'" *Journal of Geography* 106, no. 5 (2007): 181–191; NRC, *Learning to Think Spatially*.
7. National Council for the Social Studies, *The College, Career, and Civic Life (C3) Framework for Social Studies State Standards: Guidance for Enhancing the Rigor of K-12 Civics, Economics, Geography, and History* (Silver Spring, MD: National Council for the Social Studies, 2013), 40.
8. Bednarz, "Geography's Secret Powers to Save the World," 522.
9. Susan Heffron and Roger Downs, eds., *Geography for Life: The National Geography Standards*, 2nd ed. (Silver Spring, MD: National Council for Geographic Education, 2012), https://ncge.org/teacher-resources/national-geography-standards/.
10. Sarah Witham Bednarz, Gillian Acheson, and Robert S. Bednarz, "Maps and Map Learning in Social Studies," *Social Education* 70, no. 7 (2006): 398–432; Noreen Naseem Rodríguez and Katy Swalwell, *Social Studies for a Better World: An Anti-Oppressive Approach for Elementary Educators* (New York: W.W. Norton and Company, 2021).
11. C3 Teachers, "Family," https://c3teachers.org/inquiries/family/.
12. Anita L. Archer and Charles A. Hughes, *Explicit Instruction: Effective and Efficient Teaching* (New York: Guilford Press, 2011).
13. e.g., Roy Corden, "Developing Reading-Writing Connections: The Impact of Explicit Instruction of Literary Devices on the Quality of Children's Narrative Writing," *Journal of Research in Childhood Education* 21, no. 3 (2007): 269–289; Vanessa Hinton, Shaunita Stroizer, and Margaret Flores, "A Case Study in Using Explicit Instruction to Teach Young Children Counting Skills," *Investigations in Mathematics Learning* 8, no. 2 (2015): 37–54.
14. Archer and Hughes, *Explicit Instruction*.
15. Douglas Fisher and Nancy Frey, *Better Learning through Structured Teaching: A Framework for the Gradual Release of Responsibility*, 3rd ed. (Alexandria, VA: Association of Supervision and Curriculum Development, 2021).

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Free Resources for Teachers

C3 Teachers, **www.c3teachers.org**
Enter "geography" in the topic search bar for several K–5 inquiries about maps, globes, and geography.

National Council for Geographic Education, **https://ncge.org/**
Access numerous free and members-only resources for teaching geography.

National Geographic, **http://education.nationalgeographic.org**
This resource library includes maps, videos, articles, and other resources for teaching geography