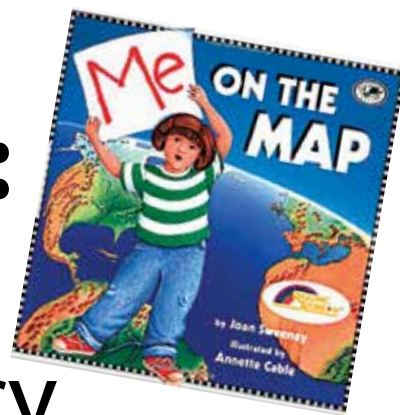


Mapping Their Place: Preschoolers Explore Space, Place, and Literacy



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“Miss Liz! We need the other blocks!” exclaims Darren.

Miss Liz, his teacher and one of the authors, Elizabeth Cottino, joins Darren and his friend, Jett, “You mean the new town blocks?”

“We’re building a city,” Jett explains.

“Oh, a city like in *Curious George*? He went to a big city in the book *Mailyn’s* dad read to us this morning,” says Liz connecting the boys to the special visit they had that morning. The boys quickly become engrossed in constructing towers and paths. Mailyn, perhaps hearing a reference to her dad, comes to join them. She adds a ramp to one of the buildings, so that they can drive trucks down into their city.

Liz had seen this type of play focused on buildings for the past few weeks; she had also noticed, on the walks the class often took, that her students were very interested in the buildings. She teaches at a university-based, multi-age preschool center, working with children ages 3–5. The Child Development Center is located on the university campus, so that, when the children and teachers take walks they observe many buildings of various sizes, shapes, and architectural design. “That one is made out of brick!” they would point out, and “this one is the tallest, taller than the library.” As a teacher in a Reggio Emilia-inspired program, her children’s curiosity and interests shape Liz’s curriculum. With anecdotes of the children’s explorations and observations in hand, she and her co-teachers began planning an intentional and purposeful course of study that would nurture the children’s interest in architecture, design and their world at school; collectively, the children and teachers decided to make a three-dimensional map.

Young Children as Mapmakers

While maps and globes continue to be an important part of the geography and social studies curricula, there has been some debate about the ability of young children to engage in maps in a meaningful way.¹ Working from a Piagetian perspective, some researchers have argued that children

younger than seven do not have the spatial-cognitive abilities to truly understand the perspective and scale differences in a map. In other words, they argue that young children are not able to interpret maps because the “bird’s-eye view” perspective that a map gives is too abstract and dissimilar to the concrete objects with which young children are familiar.² Other researchers, however, reject the notion that maps are too abstract, arguing that it is common for young children to make maps, and is something in which children across cultures take part.³ Researchers have demonstrated that children as young as three are able to use maps to solve problems,⁴ and five-year-olds can interpret aerial photos,⁵ a skill important in understanding the perspective of maps. Furthermore, a recent multinational study found that children as young as five were able to create simple topographical maps of their journey from home to school.⁶ Based on these studies and our own experience working with young children, we believe that young children are capable of making meaning of maps and, perhaps more important, have the natural inclination and curiosity to want to explore their world through many different media. Further, research on middle school-aged students indicates that map-making strongly benefits their understanding of maps and geographic concepts;⁷ it may be that creating maps with children at a young age will help build a foundation for stronger geographic understanding in the future.

Developing Skills

Working with maps in the classroom also offers an opportunity to integrate many different skills into a social studies unit. Students develop their understandings of proximity and directionality as they think about where objects are placed on maps. They develop their knowledge of spatial concepts as they explore the different shapes that could be used to represent an object of a map. The topic of study presents opportunities to practice non-standard measuring as students try to figure out the distance between buildings on the map. The students in



this class counted the number of steps from the classroom to the student center to get an idea of distance. Creating maps also allows students to practice emergent literacy skills, such as building print awareness, and practicing early writing skills as they label parts of the map. Finally, students are developing their fine motor skills as they create the representations of places and objects on their map.

Although we believe this project would be possible to enact in any classroom, it was certainly influenced by the Reggio Emilia approach that inspires the teachers at this school. First, the “Reggio Approach” sees all young children as intelligent, capable, and competent thinkers and learners. Once the teachers noticed their students’ interest in buildings and maps, they believed that their students would be able to construct a map provided that they were given the time, instruction, materials, and support. Second, the Reggio Approach encourages teachers and students to explore the beauty in the community to which they belong; it was common for this class to explore and think about their surroundings. Finally, the Reggio Approach encourages the exploration of concepts through multiple modalities, with an emphasis on including various forms of art.⁸ Creating a three-dimensional map (which was also a work of art) was an activity with which both

teachers and students felt comfortable.

Exploring in Print

In addition to the building that had been taking place in the block center, some of the children had been drawing their own maps to share with their teachers. Building on this interest, Liz gathered books about maps and about familiar places for reading books aloud during morning circle time and in the library center. She chose books specifically about maps, map-making, and symbols, such as *Follow that Map!* by Scott Ritchie and *Me on the Map* by Joan Sweeney. Liz also looked for books that would help foster discussions about the details and features of their surroundings. Books, such as *We are Going on a Nature Walk* by Steve Metzger and *The Listening Walk* by Paul Showers, might focus students on how to pay attention as they walked around campus, and Liz used *Playground Day* by Jennifer Merz to start a discussion of the different parts of the playground that the class might include on the map. (See **SIDEBAR**, p. 9 for a list of other books used in the unit.)

Liz connected her students to the idea of making a map by sharing a two-dimensional map that she and a previous group of students had made two years ago. Some of the children had older siblings in that class and were excited to recall the work



of their big siblings. Using some of the books she collected, Liz introduced the children to symbols used on maps and to new terms, such as compass and legend. After this introduction, Liz presented the idea of making a map to the students.

Capturing the Community

One of the cornerstones of the Reggio approach is that the curriculum is built with the child, not for the child.⁹ As Liz and her colleagues began setting the foundation for the project, they thought about what information the children would need to collect and what skills they needed to gain. Although the students were familiar with the layout of the campus, they would need to re-examine it with a new focus in order to recreate it in the form of a map. Students would benefit from having some sort of record beyond just their own memories. With these needs in mind, Liz and the children discussed ways that they could document the campus, and they decided that the best way would be to use digital cameras. Already familiar with using cameras as a tool for exploration and documentation in their previous studies, students were prepared to use cameras to document the buildings and landmarks on campus that were important to them.

As always, Liz let the students take the lead, choosing which

buildings they would like to photograph and which angles would best capture the buildings. She and her co-teachers were on hand to support the students in figuring out how to capture the image they wanted and how best to share the cameras with classmates. The children photographed the buildings and sculptures, features on the playground, and the paths that led them around campus. They also captured some more unconventional aspects, such as the trees and “resting rocks” that surrounded the library, the pebbles in the paths that lead to the atrium, the clock tower, and the signs. These details exemplified the children’s perspective and their attention to the smaller wonders of the campus, and ended up playing a large role in the children’s desire to represent their campus accurately.

Getting It Right: Building, Placing, and Refining

Once the children were satisfied that they had captured the important campus buildings with sketches and photographs, they began the process of making a three-dimensional map. The teachers uploaded the photos to the class computers so that students could look at the building or sculpture that they were attempting to construct. The children chose different buildings or features on which to focus, and the construction of one building was often a group effort. The teachers made



many art materials available, including cardboard, clay, paint, and an assortment of collected objects, such as buttons, spools, and rocks, that might help the children represent a feature on the map. The teachers helped the children access the photos on the computer, and talked to them about their choices in material and color, as they worked to rebuild what was in the image.

When the children finished creating a building or sculpture, the teachers supported them when they tried to find the right place for it on the map. The first speaker here, Janiry, is the teacher:

Janiry: Where does your sculpture go? (Delilah points to an empty space on the map) Can you see it from the red sculpture? Hmm... Do you remember where we saw it? What was it by?

Delilah: By the student center.

Janiry: By the student center and the ...

Delilah: The library!

Janiry: Let's look at our map, where did you say our student center was?

Delilah points.

Janiry: That is the science building, the student center is here (pointing to the building next to it) Where is the library you drew it with a person in it?

Delilah: (points to the library, and then points to a space between the two buildings) The sculpture goes here.

Janiry and the other teachers helped the children develop an understanding of a map and the space that it represents by connecting it to their experiences all around campus. They reminded the children of the places or features that they had seen on walks and used these to help them as they tried to place their objects on the map. These talks also helped students



understand the concept of a map as a representation of a place that they know as well as develop their concepts of directionality and proximity.

As the map began to take shape, the children continually revisited the work to refine it. As they spent time outside, or took a second look at their photographs, they often noticed a new detail and were eager to add it to the map. After their initial construction of the playground section, some children came back from the playground and realized that they had forgotten to include the ladder on the play structure and the tunnel. After they reported these omissions to the class, they created these aspects, making sure that the map accurately represented their playground. Occasionally, they encountered problems that they had to work with their peers and teachers to solve. Here the teacher is Liz:

Liz: We've noticed that the clock tower keeps falling and falling, and Giannamarie had a fabulous idea. Do you know what she said?

Tara: You could use a rock!

Liz: Yes, we tried that, but it didn't work. So Giannamarie said you could use a hot glue gun and glue it to the board! I also have this (holding up a small box) for the base. Giannamarie, do you want to tell them?

Giannamarie: We were looking and looking for a small one, but we couldn't find one, and then you had that.

Liz: Giannamarie noticed that we already had this small box!

This dialogue reflects the collaborative work of teachers and children problem solving to find the right materials and construction to help them complete their project.

Fostering Emergent Literacy

Creating the map was an opportunity for the teachers to incorporate the children's emerging literacy skills. They did this in two ways: through creating labels and signs for the map, and through the creation of a class book to document their work. Through awareness of each student's readiness level, the teachers were able to support her/his particular emerging literacy skills. For some students, the signs helped foster an awareness of environmental print. They began to take more notice of the signs around the campus, including the sign declaring the name of the library, which had been present all year long but was not discussed until the class started the map. As they worked with the teachers to create the letters in the signs for the map, some children grew in their awareness and identification of the alphabet. Still others were ready to use their knowledge of the letter-sound connections to sound out the names of the places they had constructed and, with the support of their teachers, write the words for their signs. Creating labels was an activity that provided multiple opportunities for all the children to participate and one that could be easily differentiated by the teachers to best fit each child.

The book was used to document the project and to communicate to others what the students wanted visitors to know about the school, highlighting many of the building and features that were important to the children. They sketched pictures of the places on the maps, labeled their pictures, and thought about what they wanted others to know about the places they had mapped. The children dictated the contents of the book to Liz; this is what three students told her about the playground:

Karly: If you don't want to go down the slide you can go down the stairs.

Giannamarie: Or you can go through the tunnel or the ladder.

Dameon: You can have sand on the ground, but don't throw the sand.

The class book was a way of confirming one of the purposes of the map: the children wanted to present their world to others.

(Earlier in the year, the teachers and children completed a unit of study on book making, so they were familiar with the process of documenting a project through writing a book.) Dictating the book gave them the opportunity to add their voices so that others could know about what was important to them in this place, for example, playground rules. It also supported the children's developing concepts of books and their beginning identities as "people who write books."¹⁰

Making Maps in Preschool

After weeks of focus on maps and map-making, Liz found that her students continued to be engaged and excited about their map. Several of the students were still examining the community around them and finding things that they would like to add to their map. It seemed that creating the map could have continued throughout the school year. Ultimately, Liz and her students decided to embark on a new unit of study: however, a seed of interest in geography and social studies had been planted.

This project shows that young children can interact and create maps in a meaningful way. These children were able to recreate their community in the abstract form of a map and engage in discussions about representation and location. The project

Picture Books Used in the Unit

Books: Maps

Hartman, Gail. *As the Crow Flies: A First Book of Maps*. New York: Alladin, 1993.

Ritchie, Sott. *Follow that Map!: A First Book of Mapping Skills*. Toronto: Kids Can Press, 2009.

Sweeney, Joan. *Me on the Map*. New York: Dragonfly Books, 1998.

Fanelli, Sara. *My Map*. New York: Harper Collins, 1995.

Books: The World Around Us

Edwards, Becky. *My First Day at Nursery School*. New York: Bloomsbury USA Children's Books, 2004.

Barns, David. *My School is Alive*. New York: One More Story Please, 2005.

Merz, Jennifer. *Playground Day*. New York: Clarion Books, 2007.

Showers, Paul. *The Listening Walk*. New York: Harper Collins, 1993.

Lobel, Arnold. *The Rose in My Garden*. New York: Greenwillow, 1993.

Metzger, Steve. *We're Going on a Nature Hunt*. New York: Scholastic, 2007.

integrated literacy as the teacher read books aloud, with students noticing and identifying print in the environment around them, and labeling and communicating through writing. Perhaps most important, students were highly engaged in the study of maps and location. Studies have often decried the lack of interest in geography,¹¹ but that was certainly not the case here.

As we examine our curriculum and consider how we structure activities that use geography, we have two thoughts: First, young children are capable, competent and intelligent thinkers and learners in many areas, including geography, which supports the integration of the study of maps with literacy for children of all ages. Second, the children in this study brought their enthusiasm for learning to the creation of this map because the teachers focused on students' interests. Many young children are interested in their surroundings, and allowing students to explore their worlds through the study of geography can plant a seed for continued interest in the subject as they grow. 🌱

Notes

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2. Roger Downs, Lynn Liben, and Debra Daggs, "On Education and Geographers: The Role of Cognitive Developmental Theory in Geographic Education," *Annals of the Association of American Geographers* 78 (1988): 680–700.
3. James M. Blaut, D. Spencer, C. Spencer, and M. Blades, "Mapping as a Cultural and Cognitive Universal," *Annals of the Association of American Geographers* 93, no 1 (2003): 165–185.

4. Christopher P. Spencer, Mark Blades, and K. Morsley, "Maps and Their Use," *The Child in the Physical Environment: The Development of Spatial Knowledge and Cognition* (Chichester, UK: John Wiley & Sons, 1989): 129–155.
5. M. Hugh Matthews, *Making Sense of Place: Children's Understanding of Large-scale Environments* (Savage, MD: Barnes & Noble, 1992); James M. Blaut and David Stea, "Studies of Geographic Learning," *Annals of The Association of American Geographers*, 61 (1971): 390.
6. Evelyne Thommen et al., "Mapping the Journey from Home to School: A Study on Children's Representations of Space," *International Research in Geographical and Environmental Education* 19, no. 3 (2010):191-205.
7. Madeline Gregg, "Mapping Success: Reversing the Mathew Effect," *Research in Geographic Education* 1, no.2 (1999): 123.
8. Louise Boyd Cadwell, *Bringing Reggio Emilia Home: An Innovative Approach to Early Childhood Education* (New York: Teachers College Press, 1997): 149.
9. Cadwell.
10. Katie Wood Ray and Matt Glover, *Already Ready: Nurturing Writers in Preschool and Kindergarten* (Portsmouth, NH: Heinemann, 2008): 89.
11. Segal, 265–266.

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