

Using Playground Maps for Movement



A. Vonnie Colvin 

Many schools now decorate their outside playground hard-surface areas with large maps. There may be maps of the world, maps of their respective state, or maps of the United States. Some of these maps can be more than 800 square feet in size. These maps provide color and excitement to a playground and are a terrific teaching tool for physical education and, of course, geography. In physical education, the map can become a structure for organization through lines and colors. Physical educators have integrated mathematics and spelling (and nearly every other possible content area) into physical education content for many years. Geography is a very easy addition with the use of large maps (Colvin & Walker, 1996).

For the classroom teacher, the map can be the focal point for teaching geography, but physical activity content can also be emphasized. The combination of learning cognitive information and participating in physical activity is powerful. From the kinesthetic aspect of Gardner's multiple intelligences (Szpringer, Kopik, & Formella, 2014) to Jean Blaydes Mandigan's action-based learning (<http://www.abllab.com>), the literature is replete with evidence that shows learning can be anchored through movement (Furmanek, 2014; Lengel & Kuczala, 2010). The purpose of this article is to provide a few initial ideas that will assist both the elementary physical educator during class time and the elementary classroom teacher during outside activity time to integrate movement with geography.

Information from all 18 National Geography Standards can be supplemented by using maps. However, Standard 1 is very specific. Standard 1 states that the student will learn "[h]ow to use maps and other geographic representations, geospatial technologies and spatial thinking to understand and communicate information" (Heffron & Downs, 2012, p. 22). Some of those maps may be on the playground.

Content from physical education can also be taught using playground maps as a focal point. To demonstrate, references to the SHAPE America – Society of Health and Physical Educators National Standards for K–12 Physical Education (SHAPE America, 2014) are included in all relevant activities described in this article. It should be noted that there are also many geography resources to assist classroom or physical education teachers in incorporating maps as they relate to the National Geography Standards (see Foster, 2008; Shireman, 2003). Throughout this article, no specific distinction will be made between activities for the physical educator or the classroom teacher. Hopefully, the physical educator will share this article with classroom teachers and both will be able to collaborate to increase student knowledge and physical activity. This article is meant to be the beginning of a collaboration and sharing of ideas between teachers, as it is not all-inclusive. A U.S. map will serve as the example for each activity, but all of the activities can be adapted for state or world maps.

Class Organization Utilizing a Map

The teacher may assign each student a "home" state. When arriving on the playground, each child will go to their home state and begin jogging in place (or jumping or whatever instant physical activity the teacher suggests). This "home state" can be utilized for listening to instructions or practicing specific skills (see Figure 1). In addition, the cardinal directions (north, south, east and west) may be added to

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the map, either by painting an "N," "S," "E" and "W" on the map or marking the directions with chalk. When the teacher needs to divide the class into groups, these directions may serve as organizational locations. One fourth of the children go to the "N," one fourth go to the "W," etc. Once the cardinal directions



Figure 1. Jump in your home state



Figure 2. Line up to come in

are mastered, children may be asked to stand on the southern (or northern, etc.) end of the blacktop. Later, the ordinal directions (i.e., northeast, northwest, southeast and southwest) may be taught as the students move to the space between north and east (for northeast) or south and west (for southwest) on the blacktop. These special designations assist with organization and increase student knowledge as they move and learn.

When teachers organize the students to return to the school building, they may ask the children to line up along the East Coast (or West Coast) or Northern border (or Southern border) of the country (see Figure 2). The challenge could be increased if desired. Using chalk, the teacher could insert time-zone lines or even latitude and/or longitude markings. Again, the kinesthetic learner retains more through physical movement on the map.

Teaching Movement Concepts

Nearly all of National Standard 2 for physical education can be addressed by utilizing a large playground map. When teaching movement concepts, the first element of Standard 2 addresses space; the second element addresses pathways, shapes and levels; and the third element addresses speed, direction and force.

Self-space

When children are first learning about self-space, standing in a state will be as helpful as having them stand in a Hula-Hoop or on a poly spot. Children can learn the name of their home state. The “home” state could be changed after a few weeks.

Pathways

The use of curvy and straight pathways can be easily taught by using large maps painted on the playground. For example, children can be challenged to:

- Find a straight pathway and walk on it. Repeat with a curvy pathway. Now can you walk on that pathway sideways? Backwards?
- Select a state that is made up mostly of straight lines (see Figure 3). Walk around it and learn its name. Repeat with



Figure 3. Straight pathway

curvy pathway. Now can you walk on that pathway sideways? Backwards?

- Find a state that has both straight and curvy pathways. Walk around it and learn its name.

Relationships

- Can you move around the outside of the map and follow someone? Now can you change places and lead while your partner follows?
- Can you stand beside someone and move around the outside of the map while moving sideways?

Speed, force

- Can you move around the map at a slow speed? A fast speed?
- Can you move with light force? Strong force?

This task can be extended by offering additional challenges. The following can be adjusted to address speed and force, as well as levels:

- Can you move at a high level on states that are painted red or yellow and at a medium level on states that are green or blue?
- When you come to a state that begins with a vowel, move at a high level. Move at a medium level for states that begin with a consonant.
- Can you walk at a high level on states that are painted a primary color (red, yellow, blue) and at a medium level for the secondary colors (purple, orange, green)?

Again, this list is meant as a guide for the teachers, both in physical education and the classroom. Many other ideas can be developed and implemented that correspond to specific state standards and teacher creativity.

Skill Themes

National Standard 1 for physical education also address skill themes.

Locomotor skills addressed in Standard 1, Elements 1 through 4

Regardless of the type of map, at least four colors will be utilized. Using the colors, children can be challenged to go from one end of the map to the other.

Children can be asked, "Within the map, can you:

- jump from one green state to another?"
- hop so you never touch a yellow state (or red or blue or green)?"
- hop from north to south and only use each color one time?" (repeat with jumps from south to north)
- jump over a state (or hop or leap)? Jump back?"
- walk around your home state?" (See Figure 4.)

They can also be asked, "Using the outside area of the map, can you:

- move (skip, slide, gallop or run) in a clockwise (or counterclockwise) direction around the map?"
- skip down the Mississippi River, around Florida, and then keep skipping while maintaining your own self-space in the Atlantic Ocean?"
- go from north to south and only hop, jump or leap one time?"
- go west to east and only hop, jump or leap twice?"

Nonlocomotor (stability) skills addressed in Standard 1, Elements 7 through 9

Within their own state, challenge the children to use nonlocomotor movements to

- stretch and curl
- twist and bend
- turn
- balance (on one body part and then two, three and four body parts).

Manipulative skills addressed in Standard 1, Elements 13 through 19

Manipulative skills can be enhanced by asking children to:

- Dribble the ball three times on the state on which you are standing. Then dribble to the other states of that color and dribble three times with your opposite hand. (With slight modification, a soccer dribble may be utilized too.)
- Walk around the map and toss and catch a ball (see Figure 5). When the teacher says stop (or the music stops),



Figure 4. Walk the perimeter of your state



Figure 5. Toss and catch in home state

stop where you are and learn the name of the state.

- Leave an empty state between students. Toss (or bounce-pass or check-pass) a ball to each other.
- Practice throwing (or kicking or punting) across the width (or length) of the country.
- Exercise in your home state by: jogging in place, demonstrating a push-up or jumping (in place, or forward and back, or side to side).

Table 1. How to Make Your Map More Geography-Friendly

- 1) Use a compass and arrange the map so its cardinal directions are correct (i.e., the north is really north, etc.). Then paint (or chalk) a large N for north, S for south, etc.
- 2) Include the names of the states. You may paint the names or allow students to use chalk to designate the states and enhance their learning.
- 3) If at all possible, place Alaska and Hawaii in the appropriate locations. Too often their location is based on available space (or convenience), and the students develop incorrect ideas about the states' locations.
- 4) Paint in the Mississippi River as well as the Great Lakes.
- 5) The company that produces the stencil can provide a scale of feet to miles. Place that information below the map.
- 6) Ask classroom teachers if there is anything specific they would like to see added to the basic map design (e.g., rivers, mountain ranges, etc.).

Other activity ideas include:

- Designate a state of the week and help the children learn about that state (e.g., what crops are grown there, climate, notable history, etc.). Perhaps even teach a dance from the area (e.g., the Virginia Reel or a line dance from a specific area of the country). You might create a trivia contest on information about the state of the week or put up a special bulletin board.
- When on the playground, show the students the location of a state or area that has been in the news (e.g., Washington, DC, home of the U.S. government; Colorado, record snowfall, etc.)
- If your students run during physical education or recess, record the distances. Weekly (or monthly), tally the total distance run by everyone in the school. Using a scale, convert their mileage into a distance on the map and mark it with chalk. Maybe the entire school can run to all 50 states within the year (Colvin & Walker, 1996).

Summary


Children love bright colors and they love to move. A large map on the playground blacktop can serve as an organizational bonanza and can be the focal point for many lessons on movement concepts and skill themes with geography knowledge as an added emphasis. The colors, lines and directions can become the new "hoop" or line to follow. Relationships, effort and space awareness can easily be taught with a geography theme. Actually "seeing" a map that is large enough to move on and explore can be a huge motivator for students across many content areas. Permitting students to move as they learn is very powerful.

Table 2. Tips for Painting a Map


- 1) To find a stencil, search under “stencil, map, playground.” Many sources will emerge for maps.
- 2) Select an area of the blacktop that is level and smooth. Examine the space after a rain storm to determine the presence of low areas. Also, many hard-surface areas have cracks. If the surface has cracks or low areas, the map will need to be repainted more frequently as moisture will collect in the low areas and in the cracks.
- 3) If at all possible, select a location that is not scraped or treated, which would require your map to be repainted more frequently.
- 4) Once you have selected your space, make sure it is clean and well swept before you begin. A leaf blower works best. You do not need to prime the surface as traffic paint already contains primer.
- 5) Working with the stencil can be challenging, but it is essential. Drawing a map freehand is not for the average person. Most commercial stencils are made of narrow (18 inches) but very long (35 feet) newsprint-quality paper. They are very fragile. Wind, even a small breeze, can be devastating to your project as the newsprint will tear easily. Put down one strip at a time and either use duct tape or many weighted objects to hold it down. Wooden 2 × 4-inch strips will also be helpful. Then align the second strip. Mark the first strip and then align a third strip. Once this is done, remove the first strip. This way, the stencil’s surface area is minimized and the wind cannot destroy your entire project. Prepare for wind.
- 6) Most stencils are just paper with holes. You spray-paint the holes and then connect the dots to create the map. On the West Coast, this is very easy, but the Great Lakes and New England can be challenging — even for the geography savvy individual. Have a road atlas available and assign someone to connect the dots with chalk before the painting begins.
- 7) The map can be completed with only four colors (but if you elect to color in the Great Lakes [or other bodies of water], you will need a fifth color). The company where you purchased your stencil will often provide photos of other completed maps. Make a color copy of one of them. Then you can paint your states the same colors as those of the copy. To further eliminate the chance of confusion, use chalk and mark a large R for a state that should be painted red, Y for yellow, etc. This way, you will not suddenly find you have two states of the same color adjacent to each other.
- 8) Throughout the entire project, work closely with your local paint store. The associates can provide terrific insights on many things (e.g., what types of brushes and rollers to purchase, how long to wait after finishing the painting to seal the project, and when children can be on it, etc.).
- 9) A quality sealer is essential. You have a beautiful product and you want it to last.
- 10) The school division may already have yellow and white traffic paint (they may even have blue and/or red). Ask your administrator to request these through the maintenance department. Every can of paint donated will decrease the expense. Your map will require approximately one gallon each of four colors, unless you choose to make Alaska its proportionate size. (Many stencils contain a true proportionate size as well as a smaller version of Alaska. You can choose the size that space and time permit.) If you use the correct proportion for Alaska, an additional gallon of paint will be required for that state.

The possible activities and ideas are limitless. The map serves as a framework, but the teachers will create the learning opportunities. For information on painting maps more geography-friendly, refer to Table 1 and if you are interested in painting a map for your school, refer to Table 2. Enjoy the maps and enjoy the movement!

ORCID

A. Vonnice Colvin  <http://orcid.org/0000-0003-3291-4360>

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- A. Vonnice Colvin (colvinay@longwood.edu) is a professor of Physical Education Pedagogy in the Department of Health, Athletic Training, Recreation and Kinesiology at Longwood University in Farmville, VA.*