

Fall Project: Treasure Map

Compelling Question:

Supporting Question:

Content Expectations Addressed:

K – G1.0.1 Recognize that maps and globes represent places.
 K – G1.0.2 Use environmental directions or positional words (up/down, in/out, above/below) to identify significant locations in the classroom
 1 – G1.0.1 Construct simple maps of the classroom to demonstrate perspective.
 1 – G1.0.2 Give examples of places that have absolute locations (e.g., home address, school address).
 1 – G1.0.3 Use personal directions (left, right, front, back) to describe the relative location of significant places in the school environment.
 1 – G2.0.2 Describe the unifying characteristics and/or boundaries of different school regions (e.g., playground, reading corner, library, restroom).
 2 – G1.0.1 Construct maps of the local community that contain symbols, labels, and legends denoting human and physical characteristics of place.
 2 – G1.0.2 Use maps to describe the spatial organization of the local community by applying concepts including relative location, distance, direction, and scale.

Learning Targets:

I can turn a model so it “fits” my room (K and grade 1)
 I can turn a map so it fits my playground (grades 1 and 2) or neighborhood (grade 2)
 I can decide where something like a poster, door, or bookshelf should go in a model.
 I can name my classroom walls and point in the right direction when asked.
 I can use my steps or outstretched arms to measure distances.
 I can put something like a model rug or desk symbol in the right place in a model.
 I can use a string or rope to outline a region in my classroom (K), on a map of my playground (1), or on a satellite image of my neighborhood (2).
 I can find my location in a model or map (of a room in K, the playground in grade 1, and the community in grade 2).
 I can use a map to find a hidden treasure (late K, 1 and 2).
 I can follow directions for a trip, or give clear directions to someone else.

Additional Resources:

Basic outline map of the classroom (K and 1), schoolyard (1 and 2), neighborhood (2 and up). Small manipulables, as described in Step 1 below.

Lesson Vocab:

Position words, like next to, close to, near, far, between, above, below, inside, outside, on the floor, on the wall, left, right, north, east, south, west, in a group, all alone, by itself, connected, separate.

Descriptive adjectives, like big, large, small, little, round, square, oval, triangular, rough, smooth, colors,

Step	Instructions	Resources
1	Preparation This Kit is a list of items a teacher could assemble from existing stock, borrow from other rooms, or keep in mind while doing ordinary shopping over a long time. Most of the items (or usable substitutes) vary widely in price and quality, and price is not a good indication of quality or durability! Model school buses, for example, are available online at prices that range from about a dollar to nearly 50 dollars. I bought two rubber ones for a dollar at a thrift store, and they have lasted for more than ten years of workshops and demonstrations. Detailed maps and aerial photos of a school or surrounding community are a different challenge. Some communities have good resources at a Chamber of Commerce or Department of Agriculture office. Online mapping sites can often produce screen-capture images that are good enough for class use. Some schools have construction blueprints that are useful in making classroom or hallway maps. The presentation in Step 2 shows how the base for a classroom model can be as simple as a cardboard box or as durable as a dovetail-jointed wooden box that a parent or school board member might gladly make as a donation.	Primary Classroom Geography Kit
2	Classroom Model, or Treasure Map? A classroom model is <u>not</u> an end in itself. It <u>is</u> a high-interest way to communicate important ideas, as explained in the presentation. You don't have to call it a classroom model activity. You could wave a piece of paper and say something like "I found this treasure map, we're going to use it to look for the treasure, but in order to do that we have to learn how to do some things first." Then do some of the mini-activities described in Step 3. In effect, this project could take several weeks, because the real benefit is the scaffold ideas and the ELA/math spinoffs. These become easier to teach, because the treasure map activity can be made so engaging. The presentation is designed for teacher background, <u>not</u> for use with students. Many images could be inappropriate, because many seemingly minor details matter, especially at first. For example, the dimensions of the room and the sizes, shapes, and colors of things like doors and windows have to match your classroom, at least until students have mastered the meaning of the word "representation" and can deal with more abstract symbols.	Classroom Model presentation Making a Map of the Classroom Making a Map of the Playground Classroom Model Generic Symbol set Scholars Measure Room Size Classroom Model Wall Names

	Getting the idea of representation is a key step. And, as the presentation shows, the classroom model can help some students grasp the idea of representation faster - which can help with both reading and math lessons ("this letter represents this sound"). The main point of the presentation is in a simple sentence: <i>the devil is in the details</i>. The sequence of steps in the presentation is based on a large body of research in neuroscience and child psychology, but it mentions only a few research studies (like psychologist Judy DeLoache's wonderful article, <i>The Credible Shrinking Room</i>, which is easy to find on Google Scholar). The presentation tracks the sequence of stages that most students go through as they progress from realistic 3D models to abstract symbols. For many students, this "scaffold" is necessary <u>before</u> trying to make a map on flat paper. It is true that some students come into a kindergarten or first-grade classroom having already made that leap - but many others are just good at quietly copying from their peers without really understanding the idea of representation. As noted in the presentation, the devil is in the details. The presentation also has many hints about possible math and ELA connections. These are discussed in Step 3. PS. Step 3 should happen <i>at the same time</i> as step 2, not after it!	
3	Spatial Thinking Scaffold and Spinoff Activities These linked documents have suggestions for many ways to introduce, practice, and review basic spatial concepts - prepositions, other position words, left-right, cardinal directions, measurements, perspectives, etc. The last resource on the list is the full set of discussion guides that were prepared for teachers in 22 K-2 classrooms in New York City. These discussion guides deal with a number of different modes of spatial thinking - different ways that human brains can organize information about where things are and how they are arranged in space. For each mode, there is a page of background, a page that describes the developmental stages that a typical student is likely to go through, and then a number of diagrams that illustrate class activities. Important note: these diagrams are guides for teacher discussion, not items to be used with students! These activities have been tried and proven successful, but no teacher is likely to use all of them. Your first challenge is to select the ones that fit <i>your</i> classroom, reading program, math curriculum, and other local conditions. The second challenge is to decide <i>when</i> to use them in the 4-8 weeks that a classroom-model or treasure-	Classroom Wall Names Left-Right and Spatial Thinking Words Spatial Thinking "Simon Says" Prompts Personal Hierarchies Representing Our World summary Representing Our World full set

	map activity should take. A third challenge is to modify these lessons to suit your local conditions. For example, the “Sound Train” is one way to introduce a skill that will be a major part in Lessons 3 (Winter Readalongs) and Spring (Field Trip) activities. This skill is the process of thinking about things in order - like the animals seen in a video or a reading about a trip from the equator to the Tropic in Africa (the winter project), and places seen on a field trip (the spring project). Like the Journey Scroll that students will use to record observations on the spring field trip, the Sound Train is just a graphic tool to show the order of things. If your school uses some other graphic device to talk about phonemes and their sequencing in a word, use that instead - or use both. The key is to link the spatial idea of a sequence of stops on a trip with the more abstract idea of a sequence of sounds in a word. The desired result is to use the engagement of the classroom or playground map to make a small spelling lesson easier to teach! (And, you can repeat it in the winter, with a bigger word that fits the readalong, like “rainforest” or “thunderstorm” or even “chimpanzee.”) Important note: As the presentation notes, it is certainly possible to “do” a classroom mapping activity in one day. The result could be a resounding success for a few students. But it is a proven fact that many students won’t get it. They will just copy from the successful students, without understanding the basic idea of symbolic representation. Moreover, this approach squanders one of the real values of a classroom model or treasure-map activity, namely the high interest level, which in turn makes it easier to teach related lessons about letters and numbers, prepositions, phonics, spelling, sentence writing, oral explanation, arithmetic procedures, etc. etc.	Sound Train form Sound Train for West and East (picture) Other activity ideas
4	Interactive games Here are some early drafts of interactive activities that can be used to help explain some of the spatial ideas, like orientation, direction, distance, and sequence.	Simon Says Digital Work Mat Near/Far Digital Work Mat Colored Circles Digital Work Mat

