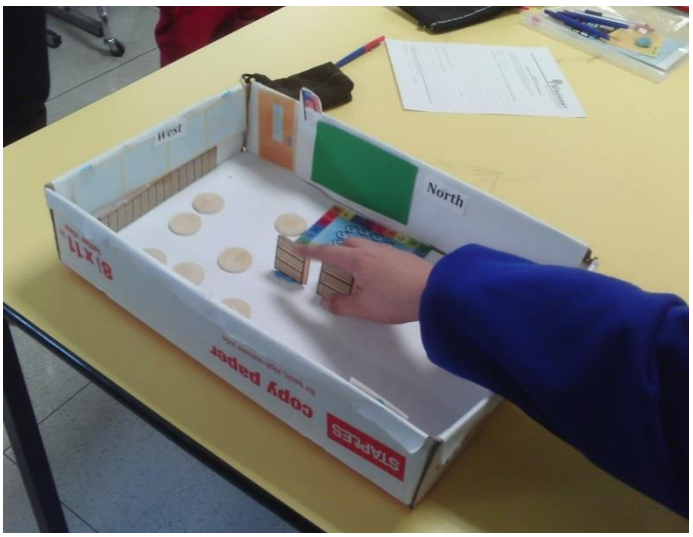
Primary-School Geography Kit

Michigan Geographic Alliance

1. A cardboard or wooden box

This box (one of three optional shapes) holds the kit and also serves as the foundation for a model of the classroom. One box shape is for classrooms that are roughly square. Another rectangular box is for elongated rooms. A third option is for rooms with irregular shapes, where someone might have to make a suitable model. The model should be at least two feet across, with "walls" roughly 6-8 inches high. "This box is what we might get if we put our whole classroom into a shrinking machine and made it really small (see #2)." [The box might also contain instructions for making a more permanent model out of wood, if a volunteer carpenter is available.]



2. At least one fairly realistic but durable model of a familiar mode of transport.

This model could be a schoolbus, if they are commonly used in the community, or an auto or SUV in suburban areas, pickup truck or tractor in rural areas, bus or taxi in cities, . . . The main purpose of this model is to illustrate the idea of a "shrinking machine" –

"What's this?" "a schoolbus"

"It can't be a schoolbus – I can ride in a bus, but I can't fit into this" [while doing an exaggerated pantomime of trying to get into the model].

"This doesn't even have a door – so what is it?"

Eventually elicit or reveal, "This is a model of a schoolbus" "It's like we put a schoolbus into a shrinking machine and made it small."

3. Printed "side-view" photos or drawings of some items that typically occur along walls or dividers.

The first symbols that students use should be reasonably faithful representations of the furniture in the room. The box should include examples of the following three items:

- windows with dimensions roughly similar to the classroom windows, e.g. three-stacked-panes
- primary writing surface in the room – blackboard, greenboard, whiteboard, smartboard, . . .
- entry door, with a knob and window (if one is there); pre-color or have students color it to suit

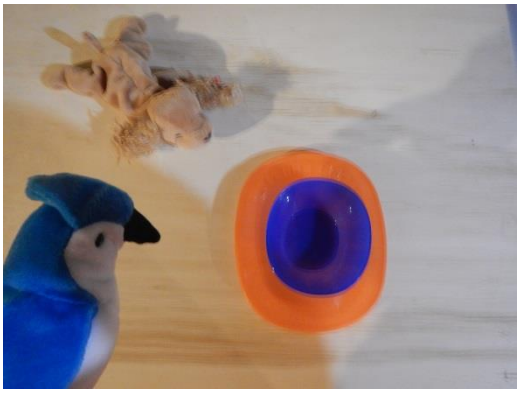
Also important, but harder to provide because of variety, are paper models of the carpets used for storytelling or to define a play area (teachers may be able to download images from vendor ads). Other useful flat items include drawings or photos of wall clock, alphabet poster, wallmap, cubbies, etc.

4. Symbols for several pieces of common classroom furniture.

Furniture can be symbolized in several ways – actual models, realistic drawings, and abstract symbols. For example, a table can be represented by a model, photo, drawing (at first, it must have legs!!), small wooden block, square or rectangular piece of paper of similar color, etc. All these props can be used to support discussion about appropriate symbols for objects. This is a very important step, because this is where students "take ownership" of the idea of representation. Many children need to be led in steps through photos or realistic drawings before they will accept an abstract symbol like a paper square for a table. The "aha" often occurs quite suddenly, after what may seem like a long lead-up time.

5. Some distinctive small dolls or puppets and very small drawings or photos of the same.

These can assist conversations about position (e.g. put a dog doll on a rug in the room, ask students to put the paper doggy on the rug in the model). These models can also be part of Simon-says type games. Their most important role, however, is to illustrate differences in perspective. Stack a small bowl on top of a larger plate, set the dog doll next to it, and ask what the doggy sees: "a blue bowl on top of an orange plate." Then hold a bird doll or puppet above the array and ask what the birdy sees: "a blue bowl inside an orange plate." This perspective activity can take many guises, with oral, multi-choice, or (later) written responses.



6. Plates or bowl of different sizes and colors that can be arranged in different ways.

These household items are good props for reviewing prepositions. "Give me a sentence to tell where the blue plate is." "It's between the red and orange plate." Other prepositional relationships include *on top of, underneath, near, next to, close to, toward* a feature like the door or clock, *away from, beyond, in front of, beside*, and *between*. Later, students can use more complex phrases, like *on the desk closest to the door, the middle desk in the row near the window, the desk near the south wall* (see #11), etc.

7. Instructions for making a to-scale 8-1/2x11 basic outline map of the classroom

One version of this map should already have a few key features: e.g., windows, greenboards, etc. These features should be chosen to be of most value in orienting the map to the room. Students can demonstrate understanding by orienting the map and locating at least one key feature (e.g. the entry door) themselves.

8. Plenty of construction paper.

Use sheets of colored paper (or inexpensive towels or tablecloths) to give tables, chairs, or other places in the room a distinctive color. You can then use smaller pieces of paper of the same color to mark these places in the room model. For a math lesson, vary the shape and size as well as the color – "Find the red triangle in the room, and put this red triangle in the right place in the model." An alternative is to use colored pencils to make marks on a room map (#8). A coin, card, drawing, or photo can then be identified as a treasure and hidden underneath pieces of colored paper – "the treasure is on the orange table in the model – find the treasure in the room." "I'm hiding the treasure under this piece of paper – put this penny under the right piece of paper in the model to show where it is."

9. Several pieces of yarn or string.

Long pieces of string can be used to delimit regions – "stretch the string to show the line between the reading area and the play area" [or whatever zoning you have in the room]. Small objects like paperclips can be used to measure or indicate shorter distances – "each paperclip in the model represents one scholar in the big room," where a scholar is defined as one kid with outstretched arms.

10. Large (at least full 8-1/2x11 page size) letters – N, E, S, W – to label walls according to their direction.

Labelling walls can facilitate many ordinary activities as well as games: "Line up along the north wall." "Line up in the middle aisle and face the east wall." "Everyone go to the rug area and sit down facing west." "Simon says go to the northeast corner of the room." "Everyone who has a blue armband (#18), line up along the west wall – greens go to the southeast corner." Group "activities" like these enable students to learn from each other. Later, the directions can be used as guides for motion activities – "Take five steps north and then turn to face east." "The treasure is under a book – go north to the bookcase and then three steps west." (People are not <u>born</u> with a sense of direction – they <u>learn</u> it!)

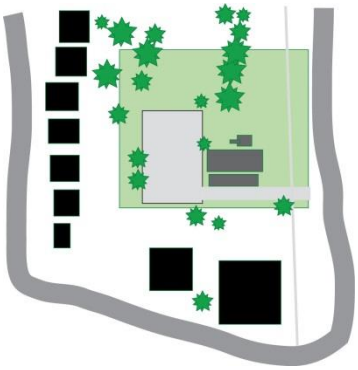
11. Sample building map that shows how the classroom fits into the building

This map should include halls, bathrooms, offices, other rooms – and a prominent compass rose. In one activity, students could try to "predict" what they would see if they could erase a wall of their room. For example, "we put an N to call that wall the north wall, but north actually goes beyond that wall – what room would we be in if we could walk through this wall and keep going farther north?"

12. Samples and instructions for a "birds-eye" photo of the school.

An overhead photo of the school building and surrounding area is a great way to help students make a transition from a map of the classroom to a map of the larger world. Students can help each other identify features on this image. It is useful to provide the image in several forms – as a color photo, B&W photo, and a stylized drawing or maybe even a durable vinyl banner or towelmap. (MGA can help construct these "props".)

13. Samples and instructions for a neighborhood map.



A student's first map experience should <u>not</u> be with the abstract "typical community map" that many publishers offer. Those published maps often drive a wedge between the students who "get it" quickly and those that are left farther and farther behind. A map of a familiar neighborhood, by contrast, can help even the playing field for students of different abilities. Later, the map can be customized with footprints for an outside field trip. This map can (and should) be used in many ways, e.g. to help students pre-plan a trip, to accompany them on the trip (perhaps as a kind of journey scroll – see #15), or as an aid in reviewing the trip later.

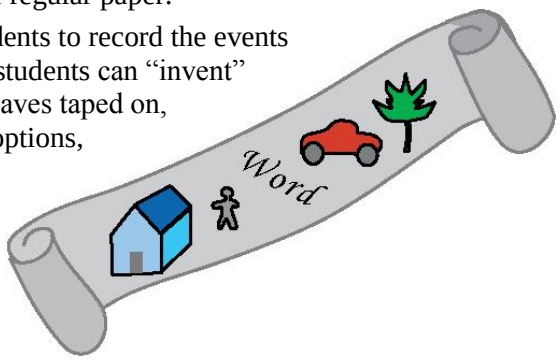
14. A variety of other items that could serve as symbols on maps or models.

Many small objects can be used to represent things in a room or outdoor play area. One important activity is for students to examine a variety of options and choose what they think is the best symbol for something – "What should we use to represent the globe? [offer a block, marble, model boat, . . .]"

15. Long pieces of paper.

These could be strips of butcher paper or adding machine rolls (do people still have any of those?!). You can also make them with taped-together strips of regular paper.

These strips are for "journey-scrolls" – forms for students to record the events of a story or the sights along a path. With guidance, students can "invent" a variety of "symbols," including drawings, words, leaves taped on, printed pictures that they choose among a variety of options, letters such as X or Y to represent their preference among alternative descriptive sentences spoken by the teacher there, many other options that fit a particular location.



16. Multiple identical colored wooden or rubber blocks for counting, model-building, representation.

One useful and very cheap option is to buy "pool-noodles" and cut them into ½ or ¾ inch slices. These can be placed in the room and then represented by coins or small paper circles in the room model. These symbols can mark treasures or track the movements of something during a story-telling about moving around the room. They can also illustrate ideas of proximity or region – e.g., by distributing a number of blocks in the room, having most of the orange blocks in one area and most of the blue blocks on another, and asking students to stretch a yarn or ribbon to divide the blue region from the orange region.

17. "Nerf" balls of different sizes, to explore idea of range (spatial aura)

"Let's try to use a string to show how far I can throw a nerf ball from this position in the room/play area/parking lot." "I can throw the small ball farther than a big ball, so more things are within range when I use a small ball." Like any other activity that relies on physical motion, expect large individual differences, which can in turn be used as teachable moments to promote a kind of "scientific inquiry."

18. Distinctive caps, bracelets, or other wearables

These are used along with printed drawings, models, or objects that might plausibly serve as symbols. For example, you could have all students with blue caps form a line in one part of the room, and then other students put blue circles in the classroom model or map to represent that group. Like many activities, these can be made very easy or quite challenging. Careful diagnosis is sometimes needed to identify students who still don't "get it" and need more scaffolding.

19. Extension: Strings that match easy-to-remember distance on maps or globes.

One very useful teaching tool is a "NYLA" (or "LANY"), which is a string just long enough to stretch from New York to Los Angeles on a globe. This distance (roughly 2500 miles) is coincidentally almost exactly one-tenth of the circumference of the earth. Students can use the NYLA-string to measure other distance on the globe. (See the student activity in the *Teaching Geography* CD: "How many LANYs from Kalamazoo to Timbuktu?")

20. Laminated or vinyl desktop and floor maps, and globes in "horizon-ring" cradles.

Maps hanging on a wall and globes mounted on spin axes may seem like a logical next step, BUT research has shown that many students have trouble accepting these common items as representations of the earth they live on. See separate document about map and globe design and selection.