



Granny's Garden School, Inc.

Teaching in the Gardens

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Mapping Skills in the Garden Grade Three

Lesson Summary

When to use this lesson

Use this in the fall when students are learning about mapping in the classroom.

Objective

Students design and label a simple map and answer questions to reinforce their understanding of cardinal directions.

Materials

A pencil for each student

A clipboard for each student

A sharpie for you

A blank map template of the garden area you will use for each student. **The templates are located on the lessons page of the website in the description for the mapping skills lesson in the grade three section. The garden map templates are created in Excel. You may modify the legend to include items you want the students to include. You will need to send a copy to the teacher for copies to be made for the students, or make a class set using the copier in the LPS teacher workroom (a code is needed).**

Compasses for your students to share; if they haven't been moved to the barn for the week of the lesson, the compasses are located in Granny's Garden School Office at 20 Miamiview Lane

Estimated Duration

30 minutes

Ohio Standards Connections

Social Studies – Geography

- Location A2: Use a compass rose and cardinal directions and intermediate directions to describe the relative location of places.
- Location A3: Read and interpret maps by using the map title, map key, direction indicator and symbols to answer questions about the local community.

In the Classroom

- Ask the students what a map is. A **map** is a visual representation of an area.
- Ask the students for three reasons why maps are important. Refer to the types of maps to pull information from the students. Some examples are: maps help you locate where countries and oceans are located; maps help you get from one place to another; maps help you locate where places and landmarks are located; maps help you learn about the geography, goods and services, populations of an area.

Revised 07-11

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- Ask students for three examples of maps. Some types of maps are climate maps to give information about climate and precipitation; economic or resource maps to show economic activity and types of natural resources; physical maps to show physical features like rivers, lakes, and mountains; political maps to show boundaries of states and countries, capitals, and cities; road maps to show mileage, highways, roads, airports, railroad tracks, cities, parks, rivers, lakes, and other points of interest; and topographic maps to show the elevation and shape of an area. In addition to these maps, other types of maps are atlases, globes.
- Ask if anyone knows the name for a map maker – **cartographer**. Explain that the students will be cartographers, or map makers in the garden. They will create a map of certain features in a garden area.
- Give each student a clipboard and worksheet. Keep a clipboard and worksheet for yourself.
- What do we need on our map? The major components of a map are a title, compass rose, legend, and scale.
 - What is needed to identify the map? Students add a **title** to the map.
 - The legend is the **key** on a map to explain symbols on the map. As a group, go over the items in the key that they will label, and ask the students to think of a symbol to represent the item. Have the student draw the symbol in the key. Explain that the symbol will be used to label the location of the item on the map.
 - The **scale** is used to read measurement on a map. A line of a certain length, like an inch, is used to represent a fixed measurement, like a number of miles. We are not adding a scale to our map.
 - The **compass rose** is the symbol on a map that shows directions. Ask the students if they know what cardinal and ordinal/intermediate directions are. Cardinal directions are north, south, east, and west. Ordinal/intermediate directions are northeast, northwest, southeast, and southwest.
 - Can you label the compass rose in the classroom? No, you must label the directions by orienting the map in the garden area. This means your map needs to be positioned to match the appearance of the garden area.

When You Are Outside

- Split the students into groups to share a compass. As a group, guide the students through the labeling of the compass rose. Give the compass to one student in the group. The compass is placed flat on the clipboard the student is holding. The clipboard is parallel to the ground. The “N” of the compass is at the top. To find north, the student with the compass turns until the point of the needle matches up with “N”. Find the point on the compass rose that matches up with the location of north on the map. Use the pre-labeled items on the map to guide you. Mark the direction on your compass rose and hold up for the students to see. Finish labeling the compass rose with the students by asking where the other directions would be located on the compass rose, e.g., where is east? East is the cardinal direction to the right of north on the compass rose.
- Have the students mark the location of the items in the key on their map. Discuss and show the pre-labeled areas on the map. Do one item together. Provide assistance as needed. Students do not need to walk to the item on the key to label the map. As the students complete their maps, complete your map.
- **Conclude the activity by reviewing the completed map.** Show your completed map. Ask the students questions to test their understanding of using the compass rose to find items,

e.g., what is located east of the parking lot (or some other item); if you are at the compost pile (or some other item), what direction will you travel to get to your garden bed (or some other item).

- **Optional, if you have extra time.** Ask the students if they can think of a way to figure out where east and west are if they are outside. To guide them through the process, ask the students in which direction does the sun rise? The sun rises in the east. And, in which direction does the sun set? The sun sets in the west. If they are outside in the morning, they will look for the position of the sun in the sky to find east. If they are outside in the afternoon, they will look for the position of the sun in the sky to find west.

Sources

- “What is a Map?”, Cartographic Connections, University of Texas at Arlington Library Special Collections. <http://libraries.uta.edu/ccon/whatis.shtm>
- “Compass Rose”, Wikipedia. http://en.wikipedia.org/wiki/Compass_rose
- “Cardinal Direction”, Wikipedia. http://en.wikipedia.org/wiki/Cardinal_direction
- “Types of Maps”, FactMonster.com. <http://www.factmonster.com/ipka/A0920936.html>