Put Me in My Place: Using Alphanumeric Grids to Locate Places

Students use a simple grid on a map.

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Grade Level: 1-2
Duration: 2 class periods

National Geography Standards

ELEMENT ONE: THE WORLD IN SPATIAL TERMS
1. How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.

Arizona Geography Standards

Grade 1
Strand 4 Geography
Concept 1 The World in Spatial Terms
PO 5 Locate physical and human features using maps, illustrations, images or globes:
   a. physical (i.e., continent, ocean, river, lake, mountains, islands)
   b. human (i.e., equator, North and South poles, country)

Concept 2 Places and Regions
PO 1 Discuss human features in the world (e.g., cities, parks, railroad tracks, hospital, shops, schools).

Grade 2
Strand 4 Geography
Concept 1 The World in Spatial Terms
PO 2 Interpret political and physical maps using the following elements:
   a. alpha numeric grids
   b. title
   c. compass rose - cardinal directions
   d. key (legend)
   e. symbols
PO 6 Locate physical and human features using maps, illustrations, images or globes:

Arizona Language Arts Standards

READING STANDARD:
Grade 1
Strand 1 Reading Process
Concept 2 Phonemic Awareness
PO 7 Blend spoken phonemes with more than three sounds into one-syllable words, including consonant blends and digraphs (e.g., /fl/ in flat)

Concept 3 Phonics
PO 5 Recognize high frequency words and irregular sight words

Strand 3 Comprehending Informational Text
Concept 2 Functional Text
PO 1 Follow a set of written multi-step directions with picture cues to assist
PO 2 Determine whether a specific task is completed, by checking to make sure all the steps were followed in the right order, with picture cues to assist.
PO 3 State the meaning of specific signs (e.g., traffic, safety, warning signs)

Grade 2
Strand 1 Reading Process
Concept 2 Phonemic Awareness
PO 8 Segment spoken phonemes contained in one-syllable words of two to five phoneme sounds into individual phoneme sounds (e.g., splat = /s/p/l/a/t/ using manipulatives to mark each phoneme)

Strand 3 Informational Text
Concept 2 Functional Text
PO 1 Follow a set of written multi-step directions
PO 2 Determine whether a specific task is completed, by checking to make sure all the steps were followed in the right order
PO 3 State the meaning of specific signs, graphics, and symbols (e.g., computer icons, map features, simple charts and graphs)

WRITING STANDARD:
Grade 1
Strand 2 Writing Elements
Concept 5 Sentence Fluency
PO 1 Write simple sentences

Concept 6 Conventions
PO 1 Incorporate conventions into own text, including:
   a. spacing between words
   b. spacing between lines
   c. consistent left-right and up-down orientation
   d. placement of title
PO 2 Use capital letters correctly for:
   a. the pronoun I
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**Overview**

Using maps to acquire and report information is an essential geography skill. Working with alphanumeric grids helps young children develop spatial perspective with maps and gives them confidence in answering the geography question, "What is this location?" They will then be well prepared for later work with more complex latitude/longitude grids.

**Purpose**

Children will learn and practice using an alphanumeric grid system. They will construct a neighborhood layout using this grid to locate common features. They will demonstrate their skill at using alphanumeric grids by locating places on a prepared map. (Children will also practice use of map legends.)

**Materials**

- For constructing a grid on a 3'x3' open wall space: 3-4 different colors of yarn, pushpins
- For constructing a paper grid to hang on a wall: 3'x3' sheet of butcher paper, yardstick, different colors of markers
- Various colors of 9"x12" construction paper for creating neighborhood symbols
- Chart paper
- Common Word Cards (Student Files that accompany this lesson)
- Neighborhood Grid Worksheets (Student Files that accompany this lesson)

**Objectives**

The student will be able to:

- Use an alphanumeric grid system to locate places on a neighborhood map.
- Spell simple words correctly.

**Procedures**

SESSION ONE - 30-45 minutes

Prepare in advance:
* A 3'x3' grid displayed on a wall for all children to see. Use different colors of yarn or different colored markers to make vertical and horizontal lines six inches apart. The colors will help children focus their eyes as they locate points on the grid. Label the vertical lines with numbers. Label the horizontal lines with letters.
* A variety of simple construction paper shapes to represent neighborhood features. Cut a variety of shapes and colors.
  - Large chart paper for spelling words and placing map symbols
  -...

1. Have children gather around the grid. Say, “Today we will create a neighborhood map. We know that a neighborhood is a place where people live, play, and sometimes work. To create our neighborhood map, we first need to decide on the important places that we want to include in our neighborhood. Think to yourselves of all the places in a neighborhood. As I write the places on this chart paper, you will help me spell the words.” (Accept all reasonable responses.)
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2. As you write the words on the chart paper, stretch out the word sounds to prompt the children to help you spell. For example, say, “Park ... right, a park is an important place to play in a neighborhood. What do you hear at the beginning of park? /p/ ... right, that's a P. Then we hear /ar/ ... that's AR. What do we hear at the end of park? /k/ ... right, that's K.”

3. Say, “Let’s use a green circle as a symbol for a park on our map.” (Tape a green circle next to the word “park” on the chart paper. Continue spelling out words and selecting symbols for each neighborhood place.)

4. Say, “Now that we’ve thought of the important places to include in our neighborhood, we will place them on a map. On the wall you see a special design called a grid. A grid is a tool to help us locate places on a map. This is called an alphanumeric grid because it uses letters of the alphabet and numbers. This line is line A.” (Run your finger across line A.) “Can you see line B?” (Call on a child to run finger along line B.) “Do you see line C?” Move your finger in the air along line C. Continue in same way until children have focused on each horizontal and vertical line.

5. Say, “Let’s begin to construct our neighborhood with the school. If I say locate the school at B2, we follow the grid line B and the grid line 2 to see where they meet.” (Run your fingers along the two lines to where they intersect.) “Right here is point B2.” (Tape or pin the school at B2. Continue to suggest points to place the neighborhood features. Call on children to run their fingers along grid lines to correctly place items at those points).

6. When all neighborhood features are placed on the map, ask a series of questions to get children to focus on using the grid lines. Of course, these questions will also prompt children to use the map legend! For example, say, “What is the location of the school? What is the location of the gas station? What is located at C3? What is located at F4?”

7. If there is time, remove neighborhood symbols and arrange them in a different layout using different grid coordinates or coordinates suggested by children.

8. Say, “We will use this geography tool—an alphanumeric grid—tomorrow to locate places in a neighborhood.”

SESSION TWO - 30 minutes

Prepare in advance:
Common Word Cards
Neighborhood Grid Worksheets

1. Say, “Today we will use an alphanumeric grid to locate places on a different neighborhood map that I’ve prepared for you on a worksheet. To answer the questions on the worksheet, we need to review some common words you’ll see.” (Use cards to review common words with students. Then review words you spelled together on the map legend in previous lesson).

2. Distribute Neighborhood Grid Worksheets. Say, “Let’s review how the alphanumeric grid works. Point to line A on your Neighborhood Grid. Run your finger across it. Point to line B. Run your finger along it.” (Continue through horizontal and vertical lines.) “Now let’s find C3. Put one finger on line C. Put another finger on line 3. Move your fingers to find where these two lines meet. This is point C3.” (Move around to check children’s accuracy in locating this point. Continue with several other examples).

3. Say, “Now you will read the questions on the second worksheet. Use the grid to answer the questions. When you get to the bottom of the page, you will write two grid sentences yourselves. Be sure to spell correctly the common words we reviewed.” (Assist beginning readers as needed to read the questions).

Assessment

Children will use an alphanumeric grid system to correctly locate 8 of 10 places on a prepared neighborhood map (Neighborhood Map Grid Worksheet).

Children will correctly use punctuation and capitalization when writing their two questions.

Extensions

Read books with neighborhood themes to set the stage for this lesson. Suggestions listed below in SOURCES.

In computer lab, children can use a simple drawing program (e.g., Kid Pix) to construct a playground or city map. Using line tools, they can overlay a grid, and using text tools, they can label lines with letters and numbers. They can add a compass rose and a legend/key. After printing their maps, children can formulate geographic location questions about their maps for classmates to
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solve. For example, "What is the location of the slide?" or "What is located at B2?"

Create a giant grid outdoors! Try a basketball court or an open yard space. Use yarn or tape to mark grid lines; use traffic cones to hold letter and number labels. Call out a location on the grid and have one child at a time locate themselves physically on that point. You can also work on compass direction skills. For example, "Move one point south." or "What direction would you move to go from C4 to A2?"

Construct a temperature graph on an enlarged sheet of graph paper. Label the horizontal axis DAYS OF THE MONTH. Label the vertical axis DEGREES F. (Consider using a two-degree scale to save space and challenge students a bit.) Check the daily morning temperature and have children take turns plotting the temperature point.

Sources


Map Adventures is a complete set of K-3 lesson plans on map skills, including one lesson on map grids. From the U.S. Geological Survey. Go to: http://www.usgs.gov/education/learnweb/MA/MAlesson6.html

The U.S. Department of Education offers this wonderful publication for parents on exploring geography topics with children. There are several sections on location skills. Go to: http://www.ed.gov/pubs/parents/Geography/