Maps with Meaning for Kindergarteners
By: Deidre Pribula

Overview:
This lesson will guide Kindergarten students to develop an understanding of maps using primary sources, guided instruction, and field experience.

1) Students will utilize a mental map exercise of the school surroundings.
2) Using a blank Map Analysis Tool students will state their personal observations of the two teacher provided maps (see attached) while the teacher transcribes their observations in the first column of Map Analysis Tool.
3) Utilizing that knowledge of recognizing patterns through a geographic lens the students will then create a teacher provided Sanborn Map of the school surroundings while on a walking field trip of the school surroundings.

Geographic Question:
How do Kindergarten students make sense of their surroundings through spatial understanding while utilizing a map?

National Geography Standards:
Geography Standard 2: How to use mental maps to organize information about people, places, and environments in a spatial context.

Oregon Geography Content Standards
K.7. Identify and compare and contrast pictures, maps and globes.

Connections to Common Core
Literacy SL. K. 1.a - Follow agreed-upon rules for discussions.

Objectives:
To understand that maps relay information about the surrounding area and then apply that understanding by color coding a Sanborn Map of the immediate buildings near the school.

Grade Levels: K    Time: 40 minutes
Materials:
Vocabulary –

1) A mental map - is a point of view tool that allows the students to explain their interaction with the area of interest (school) through a geological lens.

2) Sanborn map (these are normally color coded by building materials such as brick, wood, metal to assess fire risk but offer the student a larger understanding of the environmental factors used to construct buildings)

3) Topographical – to appear to be looking at the map from above (this shows a topographical view of the Portland, Oregon map population in 1894.)

4) Observe – to look with your eyes and read the space/pictures

5) Reflect – to think about

6) Question – something you want to know.

Map Analysis Tool - Teacher (see below)

Map Analysis Tool Whole Class – Blank (see below)

Crayons

Maps: (See Below)

(Sanborn Map Company 1894)

(Glover, E. S. Portland Oregon 1894)

*Teacher tip: I created this form easily in Google Docs with Goggle Drawing style option using shapes and lines.
**Background:** Kindergarten students will have recently experienced an on campus a Bike-A-Thon that will have exposed them to the immediate area around the school. Plus, the daily walks around campus the students will have previously experienced. The students will be asked to take visual inventory of the places they see; buildings, trees, pathways, etc. (foreshadowing.)

**Procedures:**
1) Walk the students through a mental map of the buildings they have just experienced at the Bike-A-Thon. This will be facilitated by the teacher. We will take five minutes asking them to remember what they saw immediately upon exiting the building towards the Bike-A-Thon activity.
   a. Close your eyes:
   b. What is something you remember when you left the classroom for the Bike-A-Thon?
   c. Were there any trees?
   d. What buildings do you remember?
   e. How Many buildings?
   f. Were there any walking/riding paths.

2) Students will walk among two designated areas of the room taking note of the provided maps.
   a. Display each map will be displayed on a smart board/projector or will have a predetermined magnifying glasses for ease of viewing smaller print.
   b. Teacher will lead the Map analysis tool exercise to draw student’s attention to certain areas. (See the Teacher Map Analysis Tool for direct questions.) This can be opened on the Smartboard as well.
   c. Observing – Teacher asks questions to start interest and then transcribes student’s answers on tool. Teacher will point out a legend if students did not recognize in the observing phase. Any unfamiliar words will read upon request of student. Draw out the shapes and patterns the students see. This is a great opportunity to introduce the vocabulary component (Sanborn Map, Topical, Legend, etc.)
   d. Students will then be lead through a reflection exercise to connect observations they have previously mentioned and connect with personal understanding/experience, teacher writes reflection comments in the second column.
e. Finally, the students will be guided through the questioning sequence, of what the student may want to greater understand, to complete the last column. Teacher demonstrates a form of question a student may have about maps and encourages students to continue asking questions.

3) Students will be asked to prepare for a walking field trip. Coats and restroom break.

4) Direct instruction of the legend colors that match which building resource, example: Brick = Red, Gray for Metal, and White = Wood. They will be given the time to make a note on their Sanborn Map Legend if they are unable to read. Students will then be handed a generic teacher created Sanborn Map, crayons/colored pencils.

5) They will then be led on a quick walk around the surrounding area to note the building materials by color to create their own Sanborn Map. These maps will then be used for Assessment

**Assessment:**
Students will be assessed on their ability to listen and follow the instructions given throughout this lesson. Visual participation will be observed. Proof of content understanding will be identified in student independent color-coding of the buildings on their *Student Sanborn Map Worksheet* matching the legend to the exterior building material used. The following rubric will determine a grade of Exceeds, Meets, or Needs Improvement.
## Rubric for Grading

<table>
<thead>
<tr>
<th>Category:</th>
<th>3</th>
<th>2</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td>Drawing</td>
<td>Colors all buildings on Student Worksheet. Stayed in the lines.</td>
<td>Colors all buildings on Student Worksheet.</td>
<td>Colors none of the buildings on Student Worksheet. May color whole sheet one color.</td>
</tr>
<tr>
<td>Material – Crayon color matches the elements in the building make up.</td>
<td>Matches all of the colors from worksheet legend with corresponding building materials.</td>
<td>Matches most of the colors from worksheet legend with corresponding building materials.</td>
<td>Matches none/some of the colors from worksheet legend with corresponding building materials.</td>
</tr>
<tr>
<td>On Task</td>
<td>Student was engaged, worked diligently, and added extra details (trees, people, etc.)</td>
<td>Student was engaged and worked diligently on task.</td>
<td>Student followed instructions some of the time. Spent time conversing with friends.</td>
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</tbody>
</table>

| | Exceeds Expectation | Meets Expectation | Needs Improvement |

### Extensions and/or Adaptations:

1) Students who have completed this information may make visual improvements to the maps. Walkers, bikers, manhole covers, and trees. They could even draw arrows of the path we followed (stickers may be used for this.)

2) The visual and tactile experience will also help develop a stronger understanding with ELL students.

3) This lessons allows for team building and scaffolding of student’s knowledge to improve retention of subject matter. Tag students can team up with developing students.

4) This entire lesson may also be done in pairs instead of individually for a shared grade. This lesson could also be done with older students with a “buddy” system for behavioral guidance and to engage the students.
Sources:


Professor provided Map Analysis Tool – modified by teacher for lesson
Map Analysis Tool with a Geographic Lens
Teacher

Teachers should use these questions to expand the student’s knowledge and inquiry skills for geographically analyzing these maps.

<table>
<thead>
<tr>
<th>Observe</th>
<th>Reflect</th>
<th>Question</th>
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<tbody>
<tr>
<td>What do you notice on these maps?</td>
<td>Have you ever seen any maps before?</td>
<td>What would you want to know more about these maps?</td>
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<tr>
<td>Are there any similar shapes?</td>
<td>What do you think these maps mean?</td>
<td>What else did you observe about the map? What questions do you have about this map?</td>
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<tr>
<td>What colors are on the maps?</td>
<td>Is this a map of our school, your home, some place you are familiar with?</td>
<td>What other information do you need to make sense of this map?</td>
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<tr>
<td>Do you see a pattern developing?</td>
<td>How do you think people use these maps?</td>
<td>What does this map leave you curious about?</td>
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## Map Analysis Tool with a Geographic Lens: Whole Class

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Teacher's Grading Guide for Student Sanborn Map Worksheet Activity

Brick=Red
Wood=White
Metal=Gray

Created 6/22/16 by Deidre Pribula
Student Sanborn Map Worksheet

Name: ____________________________