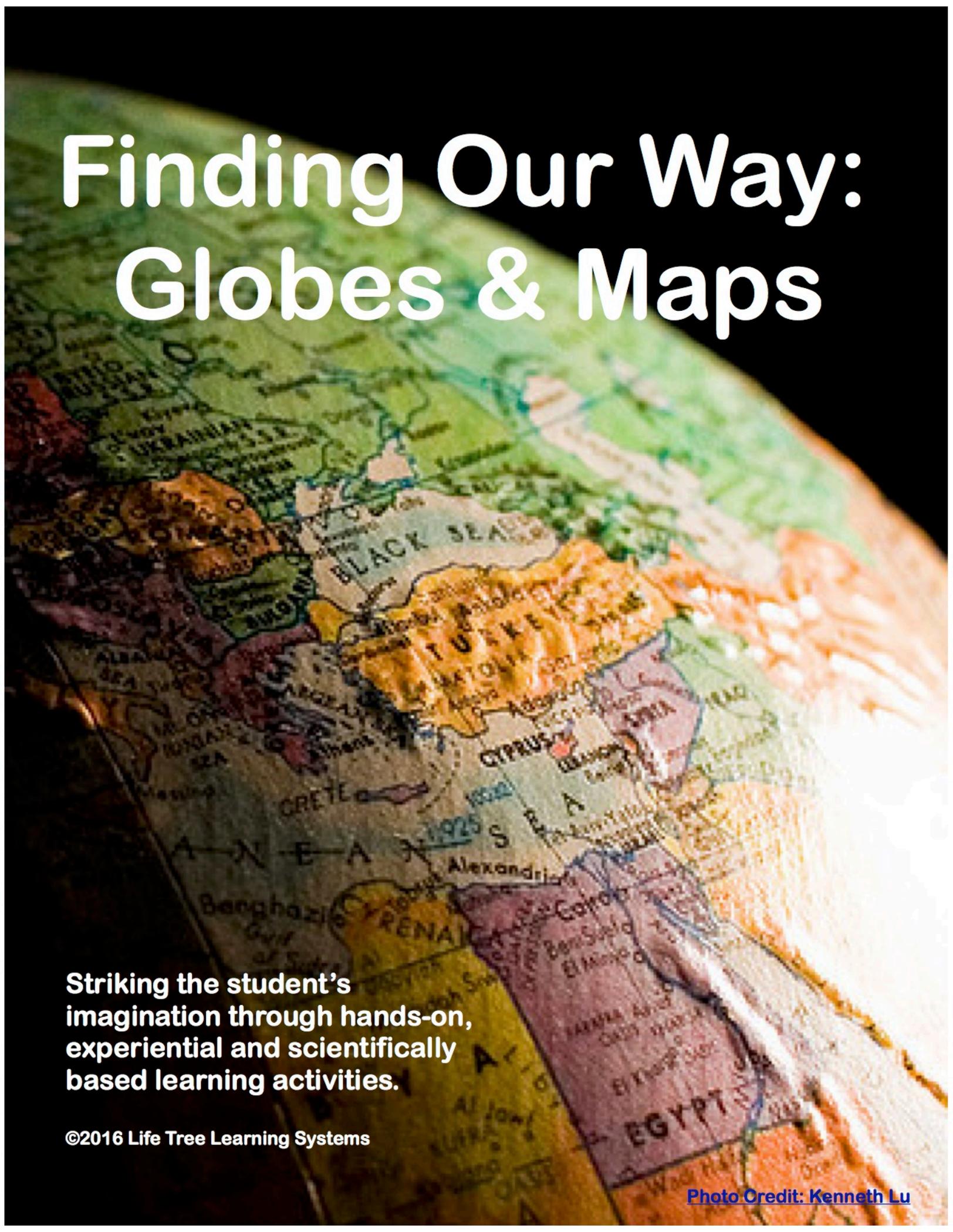


# Finding Our Way: Globes & Maps



**Striking the student's imagination through hands-on, experiential and scientifically based learning activities.**

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[Photo Credit: Kenneth Lu](#)

## Life Tree Learning Systems

is about creating cultural curriculums that strive to strike the student's imagination by using hands-on, experiential and scientifically based learning activates. Yes, this means that we want the students to be so excited and engaged in their learning that this passion for learning becomes a life long habit; where students learn not just to earn some extrinsic reward, but

because the learning is inherently rewarding and enjoyable. Towards that end, **LTLS** has created physical, biological and social science curriculums. At this point the following subjects are included: Astronomy, Physical Geography, History, Political Geography and Zoology.



*21st Century Teaching Tools*

The nexus of these curriculums are the Activity Cards. This ingenious format allows for individual, small group or large group work. This means you can set up an individual science center, have science teams that collaboratively work on an activity or even orchestrate an "Immersion Day" where the entire classroom is set up with various learning stations.

The front of the Activity Card is designed with the student in mind with appropriately sized font, controlled vocabulary, clear directions, a list of materials, and a picture of the material or the initial layout. The back of the card is a handy teacher's manual that contains the Objective/Aim, State Standard/Benchmark, Bloom's Taxonomy, Scientific Processes, Teaching Tips, Background Information, Gardner's 8 Intelligences, Control of Error, Mastery and Subject Integration. Yes, these activities are extremely well thought out and can be shown to any inquiring administrator, board member or parent to substantiate the rational behind the activity.

All of the Cultural Activity Cards are in a PDF (i.e. Adobe Portable Document Format). If you do not have Adobe Reader, it is freely available on the Internet; just do a Google search for it. These PDFs can be edited to a limited extent, which is explained below. In the near future, 'fillable forms' will be offered enabling the creation of your own activity cards, which can then be shared with the greater educational community. When appropriate, either a materials source is given under the Background Information section of the card or the actual materials are attached at the end of the PDF. Each cultural subject is organized by a graphic checklist (think restaurant menu) that is found at the beginning of each PDF strand (e.g. The Universe, The Solar System, Earth). This checklist can be used by students to select work and by the teacher to record work by dating a completed activity.

# Pol. Geography Checklist

Name \_\_\_\_\_

Green lined = Possible works; Red lined = Already mastered or not on shelf;  
Slashed (/) = Completed & mastered activity; Line over (—) = Repeat work; Mo./Yr. by completed work

## The Globe – 1 Sky Blue

The Globe:

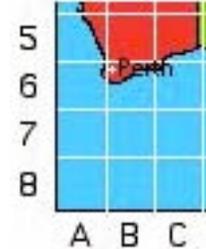


- Parts 0.A (1+)
- Directions 0.B (1+)
- Address 0.C (2+)
- Orange Globe 0.D (2+)
- Globe to Map 0.E (2+)

Maps:



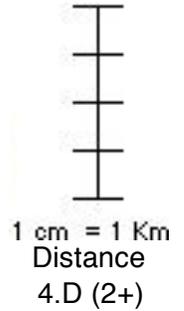
Types  
4.A (1+)



Finding Places  
4.B (2+)

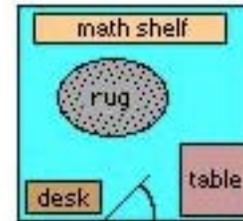


Symbols  
4.C (1+)



Distance  
4.D (2+)

Making Maps:



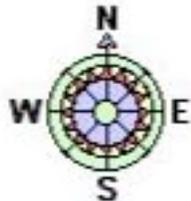
Map Your Room  
6.A (2+)



Map Your Neighborhood  
6.B (2+)

## Introduction to Maps – 2 Silver

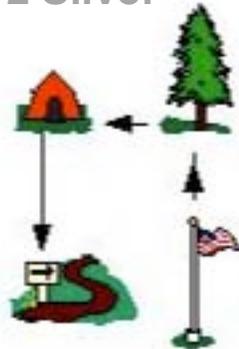
Direction:



Make a Compass  
2.A (1+)



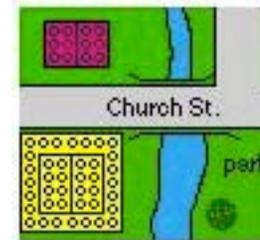
Compass Rose  
2.B (2+) 2.B1 (1+)



Orienteering  
2.C (2+)



Google Maps  
6.B1 (1+)



Lego Town  
6.C (1+)



Mt. Capulin Contour Map  
6.D (2+)

World Maps:



Continent  
8.A (PK+)

Seas  
2.B (1+)

Oceans  
8.B (K+)

**Author:** Paul Bareis-Golumb      **Entry Date:** 8/29/2000      **Bench/Standard:**

**Obj/Aims:** The student will:locate various countries using longitude and latitude coordinates; understand how to use coordinates with Google Maps

**Bloom's**

**Tax:**     Remembering     Understanding     Applying     Analyzing     Evaluating     Creating

**8 Intell:**     Intrapersonal     Interpersonal     Logical     Verbal     Visual     Musical     Bodily     Nature

**Mastery:** The student will: correctly locate at least 7 of the 9 countries.

**Control of Error:** Command card or use Google Maps to check

**Strikes Imagination:** Use of the globe and Google Maps

**Integrating:**     Math     LA     Astro     Geo/Hist     Bot/Zoo     Phy Science/Tech     Music     Art

**Teaching Tips**

- While globes are similar, the degrees can be shown different ways on different globes. Show the student where to find the degree markings on that particular globe. Remind them how to find the intersection of the longitude and latitude.

- With Google Maps, the students will need to zoom out to discover the country. It's more interesting if it is set to 'Satellite' instead of 'Map'. The coordinates for Google Maps are in the (parenthesis).

**Background Information**

Answers:

- A. Norway
- B. Algeria
- C. Guatemala
- D. Argentina
- E. South Africa
- F. Greenland
- G. Philippines
- H. Australia
- I. Antarctica

From:

**Scientific Processes:**

- Observing
- Classifying
- Inferring
- Measuring
- Researching
- Experimenting
- Collect & Organize Data
- Predicting
- Hypothesizing
- Design an Investigation
- Operational Definition
- Formulating Models

The Globe: Overview

Political Geography

**2nd+** Gr.

## Global Addresses

**0.C**

Directions

1. Find 40° North Latitude and 120° West Longitude on the globe. Find where the two lines cross, or intersect. Check your answer by entering the coordinates into the search bar of Google Maps. Just enter the numbers and the abbreviated direction (e.g. 40 N, 120 W). Eureka! You've found California!

2. See if you can find what countries lie at these global addresses and ✓ with Google Maps:

- A. 60° North Lat., 10° East Long. (60 N, 10 E)
- B. 30° North Lat., 0° East Long. (30 N, 0 E)
- C. 15° North Lat., 90° West Long. (15 N, 90 W)
- D. 30° South Lat., 60° West Long. (30 S, 60 W)
- E. 30° South Lat., 30° East Long. (30 S, 30 E)
- F. 75° North Lat., 30° West Long. (75 N, 30 W)
- G. 15° North Lat., 120° East Long. (15 N, 120 E)
- H. 30° South Lat., 120° East Long. (30 S, 120 E)
- I. 75° South Lat., 60° East Long. (75 S, 60 E)

Materials Needed

Globe with both latitude/longitude lines and their degrees indicated, computer/tablet to locate places using Google Maps



**Obj/Aims:** The student will:construct a working compass; know the orientation of the 8 directions.

**Bloom's**

**Tax:**  Remembering  Understanding  Applying  Analyzing  Evaluating  Creating

**8 Intell:**  Intrapersonal  Interpersonal  Logical  Verbal  Visual  Musical  Bodily  Nature

**Mastery:** The student will:successfully completed compass; can point in the appropriate direction when it is named

**Control of Error:** Commercial compass; activity card, teacher

**Strikes Imagination:** Water, use of magnet

**Integrating:**  Math  LA  Astro  Geo/Hist  Bot/Zoo  Phy Science/Tech  Music  Art

**Scientific Processes:**

- Observing
- Classifying
- Inferring
- Measuring
- Researching
- Experimenting
- Collect & Organize Data
- Predicting
- Hypothesizing
- Design an Investigation
- Operational Definition
- Formulating Models

**Teaching Tips**

- After the student constructs the compass, engage them in a discussion as to what direction the needle is pointing and why.
- This activity can be simplified by using only the four primary directions of E, N, S and W.
- A large dish (plastic, ceramic) is preferable as the cork will tend to float towards the sides due to the physical law of attraction.
- A round, cork disk can be obtained by slicing a thin (1/8 in. thick) section from the end of a wine bottle cork.
- Make sure to use permanent ink when marking the pebbles.

**Background Information**

The Earth's **North Magnetic Pole** is the point on the surface of the Northern Hemisphere at which the Earth's magnetic field points vertically downwards. It is the direction that a magnetic compass will point to as "north". However, the North Magnetic Pole is not at the same location as the Geographic North Pole, and so "magnetic north" is not the same as "true north".

The North Magnetic Pole moves slowly over time due to magnetic changes in the Earth's core. In 2001, it was determined by the Geological Survey of Canada to lie near Ellesmere Island in northern Canada at 81.3°N 110.8°W. It was estimated to be at 82.7°N 114.4°W in 2005. In 2009, it was moving toward Russia at between 34 and 37 mi (55-60 km) per year.

From: [http://en.wikipedia.org/wiki/North\\_Magnetic\\_Pole](http://en.wikipedia.org/wiki/North_Magnetic_Pole)



Directions

1. Inside the dish, place the pebble with:

**N** (North) at the top,

**S** (South) at the bottom,

**W** (West) to the left,

**E** (East) to the right,

**NE** (Northeast) between the N & E,

**SE** (Southeast) between the S & E,

**SW** (Southwest) between the S & W,

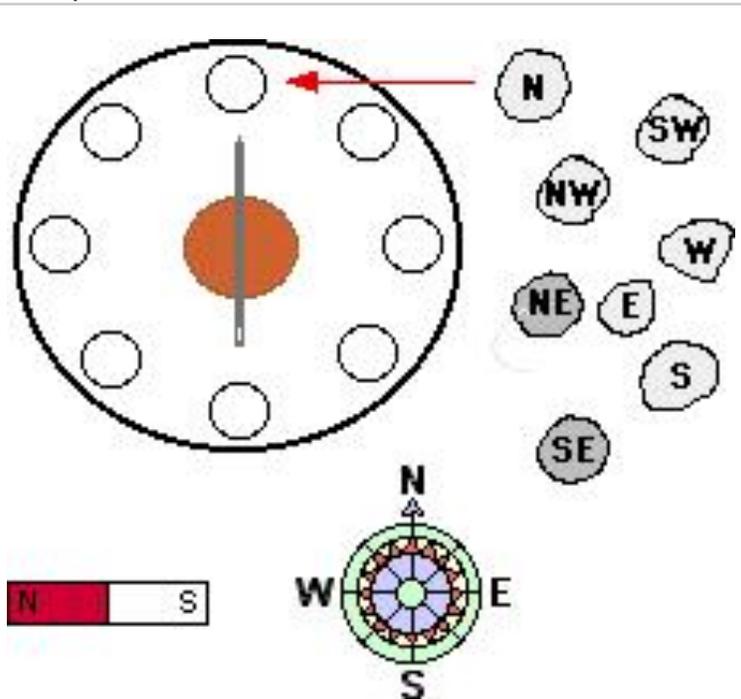
**NW** (Northwest) between the N & W.

2. Carefully fill the dish with water. What do you think will happen when you stroke the needle with the magnet in one direction, and then place it on the cork disk? Why do you think this will happen? Write down your hypothesis in your Science Journal. Now actually do the experiment observe what happens. Record your observations in your Science Journal. Was your hypothesis correct?

3. Slowly rotate the dish until the needle is pointing at the **N**. This is magnetic north.

Materials Needed

Large, round, flat-bottomed dish; cork disk, needle, magnet, water, compass & pebbles marked with: N, S, W, E, NE, SE, SW, & NW; Science Journal and pencil



**Author:** Paul Bareis-Golumb      **Entry Date:** 9/18/2002      **Bench/Standard:**

**Obj/Aims:** The student will: draw a map of their neighborhood including colors and symbols to represent real places (key); know how to use Google Maps

**Bloom's**

**Tax:**     Remembering     Understanding     Applying     Analyzing     Evaluating     Creating

**8 Intell:**     Intrapersonal     Interpersonal     Logical     Verbal     Visual     Musical     Bodily     Nature

**Mastery:** The student will: draw a map to the best of their ability that includes: names, symbols and color coding of the real places

**Control of Error:** Teacher checked

**Strikes Imagination:** Use of Google Maps

**Integrating:**     Math     LA     Astro     Geo/Hist     Bot/Zoo     Phy Science/Tech     Music     Art

**Teaching Tips**

- Explain the differences in perspective; the difference from 'top down' to 'side view'. (This can be shown with Google Maps.) Both perspectives are fine when drawing their maps. A gifted drawer could even draw things in 3D.
- This work makes a great homework project.
- Older students can use graph paper and then measure and draw their neighborhood to scale.
- If a computer or Internet connection is not available, a hardcopy of a location can be provided.

**Background Information**

**Google Maps** is a desktop and mobile web mapping service application and technology provided by Google, offering satellite imagery, street maps, and Street View perspectives, as well as functions such as a route planner for traveling by foot, car, bicycle (beta test), or with public transportation. Also supported are maps embedded on third-party websites via the Google Maps API, and a locator for urban businesses and other organizations in numerous countries around the world. Google Maps satellite images are not updated in real time; however, Google adds data to their Primary Database on a regular basis. Google Earth support states that most of the images are no more than 3 years old.

From: [http://en.wikipedia.org/wiki/Google\\_Maps](http://en.wikipedia.org/wiki/Google_Maps)

**Scientific Processes:**

- Observing
- Classifying
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- Researching
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- Collect & Organize Data
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- Design an Investigation
- Operational Definition
- Formulating Models

Introduction to Maps: Making Maps

Political Geography

**2nd+** Gr.

Google Maps

**6.B1**

Directions

1. Go to [googlemaps.com](http://googlemaps.com). Enter the address of your house, school or a significant landmark. Zoom in until you can see several blocks around the location.
2. List the places and nonmoving things you see. (buildings, streets, trees, and so on) Think about how big they are and how far apart they are from each other.
2. With a pencil, draw in the streets, then add shapes to stand for buildings, trees and the like.
3. Color code your map with colored pencils or markers. Use one color for trees, another for houses, and so on. Draw a key to show what the colors and shapes stand for.
4. Finally, label the important places with their names such as your home, church or school.

Materials Needed

Map or landscape paper, pencil and colored pencils or markers

