

# Ames Public Library @HOME Activities

## Map Skills

People have been making maps for thousands of years. Learning to read maps requires spatial reasoning skills that connect math to the physical world, and includes skills like understanding symmetry, and building 3D objects. Spatial reasoning skills correlate to early achievement in mathematics and “strongly predict” who will pursue STEM careers. To learn more see a related video on the Library’s YouTube Channel at <http://bit.ly/APLvideos>.

### Books and Media:

Title	Author / Performer	Call Number
<i>What Is a Map?</i>	Besel, Jennifer	J 912 BES
<i>Maps and Mapping</i>	Deborah Chancellor	J 912 CHA
<i>The Story of Maps and Navigation</i>	Ganeri, Anita	J 912 GAN
<i>How to Read Maps</i>	Fullman, Joe	J 912 HOW
<i>National Geographic Ultimate Globetrotting World Atlas</i>	(National Geographic)	J 912 ISA
<i>What Would You Do with an Atlas</i>	Kralovansky, Susan	J 912 KRA
<i>Maps of the World</i>	Lavagno, Enrico	J 912 LAV
<i>Maps</i>	Mizielińska, Aleksandra	J 912 MIZ
<i>National Geographic World Atlas for Young Explorers – 3<sup>rd</sup> Edition</i>	(National Geographic)	J 912 NAT
<i>World Atlas</i>	Růžička, Oldřich	J 912 RUZ
<i>If Maps Could Talk</i>	Shores, Erika	J 912 SHO

### Websites:

URL	Notes
<a href="https://www.timeoutdoors.com/expert-advice/walking/kit/map-reading-skills">https://www.timeoutdoors.com/expert-advice/walking/kit/map-reading-skills</a>	Great website for learning map skills
<a href="https://www.ngdc.noaa.gov/geomag/calculators/magcalc.shtml?#declination">https://www.ngdc.noaa.gov/geomag/calculators/magcalc.shtml?#declination</a>	This is a great website that helps calculate magnetic north

## Take Away Kit: Map and Compass

### Bag Contents:

- 1 Map
- 1 Compass

To learn how to read a map and to use the compass watch the @Home Activity video on the library's YouTube Channel at <http://bit.ly/APLvideos>.

Spatial thinking is one of the most important skills that students can develop as they learn geography, Earth, and environmental sciences.

Learning to read a map can be a fun activity for the family. Somethings to consider about maps:

- Maps show where things are located, usually from a place above.
- A map is a small model that represents something that is much larger.
- Maps have a compass rose that shows directions.

Using these guidelines, see if you can draw a map of your neighborhood. You can add details on the map to make it more interesting.

You can also use the map provided to locate your home, school, the Library or other important places in Ames.

Using the compass and the map, go for a walk with your family. See if you can navigate your way back.

## Vocabulary

Birds'-eye-view – An elevated view of an object from above, as though the observer was a bird. It is often used in floor plans and maps.

Boundary – Most commonly, a line that has been established by people to mark the limit of one political unit, such as a country or state, and the beginning of another.

Cardinal directions – The four main point of a compass: north, south, east, and west which are also known by the first letter—N, S, E, and W. These four directions are also known as cardinal points.

Cartographer – Someone who draws, plans, and studies maps.

Cartography – The making and studying of maps.

Compass Rose – A figure on a map, chart, or a compass that displays the directions. Most show points for the cardinal directions of North, East, South, and West.

Globe – A round model of the world.

GPS – an electronic tool used to find the location of an object; GPS stands for Global Positioning System.

Grid – A network of evenly spaced horizontal and vertical lines used to identify locations on a map.

Map legend – A list or a chart that explains symbols on a map or graph.

Ordinal directions – Northeast (NE), southeast (SE), southwest (SW), northwest (NW). Ordinal directions are also known as inter-cardinal directions.

Route – The path you follow to go somewhere.

Scale – A map tool that compares distances in a map to real distances on Earth.

Source: The Story of Maps and Navigation by Anita Ganeri, J 912 GAN

