Coordinate Plane Lesson Plan

Grade Level/Subject: Science or math (Could be simplified to 3rd grade level by making the coordinates all positive)

Key Concept: Locations on the Earth and sky can be represented by a set (pair) of numbers

Description: Students will learn to use the globe and to use coordinate grids (flat and spherical).

Materials Needed:
Tactile Earth globes
APH Graphical aid for Mathematics for each visually impaired student
[Graph paper and pencils for sighted students]

Procedures:
Pass out tactile Earth globes
   On the globe locate North America, US, Texas
Discuss Northern and Southern Hemispheres
Identify
   Equator and Prime meridian
   latitude circle
       (parallel with equator, decreasing in size)
   longitude circle
       (goes through the poles, same size, more or less)
Discuss
   Appearance of stars as being on a sphere with Earth in the center of the sphere (Same as the globe, except we are inside)
   Constellations are arbitrary groups of stars viewed pictures usually related to mythology
Discuss

Moving from round earth to flat map,

Latitude and longitude can be represented by rectangular grid lines, if the area is small compared to the size of the Earth

Same is true for star maps

Set aside globes and pass out coordinate planes (tactile graphic boards)

APH graphical aid for mathematics

Regular graph paper

APH graph paper with axes

Orient to x and y axes, extra pins in upper right corner

Practice plotting

Examples: (3, 1), (-2, -4), (-1, 4), (5, -2), (0, 3), (-2, 0)

Plot constellations: See Constellations Activity