

## Practice Being a Satellite

Your smartphone or tablet tracks you in two ways. The first is through the GPS (Global Positioning System) chip in the device. The U.S. Department of Defense sent 24 satellites up into space to orbit the earth. Your receiver locks on to the satellites. It needs to be connected to at least three satellites to get your 2D position (latitude and longitude) and 4 or more to collect your 3D position (latitude, longitude and altitude).

In the activity below, use the coordinates (latitude and longitude) to find the locations of the landmarks on a map of the US.

If your phone doesn't have GPS, it can use information from nearby cell towers to pinpoint your location.

**HINT:** Latitude = North / South    Longitude = East / West    Altitude = Height

**TIP:** For more information on how GPS and geolocation work visit: <http://www8.garmin.com/aboutGPS/>



Find the locations on the map using the coordinates below and match them to their corresponding landmarks  
Coordinates (GPS locations) <http://www.gps-coordinates.net/>

	LATITUDE	LONGITUDE	ALTITUDE
1	LAT: 40.689249	LON: -74.0445	ALT: 2,0 MTS
2	LAT: 39.94961	LON: -75.150282	ALT: 9,0 MTS
3	LAT: 37.819929	LON: -122.478255	ALT: -97 MTS
4	LAT: 21.344507	LON: -157.974891	ALT: 0 MTS
5	LAT: 43.879102	LON: -103.459067	ALT: 1703 MTS

