GLOBAL POSITIONING SYSTEM (GPS)

PURPOSE

To help your Cadets learn to use a GPS receiver that will help their exploring experiences in God's creation.

LEARNING

Latitude/Longitude Symbols

° = degrees
' = minutes
" = seconds

1. Longitude
   a. Closer; North and South Poles; longitudinal lines
   b. Africa and Europe
   c. 180° EW longitude; Asia
   d. North America and South America
   e. Canada, United States, Mexico, Guatemala, and El Salvador
   f. Russia, Japan, Papua New Guinea, Australia
2. Latitude:
   a. Zero; north; south
   b. North Pole; South Pole; 45° latitude; United States, Canada, and France
   c. Atlantic; no — as soon as you move away from 0° you add N or S, E or W. Only at 0° 0° is there no distinction needed.
   d. 105° W longitude, 40° N latitude; latitude and longitude; west; north
3. Understanding
   a. Self-explanatory
   b. Pencil — second satellite; string — its signal; no
   c. Yes, the satellites could converge toward or away from earth
   d. No
   e. Airplane pilot; mountain climber
   f. Self-explanatory
   g. Longitude, latitude, and feet above sea level
   h. It changes.

DOING

1. Tracks or gets a strong signal from four satellites
2. Self-explanatory
3. Latitude; longitude; feet above sea level
4. Navigating
   a. Distance to the waypoint; direction to the waypoint (compass bearing); time it will take to reach your waypoint at your current velocity; your location; speed at which you are traveling to your waypoint
   b. The waypoint's exact latitude and exact longitude; a waypoint name, number, and symbol
5. Planning a route
   a. Home; your favorite place

      Put the following information at each intersection — distance to the next waypoint; time to get to the next waypoint; direction to go to the next waypoint.
   b. Self-explanatory