

*Inspiring Inquiring Minds:  
Using GPS in the Classroom*

*Not all those who wander are lost...*  
*J.R.R. Tolkien*

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# What is GPS?

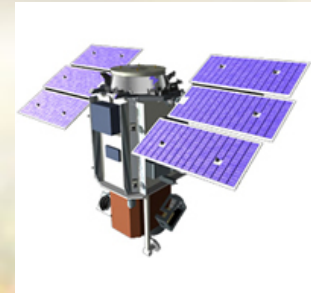
- GPS is funded by and controlled by the US Department of Defense (DOD). While there are many thousands of civil users of GPS world-wide, the system was designed for and is operated by the U. S. military.
- GPS provides specially coded satellite signals that can be processed in a GPS receiver, enabling the receiver to compute position, velocity, and time.
- Four GPS satellite signals are used to compute positions in three dimensions and the time offset in the receiver clock.

# How is GPS used?

- Besides being used by the military, GPS is used in forestry, biology, fishing, hunting, boating, racing, nursing, and many other fields.
- GPS technology can be effectively used in your classroom as well.

# How does GPS work?

- A GPS device receives signals from satellites orbiting the earth to triangulate your location, which will be given as a global address.
- Or, the GPS device can lead you to a previously marked location, much like a compass.



# GPS Video



# How do I get a GPS receiver?

- They range in price from about \$100 to well over \$1,000.
- Consider writing a mini-grant to get 4 or 5 to be used at your school.
- Borrow them from husbands, friends, or parents of your students to use for a geocache.
- Parish has a set of 12 that can be checked out!!

# What is Geocaching?

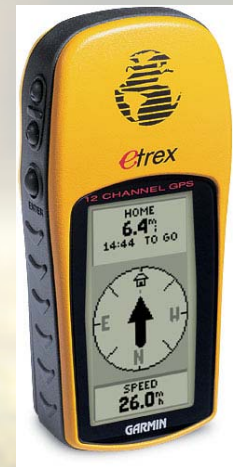
- One of the fastest growing “new” sports.
- Has participants in many countries outside of the US and Canada.
- Is a modern day active treasure hunting activity that allows you to use GPS – and therefore a “global address” – to locate a cache.

# Are there rules for Geocaching?

- Yes, they are:
  - 1. *Take something from the cache*
  - 2. *Leave something in the cache*
  - 3. *Write about it in the logbook*
  - 4. *Do not move the cache*

# What do I need to start a Geocache?

- Container(s) with a lid – usually plastic and waterproof
- At least one GPS device
- Something to put in the cache





# Versions of Geocaching to use in the Classroom

- Scavenger Hunt – students take a sealed clue from each cache and bring back to a predetermined location to open and solve a riddle or mystery
- Content Specific Caches – each cache has an activity that deals with one particular subject area (ex. – each cache has a math problem that students must solve)



## Classroom, cont.

- Interdisciplinary Cache – each cache has information or an activity from a different subject subject area
- Holiday Themed Cache – find Easter Eggs or Halloween candy!
- Science/Social Studies Cache – each “cache” is actually a tree, plant species (or something similar), or landmark that students must identify

# Just Remember...

- Take Something (may be physical or a “fact”)
- Leave Something (usually)
- Do not move the cache