

Introduction to Geocaching



What is geocaching?

- ▶ Someone hides a treasure (cache).
- ▶ “Hider” posts waypoint on internet.
- ▶ “Seekers” find cache information on website, then program waypoint into GPS.
- ▶ When located, seeker signs logbook and swaps treasure.
- ▶ Can also log the find on the website.

When did it begin?

- ▶ Initiated in 1973 by Dept of Defense as a military navigational tool to pinpoint “locations.”
- ▶ 24 Satellites orbiting at high altitudes (11,000 miles); signals intentionally distorted.
- ▶ In May 2000, distortion was disabled.
- ▶ In Oregon, “Great American Stash Hunt”
- ▶ Geo = *earth*; cache = *hiding place*

Who does it?

- ▶ Curious people; parents and kids; more and more physical education teachers!
- ▶ Caches in all 50 states, over 220 countries, more than 989,000 active caches.
- ▶ Every week around 61,000 account holders place more than 470,000 new logs.
- ▶ Ranked by difficulty to reach, and to locate.

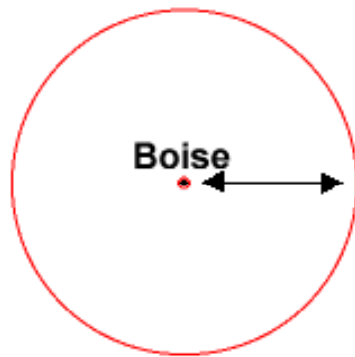
What do I need?

- ▶ \$100 GPS unit
- ▶ \$500 computer with internet access
- ▶ Multi-billion dollar satellite system!
- ▶ Sense of adventure and curiosity
- ▶ A little luck

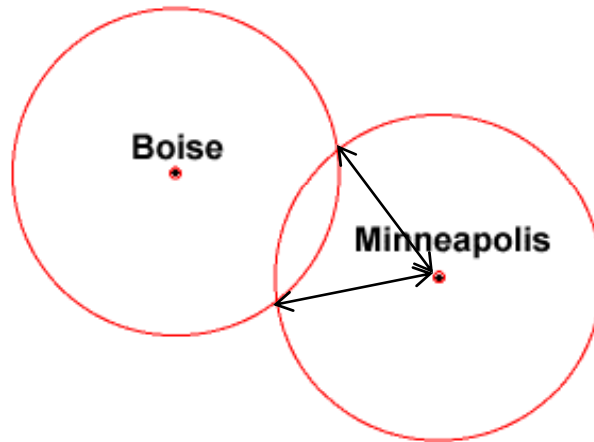
How does a GPS work?

- ▶ 24 satellites send signals that are detected by the GPS
- ▶ Useful night & day – rain or shine
- ▶ Accuracy depends on unit; some are accurate to a centimeter
- ▶ GPS provides basic navigation information such as: your current *position* (coordinates, elevation), *direction* to specified waypoints, *distance* to waypoints, *speed* of travel, and *direction of travel*
- ▶ Signals used to TRIANGULATE your position.

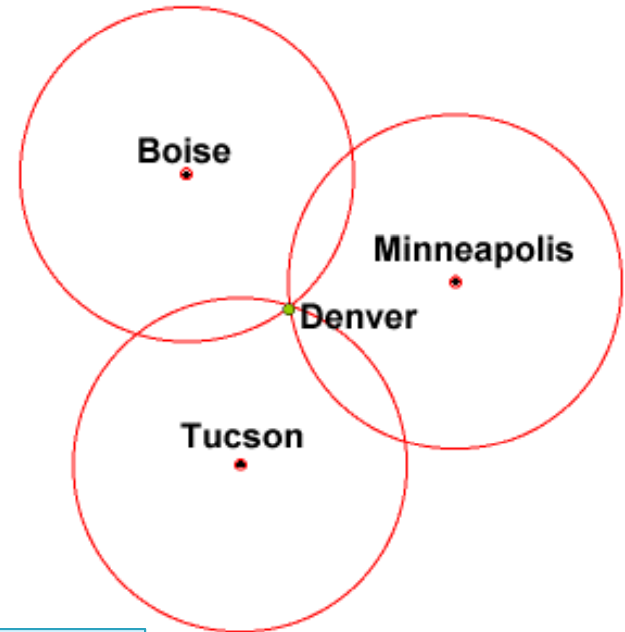
What is triangulation?



625 miles from Boise



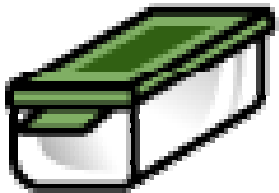
690 miles from Mpls



615 miles from Tucson

With three known points, you can determine that your exact location is somewhere near Denver, Colorado!

A Few of Many Geocache Types



Traditional Cache

This is the original cache type consisting, at a bare minimum, a container and a log book. Normally you'll find a tupperware container, ammo box, or bucket filled with goodies, or smaller container ("micro cache") too small to contain items except for a log book.

- *Cache la Poudre*
- *Estes Park*
- *Salt Lake City parking lot*



Multi-Cache

A multi-cache ("multiple") involves two or more locations, the final location being a physical container. There are many variations, but most multi-caches have a hint to find the second cache, and the second cache has hints to the third, and so on.

- *New Orleans*



Virtual Cache

A virtual cache is a cache that exists in a form of a location. Depending on the cache "hider," a virtual cache could be to answer a question about a location, an interesting spot, a task, etc.

- *Downtown Greeley*



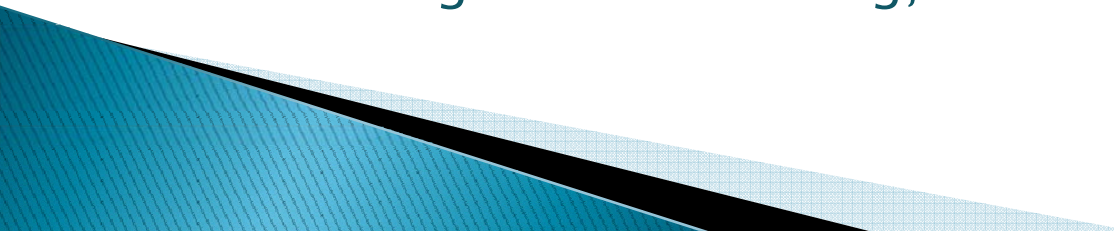
Travel bug

A travel bug is a trackable tag that you attach to an item. This allows you to track your item on geocaching.com. The item becomes a hitchhiker that is carried from cache to cache and you can follow its progress online.

- *Ballparks*

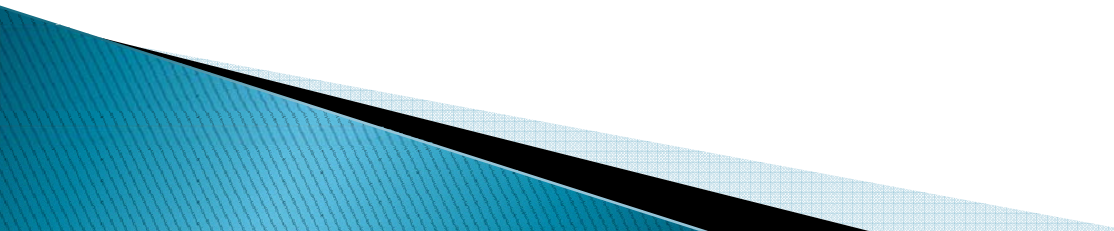
Ideas for caches

PHYSICAL EDUCATION

- Caches contain specific skills (hop, skip, throw, dribble, juggle). Teams collect all clues, return to a central location and perform the skills – or incorporate into a game or routine.
 - Caches contain clues related to health-related fitness. Teams collect clues and correctly identify terms associated with concepts.
 - Teams race from cache to cache to collect and solve clues in shortest time.
 - Download hiking and biking waypoints to use while traveling. Same for skiing, canoeing, kayaking.
- 

SCIENCE

Caches (stickers/laminated cards/zip lock bags) contain clues for answering questions about:

- Trees (deciduous, conifer, etc; or leaf identification, or leaf type (serrated, pinnate))
 - Plant species (buttercup family: columbine, pasque flower, clematis; composite family: heart leaf arnica, sagebrush)
 - Bird types (raptors: hawks, eagles, owls; gamebirds: pheasant, quail; songbirds)
 - Mammals (identified by tracks, scat, markings on vegetation)
- 

MORE SCIENCE

Things to do at caches:

- Using material provided, tie a surgeon's knot and return it with worksheet.
- Find an example of a leaf described on the worksheet (tiny leaves that overlap like scales, and a dark blue berry – answer: *juniper*); take a digital photo of the leaf and tree.
- Take a photo of a prominent feature (large tree, culvert, bridge); others must locate exact spot and log by latitude and longitude.

HISTORY

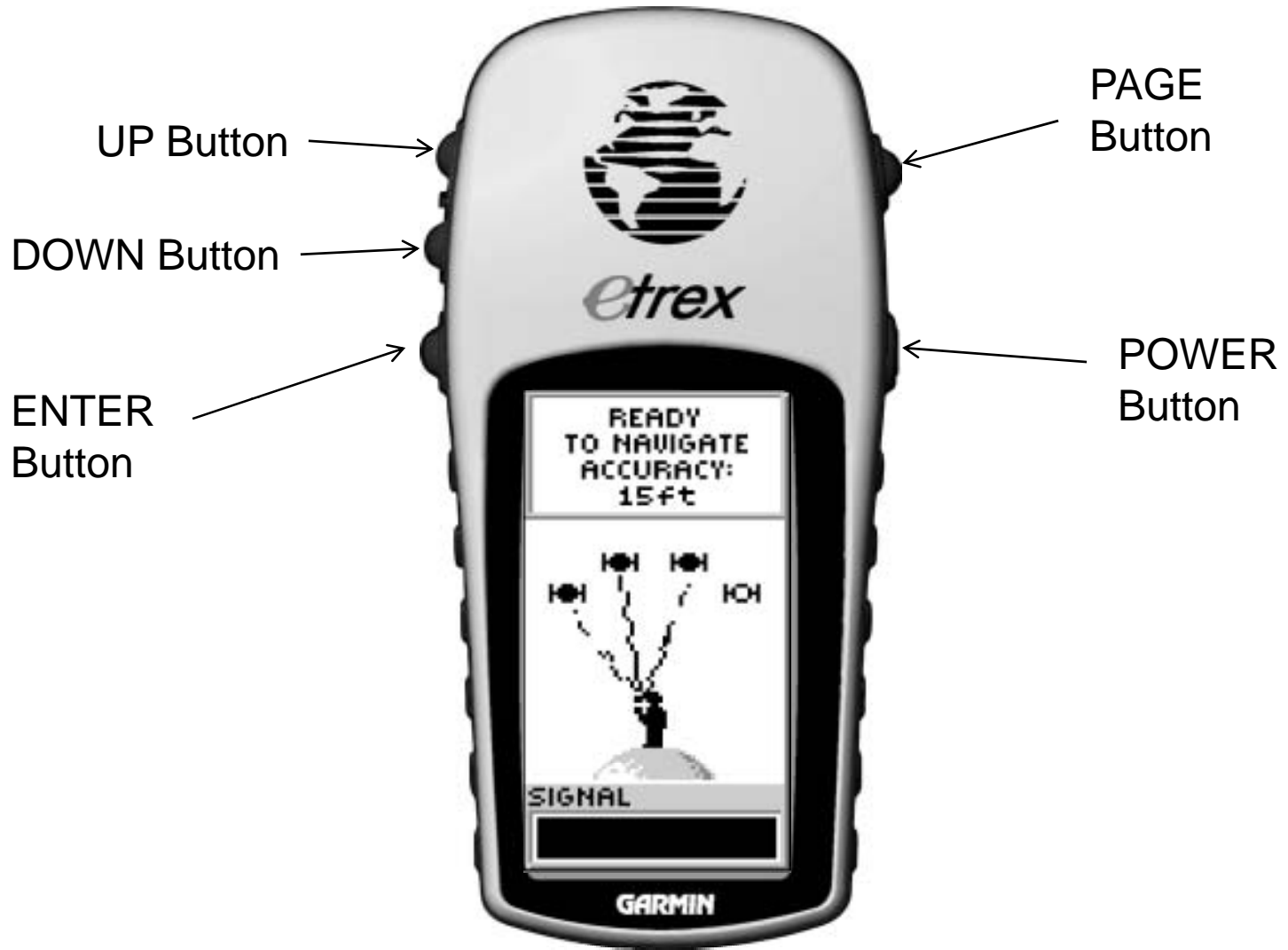
Use multi-caches where clues from one lead to the next.

- Find a particular landmark (e.g., civil war cannon). Using a code (e.g., a=1, b=2) convert the last three letters of the cannon's manufacturer. The resulting numbers represent the last 3 digits of the next waypoint.

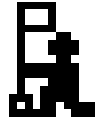
WRITING

Use travel bugs that visit important locations.

- “I want to visit the birthplace of these famous American writers: Mark Twain, Edgar Allen Poe, Gay Timken, etc. – Please send a digital photo of a prominent landmark in that city” – kids must figure out the city, hence writer.



MENU



MARK



WAYPOINTS



ROUTE



TRACKS



SETUP



06:24:14pm

31-DEC-05



ADD WAYPOINT TO ROUTE

0-9

TRAIL

A-D

E-H

I-L

M-P

Q-T

U-Z

NEAREST

DELETE ALL

MARK
WAYPOINT



ELEV: 813ft
N 39°03.090'
W 94°26.171'

REVIEW
WAYPOINT



TRAIL

DELETE

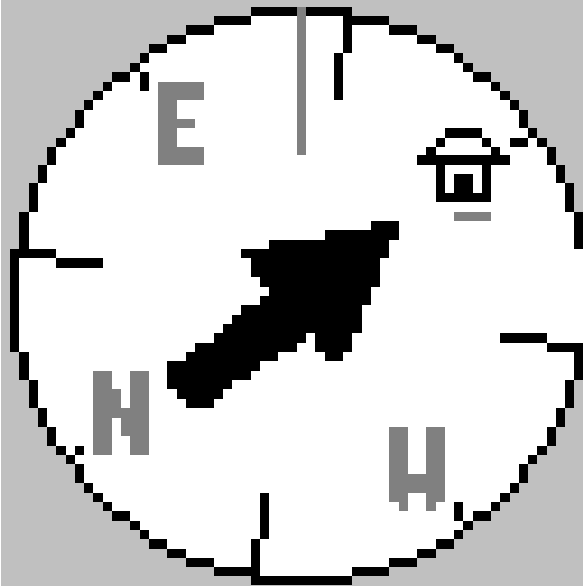
MAP

GO

PROJECT

ELEV: 813ft
N 39°03.090'
W094°36.171'

HOME
68.9°
04:48 TO GO



SPEED
20.0%