Wifi PW: thelight

Thinking ahead about routes and alternatives

DIGITAL ROUTE PLANNING

"Enthusiasm is no substitute for experience . . . "
- Andy Kirkpatrick, Alpinist and Climber

ROUTE PLANNING VS. ROUTE FINDING

Route planning starts at home. . .

Route finding starts at the trailhead. . .

GOALS:

o Gain an understanding of things one might consider when planning a route

o Gain an understanding of the resources available to plan routes

o Plan a trip using Gaia and/or Caltopo

o Hopefully remember how to apply these skills in future outdoor endeavors

Route Planning

Principals to start with . . .

- Energy Efficiency

- Safety

- Speed

Energy Efficiency

- Hiking cross-country is considerably more difficult than hiking on a cleared and well-defined trails.
  - Rock and organic debris that you need to hike over or around.
  - Tall grass, bushes, trees, bogs, and boulders may block your way.
  - The hills will be steeper than you're used to encountering on trails and your normal hiking pace will be much slower.
- Careful study of a topographic map
  - will reveal routes that are easier to walk than others, with gentler gradients and detours around difficult obstacles.
  - Cliffs are best hiked around rather than tackled head-on and
  - Sides of streams are best avoided because they're often filled with dense vegetation and flood debris.

Safety

- Things that can increase uncertainty:
  - Avalanche terrain (more on this later)
  - Scree-covered slopes
  - River crossings
  - Steep ravines as they are often catchments for ankle-busting boulders, fallen trees, and vegetation.
- While many of these hazards can be anticipated by learning to analyze topographic maps, you'll also want to make real-time detours around dangerous terrain that you can't anticipate based on the information provided by maps or other planning resources.
  - Why would you not be able to anticipate something just based on your map work prior to a trip???
    - 40ft intervals on your map?

Speed

- Despite the difficulty of wilderness travel, there are land features that you can follow that make cross-country travel faster and easier.
  - Hiking above tree-line is often faster than below it
  - Hiking along gravel river bars is also much faster since there is no impeding vegetation.
  - But there are also many types of terrain that will significantly slow you down because they're boulder or vegetation traps such as steep hillsides, ravines, or hellish slide alder.

Is this the "best" way from Mt. Martha to The Humps?
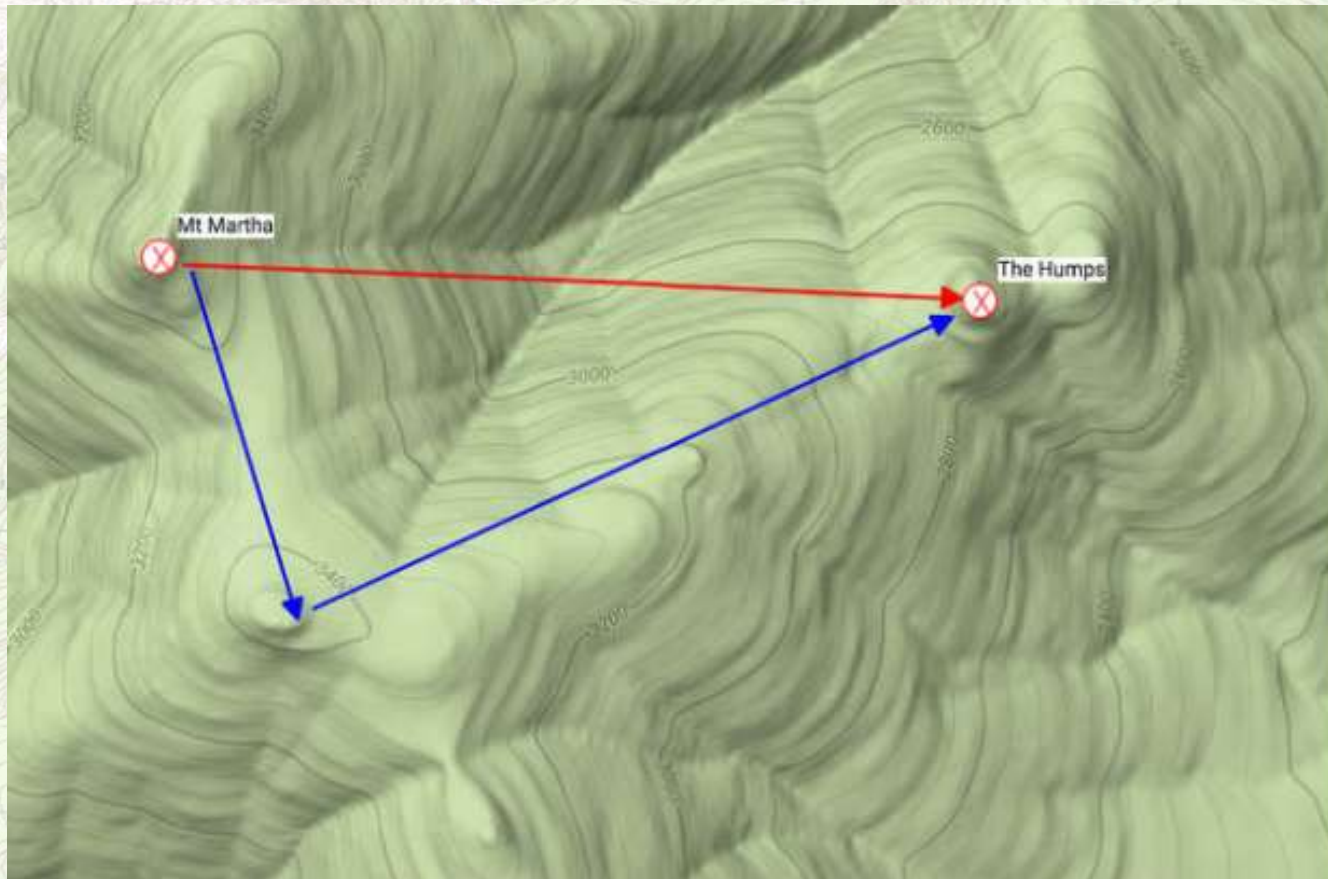
Which way would you go????

Back to our map….

Route Planning

Other stuff (cont.)

- Select a trip that suits your abilities

- Gather Information
  - Mountaineers.org, SummitPost, Peakbagger, Mountain Project, WTA, NWHiker, Mountaineers Library, Guide Books, Facebook Groups

- Evaluate Routes and Select One   ("Map Study")

  - **Caltopo**, Gaia, OnX, Strava, etc.

Route Planning
What you need to know about the route…

- Elevation gain

- Distance

- Travel Method(s)

- Weather/Seasonal conditions
  - As we discussed before with energy and efficiency

Munter Method of Estimation

- **t** is the trip time in hours
- **d** is the distance traveled in kilometers,
- **e** is the total elevation gain in meters, and
- **r** is <u>your</u> rate of travel
- Rate of travel depends on your form of travel, pack weight, as well as fitness and group dynamics, however good estimates are:
  - Skinning/Walking uphill - 4
  - Walking flat/downhill - 6
  - Skiing downhill - 10
  - Bushwhacking - 2

$$t = \frac{d + \frac{e}{100}}{r}$$

1.6 kilometers per 1 mile
0.305 meters per 1 foot
https://muntercalculation.com/

A Case Study – Mt Pugh Scramble

A Case Study – Mt Pugh Scramble

- **Using Gaia App, plan a scramble trip for August**
  - What's the Elevation Gain?
  - What's the Total Distance?
  - What's the Anticipated Duration? Depart and Return Times? Sunrise/Sunset?
  - Weather/Seasonal conditions?
  - Equipment Needs?

- To Accomplish in Gaia
  - Create a folder
  - Drop three waypoints
  - Create a route
  - Save all to folder
  - Change base map layer
  - Save digital map

Start at:
10U 617842 5333714

GAIA GPS

A Case Study – Mt Helens Climb

A Case Study – Mt Helens Climb

- **Using Caltopo, plan a snowshoe trip for February**
  - What's the Elevation Gain?
  - What's the Total Distance?
  - What's the Anticipated Duration? Depart and Return Times? Sunrise/Sunset?
  - Weather/Seasonal conditions?
  - Equipment Needs?

- To Accomplish in Caltopo
  - Create a folder
  - Drop three waypoints
  - Create a route
  - Save all to folder
  - Add UTM Grid
  - Print map to PDF

Start at:
46.13065, -122.17138
https://caltopo.com/map.html

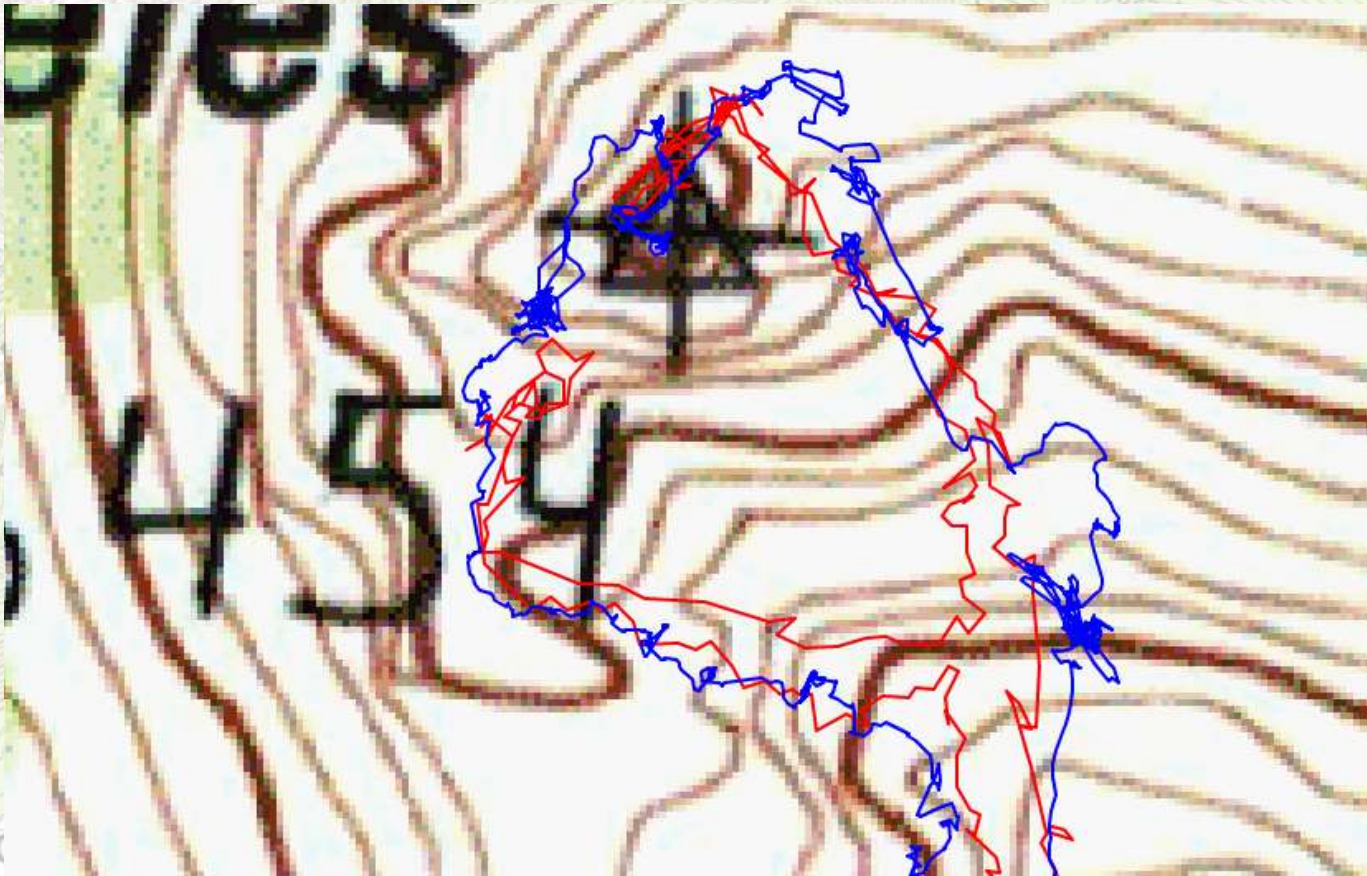Olympia Navigation

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Remember that on the trip you must consider. . .

- Weather
- Confirm route against description against ability
- Confirm the time taken for route segments
- Keep an eye on the party
- Turnaround Time
- And lastly. . .

Be Flexible