

Watershed Cartography

(30 minute activity)

- Objectives* Students will be able to:
- 1) List the components of a topographic (topo) map
 - 2) Describe how contour lines function
 - 3) Delineate a watershed area on a map
 - 4) Read a topo map to complete a worksheet

- Materials*
- Copies of enclosed topo map (Icicle Creek Watershed or one from your area)
 - Find Your Way* Mapping Exercise
 - Pencils
 - Transparency of Cashmere Mountain Township map or corresponding local map

Background There are many types of maps, including highway, street, administrative, travel guide, and forest maps. *Topographic maps* delineate natural features more precisely than conventional maps. Users include surveyors, backcountry travelers and pilots. When reading a topo map, try to visualize features in 3-dimensional terms. Horizontal and vertical differences are noted on topographic maps with contour lines. Spaces between contours are called contour intervals. Contour interval distances differ according to the scale of individual maps. Main characteristics to consider when reading contour lines are:

- Contour lines closely spaced indicate a steeper grade
- Contour lines widely spaced indicate a flat area or gentle slope
- Evenly spaced contours indicate a uniform slope
- When crossing a drainage, contour lines always look like a right side up V (the v points upstream)
- Contour lines joining indicate a high point, unless they are blue, where there is a lake

- Procedure*
1. Make a transparency of the magnified topographic map of a township (Figure 1) and discuss its features. Ask students to come up and point out drainages, peaks, main roads, trails, flat/steep areas and ridges.
 2. Pair up the students. Distribute copies of *Cashmere Mountain Township* map, the *Icicle* (or local) *Watershed* map, and *Find Your Way* Student Worksheets.

- Assessment*
- ❑ Using different topo maps, ask students to compare and contrast land uses as follows: Looking at the topography, are roads, buildings, farms and other features well placed? Consider proximity to water, slope steepness, possible natural disasters, etc. in the investigation.
 - ❑ Write a critical analysis of a selected area. If it was found that some land uses were inappropriate for the current locations, indicate possible relocation sites on the map.

Mt. Cashmere and Vicinity

