A major problem in map making is the visual representation of relief features such as mountains, plateaus, hills and valleys. The essential difficulty is that we are accustomed to viewing these and other surface features diagrammed from above, as shown on a map, is unfamiliar to most of us.

Use the Columbia quadrangle map for the following lab which has been designed to serve as a means of acquainting you with symbolization and to provide practice in understanding current large and small scale maps.

1. SYMBOLS
Examine a sheet of topographic map symbols. Note that five colors are employed in showing natural and cultural features: red, green, brown, blue and black.

a. Describe the use of each of these colors on a map.

   1. Red
   2. Green
   3. Brown
   4. Blue
   5. Black

b. Try to find an example of each of the following features on the quadrangle. Draw the symbol as shown in the space provided. Use colored pencils to note the precise color used.

   1. School
   2. Church
   3. Quarry
   4. Orchard
   5. Road, medium duty
   6. Power Line
   7. Railroad, single track
   8. Intermittent Stream
A standard topographic quadrangle has two parts: the mapped area and the marginal information that puts the map into its spatial, temporal and jurisdictional context. Using the Columbia map, fill in the map information below.

1. Name of the quadrangle  
2. Publishing Agency  
3. Representative Fraction scale  
4. Date of Publication  
5. Date of ground survey  
6. Date of Aerial survey  
7. Date of Field Check  
8. Date of Revision  
9. Minimum Latitude  
10. Minimum Longitude  
11. E-W extent (answer 9-10)  
12. Map Series  
13. Magnetic Declination  
14. Date of Declination  
15. UTM Grid Zone  
16. UTM Northing near center of map  
17. State Coordinate Zone  
18. General Location in State  
19. Name of quad just to the east  
20. Name of quad just to the northwest  
21. Contour Interval  
22. Contour Datum  

23. Does this map comply with national map accuracy standards?  
Note: Map standards have changed through time and therefore a given topographic map will not necessarily provide every kind of information listed here, nor will a given kind of information appear in the same place on every map.