

THE ROUND EARTH ON FLAT PAPER

A Scale

1. The importance of scale
 - a. Controls amount of detail shown on maps
 - b. Determines the size of the sheet
 - c. Influences the choice of projection to use
2. Representative Fraction -- R.F.
3. Examples of large, medium, and small scales

B Introduction to map projections

1. There are many different projections
2. The problem of flattening out the globe's surface
3. Characteristics of maps
 - a. Orthomorphic - conforms to true shape
 - b. Equal-area - areas have correct size
 - c. Azimuthal - all radial distances are true
4. Three methods of drawing maps
 - a. Orthographic - as viewed from an infinite distance
 - b. Stereographic - as viewed from the opposite surface of the globe
 - c. Gnomonic - as viewed from the center of the globe

The Round Earth On Flat Paper (continued)

5. Examples of map projections

a. Mercator - all compass directions are true

(1) Transverse Mercator - follows great circle route

b. Polyconic - accurate for large scale maps

(1) Transverse polyconic - earth's axis turned 90°

c. Lambert conformal conic - good for mid-latitudes