

## Introduction to Geography

### What is Geography?

- Geo
- Graph
- Today

### Modern definition

- Study of *spatial* patterns and processes on the surface of earth

### What do geographers study?

#### Spatial Science

- Distribution
- Variance
- Interaction
- Geotechnology is one of 3 emerging fields in the US

#### Physical geography

- Spatial processes & patterns of 4 spheres
  - Atmosphere
  - Hydrosphere
  - biosphere
  - Lithosphere

## Earth systems concepts

- In order to answer questions about the Earth we need..
- System

- Open

- Closed

- System feedback

- Positive

- Ex.
  - Wildfires

- Negative

## System equilibrium

- Most systems maintain a steady-state

- Dynamic equilibrium

## Fundamental geographic tool

- Map
  - Analog
  - Digital

Map defined

- What is a map?

- General or thematic

- Types

General purpose maps

- Political map

- Physical map

Thematic map

- Choropleth

Thematic

- Elevation
- topographic

- Contour

- Interval

Topo interpretation

- Closely spaced

- Widely spaced

- Contours can be labeled every 4<sup>th</sup> or 5<sup>th</sup> line

- Contours crossing a stream point uphill

- Closed contours indicate a hilltop
- Hashures indicate a depression
- Contours never cross
- Large
- Small

Representative fraction

- $RF = \text{map distance} / \text{earth distance}$
- Map distance is always equal to 1

Scale problem