CHAPTER 1 BASIC CONCEPTS

Key Issue 1: How do Geographers Describe Where Things Are?

• Maps
• Contemporary Tools
WHAT IS GEOGRAPHY?

Who can tell me what Geography is?

- It is the scientific study of the location of people & activities across the earth and the reasons for their distribution.
- Eratosthenes (Greek Scholar) first to say Geo-graphy

Geography asks two questions:
1) WHERE things are and
2) WHY they are there

- Geographers organize things by place
- Historians organize things by time.

Something happening here can affect what’s happening there.
GLOBALIZATION VS. LOCAL DIVERSITY

**Globalization** pulls the world together
- Internet has made us a global community

**Local Diversity** pushes us to be unique
- Express cultural traditions and economic practices

This push and pull can lead to conflict, what could they be?
- Political, economic, and pollution to name a few
BIG 2: WHERE AND WHY

- Where are people and activities found on Earth?
- Why are they found there?

HUMAN ASPECT: (Our focus)
- Religions, cities, businesses

PHYSICAL ASPECT: (Can’t Forget)
- Climate, land formation, vegetation
DON’T FORGET ABOUT PHYSICALITY

Why should we not forget about the physical aspect of Geography?

• All physical aspects affect the human side.
• People and their environments

Examples???
HURRICANE KATRINA (2005)

Fig. 1.1: Most of the area of New Orleans flooded after Hurricane Katrina was majority African American. Physical and political geography intersect in analyzing the impacts of the natural disaster.
GEOGRAPHY’S MOST IMPORTANT TOOL?

MAP: A 2-D or flat-scale model of Earth’s surface, or a portion of it.

• Stores reference material and communication geographic info.

Cartography: The science of mapmaking.
MAPS

Early Mapmaking

• Babylonians ~ 2300 B.C.
• Aristotle demonstrates E was spherical (384-322 B.C.)
• Roman & Greek Contributions

Map Scale

• Large scale = less detail, Smaller scale = more detail
• Scale: relationship of a feature’s size on a map to its size on Earth
  • Fraction/ratio, written, bar scale

https://www.google.com/maps/place/Patriot+High+School/@34.022527,-117.4197794,11929m/data=!3m1!1e3!4m2!3m1!1s0x80dcb50865a44b6d:0xa0f37b860e3c1123
SIMON PEG MINISTER SCALE TRAIN CLIP
SCALE AND PROJECTIONS

Two confusing things about maps…
PART 1: SCALE

Sizing the Earth onto a Map
A SIMPLE MATH PROBLEM…

Which number is larger?

½ or ¼
A SIMPLE MATH PROBLEM…

Which number is larger?

$\frac{1}{2}$ or $\frac{1}{4}$
A SIMPLE MATH PROBLEM...

Which number is larger?

$\frac{1}{2}$ or $\frac{1}{4}$

$\frac{1}{1,000}$ or $\frac{1}{10,000}$
A SIMPLE MATH PROBLEM…

Which number is larger?

½ or ¼

1/1,000 or 1/10,000
WHAT IS THE DIFFERENCE?

- 1:100 vs. 1/100

- What does this mean on a map?
  1:10,000
TWO MAPS

- Scale of Map 1 - 1:10,000
- Scale of Map 2 - 1:100

Which map has a bigger scale?
Which map has a bigger view of the earth?
TWO MAPS...

● Which map has a smaller scale?
SCALE DIFFERENCES: MAPS OF WASHINGTON STATE
WASHINGTON STATE

(1:10 MILLION SCALE)
WESTERN WASHINGTON
(1:1 MILLION SCALE)
SEATTLE REGION
(1:100,000 SCALE)
DOWNTOWN SEATTLE, WASHINGTON
(1:10,000 SCALE)
THE TAKE-HOME MESSAGE...

- Zoomed out maps (larger areas) have small scales.

- Zoomed in maps (smaller areas) have large scales.
PART 2: PROJECTIONS

(what happens when something spherical is made flat)
WATCH CLOSELY AS I MAGICALLY CONVERT THIS BALL INTO A PIECE OF PAPER… WHAT BECOMES DISTORTED?

● Shape
● Distance
● Relative size
● Direction
MAPS

Projection: method of transferring locations on Earth’s surface to a flat map.

• 4 types of distortion
  1. shape: elongated or squat
  2. distance: + or –
  3. relative size: appears bigger than reality
  4. direction: one place to another
Fig. 1-8: The world geographic grid consists of meridians of longitude and parallels of latitude. The prime meridian (0°) passes through Greenwich, England.
Fig. 1-9: The world’s 24 standard time zones each represent about 15° of longitude. They are often depicted using the Mercator projection.
HTTPS://WWW.YOUTUBE.COM/WATCH?V=UW6QQCMCFM8

1 minute 30 seconds-China exception
CONTEMPORARY TOOLS

GIS: (Geography Information Systems)- the position of any object on Earth can be measured and recorded with mathematical Precision

- What can GIS be used for or prevent?
  - Info can be stored in layers (like Photoshop)
- Boundaries, water, roads, climates, etc.
- Shows relationships among different info as well
- Farming practices, H2O/O, vegetation, development
Fig. 1-5: A geographic information system (GIS) stores information about a location in several layers. Each layer represents a different category of information.
CONTEMPORARY TOOLS

Remote Sensing: collection of data about Earth’s surface from an orbiting satellite
- Essentially a grid containing many rows of pixels
- Primarily used for environmental issues

GPS: (Global Positioning System): determines the precise position of something on Earth
- Google Maps, Yelp, etc.
GOOGLE MAP

MCDONALD’S IN JURUPA VALLEY