

Notices

EXAM 1 and ExCr 1 will be
returned on Tuesday

IF YOU MISSED THE EXAM YOU
NEED TO SEE ME TO ARRANGE
A DATE FOR A MAKE-UP EXAM.

- ❖ Extra Credit:
"Think Geographically" Essays
from any five of the textbook's
chapters 4-12.
 - Last day to submit is **MAY 12**
but it is best to do them as you
finish reading a chapter.

- ❖ Two required essays are due by
April 17, 2020.

- A late penalty will be applied.

- ✓ *A third essay may be used for extra credit
in place of a "Think Geographically" essay.*

ESSAY TOPICS (choose any two):

- Contributions of a noted geog-
rapher, earth scientist or explorer
(chapter 1)
- Relationship of climate change to
a listed current event topic
(chapter 2)
- Discuss a natural process that is
deemed a natural hazard and how
we deal with it (chapter 3)

GEOG 101

PART II

Environment and Resources

Chapters 2, 3, 4, and 5

Prof. Anthony Grande
Hunter College Geography

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**Textbook
Chapters:
2, 3, 4, 5**

9: Intro. to People and their Physical Environment

- I. Introduction to the Physical Environment**
- II. Earth-Sun Relationship**
- III. Earth Systems**
 - A. The Hydrosphere: Oceans**
 - B. The Atmosphere: Weather and Climate**
 - C. The Lithosphere: Geologic Influences**
- IV. Earth Habitat**
 - A. Biosphere**
 - B. Natural Controls and Cycles**
 - C. Human Impact**
 - D. Natural Hazards**
 - E. Earth Resources**

**EXAM 2
covers all
the topics
listed.**

**Look through
all 4 chapters
now. Return
to the topics
as we cover
them in class.**

People and their Physical Environment

❖ **There is a relationship between people and nature**, especially dynamic earth processes (chapters 2 and 3)

- ✓ People interact with the processes.
- ✓ People have an impact on earth systems (chapters 4 and 5).
- ✓ The Earth is composed of a complex of systems and subsystems that act as a whole.
- ✓ These systems may be altered by the works of people.

➤ **When one thing changes,**
other things also change!

▪ **This is called “interrelationship.”**

Landscapes

- ✓ **Physical landscape** = natural conditions
- ✓ **Cultural landscape** = imprint of human activity
 - Physical landscape **influences the development** of cultural landscape:
 - economic activity
 - architecture/clothing
 - technology/inventions



Terraced farming, Southeast Asia



Cork, Ireland

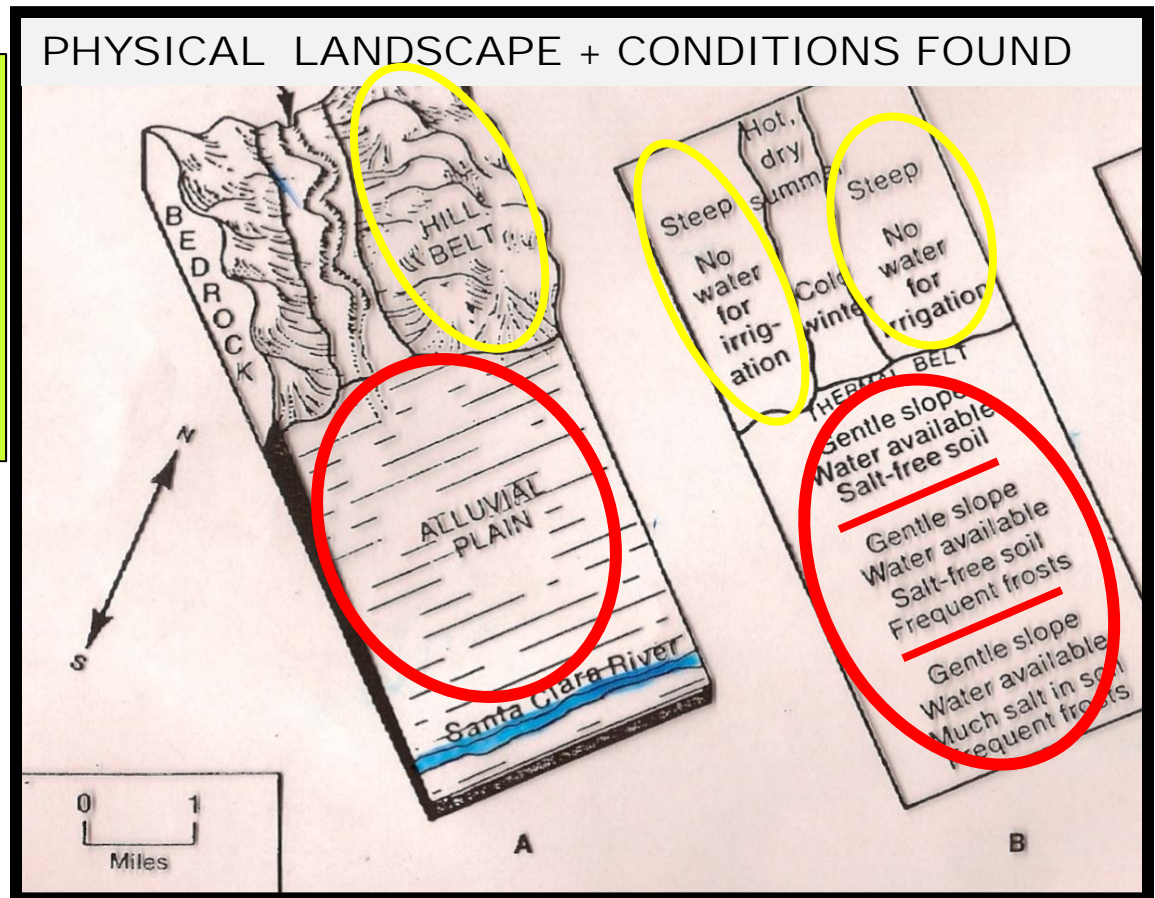
People and their Physical Environment

**There is a relationship
between people and
nature.** (Chapters 2 and 3)



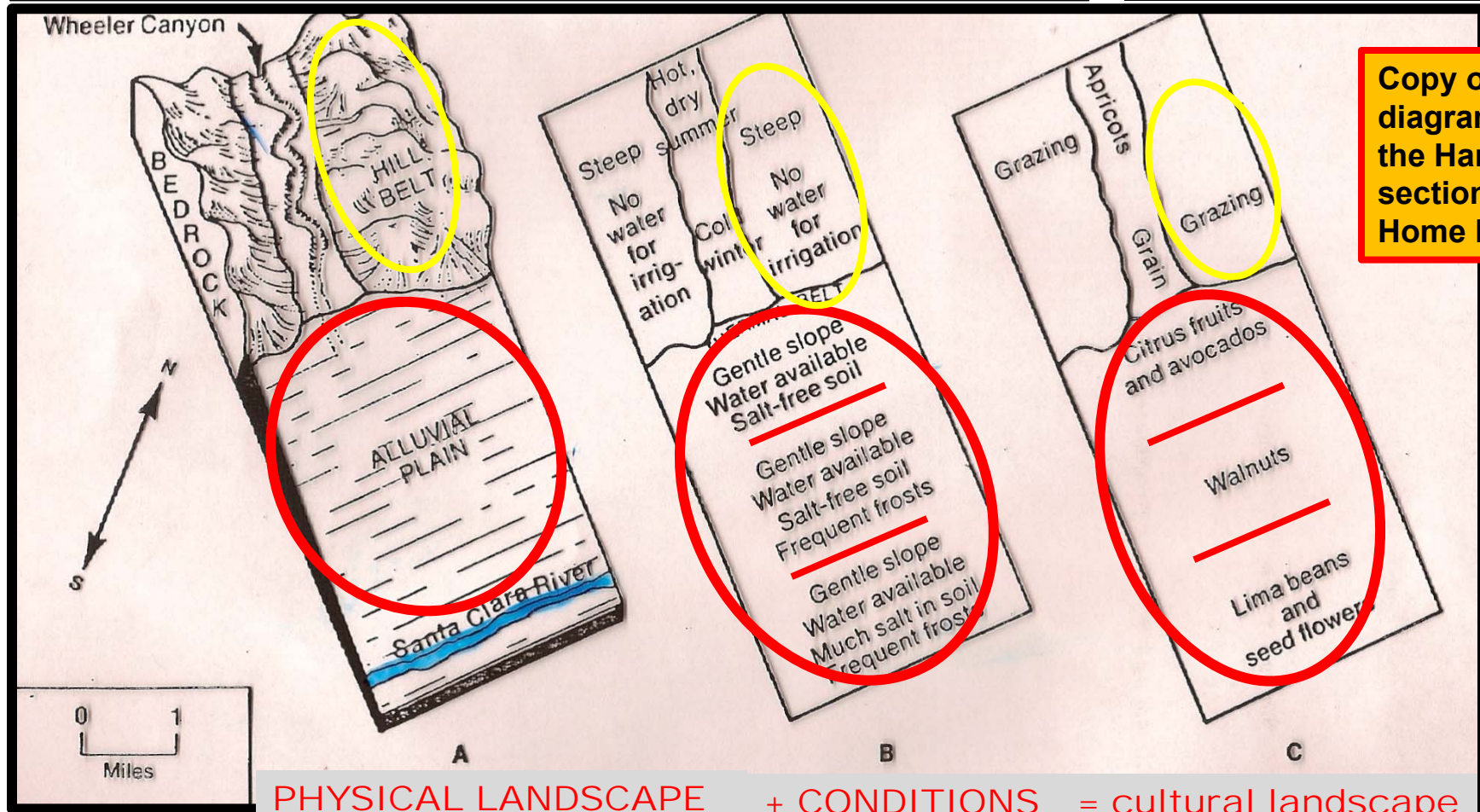
People and their Physical Environment

People identify and **interact** with the existing conditions and the processes creating them.



People and their Physical Environment

People have an impact on earth systems (ch. 4 and 5) and the result is the **cultural landscape**: the human imprint on the physical environment.



Copy of this diagram is in the Handouts section of the Home Page

PHYSICAL LANDSCAPE + CONDITIONS = cultural landscape

People and the Physical Landscape

- **People cope** with their environment and deal with natural processes.
- The natural processes that harmful to them are called “**hazards**.”
- Likewise, actions of **people impinge on nature** and can be disruptive (**hazardous to nature!**) as pollution, agricultural methods, importing non-native plants, insects and animals, killing/extinction of various species of living things.

People and Physical Processes

**There is a relationship
between people and nature.**

When dynamic earth processes **adversely** affect people they are called **“natural hazards.”**

Prepare and Be Aware

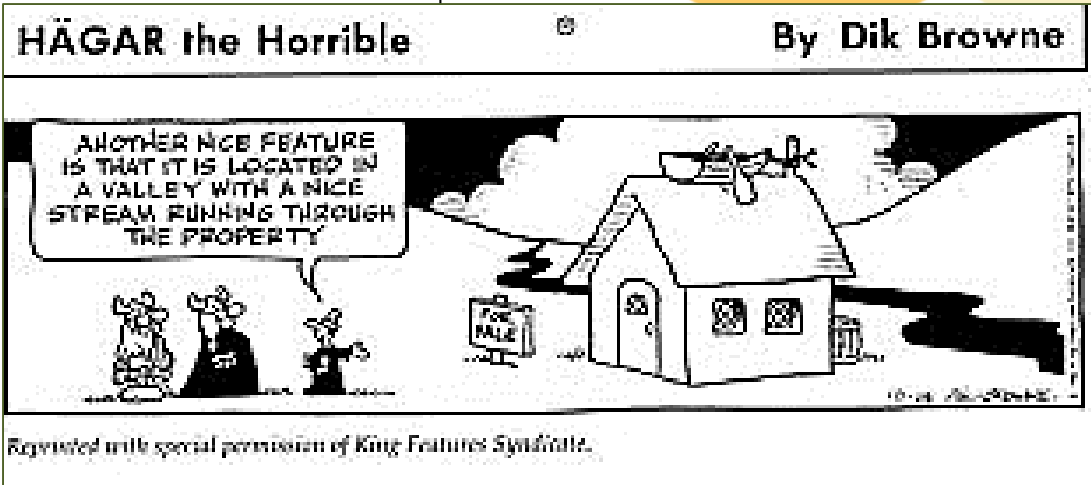
A Venn diagram with two overlapping circles. The left circle is orange and labeled 'HAZARDS' with a list of natural disasters. The right circle is yellow and labeled 'ASSETS' with a list of infrastructure and population. The intersection of the two circles is a darker orange color and labeled 'RISK'.

HAZARDS
volcanic activity,
flooding,
landslides,
tsunamis,
coastal erosion,
earthquake
shaking, etc.

ASSETS
infrastructure,
population
critical facilities,
etc.

RISK

By Dik Browne



People and their Physical Environment

❖ Again, to stress this point:

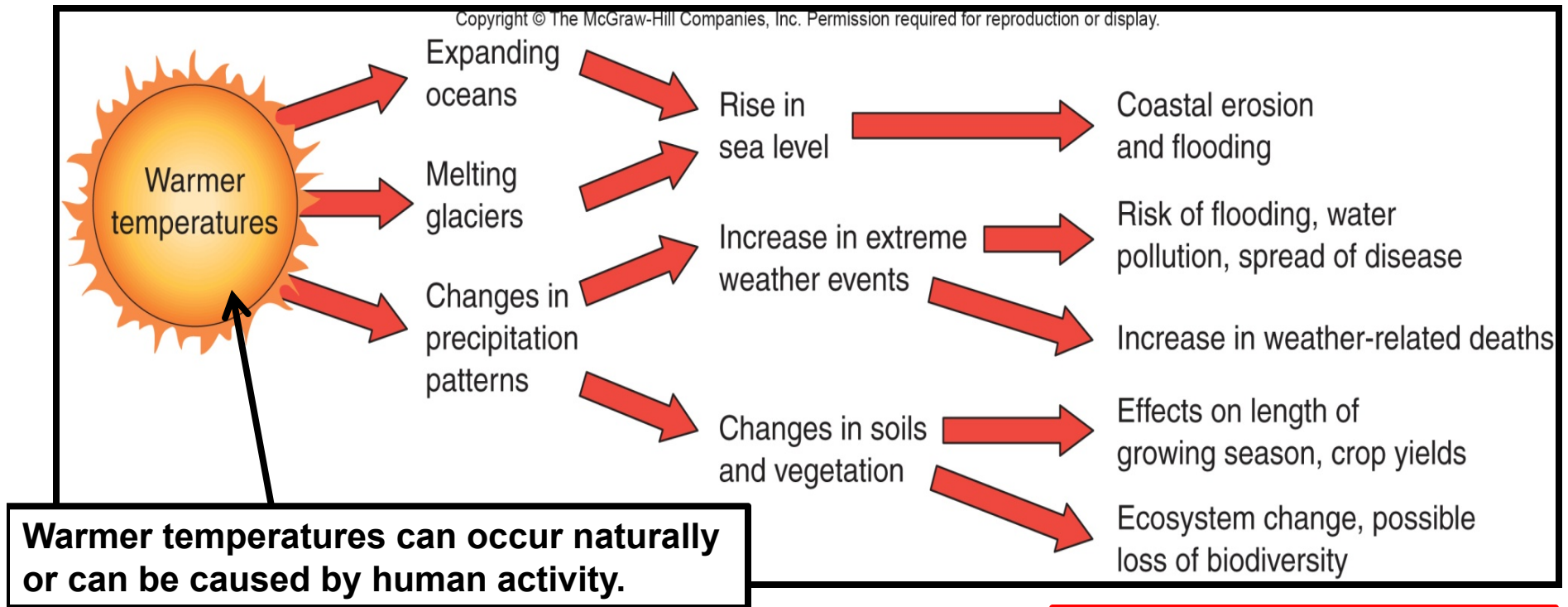
The earth is made up of a complex of systems and subsystems that act as a whole.

**When one thing changes,
other things change too!**

This is “interrelationship.”

Examples: global climate change; dam/reservoir construction; turning a agricultural area into a suburb or shopping mall with a huge parking lot.

Interrelationship: An example of global warming



Global Warming and Airline Industry

1. **Rising sea level** - flooded runways; storm surges
2. **Hot runways** - buckled concrete; melting tar
3. **Decrease air density** - longer runways needed; lighter loads
4. **Extreme high temperatures** - affect on aircraft operations and electronics

The same diagram can be used to show the effects of global cooling.

Earth Statistics

Limited land area

Circumference = 25,000 mi

Diameter = 8,000 mi

Total area = 197 million sq. mi.

Water area = 139 million sq. mi. (71%)

Land area = 58 million sq. mi. (29%)

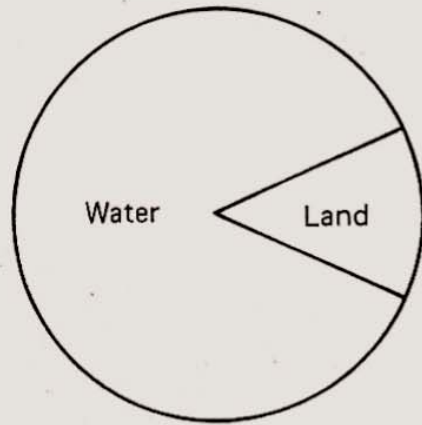
Human population: est. 7.7 billion in 2019

Human population grows but earth statistics stay the same.
Usable land area gets smaller.

<https://www.worldometers.info/world-population/>

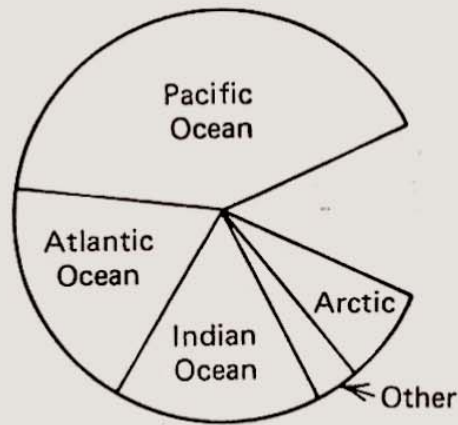
Earth Segments

Earth



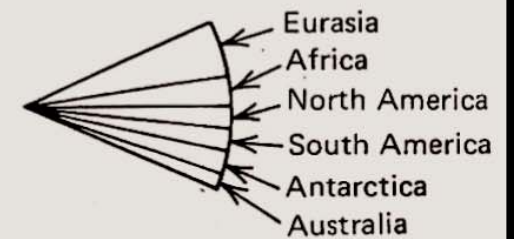
A

The Oceans



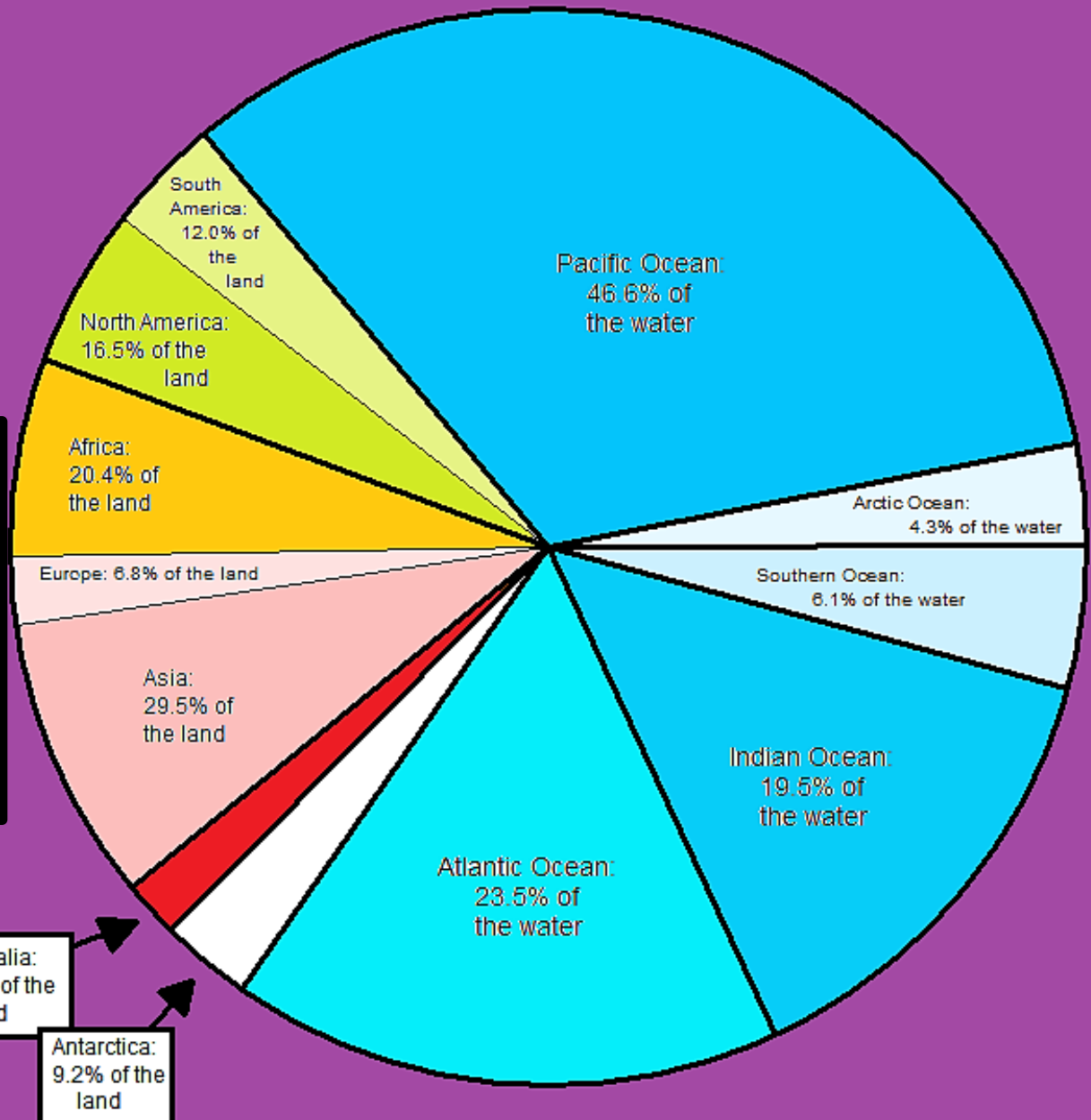
B

The Land Masses



C

Whole Earth

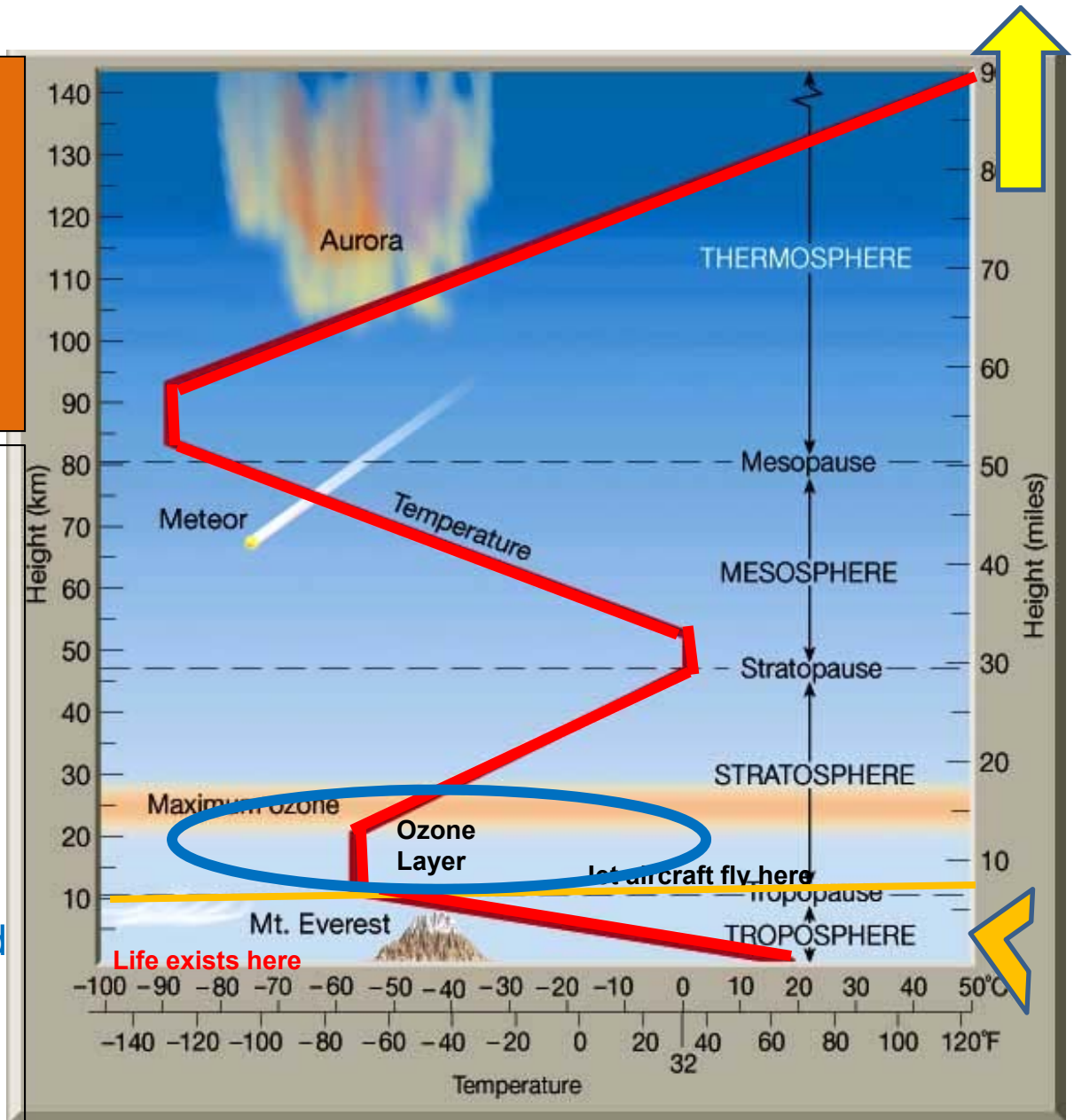


Spaceship Earth

- 1. Closed environment.**
- 2. Life depends on a critical balance of elements to survive.**
- 3. Life exists at the bottom of a 600 mi thick “ocean of air” composed of:**
 - 78% nitrogen**
 - 21% oxygen**
 - 1% other of which .03% is CO₂ (carbon dioxide)**
- 4. The bottom of the atmosphere is 5-7 mi thick and composed of air, water vapor and dust particles.**
- 5. This provides the comfort zone of air pressure, humidity and light.**

Layers of the Atmosphere

- Traces of Earth's atmosphere are found as far as 6000 mi. from the surface.
- The densest portion is closest to the surface and extends only 7 miles up.
- **Temperature varies with a layer's composition.**
- Ozone in the stratosphere absorbs heat as do the ionized particles of the thermosphere.
- **Ozone Layer protects all life on Earth from the ultraviolet rays of the sun.**



Role of the Geographer and those who are Geographically Literate

- 1. Study interrelationships** (*people + knowledge of processes = better habitat*)
- 2. Espouse conservation/preservation** (*recurring theme*)
- 3. Monitor human influence** (*short period on earth/great change*)
- 4. Counsel political realities** (*haves vs. have-nots*)
- 5. Push for sustainable development** within an area's **carrying capacity** (*working with nature; limited resources that are unevenly distributed*)

N E X T

**EARTH - SUN
RELATIONSHIPS**