Notes for Earth Science Intro- Week 11 & 12

C-notes

Earth Science: An introduction

What is Earth Science? It is the study of Earth and the universe around it.

Branches Earth Science:

- **Geology**
- **Oceanography**
- **Meteorology**
- **Astronomy**

Earth Science: An introduction

- **Geology- the study of the origin, history, processes and structure of the solid Earth. (Including rocks)**

Earth Science: An introduction

- **Oceanography- the study of the Earth's oceans: waves, currents, tides…**

Earth Science: An introduction

- **Meteorology- the study of the Earth's atmospheric conditions that produce weather.**

Earth Science: An introduction

- **Astronomy- the study of the universe beyond the Earth**

C-notes

Earth Science: Importance

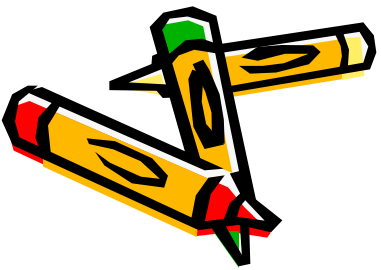
Earth science can help us answer questions like: Why are there earthquakes?

Study Strategies

- Making Questions"/Re-write notes- GOOD FOR- REVIEW, DEEPENING UNDERSTANDING

Quizzing self: GOOD FOR- MEMORIZING, VOCABULARY, DEFINITIONS

Quizzing other: GOOD FOR- SAME AS ABOVE



Study Strategies

- **Explaining:** GOOD FOR- UNDERSTANDING

- **Graphic Organizer/Mind Map:** GOOD FOR- QUICK REFERENCE, ORGANIZES THE INFO VISUALLY IN YOUR HEAD

Earth’ s Spheres

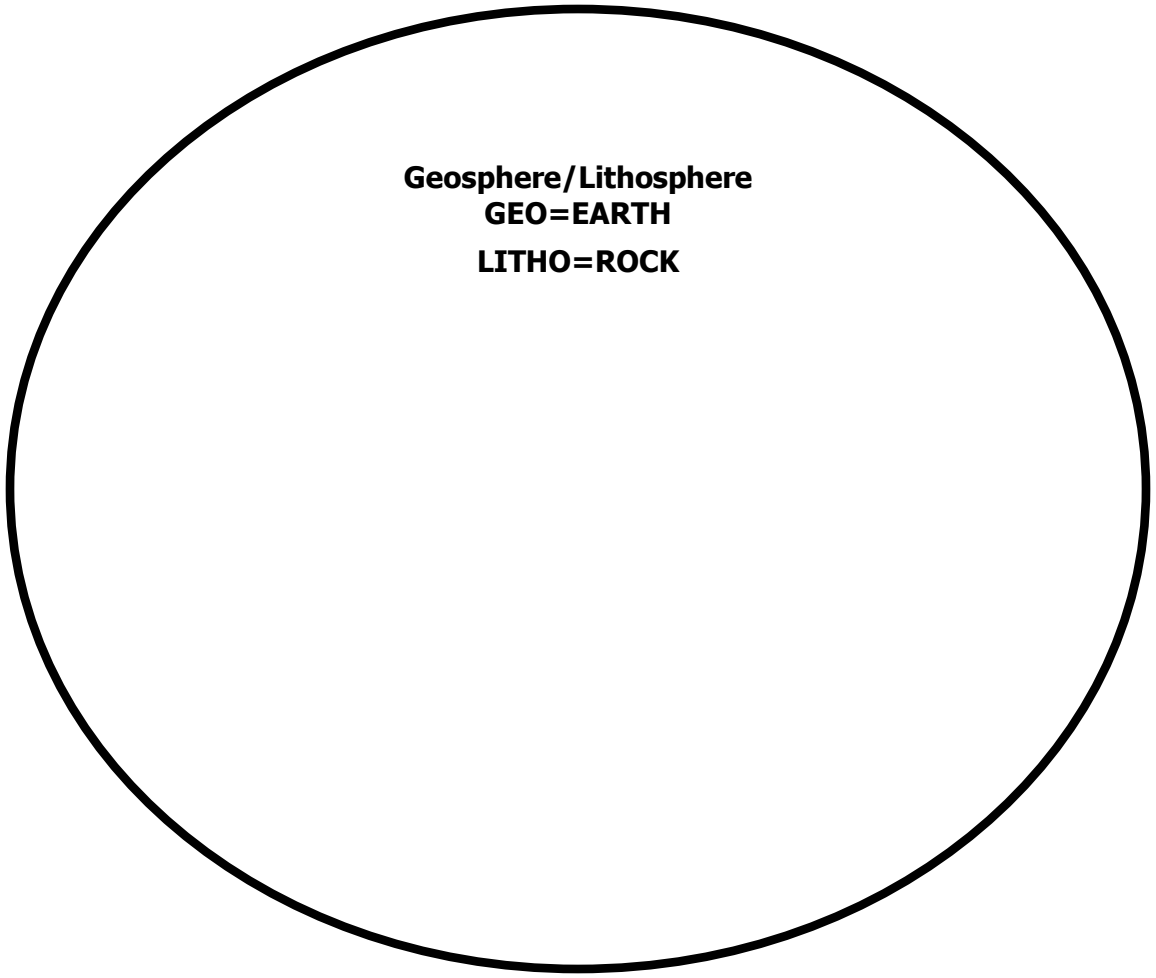
Geosphere/Lithosphere
GEO=EARTH
LITHO=ROCK

Biosphere
BIO=LIVING

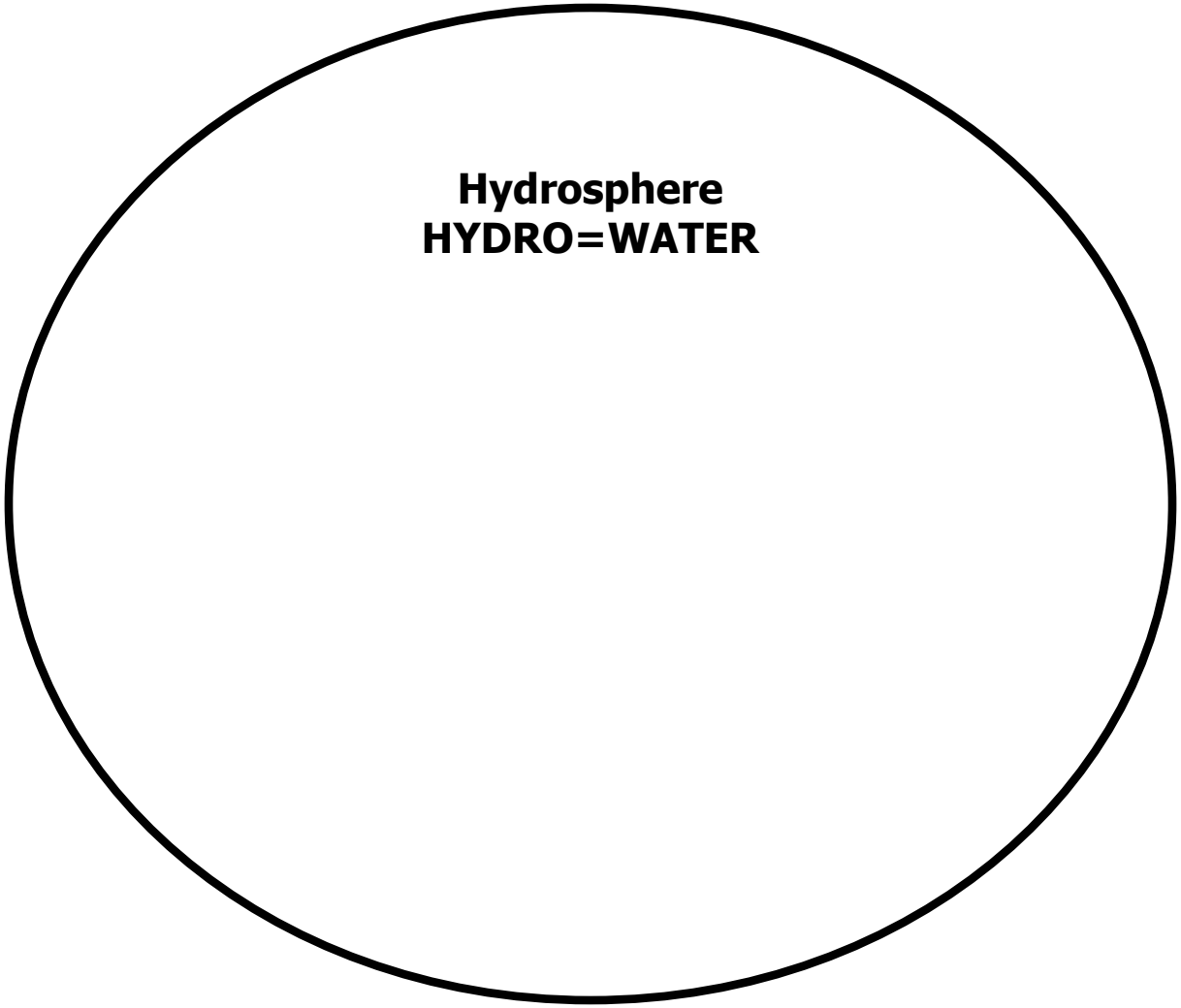
Hydrosphere
HYDRO=WATER

Atmosphere
ATMOS=AIR

Earth’ s Spheres



Earth’ s Spheres



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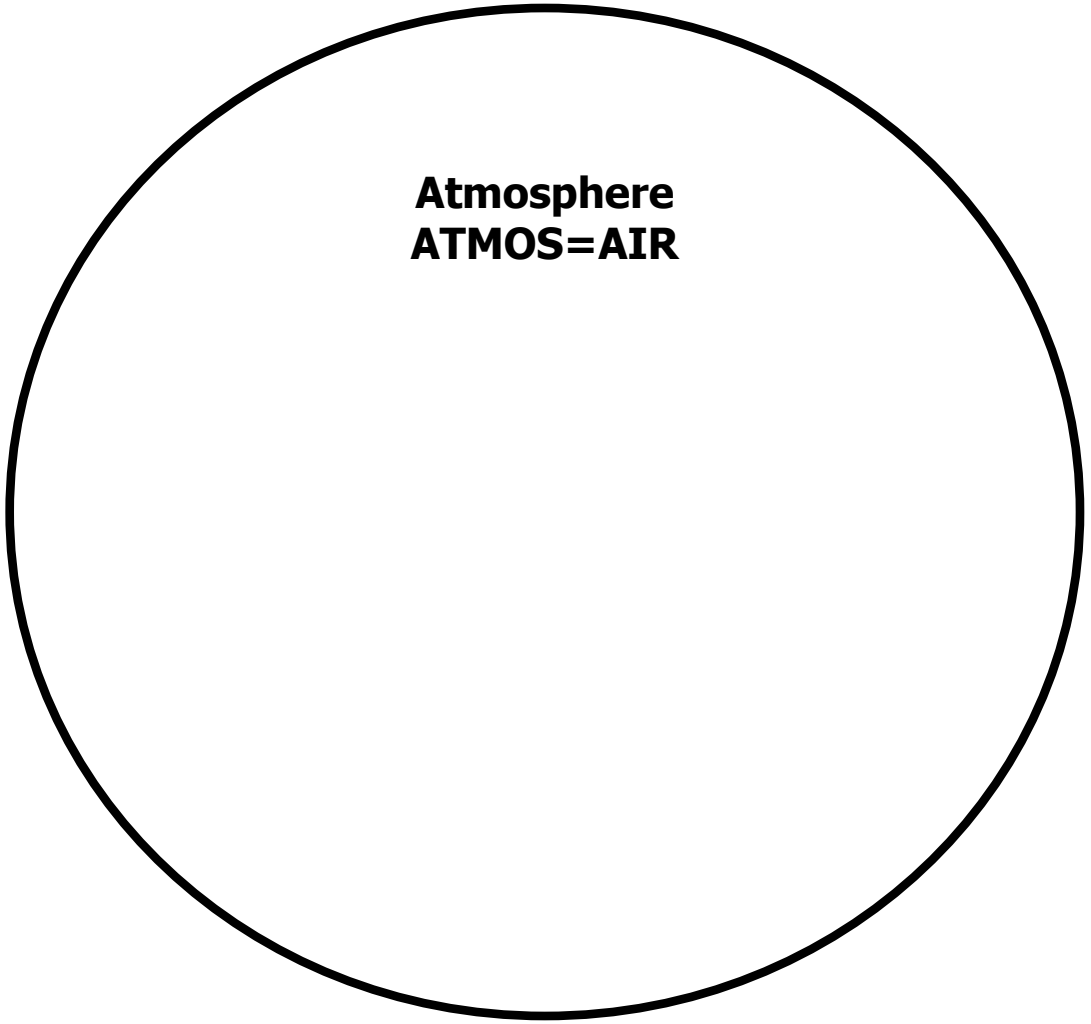

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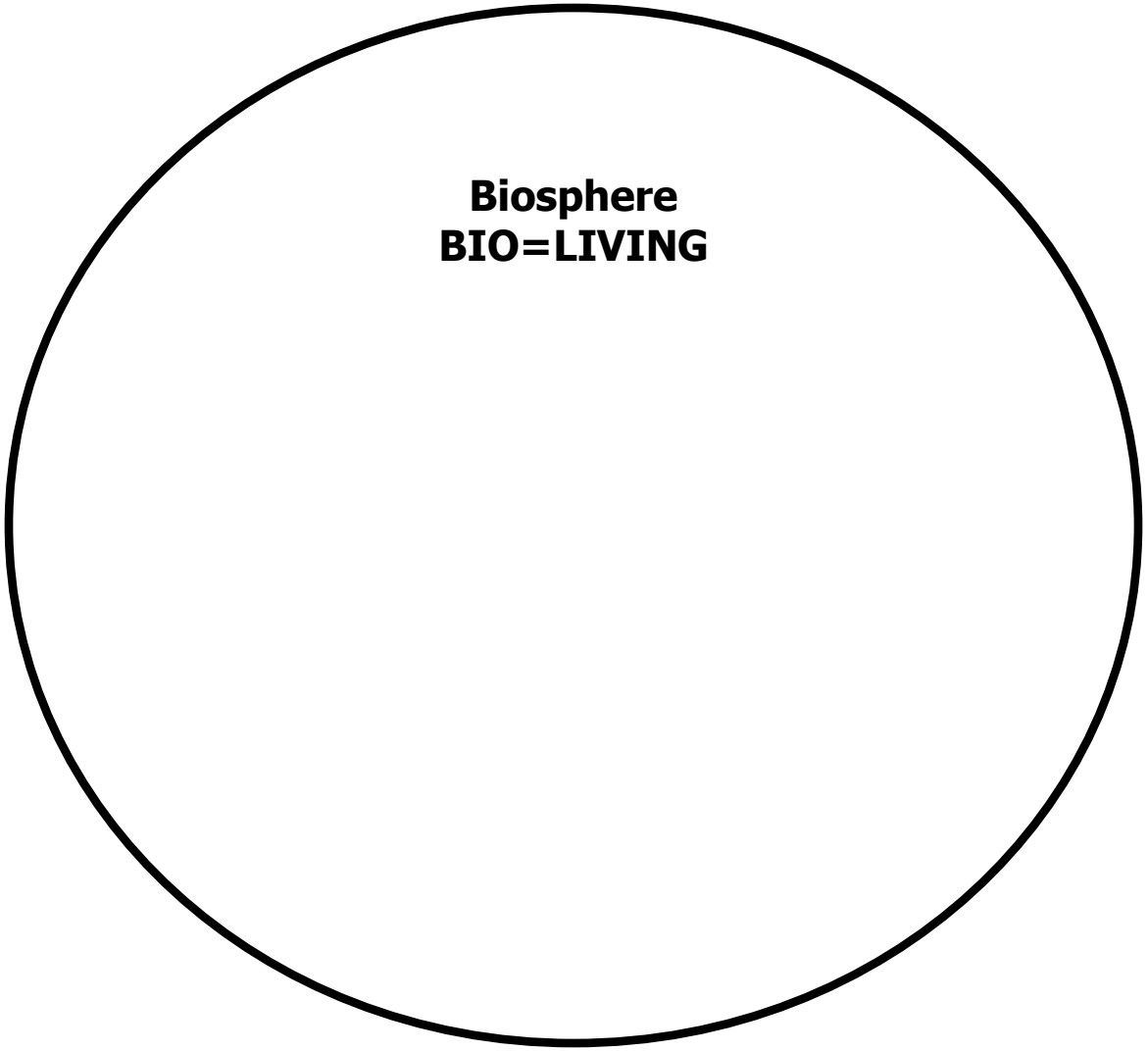

ACTIONS

SPHERES

INTER

ACTION

NAME:

Foldable- Interactions

Left	Right
1.I breathe in	biosphere- atmosphere
2.A volcano erupts	atmosphere-geosphere
3.A plant does photosynthesis	
4.Bacteria decomposes a dead leaf	
5.A mountain is eroded by a river	
6.A tornado destroys a house	
7.Drive a car	
8.Deer eats grass	
9.It rains……	

Process 1: Gaseous carbon dioxide dissolves into the ocean	Process 2: Animals breath carbon dioxide into the air.	Process 3: Volcances erupt releasing carbon dioxide into the air.	Process 4: Carbon Dioxide in the ocean is released into the air
Process 5: Fossil Fuels are burned.	Process 6: Calcite in water precipitates out of water and is deposited onto the bottom of the ocean.	Process 7: Plants take up carbon nutrients from the soil through their roots.	Process 8: Plants die and decompose. Fossilization may occur and fossil fuels made.
Process 9: Water containing carbonic acid dissolves limestone in a cavern.	Process 10: Carbonate sediments (shells) are deposited on the bottom of the ocean floor.	Process 11: Plants absorb carbon dioxide from from the air to make sugar and oxygen.	Process 12: Rocks are chemically weathered and carbon dioxide is released into the air.

Carbon Cycle Interactions

For each of the 12 processes, identify the interactions

Process 1: Gaseous carbon dioxide dissolves into the ocean	Process 2: Animals breath carbon dioxide into the air.	Process 3: Volcanoes erupt releasing carbon dioxide into the air.	Process 4: Carbon Dioxide in the ocean is released into the air
Process 5: Fossil Fuels are burned.	Process 6: Calcite in water precipitates out of water and is deposited onto the bottom of the ocean.	Process 7: Plants take up carbon nutrients from the soil through their roots.	Process 8: Plants die and decompose. Fossilization may occur and fossil fuels made.
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Process 1-

Process 2-

Process 3-

Process 4-

Process 5-

Process 6-

Process 7-

Process 8-

Process 9-

Process 10-

Process 11-

Process 12-

Front

Carbon Cycle
Terms:
Carbon Dioxide- a gas with the formula CO_2
“Sugar”- a solid with the formula $C_{12}H_{22}O_{11}$
Photosynthesis- process where plants and some bacteria and some unicellular organisms use light, water and carbon dioxide to make sugars
Combustion- burning, happens in gas engines, fires
Respiration- when we exhale we put out CO_2
Dissolved- when some matter a solid or gas, is mixed into a liquid

Inside

ATMOSPHERE

Carbon is in the form of a gas.

CO_2

How does it get there?

From volcanic eruptions, respiration, combustion

Inside

HYDROSPHERE

CO_2 is dissolved in the water

How does it get there?

Mixed from air and respiration

Inside

GEOSPHERE

Carbon is part of the rocks

How does it get there?

Rock cycle, parts of dead animals, plant, shells

Inside

BIOSPHERE

Parts of living things; carbohydrates (sugars), protein (muscles)…plants, animals, etc.

How does it get there?

Photosynthesis, photosynthesis, eating plants and animals