#### Bell Ringer: Page 35

Look at the time zones of the world. What does each vertical line refer to? What does the "International Date Line" refer to?



#### Begin notes on page 35 below bell ringer

### Scientific Language Cards-Front of Card

- You will need 9 index cards
- Write down the word given to you.
- Research the definition and add to the card.
- Write the phonetic spelling under the word
- Draw one connecting image on the card.
- Write one connecting word or words.

### Scientific Language Cards – Back of Card

Use the word in at least one sentence

Underline or circle the vocabulary word

Due as homework: Friday 9/16, beginning of class.

## Vocabulary Words: Due 9/16

- Core
- Mantle
- Crust
- Atmosphere
- Weathering
- Erosion
- Deposition
- Plate
- Fault

## Earth's Structure's and Forces! CC 2.3-2.4



## Earth Layers



The Earth is divided into three main layers.

\*Crust \*Mantle \*Core: Inner and Outer

## The Crust

- The Earth's crust is like the skin of an apple. It is very thin compared to the other layers.
- Includes the land where people live and the ocean floor.
- There are two types of crusts, oceanic and continental.



#### Crust

#### <u>Oceanic</u>

- Makes up our ocean floors
- Thin layer found under the ocean
- Dense

#### **Continental**

- Makes up continents
- Rests on top of oceanic crust
- Less Dense
- Thicker than oceanic



## The Mantle

- The mantle is the layer below the crust.
- The mantle is the thickest layer and rocky.
- HOT! Temperature greater than 3300°F,
- It is solid but able to still flow like a slightly melted stick of butter.



#### <u>Outer Core</u>

- \* The core of the Earth is like a ball of very hot metals, 5000 ·C
- \* The outer core is liquid.
- \* The outer core is made up of iron and is very dense.



#### Inner Core

\* The inner core of the Earth has temperatures and pressures so great that the metals are squeezed together and are not able to move. 6000 C

\* The inner core is a solid.



Diagram Courtesy of Br. Stephen Mattox

#### Checks for Understanding

- 1. Why are the mantle and the core not suitable for human life?
- 2. How is the mantle like a stick of butter?
- 3. Where is the core in relation to the other two layers?
- 4. What state of matter is the inner core?



#### Atmosphere

- Located above Earth's surface
- Comprised of gases called air, including oxygen
- Acts like a blanket holding heat in which sustains all life.

Question: What would happen if the blanket of Earth's atmosphere no longer worked to hold the sun's heat in?

#### Water

- Covers 75% of the Earth.
- Forms a layer above the crust.
- The ocean holds 97% off all Earth's water.
- Most fresh water is frozen in ice caps on the poles
- Most of our fresh water comes from lakes, rivers and ground water.



#### **Checks for Understanding**

- 1. What part of Earth's structure (layer) are the oceans located on?
- 2. What is most of Earth's water like?
- 3. Earth's fresh water is mostly frozen. Why is this a problem?

#### Landforms

- 25% of Earth's surface is land
- Landforms include mountains, hills, valleys or plateaus.
- Created by weathering and erosion.
- An area where a type of landform is dominant is called a <u>landform region</u>.



## Forces Wearing Away Earth's Surface

#### Weathering:

- 1. Chemical: water and acid in the water dissolves the rocks.
- 2. Mechanical: moving water, ice and wind break the rock apart

Weathering helps create soil along with plant and animal matter. Soil is required to sustain animal and plant life.



# Forces Wearing Away Earth's Surface

**Erosion:** Process where wind, water or ice remove small pieces of rock depositing the pieces downstream or downwind. This is called <u>deposition</u>.

**Deposition:** creates new landforms such as beaches.



#### Check's for Understanding

1. How is erosion different from weathering?

#### Page 34 of ISN

#### HMWK page 34 due 9/14:

#### **Analyze A Visual**

Explain the relationship between weathering, erosion and the landform in the photograph on page 24 of your text. What caused the shape in these rocks?

#### AHA Connections: Page 28,29

Can you use something you have learned today and attempt to answer the unit question?

"How do human actions modify the physical environment? How do physical systems affect human activity and living conditions?"

Place the sticky note somewhere on page 28 or 29, and begin to draw connecting lines between the unit question and your new learning.