

Sources of Earth's Energy

1. Radioactive Decay \_\_\_\_\_

- Geothermal Heating: \_\_\_\_\_

- Hot Spots: \_\_\_\_\_

Ex. \_\_\_\_\_

2. Incoming Solar Radiation (aka \_\_\_\_\_): \_\_\_\_\_

- Includes all parts of the \_\_\_\_\_

How does the Earth cool off?

Equilibrium

1. Static equilibrium: \_\_\_\_\_

2. Dynamic Equilibrium: \_\_\_\_\_

What kind of equilibrium can Earth reach in terms of energy? \_\_\_\_\_

What would have to be true if Earth was in equilibrium in terms of its energy?

## The Greenhouse Effect:

1. Our atmosphere blocks a lot of insolation, including most \_\_\_\_\_
2. Visible light \_\_\_\_\_
  - 2a. Some visible light is reflected back into space by \_\_\_\_\_
3. Some visible light is reflected back out by \_\_\_\_\_  
\_\_\_\_\_
4. Lots of visible light is absorbed by Earth's surface and warms it up.
  - Albedo: \_\_\_\_\_
    - \_\_\_\_\_
    - \_\_\_\_\_
5. Reradiation ( \_\_\_\_\_ ): results as the warm surfaces generates \_\_\_\_\_ .
  - Terrestrial radiation warms the atmosphere from \_\_\_\_\_  
\_\_\_\_\_

6. a. Greenhouse gases ( $\text{CO}_2$ ,  $\text{CH}_4$ , CFC's) absorb \_\_\_\_\_  
\_\_\_\_\_
6. b. Some infrared radiation \_\_\_\_\_
7. The warmed atmospheric gases will reradiate infrared too. Some will warm \_\_\_\_\_  
\_\_\_\_\_

### Greenhouse Effect vs. Global Warming