



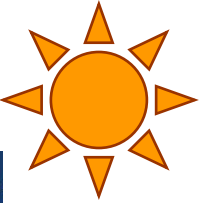
# Light From the Sun

Incoming Radiation in the form of **UV light, visible and a small amount of infrared (short wave)**



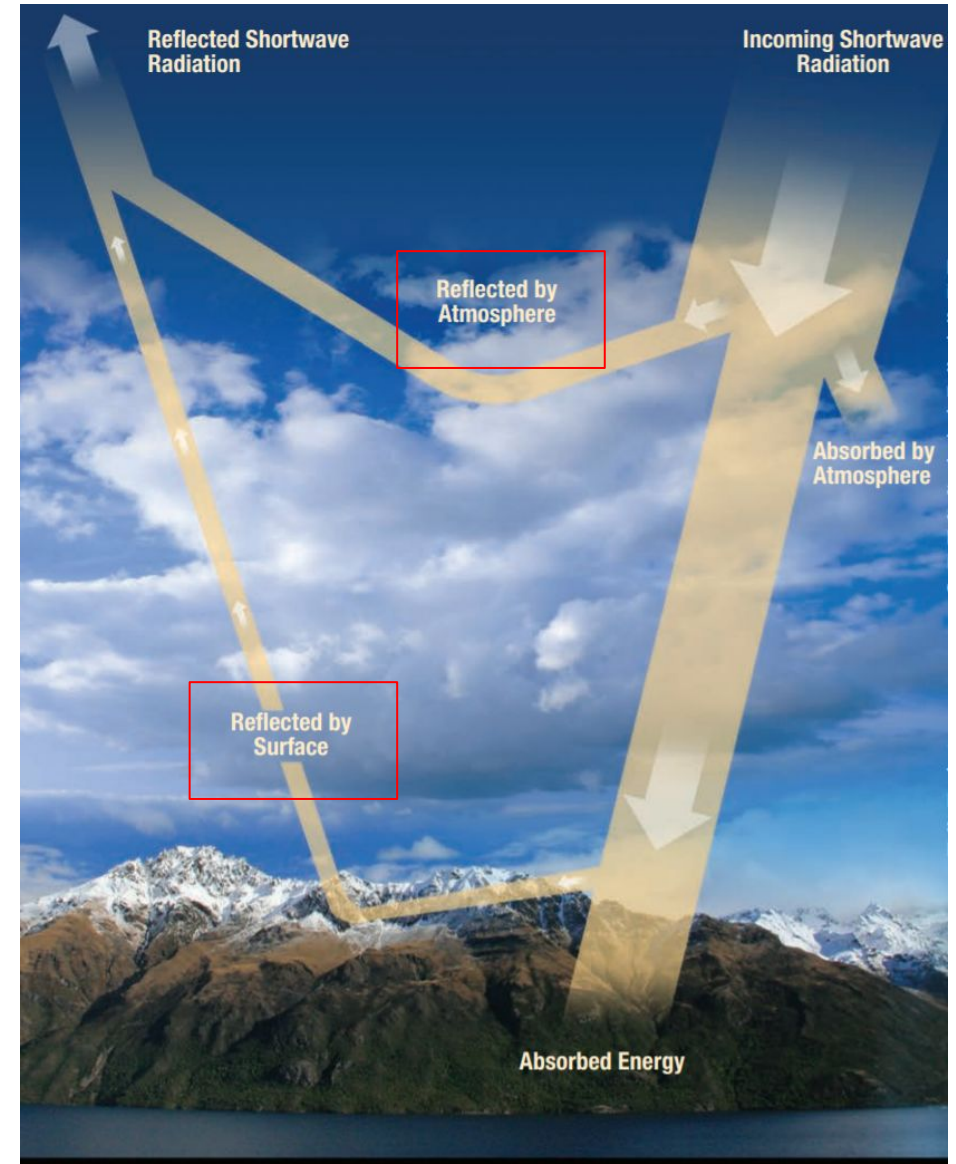
Some of the solar energy (radiation) passes through the Earth's atmosphere and hits the Earth's surface  
**Earth's surface absorbs the energy and warms up.**

# Light From the Sun



Some of the radiation that hits the earth's surface or atmosphere is **reflected** back into space.

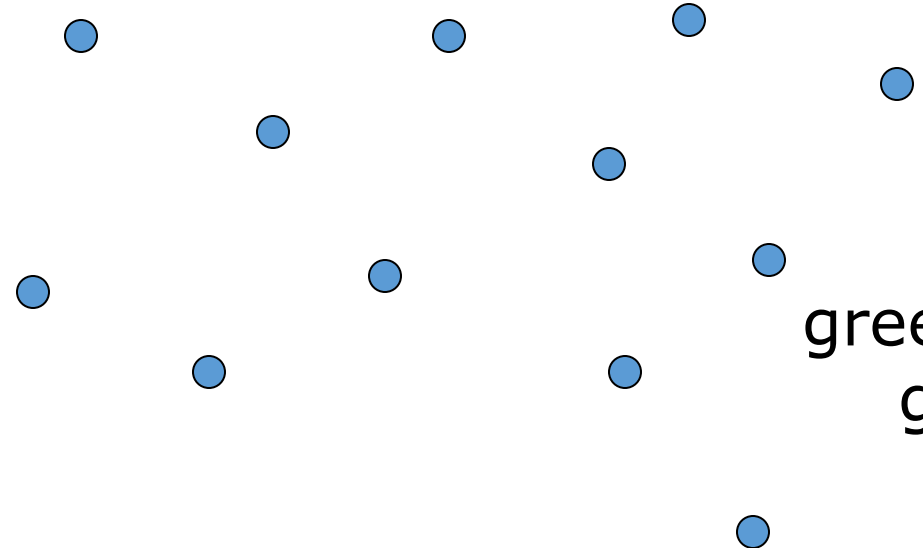
When radiation passes through something, it is **transmitted**.



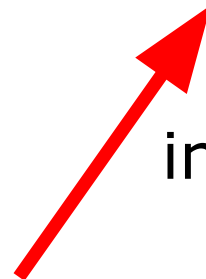
# Light From the Sun



Incoming  
solar  
radiation



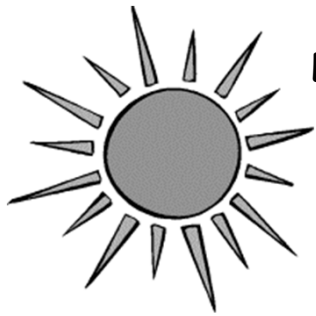
greenhouse  
gases



infrared radiation (IR)



The warm earth's surface radiates infrared (**long wave**) radiation .  
Greenhouse gases absorb IR leaving the surface



## Light from the Sun

1. What type of radiation does the sun emit?

**Long wave**

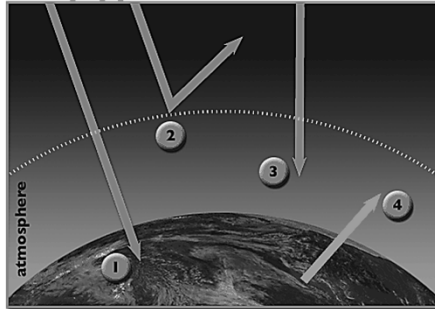
The radiation passes through the Earth's **atmosphere** and hits the Earth's surface

Some of the radiation that hits the Earth's surface does not bounce back. This means it has been **absorbed** / reflected / transmitted

2. When the radiation hits the Earth's surface/atmosphere some of it bounces back into space. This means it has been absorbed / **reflected** / transmitted

3. When radiation passes through something this means that it is absorbed / reflected / **transmitted**

4. This radiation warms the Earth's surface and the heat energy is radiated back into space.  
This is called **long wave** radiation.



## The Greenhouse effect

What gases in the atmosphere stop the heat from escaping?

- i.
- ii.
- iii.
- iv.
- v.
- vi.



This is because these gases (absorb/reflect/transmit) the heat energy?



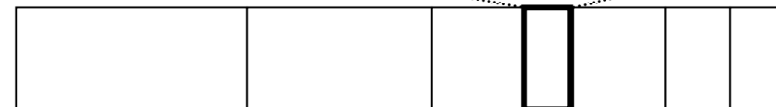
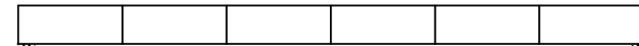
Which gas has increased due to humans?



What would earth be like without the greenhouse effect?

## Electromagnetic Spectrum

What is the electromagnetic spectrum?



\_\_\_\_\_ wavelength

\_\_\_\_\_ frequency

\_\_\_\_\_ energy

\_\_\_\_\_ wavelength

\_\_\_\_\_ frequency

\_\_\_\_\_ energy