

Electromagnetic Spectrum

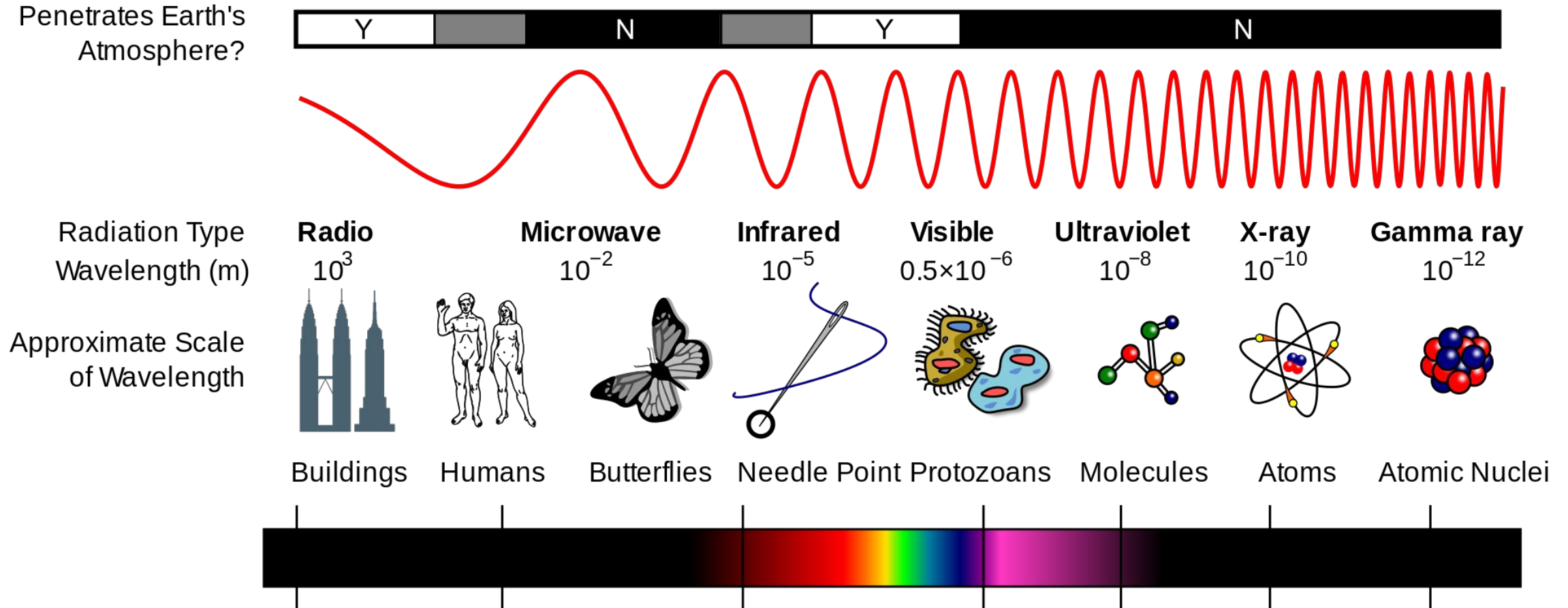
What is the electromagnetic spectrum?

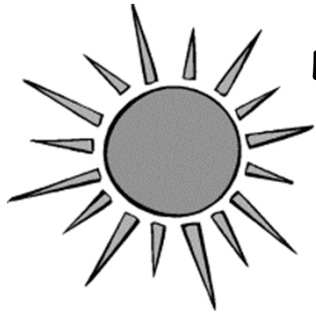
- ❑ a range of all types of electromagnetic (EM) radiation
- ❑ it describes the full range of **light**

Distinguishing characteristics

- ❑ divided into seven regions
- ❑ most types of light are invisible to our eyes

Electromagnetic Spectrum





Light from the Sun

1. What type of radiation does the sun emit?

Long wave

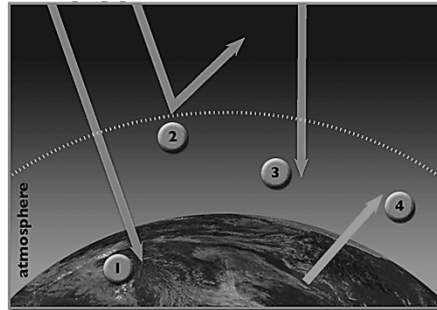
The radiation passes through the Earth's **atmosphere** and hits the Earth's surface

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?



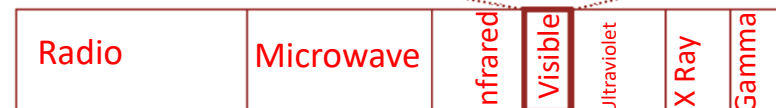
What would earth be like without the greenhouse effect?

Electromagnetic Spectrum

What is the electromagnetic spectrum?

Represents all the different forms of light/electromagnetic energy

Red Orange Yellow Green Blue Violet



high wavelength
low frequency
low energy

low wavelength
high frequency
high energy