

Turn to page 116 in textbook...

**Greenhouse gases=**

**Greenhouse effect =**

**Emitted =**

**Questions**

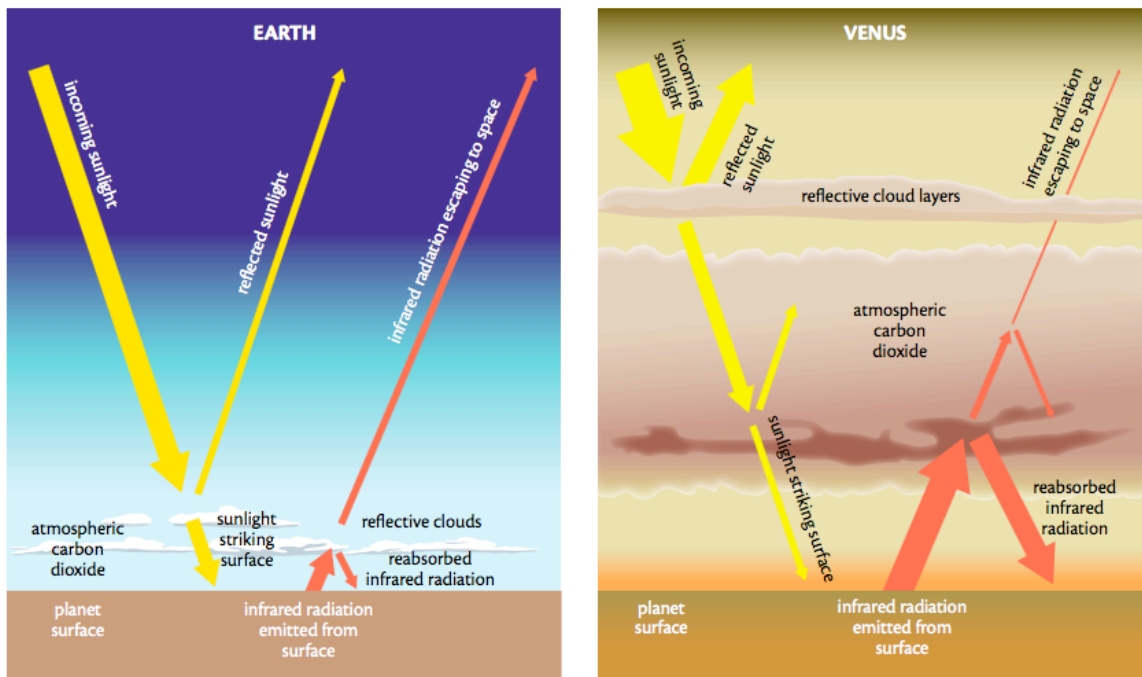
1. Find/record the abundance of gases in Earth's atmosphere.
2. Compare the atmospheric composition of Earth to Venus.
3. Label which gases are greenhouse gases.
4. How do greenhouse gases behave differently from other gases?
5. Which greenhouse gas is found in the highest concentration in Earth's atmosphere? Venus's atmosphere?
6. Find/record the distance Venus and Earth are from the sun.
7. Find/record the surface temperature of Venus and Earth.
8. What, other than distance from the Sun, could be affecting the surface temperatures of these terrestrial planets?

Study the diagrams below. The yellow arrows on these diagrams represent short-wave radiation and the red arrows represent long-wave (infrared) radiation. The thickness of the arrows shows the relative amount of radiation.

9. Why is the arrow showing incoming solar radiation thicker on the Venus diagram than it is on the earth diagram?

10. How does the amount of sunlight reflected by clouds in the atmosphere compare between the two planets?

11. How does the amount of sunlight striking the surface compare between the two planets?



12. Venus's surface is very hot, so a large amount of infrared radiation is emitted, as you can see by the thickness of the arrow. How much of the infrared radiation emitted from Venus's surface makes it back into space? (Give an approximate amount.)

13. Approximately what amount of the infrared radiation emitted from Earth's surface makes it back into space?

14. From facts collected and observations made, what is causing Venus's surface to be so much hotter than Earth's?

