

Name:

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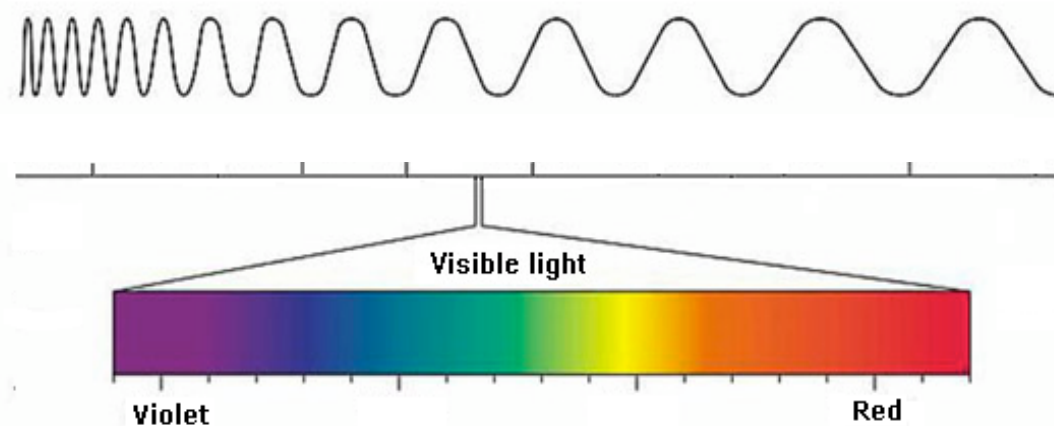
Per:

Greenhouse Gases Study Guide

1. Fill in the table with either the property of light or the evidence of the property

Property of Light	Evidence of Property (you may draw a picture that represents the property)
Light travels out in all directions as straight lines	
	A ruler appears to be bent (a different shape) when submerged in water
Light reflects	
Waves can interfere (when the crest of one wave overlaps the crest of another wave, the crests add together and create a greater amplitude)	

2. Know which waves on the electromagnetic spectrum have high frequencies, low frequencies, short wavelengths, and long wavelengths. You also need to know where each type of wave (including visible light) is found along the EM spectrum.



High frequency (more energy) waves have a _____ wavelength

Low frequency (less energy) waves have a _____ wavelength

3. Fill in the table with either the property of gas or an example illustrating the gas property.

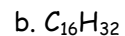
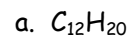
Property	Example illustrating property
Gases have mass	
	When the balloon was placed in hot water it expanded
	The volume of a balloon increases when you exhale into it
Gases exert pressure	

4. List the main elements that make-up the Earth's atmosphere and include their percentages:
- a. _____ c. _____
- b. _____ d. _____
5. Explain what the temperature of Earth would be like if there was no atmosphere:
6. What are the main greenhouse gases?
7. If the Earth's atmosphere were composed of .07% Carbon Dioxide and Mars' atmosphere were composed of 54% Carbon Dioxide, explain which planet would have the greatest greenhouse effect.
8. What is the difference between global warming and the greenhouse effect?

9. Draw a picture that represents the greenhouse effect (you should include the Earth's surface, the sun, atmosphere, and light rays)

10. Explain why fossil fuels are a non-renewable resource (Hint: how are they made in nature):

11. Comparing molecule a and molecule b, which would release the most carbon dioxide during combustion? How do you know?



12. Draw a diagram that shows how plants (photosynthesis) and humans (cellular respiration) are part of the carbon cycle.

13. In 3 sentences or less, summarize the nitrogen cycle.

14. What do plants and animals depend on to convert nitrogen gas to a usable form?

15. Define nitrification

16. Why do animals and people need nitrogen?

17. What is the "run-away greenhouse effect," or "spiraling up," and give some specific examples that may be causes of this effect happening on Earth today.