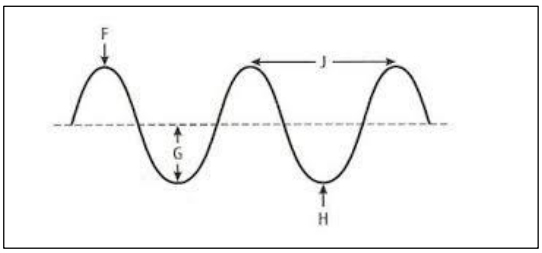
Waves – Bill Nye

Name_____

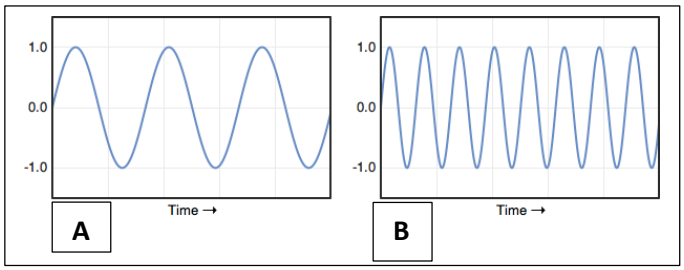
Directions: ***Watch the video. Collaborate with your group after the video to answer the following questions. For additional help on waves, use the following website:*** ***http://www.ducksters.com/science/physics/waves.php***

1. _____travels in **waves.**
2. Light and Sound are forms of _____that travel in _____.
3. Below is a diagram of a **transverse wave**. Label the diagram and explain each term.
4.



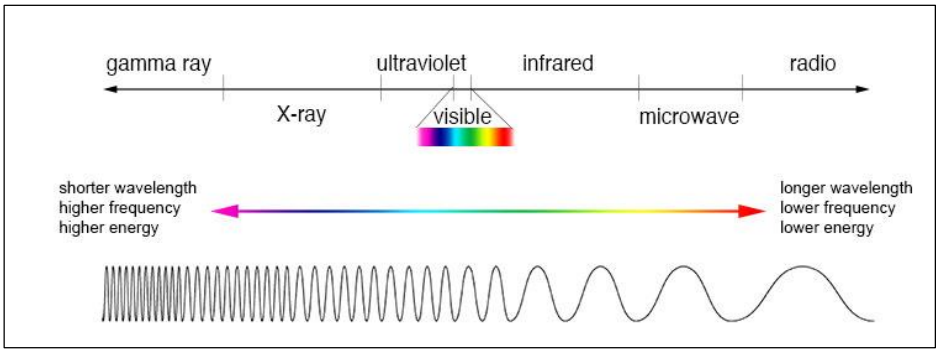
Letter	What is the letter called?	Give a definition for this scientific term
F		The highest point of the wave
G		
H	Trough	
J		

- Below is a diagram that show waves with two different **frequencies.**



5. Which diagram represents a **high frequency** wave?____
6. Which diagram represents a **low frequency** wave?____
7. What is the definition of wave **frequency?**

- Below is a diagram of the **electromagnetic spectrum**. **(Red book –page 337)**

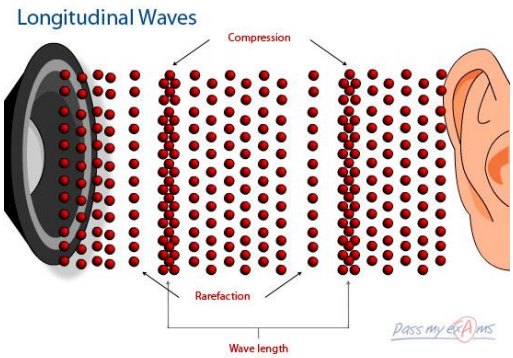


8. Explain how **color** and **wavelength** are directly related to one another.

9. Name 7 different forms of **electromagnetic radiation** and **explain** at least two ways the 7 forms differ from one another.
http://imagine.gsfc.nasa.gov/science/toolbox/emspectrum1.html

a.
b.
c.
d.
e.
f.
g.

- Below is a diagram of a **sound wave** which is also called a **longitudinal wave** or **compression wave.**



10. Explain how sound waves work using the terms ***compression*** and ***rarefaction.*** ***(Red book-pages 644-645)***

11. Explain how ***echolocation*** and ***sonar*** work. **Refer to pages 669-670 in Red textbook.**