Wave Interactions Quiz Review Name: _____

Quiz Date: _____ Review Due: _____

This short quiz is on wave interactions (reflection, absorption, transmission, refraction, and the Doppler Effect). You will need to create and label diagrams and be able to explain them. Here are the learning targets:

LT: I can create and explain a model of a scenario where light waves are reflected, absorbed, and transmitted.

LT: I can diagram and explain the wave interactions that result in different sound phenomena.

Try these practice problems to make sure you're ready:

1. Sunlight is called "_____" light, but it consists of these colors _____.

2. Each color of light that we see has a different _____.

3. Our eyes have these three types of cone cells _____. How do the cones work to allow us to see other colors? _____

_____

_____

4. Define what happens to a wave in each process:

Reflection: _____

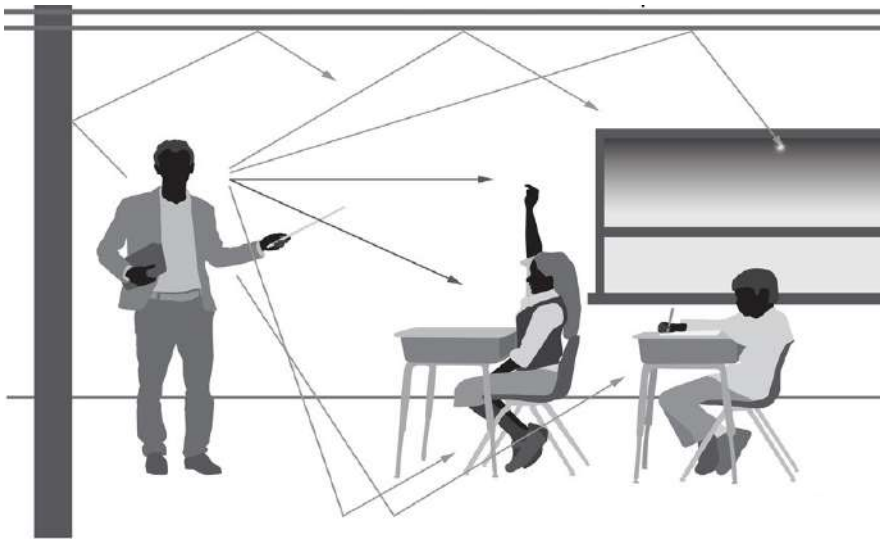
Transmission: _____

Absorption: _____

Refraction: _____

5. A yellow pencil is sitting on the table. What allows us to see it? Draw and label a diagram using the terms **transmission, absorption,** and **reflection** to explain what is happening that makes us see a yellow pencil. Include an explanation of how your eyes and your brain work to see the yellow color.

6. You are standing still on a sidewalk. Suddenly, you hear an ambulance heading along the road towards you. Its siren is blaring one loud note. Describe what you will hear (pitch) as the ambulance approaches and what you will hear as it drives away. Be sure to discuss what's going on with wavelength and frequency of the sound wave. Draw a diagram showing what is happening to the sound waves as the ambulance approaches you.



7. a. Label one spot on the diagram where sound is **transmitted** and **reflected.**

b. What could the designer of this room do to increase the **absorption** of sound by the walls?

8. Draw a diagram of how a submarine could use sound (SONAR) to detect an object underwater. Label your diagram to show **transmission** and **reflection**.