

**Directions:** For each letter pick one box of tasks to review what you know.

You **MUST** choose two review boxes for different standards in two different columns as a remediation activity for the waves unit. **For example you may choose to work on the A&B standard in column II and the C&D standard in column III.**

The grade from these completed activities will be used to replace grades in areas where you can show that you have mastered the material.

### Remediation for Waves

S8P4. Students will explore the wave nature of sound and electromagnetic radiation.	<b>I</b> You must complete all 3 tasks for each letter.	<b>II</b> You may pick 2 of the 3 tasks for each letter.	<b>III</b> You may pick one task for each letter.	<b>IV</b> You may complete the task for any letter.
<b>A &amp; B</b> Characteristics and Behaviors of Mechanical and Electromagnetic waves.	1. Define all of the vocabulary: <i>Absorption, Amplitude, Color, Diffraction, Electromagnetic wave, Frequency, Intensity, Light, Mechanical wave, Medium, Pitch, Reflection, Refraction, Sound, Transformation of Energy, Wave, and Wavelength</i> 2. Identify the characteristics of waves and the behaviors of waves explaining each one. 3. List 3 examples of mechanical and electromagnetic waves.	1. Create a diagram that explains the characteristics and movement of both types of waves. 2. Illustrate a comic strip that explains the behaviors and characteristics of the two types of waves. Minimum 4 slides with 1 sentence to explain for each. 3. Use the textbook and create your own explanation for the behaviors and characteristics of waves.	1. Compare and contrast Electromagnetic and Mechanical waves. Explain how the two relate and work together. 2. Draw conclusions between Electromagnetic and Mechanical waves from what we have learned and explain how it relates/ reinforces what you learned in life sciences.	1. Explain why different types of waves are impacted by different mediums, even if said medium is not required for transmission, effect wave behavior. Include examples and instances from other subject matters to clarify your reasoning.
<b>C &amp; D</b> Explain how the human eye sees objects and colors and explain how different mediums can impact the behavior of waves and the eye's perception of light.	1. Draw and identify the parts of the eye and the behaviors of light waves. 2 Create flashcards for vocabulary: <i>Cornea, iris, pupil, lens, retina, cones, rods, optic nerves, frequency, transparent, translucent, opaque, color, reflection, refraction, diffraction.</i> 3. Compare and contrast the way a person hears sound to the way a person sees light.	1. Illustrate a comic strip that explains the behaviors and characteristics of light waves and how they behave. Minimum 4 slides with 1 sentence to explain for each. 2. Write a song that explains the function of the eye and behavior of light in the world around you. 3. Diagram an eye and various light behaviors in a small booklet. Explain each page in one to two sentences.	1. Evaluate your notes and the textbook create 10 original questions about the behavior of Electromagnetic waves and the Eye focus an additional 5 questions on their relationship. 2. Make a connection between how light waves behave and are perceived by the eye and how sound waves behave and are perceived by the ear.	1. Create a brochure about Light waves. Explain the types of waves, give examples, and illustrate each. Introduce and explain the multiple facets of light behavior and sight. Include ROYGBIV, the EM Spectrum and color. Finally explain the processes involved for how humans see. Make connections between energy waves and sight. In a conclusion paragraph <b>persuade</b> the reader what the most critical concept about light and sight is and why.
<b>E &amp; F</b> Diagram the parts of a sound wave, show the changes in a waves in different mediums. Explain how sound waves are effected by different mediums.	1. List examples of longitudinal waves and wave behaviors. 2 Create word walls for vocabulary: <i>Outer ear, ear drum, hammer, anvil, stirrup, cochlea, auditory nerve, frequency, pitch, echo, Doppler effect, vibration.</i> 3. Create a fact chart about all of the ways sound waves can behave and be impacted by different forms of matter.	1. Create an anchor chart that explains and displays what you have learned about the different ways that sound waves behave with different mediums. Give examples and illustrations, include memory tools for others. 2. Make a Venn Diagram comparing and contrasting wave and light behaviors. 3. Make a bubble map about sound waves that includes all of the types of behaviors that occur when sound is introduced to different mediums.	1. Diagram a picture of an ear and explain how sound waves create sounds. Show how changes to the characteristics of waves (frequency, amplitude, pitch, etc. can affect how sound is heard) 2. Connect the types of sound wave behaviors to the mediums that they interact with. Your observations need to be explained in a full paragraph.	1. Write a persuasive paragraph: Sight/ Hearing is a more complex body system because... Include textual support, pictures, diagrams, use characteristics, behaviors, and interactions to refine your position and prove your point.