



Oxford City Schools

# Proficiency Scale

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**GRADE LEVEL: 10-12    COURSE NAME: Physical Science**  
**MEASUREMENT TOPIC: Compare the Movement of Energy Through Waves**

<b>4</b>	In addition to Score 3, the student makes in-depth inferences and applications.
<b>3</b>	The student can: <ul style="list-style-type: none"><li>• Compare and contrast the transfer of energy through electromagnetic and mechanical waves.</li><li>• <b>Obtain information in order to communicate how transmitting and receiving devices use principles of waves to transmit and capture energy using phenomena such as:</b><ul style="list-style-type: none"><li>• Doppler effect</li><li>• SONAR</li></ul></li></ul>
<b>2</b>	The student can: <ul style="list-style-type: none"><li>• <b>Analyze the ways in which different media and their characteristics affect the speed of sound and light waves.</b></li><li>• <b>Use models to describe reflection, refraction, interference, and diffraction.</b></li><li>• <b>Describe the relationship amongst wavelength, frequency, amplitude, and energy in waves.</b></li></ul>

**1**

With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.

**Key Vocabulary:**