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| **Physical Science** |
| **Energy** |
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| **Score 4.0** | **In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.** |  |
|  | *Score 3.5* | *In addition to score 3.0 performance, partial success at score 4.0 content* |  |
| **Score 3.0** | The student will:Describe mechanical wave properties (speed, wavelength, frequency) and how waves travel through a mediumRecognize that energy in waves can be changed into other forms of energyRecognize that light can behave as a wave (diffraction and interference)Recognize that the production of electromagnetic waves is a result in changes in the motion of charges or by changing the magnetic fieldCompare and contrast segments of the electromagnetic sprctrum based on frequency and wavelengthInterpret the law of conservation of energy to make predictions for the outcome of an eventIdentify that all energy can be considered to be either kinetic, potential, or energy contained by a field (e.g. electromagnetic waves)Recognize that an attractive or repulsive force exists between two charged particles and that this force is proportional to the magnitude of the charges and the distance between them  | **Sample Activities:**Slinky labVirtual LabVideosReading and animation activitydiagrams |
|  | *Score 2.5* | *No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content* |  |
| **Score 2.0** | There are no major errors or omissions regarding the simpler details and processes as the student:\*recognizes or recalls specific terminology such as: Transverse wave, longitudinal wave, electromagnetic wave, mechanical wave, crest, trough, amplitude, frequency, period, diffraction, reflection, refraction, constructive interference, destructive interference, potential energy, kinetic energy | **Sample Activities:**diagrams, bellringers, sporkle game, word web |
|  | *Score 1.5* | *Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content* |  |
| **Score 1.0** | **With help, partial success at score 2.0 content and score 3.0 content** |  |
|  | *Score 0.5* | *With help, partial success at score 2.0 content but not at score 3.0 content* |  |
| **Score 0.0** | **Even with help, no success** |  |