**Noteguide for Basic Wave Principles and Calculations (Videos 12A, B, C))Name**

**Video 12A - two important principles:**

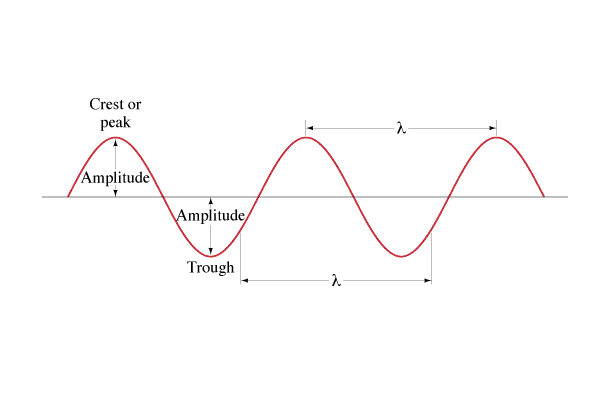
|  |  |
| --- | --- |
| Principle 1: | Principle 2: |

**Video 12B - Types of waves:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Wave moves** | **Particles move** | **Examples of** |
| **Transverse:** |  |  |  |
| **Longitudinal:** |  |  |  |

I have some demos and activities for this in class tomorrow

**Video 12C - Wave Calculations - Period, Frequency, Wavelength, and Wave speed**

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|  |  |
| --- | --- |
| **Formula 1:** | **Formula 2:** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Symbol | What it is | Units |
| Medium |  |  | N/A |
| Amplitude |  |  | Many answers |
| Wavelength |  |  |  |
| Wave speed |  |  |  |
| Period |  |  |  |
| Frequency |  |  |  |

Example 1: What is the frequency of a wave that takes 0.12 s for the whole wave to pass by?

Example 2: What is the wavelength of an A 440.0 Hz if the speed of sound is 343 m/s?

**Whiteboards:**

|  |  |
| --- | --- |
| 1. What is the period of a 60. Hz wave? | 2. What is the frequency of a wave with a period of 0.003906 s |
| 3. What is the velocity of a 1.12 m wave with a frequency of 32 Hz? | 4. What is the wavelength of a 89.1 MHz FM radio signal?  MHz = 106 Hz  v = c = 3.00 x 108 m/s (Speed of light) |
| 5. What is the frequency of a sound wave that has a wavelength of 45 cm, where the speed of sound is 335 m/s | 6. What is the period of a 12.0 m long radio wave?  v = c = 3.00 x 108 m/s (Speed of light) (These are EC on the test) |