Resonance: Key Concepts

**Frequency**

The frequency of the wave is how many cycles pass by in a given time period. What size wavelength will lead to higher frequency?

**Constructive Interference**

If the peaks and troughs of waves are aligned, two waves can add together. If they don't align, the waves can cancel each other out.

**Sound Waves**

Sound is a pressure wave that compresses air molecules. How do you think the frequency of a sound wave changes what we hear?

**Using Resonance**

Particles naturally vibrate at certain frequencies. If we send in signals with a broad range of frequencies, the one that is equal to the particle's resonant frequency will be intensified and others will cancel out. We can learn about quantum particles this way.

**Amplitude**

The frequency of the wave is how many cycles pass by in a given time period. What size wavelength will lead to higher frequency?

**Wavelength**

1 cycle

**Time**

If the peaks and troughs of waves are aligned, two waves can add together. If they don't align, the waves can cancel each other out.

**Compressed Region**

Individual Air Molecules

**Range of frequencies**

Particle's resonant frequency is amplified.

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