

Vocabulary: Resonance

- Driving force – an external impulse pumping energy into a mechanical system.
- Hertz – a unit of frequency equivalent to one cycle per second.
 - A drumhead vibrating 100 times a second is said to have a frequency of 100 Hz.
 - The unit “hertz” (uncapitalized) is named after Heinrich Hertz, a 19th century German physicist.
- Natural frequency – the frequency at which a mechanical system will oscillate when not being driven by an external force.
- Period – the time required to complete one cycle.
 - Period is the inverse of frequency.
- Resonance – the tendency for certain systems to respond more vigorously to certain frequencies than to others.
 - Because the response of a system is very often related to a type of energy, resonance can also be viewed as the tendency for systems to retain or store energy better when the energy is fed into the system at certain frequencies than at other frequencies.
 - The natural frequency of a system is very commonly a resonance frequency.
- Sound wave – a pattern of pressure fluctuations moving through space.
 - High-pressure regions are called *compressions* and low-pressure regions are called *rarefactions*.
 - The pressure fluctuations cause our eardrum and the various bones nearby to vibrate, allowing for the sense of hearing.

