**Vocabulary: Hearing: Frequency and Volume**



**Vocabulary**

* Decibel – a unit used to measure relative sound intensity, or loudness.
	+ The symbol for decibel is “dB.”
	+ The decibel is measured relative to a reference intensity level. The reference level may vary in different applications.
	+ The decibel scale is a logarithmic scale. A decibel level of 20 is 10 times louder than a decibel level of 10 and 100 times louder than a decibel level of 0.
* Equal-loudness curve – a line on a sound *volume* vs. sound *frequency* graph that represents equal perceived volume across the spectrum of frequencies.
* Frequency – the number of times something happens in a given period of time.
	+ The frequency of a sound wave is equal to the number of waves that pass a point each second.
	+ The shorter the *wavelength* of a wave is, the greater its frequency. Longer wavelengths correspond to lower frequencies.
* Hertz – the SI unit of frequency.
	+ The symbol for hertz is *Hz*.
	+ One hertz is equal to one wave per second.
* Logarithm – the power to which a certain number (called the “base”) must be raised to in order to produce a given number.
	+ The base for a logarithm is usually either 10 or the number *e* (2.7183).
	+ For example, the base-10 logarithm of 1,000 is 3 because 103 = 1,000.
	+ Decibels use base-10 logarithms.
* Pitch – the perceived frequency of a sound.
	+ Shrill sounds like sirens or smoke alarms are high in pitch and high in frequency.
	+ The deep sounds made by foghorns and tubas are low in pitch and low in frequency.
* Threshold – the smallest detectable sensation.
* Volume – the intensity or magnitude of a sound.
	+ The difference in the volume of two sounds can be measured in decibels.