

## **AUGUST HORSE MATH & SCIENCE FUN**

Have there been times when you're with a horse and something catches their attention? Their head goes up and their ears start flicking back and forth searching for a sound. While you hear nothing! How does a horse's hearing compare with ours?

Horses hear a wider range of high frequency tones than we do. Humans with good hearing perceive sound in the frequency range of 20 Hertz to as high as 20,000 Hertz, while the range of frequencies for horse hearing is reported as 55 to 33,500 Hertz with their best sensitivity between 1,000 and 16,000 Hertz.

Science Talk: hertz (symbol: Hz) is a unit derived from time which measures frequency. Frequency is how often something happens. A frequency of 1 hertz means that something happens once a second. The note Middle C (the C in the middle of the piano) is 262 Hz. This means there are 262 vibrations every second, which is heard as the note Middle C, when that piano key is played.

While you can probably hear some lower sounds better than your horse, she hears many more sounds than you do, especially high pitched ones.

A horse's ear is moved by ten muscles (humans have three) allowing each ear to rotate independently almost 180 degrees! This means horses have the ability to listen in two different directions at the same time without moving their head!

### **More about Horse Hearing**

Is music played in your barn? Ever wonder if the horses like it? A Hartpury College study looked at whether horses liked classical, country, rock or jazz. Read all about it on Horse Lover's Math  
Do Horse Like Music?

<https://www.horseloversmath.com/do-horses-like-music>

How do horses respond to different human voices? Most horse owners will tell you that their horses know when they're being scolded or when they're being praised based on tone. Some will even say their horse has a preference for a high- or low-pitched voice. But is there any proof? Learn more at Horse Lover's Math

Do Horses Understand Our Tone of Voice?

<https://www.horseloversmath.com/communicating-with-horses>