

Kirsten Hamm
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Pitch Shift

According to the pitch-shift phenomenon, there is a slight upward pitch-shift with age. This means that the typical non-severely damaged hearing of a child or adolescent will allow them to hear higher frequencies than that of an adult.

Insert Video Here

However, as children and adolescents increase in age, they will no longer be able to hear the high pitches they could as children/adolescents. Because the frequencies perceived in adolescence as lower are shifted and perceived as higher when age increases, the highest frequencies heard as a child are shifted out of one's hearing range.

Insert Demonstration of Different Tones w/ Class Here

Introduce:

These are ultrasonic ringtones that can be downloaded from the internet. These ringtones are advertised especially to adolescents who are students, as tones that they can hear, but their older teachers and parents cannot. (You can imagine the trouble that can bring!) These ultrasonic sounds for ringtones are referred to as "Mosquito Ringtones."

Demonstrate:

I will play different "Mosquito Ringtones" that vary based on frequency. As I play each tone and the frequencies appear on the screen, please write down each frequency. Circle the last, highest frequency value you hear. After you get that value, you no longer need to write anything.

Explain:

Because of the phenomenon of the upward pitch shift, it is possible to predict the age-range of an individual with non-severely damaged hearing, based on the highest frequency they can hear.

Insert Own Table of What Each Sound Meant

Everyone please match your highest frequency to the chart. Given that there are no hearing conditions in the class(...?), raise you hand if your corresponding age-range correct.

SIDE NOTE: Also notice the different notes beside each frequency. Since frequency is the primary determiner of pitch, these notes/tones at which the pitches play vary related to frequency.