What Is Pitch?

And this harp produces sounds with many different frequencies, ranging from as high as 3,000 Hertz--

[PLAYING NOTES]

--to as low as--

[PLAYING NOTES]

--30 Hertz. Because as examples such as this harp show, one reason sounds are not all alike is that they have different frequencies. And the frequency of the sound determines whether it's high or low or in between. The highness or the lowness of sounds is called pitch.

[PLAYING NOTES]

There is a simple experiment that clearly shows how pitch depends on the frequency of a sound, the number of vibrations per second. You take an ordinary playing card and attach it to the rear wheel of a bicycle with a clothespin. If you turn the bicycle upside down you can do this more easily. One edge of the playing card should just touch the wheel's spokes. Now turn the wheel very slowly.

[FLUTTERING]

Each time a spoke hits the card, the card vibrates.

[FLUTTERING]

Notice how when you turn the wheel slowly, the pitch is low. But as you turn it faster and faster, the pitch gets higher and higher. The faster something vibrates, the greater its frequency and the higher its pitch.

[WHIRRING]

It's important to remember that pitch and volume aren't related. Volume refers to how loud or soft a sound is. Pitch refers to how high or low a sound is. We can see these distinctions in our own voices. I can change the volume of my voice by talking (WHISPERING) more softly or more loudly! I can also change the pitch of my voice. I can talk with a high pitch or with a pitch that is lower. We change the volume and pitch of our voices all the time in the course of normal conversation. (MONOTONE) In fact, our speech would be very flat and unnatural if we didn't change its volume and pitch.