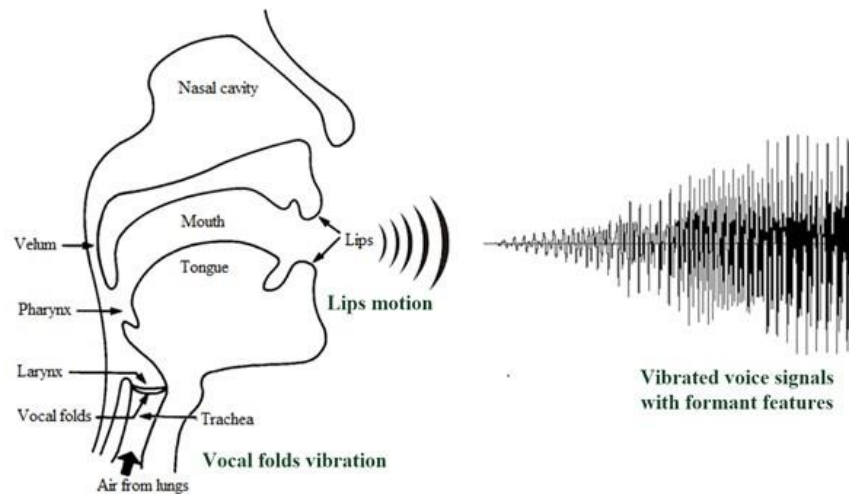


Making Sense of Patterns of Pitch

Most of us know that sound is produced by vibrating objects that create waves. When our vocal chords vibrate, they make waves that travel through the air. When these waves enter the ear of a listener, they can be interpreted as sounds. When these sounds are produced in meaningful patterns, we may interpret them as warnings, music, intelligible language, or gibberish. While the interpretation of these sounds may now seem automatic to us, it takes a great deal of our brain's time and energy to understand these wave patterns when we are young.



Music is the art of giving structural forms and rhythmic patterns to sound. Music provides an artistic design for vibrations that, when artfully applied, can be created and enjoyed by all cultures – even if you don't speak the language of the composer. Music can be composed for a huge orchestra of instruments or a melodious solo singer. Even a simple set of plastic palm pipes provides us with a complete scale of musical notes. Luckily, that's all we need to start making some cool music together.



We can change the pitch of a sound by either changing the speed of the sound or the wavelength. Since the speed of sound is difficult to change significantly, we can change wavelength by using pipes of different length. These changes modify the pitch of the wave that is created by the palm pipe. The longer the wavelengths (the longer the pipe), the lower the pitch of the pipe.

Can you play some cool songs with your palm pipes?