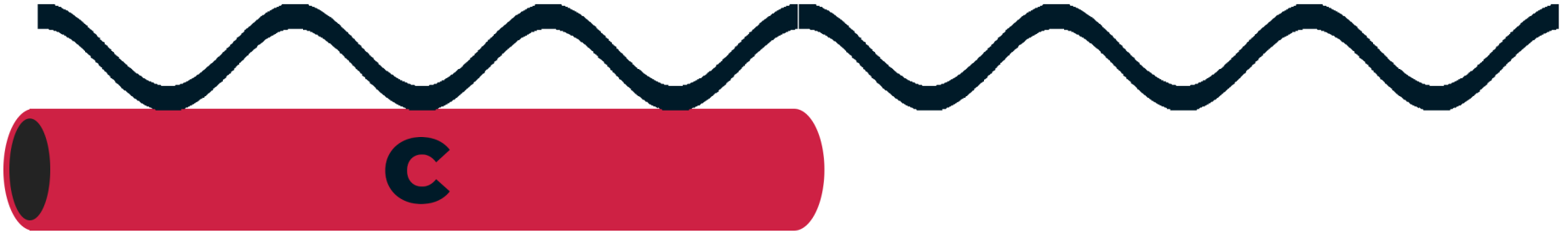
Boomwhacker Wavelengths

The tuning of the major scale relies on a principle that the wavelength of any pitch is doubled if played one octave lower or doubled if is played one octave lower.

All the other pitches in the scale have distinct mathematical ratios according to these wavelengths. It is becuase of these mathematecal relationships that certain notes harmonize with others, particularly the octave.

Boomwhackers are the ideal instrument to demonstrate these principles becuase their physical lengths very closely match these ratios.

The High C has a wavelength of 65.93 cm.
Compared to the Low C, the wavelength is doubled.



The Low C has a wavelength of 131.86 cm.
Compared to the High C, the wavelength is doubled.