Hazlip Creative Learning

Sound

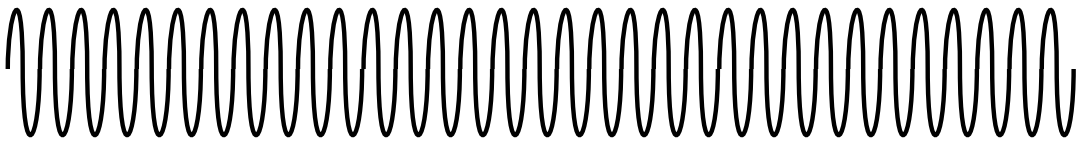
Sound is _____ _____

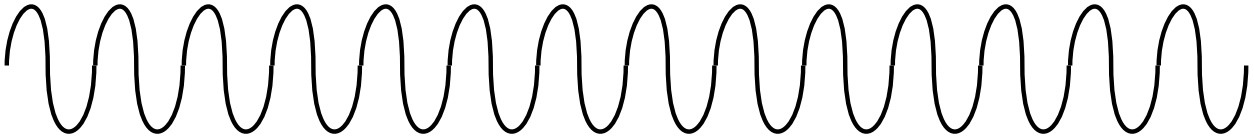
The air vibrates as a _____

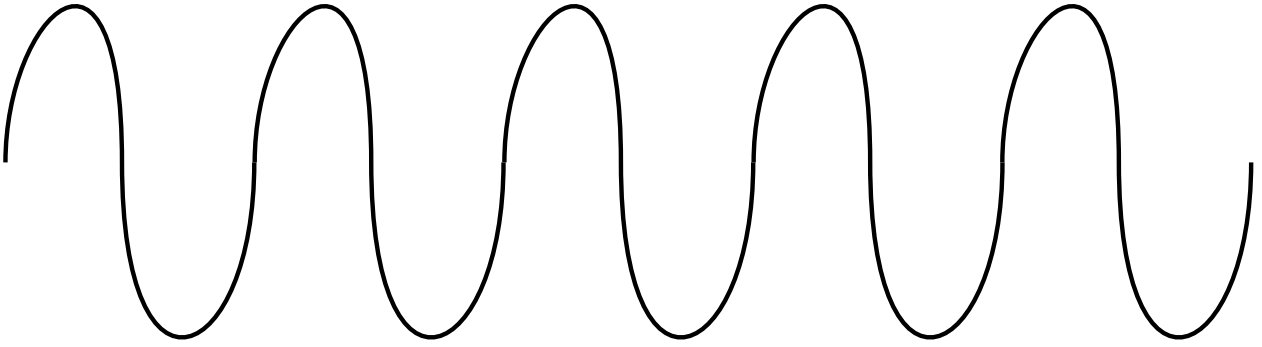
The waves travel at _____ which is about _____ mph

Directions: Match the name of the frequency with it's sound wave

Middle	Low	High

a. _____ 

b. _____ 

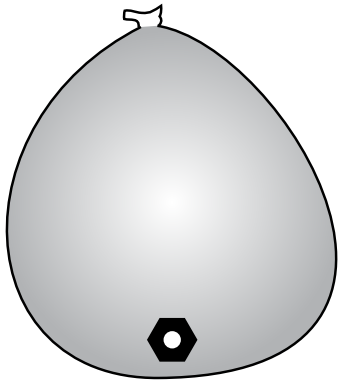
c. _____ 

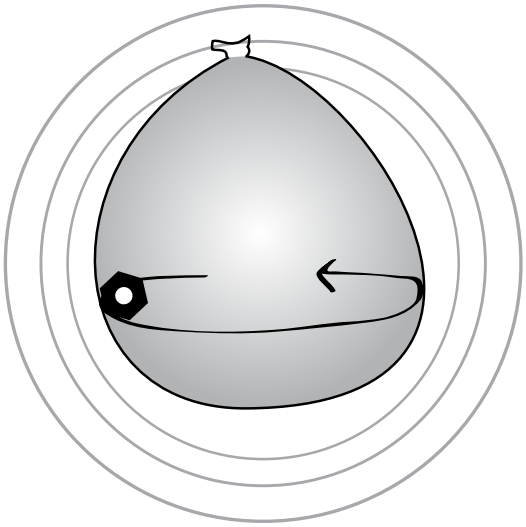
Hazlip Creative Learning

Sound

Singing Balloons

Drop a six-sided hex nut into a balloon and inflate the balloon. Move the balloon around in circles to get the nut moving around the inside of the balloon.





What happens when you shake the balloon?

Why do you think this is happening?

What happens when the nut moves faster or slower?

Why does this happen?

Bonus Question!
What force is making the nut stick to the inside of the balloon?

Hazlip Creative Learning

Sound

Sound is _____Vibrating_____ _____Air_____

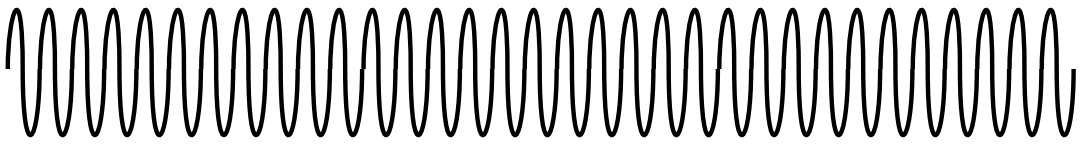
The air vibrates as a _____Wave_____

The waves travel at _____Mach 1_____ which is about _____650 - 700_____ mph

Middle	Low	High

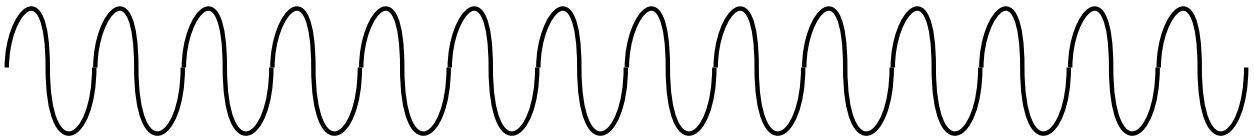
a. High

(Treble Notes)



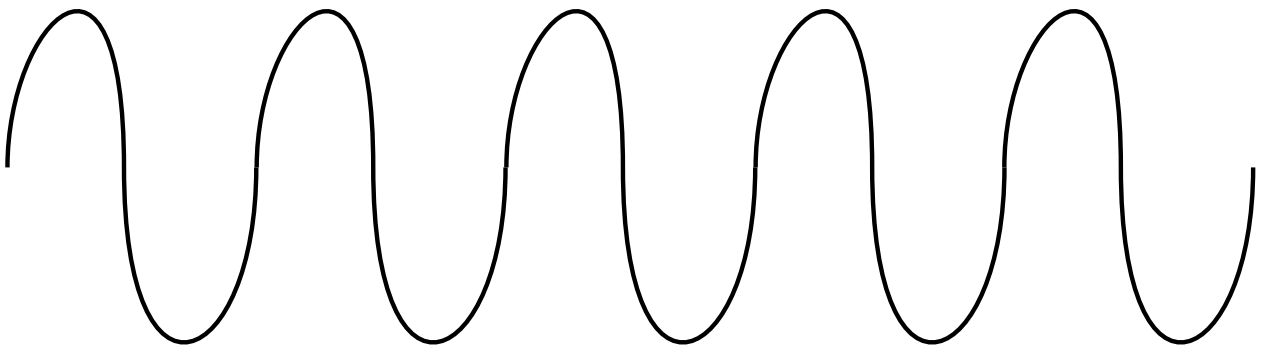
b. Middle

(Mid-Range Notes)



c. Low

(Bass Notes)

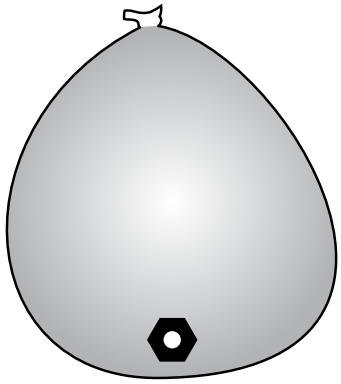


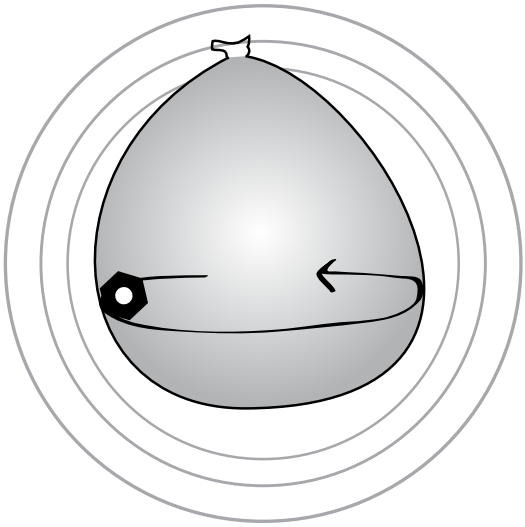
Hazlip Creative Learning

Sound

Singing Balloons

Drop a six-sided hex nut into a balloon and inflate the balloon. Move the balloon around in circles to get the nut moving around the inside of the balloon.





What happens when you shake the balloon?

The Balloon sings

Why do you think this is happening?

Answers will vary
The nut is causing the surface of the Balloon to vibrate which in turn Vibrates the air inside and outside The balloon

What happens when the nut moves faster or slower?

The frequency changes

Why does this happen?

The faster the nut moves, the higher the Frequency. The frequency drops as the nut slows down, which makes a lower pitch

Bonus Question!
What force is making the nut stick to the inside of the balloon?

Centrifugal Force