

Key Vocabulary

vibration	A quick movement back and forth.
sound wave	Vibrations travelling from a sound source.
volume	The loudness of a sound.
amplitude	The size of a vibration . A larger amplitude = a louder sound.
pitch	How low or high a sound is.

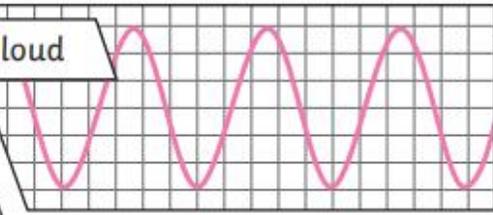
Key Knowledge

Sound is a type of energy. Sounds are created by **vibrations**. The louder the sound, the bigger the **vibration**.

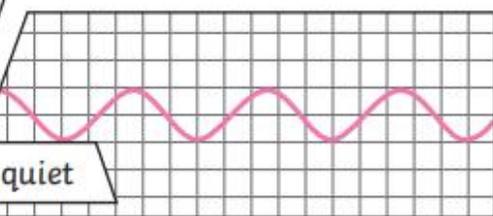


The size of the **vibration** is called the **amplitude**. Louder sounds have a larger **amplitude**, and quieter sounds have a smaller **amplitude**.

loud



quiet

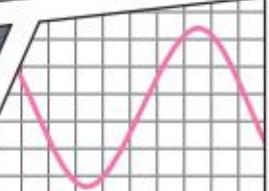


Pitch is a measure of how high or low a sound is. A whistle being blown creates a high-**pitched** sound. A rumble of thunder is an example of a low-**pitched** sound.



Faster **vibrations** = higher **pitch**





Slower **vibrations** = lower **pitch**



You can change the **pitch** of a sound in different ways depending on the type of instrument you are playing.

For example, if you are playing a xylophone, striking the smaller bars with the beater causes faster **vibrations** and so a higher **pitched** note. Striking the larger bars causes slower **vibrations** and produces a lower note.



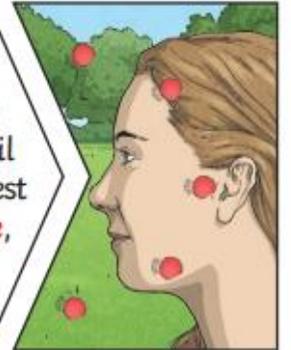
Key Vocabulary	
ear	An organ used for hearing.
particles	Solids, liquids and gases are made of particles . They are so small we are unable to see them.
distance	A measurement of length between two points.
soundproof	To prevent sound from passing through.
absorb sound	To take in sound energy. Absorbent materials have the effect of muffling sound.
vacuum	A space where there is nothing. There are no particles in a vacuum.
eardrum	A part of the ear which is a thin, tough layer of tissue that is stretched out like a drum skin. It separates the outer ear from the middle and inner ear . Sound waves make the eardrum vibrate .

Key Knowledge
 Sound can travel through solids, liquids and gases. Sound travels as a **wave**, **vibrating** the **particles** in the medium it is travelling in. Sound cannot travel through a vacuum.

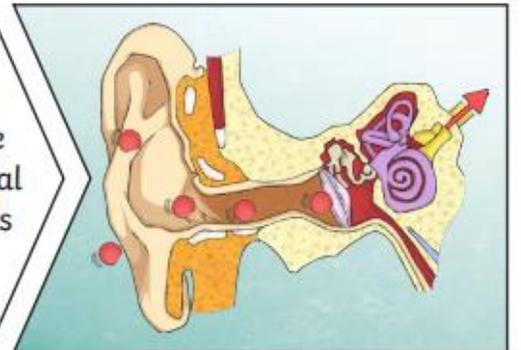
When you hit the drum, the drum skin **vibrates**. This makes the air **particles** closest to the drum start to **vibrate** as well.



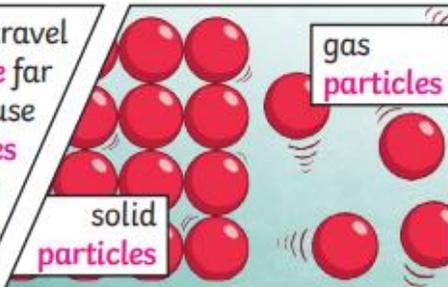
The **vibrations** then pass to the next air **particle**, then the next, then the next. This carries on until the air **particles** closest to your ear **vibrate**, passing the **vibrations** into your **ear**.



Inside your **ear**, the **vibrations** hit the **eardrum** and are then passed to the middle and then the inner **ear**. They are then changed into electrical signals and sent to your brain. Your brain tells you that you are hearing a sound.



Sound energy can travel from **particle to particle** far easier in a solid because the **vibrating particles** are closer together than in other states of matter.



If you throw a stone in a pond, it will produce ripples. As the ripples spread out across the pond, they become smaller. When sound **vibrations** spread out over a **distance**, the sound becomes quieter, just like ripples in a pond.



Key Vocabulary

agriculture	The farming of crops or animals.
early settlers	The first people to settle in an area including Romans, Vikings and Anglo-Saxons.
healthcare	Includes, doctors, dentists, hospitals etc.
industrial	Businesses that provide products or services.
leisure	Time spent away from work relaxing.
retail	Shops selling products to people.
settlement	A village, town or city where people live.



Early Settlers

- Many of the places where people live today have existed for hundreds or even thousands of years.
- They were created by **early settlers** to the UK including Romans, Vikings, Anglo-Saxons.
- London - AD 43, Grimsby - AD 800, Milton Keynes - AD 1967



What Did Early Settlers Need to Have?

- shelter
- water
- food

What Would Early Settlers Have Liked to Have?

- transport links
- **healthcare**
- electricity

What Would Early Settlers Not Have Needed?

- entertainment
- friends
- shops

Place Names

Place names give us clues as to who first settled in an area and what it was like.

Romans

- chester = castle
- caster = castle
- cester = castle
- e.g. Manchester



Anglo-Saxons

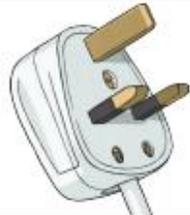
- ham = village
- ton = farm
- ford = river crossing
- e.g. Birmingham



Vikings

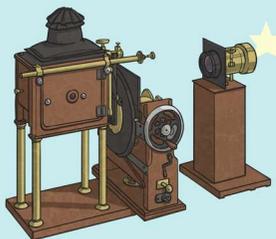
- by = village
- thorpe = farm
- toft = house
- e.g. Scunthorpe



An Ideal Place to Settle		
Essential	Desirable	Unwanted
shelter	entertainment/shops	open to attack
		
water supply	education	
		exposure to weather
food	green space	
		prone to flooding
electricity/fuel supply	neighbours	
		
	healthcare	
	transport links	
		
		

How Is Land Used in Settlements?	
agriculture	industrial
	
housing	leisure
	
business	retail
	

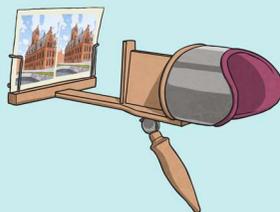
Animation



zoopraxiscope



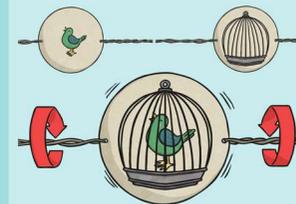
zoetrope



stereoscope



flip book



thaumatrope



loop



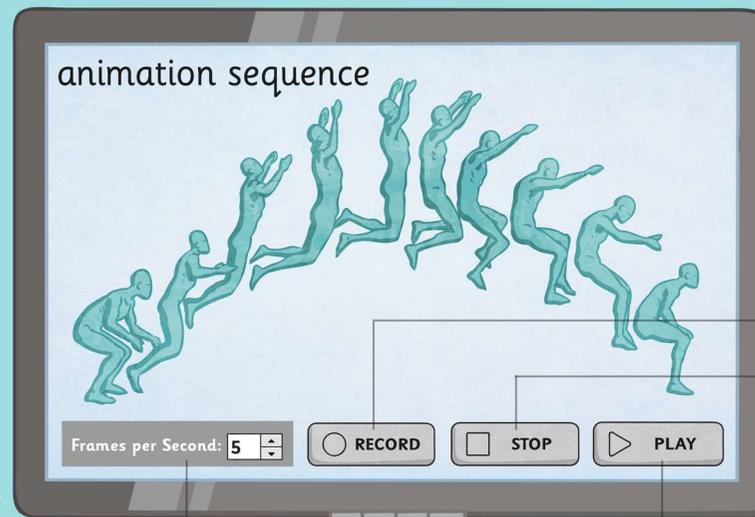
onion skinning



still image



stick man



animation sequence

Frames per Second: 5

RECORD

STOP

PLAY

record stop

play

frame rate