

**SOUND**

KNOWLEDGE ORGANISER

Y4

|  |  |  |
| --- | --- | --- |
| **Overview** |  | How Sounds are Made |
|  -Sounds are made when objects vibrate.-Vibrations travel from objects in waves to our ears, allowing us to hear sound.-Weak vibrations make a gentle soundwave which do not travel as far as strong vibrations. This is why sounds have different volumes.-Sounds can be high pitched or low pitched. Tight, short frequency waves make a high-pitched sound, while more loose waves make low-pitched sounds.  |  |  | -Sounds are created when something vibrates (shakes back and forth).-This creates soundwaves which travel to the ears of the listener.-When a bell is struck, the metal of the bell vibrates. These vibrations create waves in the air (sound waves).-When they reach our ears, they make our eardrums vibrate, and we hear the sound of the bell ringing. |
|  |
|  |  |  |  |
| **Pitch** |  | **Volume** |
| -Pitch is the highness or lowness of sounds. -Pitch is caused by the frequency of vibrations (how many times vibrations go back and forth per second).-The higher the rate of vibrations, the higher the pitch.-Lower pitch sounds have a lower rate of vibrations.-Humans can hear a large range of pitches, high-pitch sounds e.g. a mouse squeak to low-pitch sounds e.g. the rumble of an earthquake.-However, some sounds are too high or low-pitched for us to hear. | Image result for low pitch and high pitch sounds |  | Image result for high and low volume sounds-Volume is the loudness of a sound.-The volume of a sound depends on the amount of energy that the vibrations contain.-Vibrations with lots of energy create large soundwaves. -When these large soundwaves arrive at your ears, they push harder on your eardrums. -This is why when we strike a drum harder (with more energy) it is louder than when we strike it more softly.-Our ears can detect a wide range of loud and quiet sounds, from rumbling jet engines to leaves rustling. |
|  |
|  |
|  |
|  |
|  |

High Pitch Sounds

Low Pitch Sounds

Mouse Squeak

Shriek

Whistle

Thunder

Bass Guitar

Lion’s Roar

Child’s voice

Tuba