

Year 4 – Good Vibrations ENERGY SCIENCE AUTUMN 2

Prior Learning: Children will have learned that sound is heard with ears.

Concept: Energy

In this topic we will be investigating how sounds are made, how they can change and how they travel!

Working scientifically:



Take measurements



Draw conclusions (KS2)
• explain the results using knowledge



4. TWAL to investigate volume

We will be using a decibel reader to take measurements of volume around the school to see where is the quietest place and where is the loudest place.



Volume is how loud or quiet a sound is.



1. TWAL to identify how sounds are made

Stomp! Bang! Toot! - all sounds, but how are they made? We will be investigating how *all* sounds are made when something vibrates using lots of instruments and making our own kazoos!



Sound is made when something vibrates.

2. TWAL to recognise how sound travels

Today we will learn how sound travels through solids, liquids and gases by passing on vibrations. We will explore this by making our own cup telephones.



Sound travels through a medium to get to the ear.



5. TWAL: to find patterns between the volume and strength of vibrations



Today we will use tuning forks and ping pong balls to observe how louder sounds are made when the vibrations are stronger.



Volume is linked to strength of vibrations

6: TWAL: that sounds get fainter as the distance from the sound source increases

We will investigate how sounds get fainter over distance using a buzzer and a decibel reader. We will explain our conclusion verbally, using the image of a hose spraying water, then we will write our conclusions in our own words.



Sound travels in all directions.



3. TWAL to investigate how to control the pitch of stringed instruments



We will use elastic bands to find out how thickness of string, length of string and tension of the string can change how high or low the sound it makes is.



Sticky knowledge: Pitch is how high or low a sound is.

Words we will know!

