Sound	Strand: Physics	Year 4

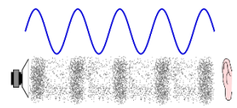
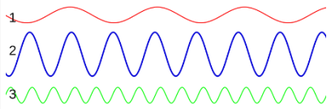
Working Scientifically						
Ask relevant questions	**Set up** simple enquiries	**Make careful observations**	**Gather, record** and **classify data**	**Record** & **report** findings	**Use results** to draw simple conclusions	**Use scientific evidence** to answer questions & support findings

What I should already know
• Hearing is one of the five senses • **Sound** can be combined using musical instruments

Key Vocabulary	
amplitude	how the strength of a **sound wave** is measured
decibel	Unit in which **sound** is measured
electricity	Form of **energy** usually carried by wires and used to power devices
energy	**Power** from a **source** that makes machines work or provides heat
faint	Low **volume**. **Sounds** are **fainter** the further away you are from the **source**
frequency	How many times per second the **sound wave** cycles
insulation	Material that is used to stop **electricity**, heat or **sound** passing through
loud	Very high **volume**
medium	Substance through which **energy** is transferred. **Sound** can be **transmitted** through different **mediums** – solids, liquids or gases
pitch	how high or low a **sound** is and depends on the speed of the **vibrations**
power	**Energy** from a fuel **source** used to operate lights, heating or machinery
sound	Type of **energy** made by something **vibrating**
sound waves	Invisible waves that travel through air, water or solids as **vibrations** for us to hear **sound**
source	Where something comes from

Key Vocabulary	
transmit	Pass from one place, or person, to another
travel	How something moves around
vibrate	When something moves back and forth, or up and down and a **sound** is produced.
vibrations	**Sounds** are made from the **energy** caused by **vibrations**
volume	The **loudness** of a **sound**

Investigate
Use recyclable items and make a musical instrument Make your own telephone using along piece of string and two yogurt pots – why does this work? Fill identical jars with different volumes of water – which one creates the highest pitch? Go on a sound walk and record the sounds you hear in your local environment

What I will know by the end of the unit	
How **sounds** can be made	**Sounds** are things that can be heard. **Sounds** can be heard when something **vibrates**. The **vibration** causes air around the object to move (**vibrate**) and the **vibrations** cause parts of our body inside our ears to **vibrate**. **Vibrations** are invisible – we can't see them, we can only hear them
How **sounds travel**	**Vibrations** travel in a wave pattern called **sound waves**. The waves **travel** through **mediums** (solids, liquids or gases) to the ear. The **louder** the **sound** the stronger the **vibration** 
How **sounds** change	 Long **sound waves** create a low **pitch** Short **sound waves** create a high **pitch** The **pitch** of a **sound** changes – it is either high or low. A mouse squeak has a high **pitch** and is created by short **sound waves.** A lion's roar has a low **pitch** and is created by long **sound waves**. Usually smaller objects produce higher **pitched sounds** The **volume** of a **sound** also changes. How **loud** a **sound** is depends on the strength of the **vibrations** The further away the **sound** is, the lower the **volume**
How we measure **sound**	**Decibels** measure how **loud** a **sound** is **Amplitude** measures how strong a **sound wave** is

Useful links
https://www.dkfindout.com/uk/science/sound/ https://www.bbc.com/bitesize/topics/zgffr82 http://www.sciencekidsathome.com/science_topics/what_is_sound.html http://www.scienceforkidsclub.com/sound.html