

Medium Term Plan: Supporting Implementation of LTP/Progression Grid

Subject: Science Year: KS1 Year A Energy – Forces and Sound
NC/PoS:

- Unit designed to introduce children to energy (electricity, light, sound, and forces) before studying national curriculum units in LKS2

Prior Learning (what pupils already know and can do)

Know that a toy car is pushed to make it move. Know different animals make different sounds. Know lights are switched on and off in the house, school and outside

End Goals (what pupils MUST know and remember)

- Know a force is a push or a pull
- Know that pushing or pulling things can make objects start or stop moving
- Know that sometimes pushes and pulls change the shape of objects

- Know that there are many different sources of sounds
- Know how to make observations of sounds by listening carefully
 - Know that some materials float and others sink

Key Vocabulary: sound, hear, source, force, push, pull, float, buoyant, sink

Session 1: Recap: What body part do we use to hear sounds.

Know that there are many different sources of sounds

Know how to make observations of sounds by listening carefully

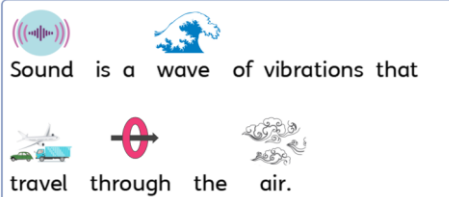
Suggested activities: <https://www.youtube.com/watch?v=n1m4h79JZso>

What is the sound? Carry out a 'sound quiz' by asking children to listen to a recording containing familiar sounds e.g. a car engine, birds singing, children singing, a piano playing, footsteps, a tap running and to identify what they are.

Record different children in the class speaking and ask children to identify who they are
Vocabulary: sound, sources

Session 2: Name some sounds that we named last week.

Teach that sound is a wave of vibrations



Sound is a wave of vibrations that travel through the air.

The diagram consists of a blue box containing several icons: a speaker icon, a blue wave icon, an airplane icon, a red circle with a black dot and a horizontal line through it, and a hand clapping icon. Below the icons, the text reads: "Sound is a wave of vibrations that travel through the air."

Teach:

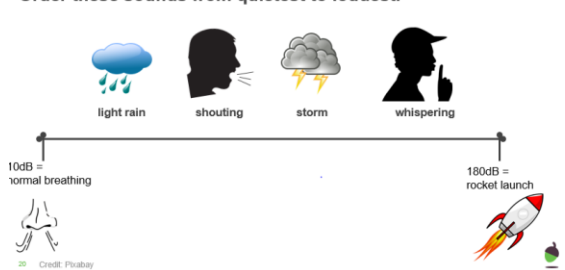


The loudness of a sound is called its volume.

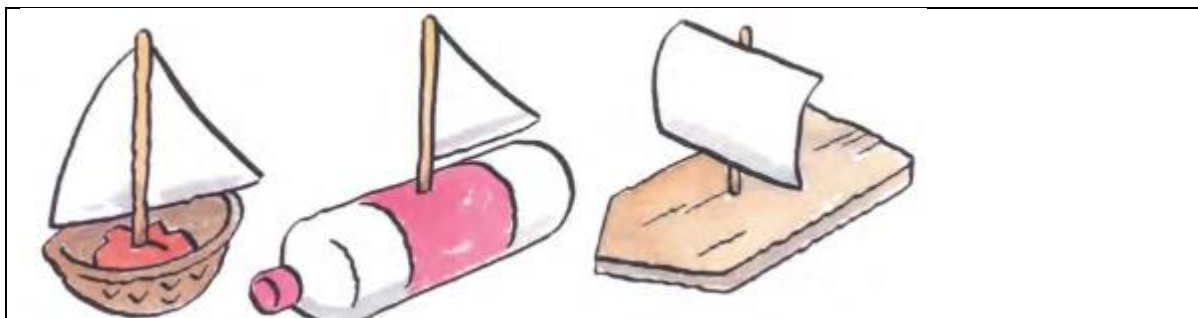
The diagram consists of a green-bordered box containing a speaker icon and a black speaker icon. Below the icons, the text reads: "The loudness of a sound is called its volume."

Explain that we measure how loud a sound is in decibels
Children to order sounds in their books

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<p>Order these sounds from quietest to loudest.</p>  <p>10dB = normal breathing</p> <p>180dB = rocket launch</p> <p>light rain shouting storm whispering</p> <p><small>Credit: Pixabay</small></p>
<p>Vocabulary: sound, volume, loud, quiet, decibels</p>
<p>Session 3: Recap: Can you tell me the names of any objects in the classroom that move?</p> <p>Know a force is a push or a pull</p> <p>Know that pushing or pulling things can make objects start or stop moving</p> <p>Know that sometimes pushes and pulls change the shape of objects</p> <p>Suggested activities: Present children with a collection of materials e.g. plasticine, dough, bag of sand, sponge, elastic bands. Ask children to explore how to make a variety of shapes e.g. sausage, ball, worm to describe what action they used e.g. twist, stretch and to classify the action as a push or a pull.</p> <p>Vocabulary: push, pull, change, twist, stretch</p>
<p>Session 4: Recap the actions used to change the shape of an object</p> <p>Present children with a collection of toys and ask them how to make them move faster, slower, or change direction. e.g. cars, balls, prams, paper aeroplanes, skates, marbles, and pull-string phones. Classify the toys into those which are pushed and those which are pulled.</p> <p>Vocabulary: push, pull, force, stop</p>
<p>Session 5: Recap floating and sinking</p> <p>What happens when you put the things in the water? Can you draw what happens to them in the water?</p> <p>A transparent tank will let children watch what happens to the object</p> <p>A guessing game might encourage children to predict what will happen when each object is placed in water.</p> <p>Sort objects into those that float and those that sink.</p> <p>Vocabulary: float, sink, buoyant</p>
<p>Session 6: Do all big objects sink?</p> <p>Recap what we mean by floating and sinking</p> <p>Children to design a boat that will float</p>

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Predict what will happen then test.

Link to career scientist:

https://pstt.org.uk/application/files/1116/2851/6355/Materials_scientist_-_Pearl_Agyakwa.pdf