

Year 4 Spring 2 Knowledge Organiser – Science

Sound



Science study

INTRODUCE
SOUND



Year:4

Term: Spring 1

sound

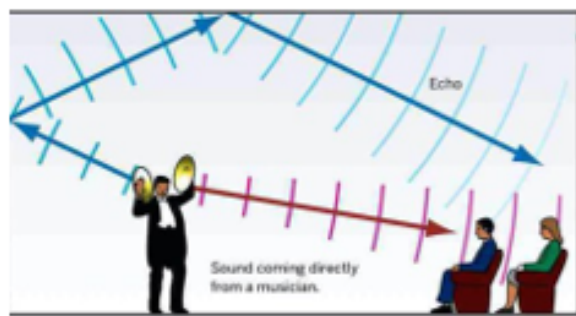
travels in waves as
vibrations

sound waves can
ONLY travel through
a **medium**

A medium such as

- air (gas)
- water (liquid)
- wood (solid)

sound travels through
anything with
particles ✓



Sound coming directly from a musician.

properties of sound

sound

is transfer of **energy**

vibrations create sound

regular and repeated
movement of an object
that moves backwards
and forwards

sound can't
travel in a vacuum
(no particles) ✗

sound travels in air

340 metres each second

pitch

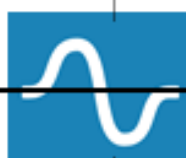
(frequency)

number of **sound** waves
each second

sounds high or low

how frequent
waves are

low pitch



low frequency =
low number of waves
each second (tuba)

high pitch



high frequency = high
number of waves each
second (trumpet)

3 things that affect

pitch

(frequency)
of the sound wave

- size
- length
- tightness

of the thing that
is vibrating

loudness

size of the
sound waves

rest point
(where there would
be no sound)



bigger the waves

more energy

louder it sounds

2 things that affect loudness

amount of energy

amount of stuff vibrating
(larger sound boxes
can make larger sounds)



hearing

sounds travel through a medium (air, water,
wood) and enter your ear canal



sounds vibrate the ear drum,
middle ear and inner ear

vibrations send messages
to your brain

sound fades

vibrations get fainter as the distance
from the source increases

the same amount of
energy is spread over
a larger area



