



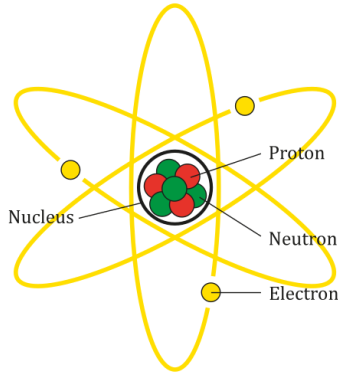
# What does sound travel best through?



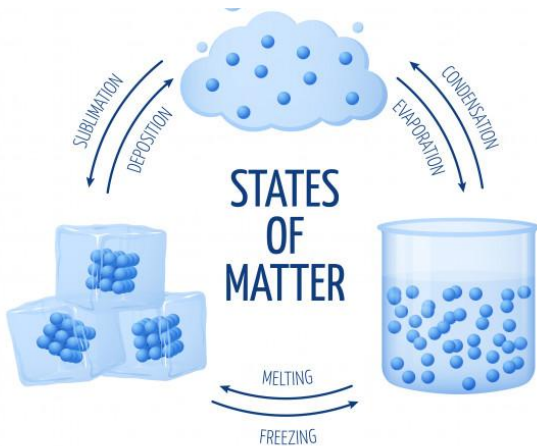
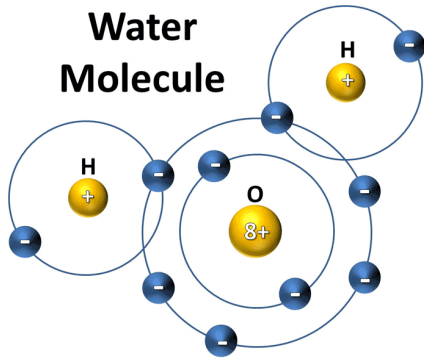
## Pupils will learn

- How sounds are made and how they travel through matter.
- How pitch changes depending on the shape and size of the object that makes them.
- Compare solids, liquids and gases
- Understand changes in state in relation to the water cycle

### Important info



### Water Molecule



### Local links

- Strumpshaw Steam Museum
- Norwich Science Festival
- Sainsbury's Centre for Visual Arts

### Home learning ideas

- <https://www.dkfindout.com/uk/science/solids-liquids-and-gases/>
- <https://www.bbc.co.uk/bitesize/topics/zkkgg87h/articles/zsgwwxs>
- <https://www.exploratorium.edu/snacks/subject/sound>
- <http://kidsacademy.mobi/storytime/sound-science-experiments/>
- <https://www.bbc.co.uk/bitesize/topics/zgffr82>

### Books to read at home

- Horrid Henry Rocks [F. Simon]
- The BFG [R. Dahl]

### Inquiry Questions

If a tree falls in the woods does it make a sound?

- What is a sound?
- How are sounds made?

What is the difference between music and noise?

- How does sound reach your ear?
- Does music create sound waves?
- What is pitch and volume?

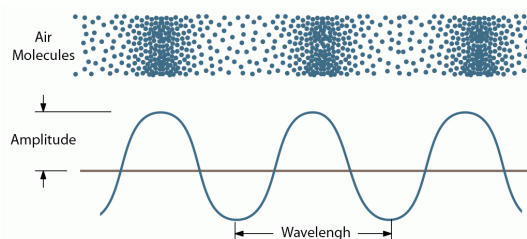
How do particles behave in different states of matter?

- What is a particle?
- What are the differences between a solid, liquid and gas?
- What happens to particles when they are heated?

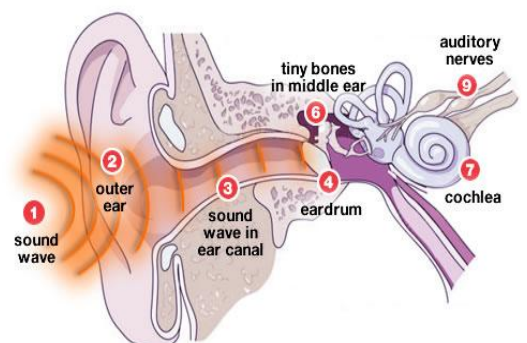
Which states of matter appear in the water cycle?

- Why do puddles disappear?
- What is evaporation?
- What is the water cycle?

## Further Information



An object (e.g. guitar) **vibrates** and makes a sound which passes through air **molecules** in **waves** and enters the ear. It is then turned into signals in the cochlea, which the brain can **interpret**.



## Key Vocabulary

<b>Atoms</b>	The basic building blocks of all matter - made up of protons, neutrons and electrons.	<b>Metals</b>	A solid material which is normally hard, shiny and can conduct electricity.
<b>Amplitude</b>	The height of a wave from its rest position	<b>Molecules</b>	Two or more atoms joined together.
<b>Celsius</b>	A measurement of temperature in which 0 degrees represents the freezing point of water, and 100 degrees represents water's boiling point.	<b>Pitch</b>	The high or low quality of a sound.
<b>Condensation</b>	The change of water from gas to liquid.	<b>Solid</b>	Firm and stable in structure; a fixed volume and shape unlike a liquid or fluid.
<b>Evaporation</b>	The process of a liquid turning into a gas.	<b>Toughness</b>	The ability of a material to absorb energy and plastically deform without fracturing
<b>Frequency</b>	The number of waves that pass over a period of time.	<b>Waves</b>	A disturbance that travels through a medium, transporting energy from one location (its source) to another location without transporting matter.
<b>Gas</b>	A state of matter where the particles have no fixed shape or volume.	<b>Wavelength</b>	The distance between two identical points on back-to-back waves
<b>Liquid</b>	A substance that flows freely but is of constant volume	<b>Vibration</b>	Continuous quick, slight shaking movement back and forth
<b>Manipulate</b>	Handle or control in a skillful manner.	<b>Source</b>	Place from where things originate
<b>Interpret</b>	Explain the meaning of information or actions.	<b>Duration</b>	The length of time that something lasts

\* Words in grey are Tier 2 (non-enquiry specific) vocabulary