Windmill L.E.A.D Academy
Lead · Empower · Achieve · Drive

Subject: Year 1
Concept: Materials & States of Matter

Previously, I have learnt...	In Year 1, I am learning...	In the future, I will learn...
That objects are made from different things	To distinguish between an object and the material from which it is made	How to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
How to describe materials using simple vocabulary.	To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock	How to investigate how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
How to use different materials for certain jobs.	To describe the simple physical properties of a variety of everyday materials	
	To compare and group together a variety of everyday materials on the basis of their simple physical properties.	

materials
object
hard
strong
soft
smooth
rough

properties
uses
objects
waterproof
absorbent
smooth
rough
stretchy
stiff
hard
soft

shape
suitability
solid
changes
squashing
bending
twisting
similarities
differences

My future...

Scientist
Doctor
Dentist
Archaeologist
Engineer
Chemist
Teacher
Biochemist
Astronaut
Anthropologist
Environmentalist
Naturalist
Wildlife documentary presenter

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Subject: Year 2
Concept: Materials & States of Matter

Previously, I have learnt...

- To distinguish between an object and the material from which it is made
- To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- To describe the simple physical properties of a variety of everyday materials
- To compare and group together a variety of everyday materials on the basis of their simple physical properties.

In Year 2, I am learning...

- How to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- How to investigate how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

In the future, I will learn...

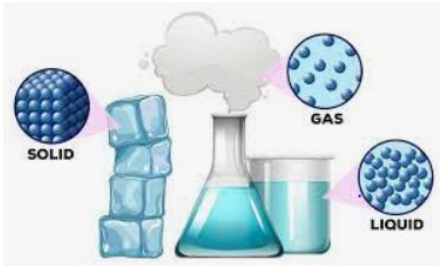
- The characteristics of different states of matter including solids, liquids and gases.
- How water changes state and how to use the names of the different states to identify these.
- That some materials change states (at different temperatures e.g. from a solid to a liquid)
- How to describe the water cycle and how evaporation can be useful.

My future...

- Scientist
- Doctor
- Dentist
- Archaeologist
- Engineer
- Chemist
- Teacher
- Biochemist
- Astronaut
- Anthropologist
- Environmentalist
- Naturalist
- Wildlife documentary presenter

properties
uses
objects
waterproof
absorbent
smooth
rough
stretchy
stiff
hard
soft

shape
suitability
solid
changes
squashing
bending
twisting
similarities
differences



solid
liquid
gas
state
melting
boiling
evaporation
condensation
degrees Celsius (oC)

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Subject: Year 4
Concept: Materials & States of Matter

Previously, I have learnt...	In Year 4, I am learning...	In the future, I will learn...
How to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	The characteristics of different states of matter including solids, liquids and gases.	To compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
	How water changes state and how to use the names of the different states to identify these.	
How to investigate how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	That some materials change states (at different temperatures e.g. from a solid to a liquid)	To use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
	How to describe the water cycle and how evaporation can be useful.	How to explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.
		To demonstrate that dissolving, mixing and changes of state are reversible changes

My future...

Scientist
Doctor
Dentist
Archaeologist
Engineer
Chemist
Teacher
Biochemist
Astronaut
Anthropologist
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Wildlife documentary presenter

shape
suitability
solid
changes
squashing
bending
twisting
similarities
differences

solid
liquid
gas
state
melting
boiling
evaporation
condensation
degrees Celsius (oC)

soluble
insoluble
solution
conduct
insulate
distillation
chromatography
particles

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Subject: Year 5
Concept: Materials & States of Matter

Previously, I have learnt...

- The characteristics of different states of matter including solids, liquids and gases.
- How water changes state and how to use the names of the different states to identify these.
- That some materials change states (at different temperatures e.g. from a solid to a liquid)
- How to describe the water cycle and how evaporation can be useful.

In Year 5, I am learning...

- To compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- To use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- How to explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.
- To demonstrate that dissolving, mixing and changes of state are reversible changes

In the future, I will learn...

- The properties of the different states of matter (solid, liquid and gas) in terms of the particle model, including gas pressure.
- The changes of state in terms of the particle model.
- Simple techniques for separating mixtures: filtration, evaporation, distillation and chromatography
- The order of metals and carbon in the reactivity series.
- The use of carbon in obtaining metals from metal oxides.

My future...

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Environmentalist
Naturalist
Wildlife documentary presenter

solid
liquid
gas
state
melting
boiling
evaporation
condensation
degrees Celsius (oC)

soluble
insoluble
solution
conduct
insulate
distillation
chromatography
particles

alloys
atoms
element
equation
malleable
neutralisation
ores
sonorous
indicator
unreactive