



### Key Vocabulary

**Filter** – to separate particles of a certain size

**Sieving** – a device for filtering

**Evaporate** – turning a liquid into gas

**Dissolve** – a solid combining with a liquid to form a solution

**Solution** – a liquid that has a solid dissolved within it

**Soluble** – a material that will dissolve

**Transparent** – light passes fully through

**Translucent** – allows **some** light to pass through

**Conductor** – a material that allows heat or electricity through

**Insulate** – a material that restricts heat or electricity

**Thermal** – regarding heat

**Reversible** – can be changed back

**Irreversible** – can **not** be changed back

**Change of state** – some materials can change between solid, liquid and gaseous states

**Burning** – a chemical change of state that creates new materials, including gases

**Melting** – turning a solid into liquid by adding heat

**Spencer Silver** – The man who “invented” the glue on Post-It notes

### Key Knowledge

Children will be able 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
- ♣ know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- ♣ use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- ♣ give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- ♣ demonstrate that dissolving, mixing and changes of state are reversible changes
- ♣ explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

## Changes Owls: Properties of materials

