

Properties and Changes of Materials

Autumn Term 1 and 2

**Explaining
Science**

**Designing
Experiments**

Important Scientists



Virginia Holsinger (1937-2009) American scientist that developed milk substitutes for those with lactose intolerance. She used an enzyme from fungi to break down lactose so it was more easily digested.



Spencer Silver (1941-1921) American scientist that developed the low-tack glue that Arthur Fry later used to create his Post-It Notes in 1974. Silver's glue allowed stick-re-stick without leaving a residue.



Ruth Benerito (1916-2013) American scientist who worked for the textile industry and developed wash-and-wear (wrinkle free) cotton and flame-resistant fabrics in the 1950s. She saved the cotton industry.

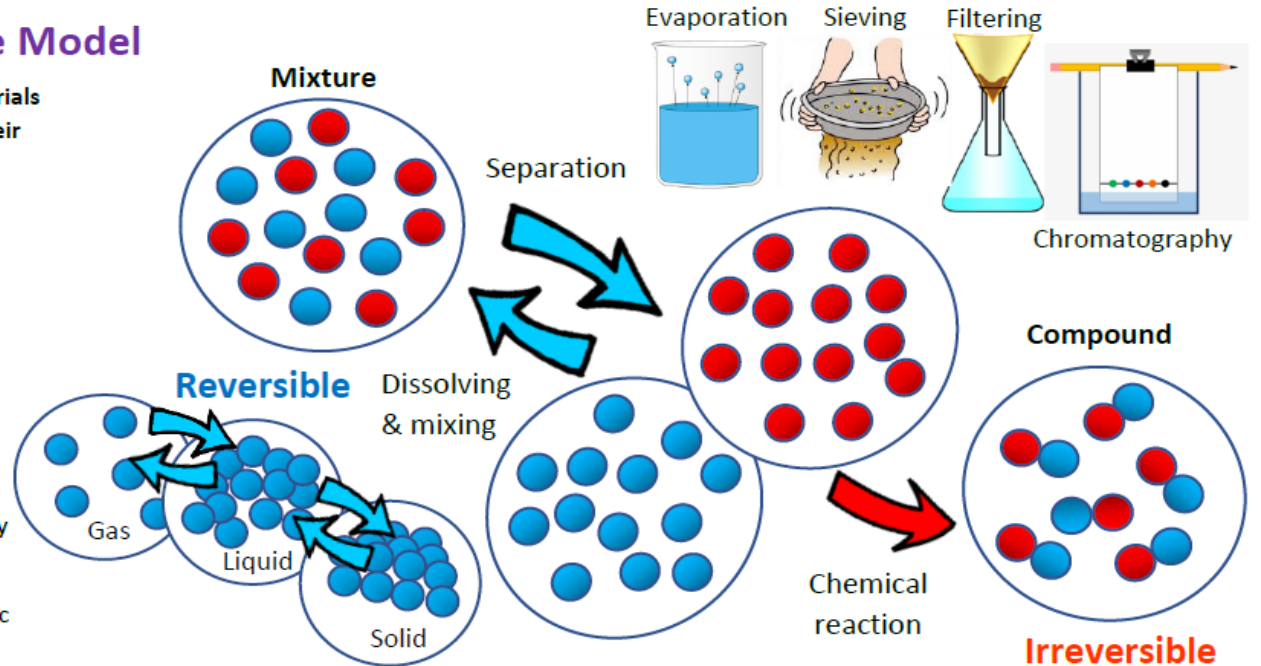
Key Knowledge

- Know the comparative properties and uses of a range of materials.
- Know how mixtures and solutions form. Know how we can separate these.
- Know and describe both reversible and irreversible changes.

Particle Model

Group materials based on their properties:

Strength
Hardness
Flexibility
Elasticity
Solubility
Viscosity
Absorbency
Transparency
Conductivity
Magnetic, etc



Key Words

material
property
application
particle
energy
chemical
insulating
waterproof

variable

attraction
substance
mixture
solution
solvent
solute
temperature
absorbent

independent

dissolve
soluble
solubility
insoluble
boiling
evaporation
rigidity
magnetic

dependent

reaction
melting
condensing
freezing
reversible
irreversible
flexibility
non-magnetic

controlled

reliable

sieving
filtering
opaque
transparent
conductivity
conductive
viscous
separation