Science	Photosynthesis, Separating Mixtures, Physical and Chemical Changes	Year 8	Term 3

1: Plant Structure

Root	part of the plant which absorbs water and minerals; adapted for this by having a large surface area
Photosynthesis	a chemical process in which plants make glucose. Takes place in the chloroplast of the leaf
Stomata	small pores (openings) on the underside of a leaf, where gas exchange occurs
Chloroplast	organelle which is the site of photosynthesis
Estimate	an approximate calculation or judgement of the value or number of something

2: Adaptations of the Leaf

Epidermis	a thin, transparent layer of the leaf which allows sunlight into leaf
Cuticle	thin and waxy to protect the plant and prevent water loss but still allowing sunlight through
Air space	the space within the leaf to allow the diffusion of gases *e.g. carbon dioxide*
Guard cells	control the opening and closing of the stomata
Root hair cell	increases the surface area of the root to increase water uptake
Surface area	the amount of exposed area there is

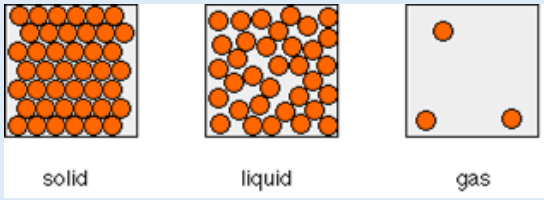
3: Mixtures

Element	a substance made from one type of atom
Compound	two or more different types of element that are chemically bonded
Mixture	two or more different types of substance that are not chemically joined
Pure	only containing one type of substance
Impure	contains mixtures of different substances
Solute	a substance that dissolves to make a solution
Solvent	a substance that can dissolve other substances
Solution	a substance that has mixed with a solvent to make a liquid
Dissolve	when a soluble solid and a solvent form a solution

4:Separation Techniques

Soluble	a substance that can dissolve
Insoluble	a substance that cannot dissolve
Chromatography	a method to separate soluble substances
Chromatogram	the visible result of chromatography
Filtration	a method to separate an insoluble solid from a liquid
Crystallisation	a method to separate a soluble solid from a solution
Distillation	a method to separate solutions of different boiling points

5: States of Matter



Particle	the smallest piece of matter
Chemical change	a chemical reaction in which a new substance is formed, usually irreversible
Physical change	a change of state where no new substance is formed, usually reversible
Observation	a comment based on something an individual has seen, heard or noticed

6: Conservation of Mass and Density

Conservation of mass	matter cannot be created or destroyed, just transferred from one form to another
Mass	the amount of matter in a given volume
Volume	the quantity of three-dimensional space taken up by a substance
Density	the mass per unit volume of a substance
Compare	looking at the similarities *and* difference
Anomaly	a result that does not fit a pattern or trend