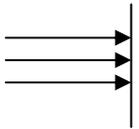
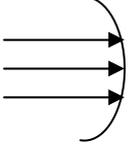
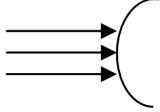
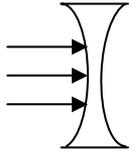
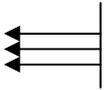
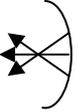
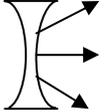
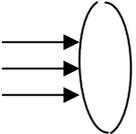
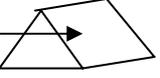
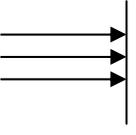
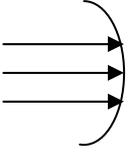
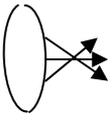
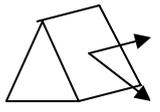
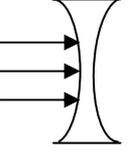
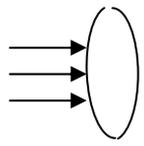
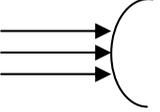


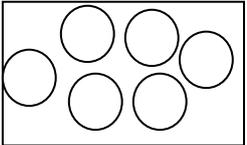
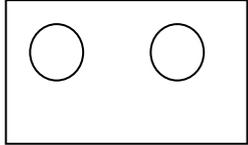
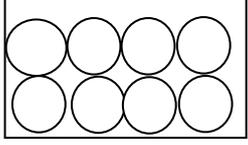
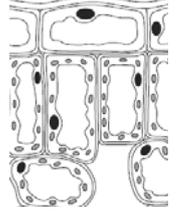
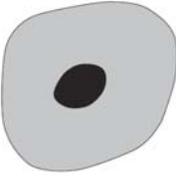
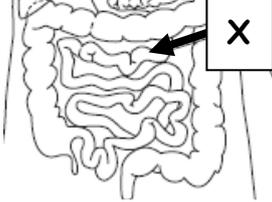
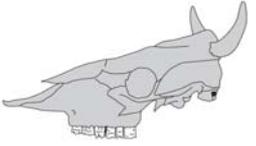
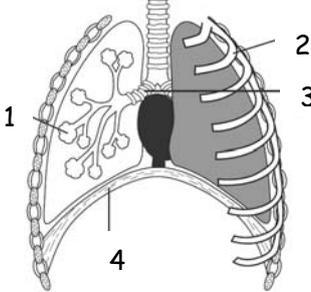
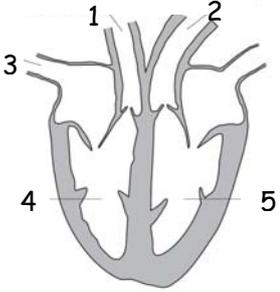
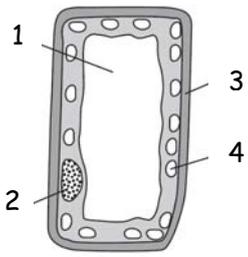
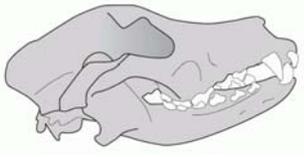
What does the G in MRS GREN stand for?	What do the two R's in MRS GREN stand for?	What does the M in MRS GREN stand for?	What does the S in MRS GREN stand for?
growth	respiration and reproduction	movement	sensitivity
What does the E in MRS GREN stand for?	What does the N in MRS GREN stand for?	What does the word nutrition mean?	What does the word excretion mean?
excretion	nutrition	getting food	getting rid of waste
What does the word respiration mean?	In terms of nutrition, what can plants do that animals cannot?	Animals need to _____ other animals and/or plants to get their energy	What do we call the animals that do not have backbones?
releasing energy from food in a cellular process	produce own food from water, carbon dioxide & suns energy	eat	invertebrates
What do we call animals which have backbones?	In Classification, what are keys used for?	What is the name for the organisms which can carryout photosynthesis?	What do we call organisms which eat both plant and animal material?
vertebrates	to identify & name an organism	producers	omnivores

What do we call organisms which eat only plant material?	What do we call organisms which eat only meat?	What are the 4 types of teeth found in humans?	How many teeth in an adult jaw? i = 2/2 c = 1/1 pm = 2/2 m = 3/3
herbivores	carnivores	incisors, canines, premolars & molars	32 (dental formula shows teeth in $\frac{1}{2}$ jaw)
All living things are made of small units called _____	What part of the cell controls the cells processes?	What part of a cell controls what enters and leaves the cell?	What part of the cell is filled with watery 'sap' which pushes the chloroplasts against the cell wall?
cells	nucleus	cell membrane	vacuole
What part of the cell is where chemical reactions occur?	Which part of the cell is the thick coat that protects the cell and gives it shape. Only found in plant cells.	What part of the cell captures light and converts it to glucose during photosynthesis?	 <p>Make their own light</p>
cytoplasm	cell wall	chloroplasts	light sources / luminous
What three things are absent in animals cells but present in plants cells?	Is the moon a light source or a reflector?	Plant cells are more _____ in shape than animal cells	What inorganic molecules do plants need for photosynthesis?
cell wall, large vacuole, chloroplasts	reflector	regular	carbon dioxide and water

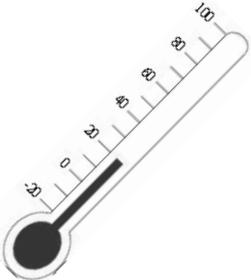
<p>Draw the reflected rays for this plane mirror:</p> 	<p>Draw the reflected rays for this concave mirror:</p> 	<p>Draw the reflected rays for this convex mirror:</p> 	<p>Draw the refracted rays for this concave lens:</p> 
			
<p>Draw the refracted rays for this convex lens:</p> 	<p>Draw how the light is split in a prism:</p> <p>white </p>	<p>What type of mirror is this?</p> 	<p>What type of mirror is this?</p> 
	 <p>Red</p> <p>Violet</p>	<p>flat or plane mirror</p>	<p>concave mirror</p>
<p>What type of lens is this?</p> 	<p>What type of lens is this?</p> 	<p>What type of mirror is this?</p> 	<p>Mirrors reflect light, what do lens do?</p>
<p>concave lens</p>	<p>convex lens</p>	<p>convex mirror</p>	<p>refract</p>
<p>Refracting light means that the light has been _____ ?</p>	<p>What type of mirror is used for: rear vision mirrors, shoplifting mirrors and traffic mirrors?</p>	<p>What type of mirror is used for: make-up mirrors, dentist mirrors, telescopes, spotlight and torch lights?</p>	<p>What do we call the ray that goes into a mirror?</p>
<p>bent</p>	<p>convex mirror</p>	<p>concave mirrors</p>	<p>incident ray</p>

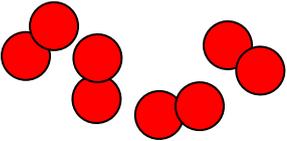
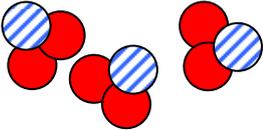
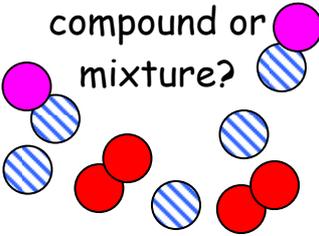
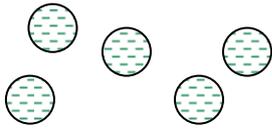
What do we call the ray which bounces off a mirror?	What do we call the ray which passes through a lens and out the other side?	Complete this light rule: in a plane mirror, the angle of incidence = the angle of	What is the word used to describe rays which spread out?
reflected ray	refracted ray	reflection	diverging
What is the word used to describe rays which come together?	What is the coloured part of the eye called?	What is the light sensitive layer of cells on the back of the eye called?	What is the nerve which sends messages from the eye to the brain?
converging	iris	retina	optic nerve
What part of the eye changes shape so the light rays are focussed on the retina?	What is the name for the hole in the eye which lets light into the eye?	What part of the eye changes the shape of the lens so it focuses the light on the retina?	A person whose eyes focus the image in front of the retina is said to be _____
lens	pupil	muscle	short sighted
A person whose eyes focus the image behind the retina is said to be _____	What sort of lens do you use to correct long sightness?	What sort of lens do you use to correct short sightness?	What does a convex lens do to an object?
long sighted	convex lens	concave lens	magnifies it

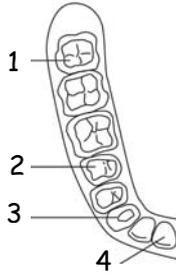
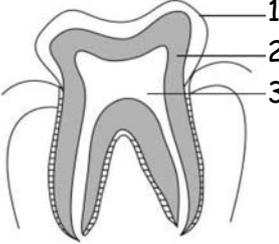
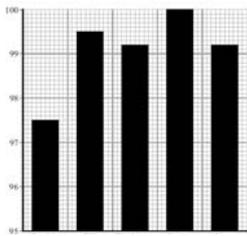
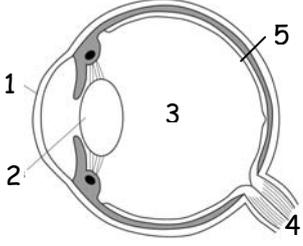
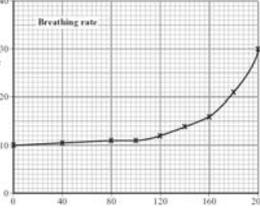
What does a concave lens do to an object?	What is the most common element in the air?	How much oxygen O ₂ is in the air?	What two things must be present for an object to burn?
makes it smaller	nitrogen 78%	21%	fuel eg. candle and oxygen
What is another name for burning?	What is the scientific name for the black stuff often left behind after burning?	What is the formula for carbon dioxide?	What is the formula for water?
combustion	carbon	CO₂	H₂O
Number of protons in the nucleus.	Number of protons & neutrons in the nucleus.	Particles too small to see. Made up of protons, neutrons and electrons.	Pure substances made up of only one type of atom, cannot be broken down in a chemical reaction.
atomic number	mass number	atom	element
Two or more elements chemically joined together are called?	Table of elements arranged in order of their atomic number	New substances produced in a chemical reaction. Always on the right hand side of the equation	Substances you start with in a chemical reaction. Always on the left hand side of the equation arrow
compounds	periodic table	products	reactants

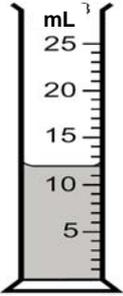
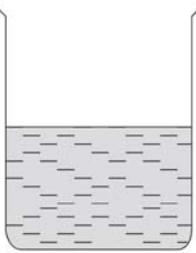
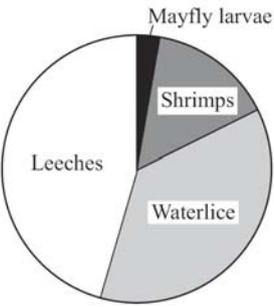
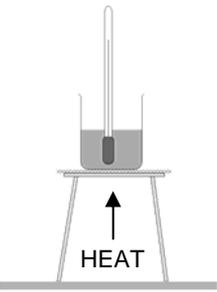
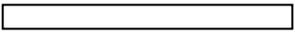
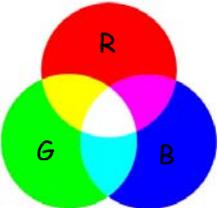
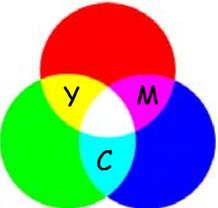
What are the three states of matter?	Burning Mg ribbon, cooking, fireworks, & bleaching cloths are all examples of	Melting butter, drying cloths, water cycle are all examples of	Which state of matter has a fixed shape and can not be compressed?
solid, liquid and gas	chemical change	physical change	solid
Which state has the particles arranged this way? 	Which state has the particles arranged this way? 	Which state has the particles arranged this way? 	 Plant or animal cells?
liquid	gas	solid	plant cells
 Plant or animal cell?	 Plant or animal cell?	 What is X?	 What teeth are missing from the top jaw?
animal	plant cell	small intestine	incisors & canine
			 Herbivore or carnivore? Why?
1. alveolus 2. rib 3. bronchus 4. diaphragm	1. pulmonary artery 2. aorta 3. vena cava 4. right ventricle 5. left ventricle	1. vacuole 2. nucleus 3. cell wall 4. chloroplast	Carnivore: sharp teeth, big canines; forward facing eye sockets

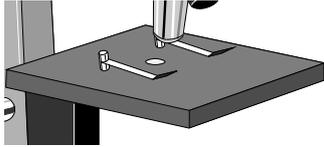
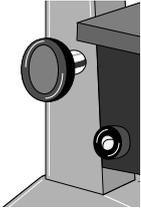
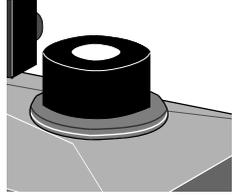
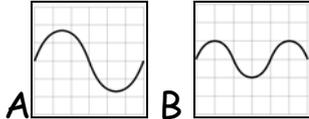
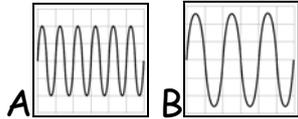
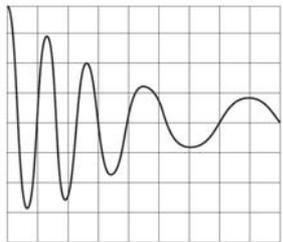
Colourless gas which is 15 times lighter than any other substance. Makes a pop sound when lit	Colourless gas which is needed for respiration. Relights a glowing match	Colourless gas which is heavier than air, needed for photosynthesis. Turns limewater milky	What do we call it when a solid changes into a liquid?
hydrogen	oxygen	carbon dioxide	melting
What do we call it when a liquid changes into a solid?	What do we call it when a liquid turns into a gas?	What do we call it when a gas turns into a liquid?	What do we call it when a solid turns into a gas (without melting)?
freezing / solidifying	evaporation	condensation	sublimation
What do we call it when a gas turns into a solid?	What is the process where particles spread out from area of high to low concentration?	What is the process where a solid placed into a liquid breaks up into particles so small that they can't be seen?	What do we call the solid that dissolves in the solvent to make a solution?
reverse sublimation	diffusion	dissolving	solute
What do we call the liquid which the solute dissolves in to make a solution?	What is the name given to the product when a solute is dissolved in a solvent?	What method is used to separate a mixture of coloured pigments eg. pens	A substance which will dissolve is said to be _____
solvent	solution	chromatography	soluble

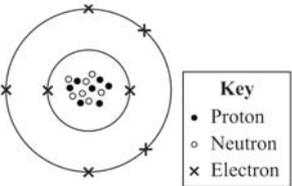
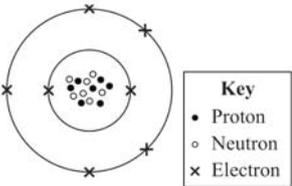
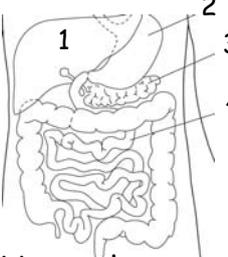
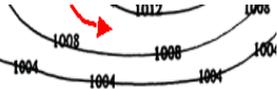
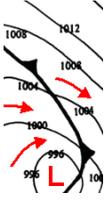
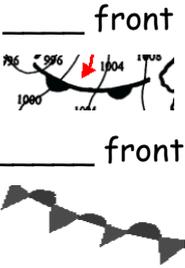
A substance which will not dissolve is said to be _____	What is the name for a solution in which no more will dissolve?	What are the positively charged particles of an atom found in the nucleus?	What are the negatively charged particles of the atom, found outside the nucleus?
insoluble	saturated solution	proton	electrons
What are the particles of the atom, which have no charge and are also found in the nucleus?	Atoms are neutral overall as they have the _____ number of protons as neutrons	The first shell holds up to how many electrons?	The second shell holds up to how many electrons?
neutrons	same	2	8
The third shell holds up to how many electrons?	Ar has an atomic number of 18, how many electrons are in each shell?	F has an atomic number of 9, how many electrons are in each shell?	
8	2,8,8	2,7	20°C
Those elements found on the middle and left hand side of the periodic table are _____	Those elements found on the right hand side of the periodic table are _____	List three physical properties of metals.	List three physical properties of non metals.
metals	non metals	Conduct heat and electricity, can bend and are shiny	Don't conduct heat or electricity, are brittle & don't shine

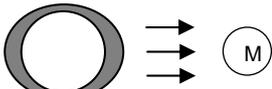
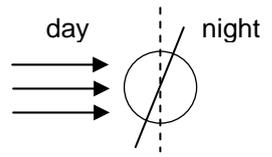
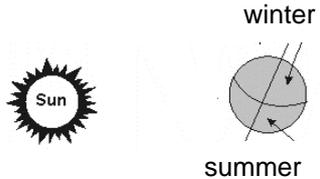
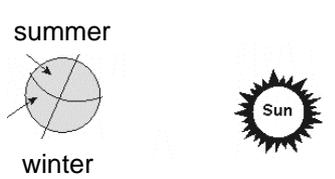
<p>Element, compound or mixture?</p> 	<p>Element, compound or mixture?</p> 	<p>Element, compound or mixture?</p> 	<p>Element, compound or mixture?</p> 
element (molecules of element)	compound	mixture (mixture of 2 elements & 1 compound)	element (atoms of element)
What part of a plant carries out photosynthesis to produce food (glucose)	Why do plants produce flowers?	What plant part holds up the leaves & transports water up the plant and food down from the leaves?	What is the function of the roots of the plants?
leaf	to produce seeds/for plant reproduction	stem	hold the plant in the soil and absorb water
What is a transparent material?	What is an opaque material?	What is a translucent material?	What three things must a leaf have to carry out photosynthesis?
light is able to pass through it eg. glass	light can not pass through it eg. a wall	some light is able to pass through it eg frosted glass	carbon dioxide CO₂, water H₂O and light
What chemical is used to test for the presence of starch?	If starch is present in a leaf what colour will it go when tested with iodine?	How do plants store glucose which is produced during photosynthesis?	What is the name for the green pigment found in plants leaves where photosynthesis occurs?
iodine	blue/black	as starch	chlorophyll

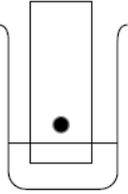
 <p>What sort of diet?</p>	<p>What piece of science equipment do you use to measure temperature?</p>	<p>What piece of scientific equipment do you use to measure the volume of a liquid?</p>	<p>What piece of scientific equipment do you use to heat an object?</p>																															
<p>plants / grass etc</p>	<p>thermometer</p>	<p>measuring cylinder</p>	<p>Bunsen burner</p>																															
<p>Iodine solution is used to test food for the presence of _____</p>	<p>Benedict's solution is used to test food for the presence of _____</p>		<p>Sodium hydroxide & copper sulfate (Biuret test) are used to test food for the presence of _____</p>																															
<p>starch (brown to blue-black)</p>	<p>sugar (blue to green, red or orange)</p>	<p>1. molar 2. premolar 3. canine 4. incisor</p>	<p>protein (pale blue to purple)</p>																															
<p>Rubbing food on paper & looking for a translucent spot is to test food for _____</p>			<table border="1" data-bbox="1225 1120 1485 1395"> <thead> <tr> <th rowspan="2">Time in minutes</th> <th colspan="3">Temperature in °C</th> </tr> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>2</td> <td>20</td> <td>30</td> <td>12</td> </tr> <tr> <td>4</td> <td>25</td> <td>44</td> <td>14</td> </tr> <tr> <td>6</td> <td>37</td> <td>55</td> <td>16</td> </tr> <tr> <td>8</td> <td>42</td> <td>55</td> <td>18</td> </tr> <tr> <td>10</td> <td>42</td> <td>55</td> <td>18</td> </tr> </tbody> </table>	Time in minutes	Temperature in °C			A	B	C	0	10	10	10	2	20	30	12	4	25	44	14	6	37	55	16	8	42	55	18	10	42	55	18
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<p>Fat or oil</p>	<p>1. enamel 2. dentine 3. pulp cavity</p>	<p>bar chart</p>	<p>results table</p>																															
	 <p>What does this hazard symbol mean?</p>	 <p>What does this hazard symbol mean?</p>																																
<p>1. cornea 2. lens 3. vitreous humour 4. optic nerve 5. retina</p>	<p>corrosive</p>	<p>flammable</p>	<p>line graph</p>																															

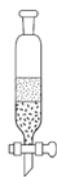
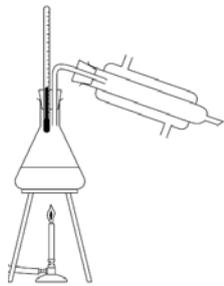
			
measuring cylinder (12 mL)	beaker of water	test tube	conical flask
		What are the colours of the spectrum?	
pie chart	evaporating basin	ROYGBIV red orange yellow green blue indigo violet	plain mirror
			
boil a beaker of water, recording the temperature	heat proof mat / heat mat	gauze mat and tripod	thermometer
		Mixing red and green and blue light produces _____ light	natural process by which atmosphere traps some of the Sun's energy, warming the Earth enough to support life
red, green, blue	yellow, magenta & cyan	white	green house effect

Excess ____ and water vapour increase the global warming effect	Microscope parts 	Microscope parts 	Microscope parts 
carbon dioxide	revolving nose piece and objective lenses	stage & clips	coarse and fine focus knobs
Microscope parts 	Microscope parts 	Take a thin layer of onion epidermis Lie it flat on a slide Add a drop of stain (iodine) Carefully lower coverslip to avoid air bubbles	Two functions of the ear are ____ & ____
eyepiece and barrel	lamp (mirror in some microscopes)	making a slide of onion cells	hearing and balance
Sound which has been reflected back to your ears is called an ____.	Soft uneven materials like curtains, carpets and cushions ____ sound much more than they ____ it, and decrease echoes.	sound reflection occurs best from ____ surfaces	The loudness of sound depends on the ____ of the wave. The bigger the ____, the louder the sound.
echo	absorb reflect	flat hard	amplitude
The pitch of sound (how high the note is) depends on the ____ of the wave. The higher the ____, the higher the pitch.	 A has a higher ____ than B	 A has a higher ____ than B	 Describe the sound
frequency	amplitude (volume)	frequency (pitch)	loud high pitched note becoming quieter and lower pitched

 <p>Atomic No. = Mass No. =</p>	 <p>Electron arrangement is _____</p>	<p>Name these elements H, O, S & Mg</p>	<p>Name these elements C, Fe, Cu & N</p>
<p>atomic No. = 7 mass No. = 15</p>	<p>2,5</p>	<p>hydrogen, oxygen sulfur & magnesium</p>	<p>carbon, iron, copper & nitrogen</p>
 <p>Name the parts</p>	<p>What is produced by the stomach to help the enzyme there to digest protein & to kill some bacteria?</p>	<p>Part of digestive system where digestion is completed and soluble molecules are absorbed into blood</p>	<p>Part of digestive system where water is reabsorbed into blood, and the waste gets more "compacted" and solid</p>
<p>1. liver 2. stomach 3. pancreas 4. small intestine</p>	<p>hydrochloric acid</p>	<p>small intestine</p>	<p>large intestine</p>
<p>Where the faeces are stored before egestion through the anus</p>	<p>Isobars enclose area of high pressure with sinking air. Air warms as it descends, clouds evaporate & produces fine weather</p>	<p>Isobars enclose area of low pressure with rising air. Air cools and often condenses into clouds and rain.</p>	<p>Lines joining places where air pressure is the same.</p> 
<p>rectum</p>	<p>high or anticyclone</p>	<p>low or depression</p>	<p>isobars</p>
<p>Boundary between two air masses. Triangles point in direction the air is moving. Cold air mass is moving into warm air.</p> 	<p>_____ blow parallel to isobars. The closer the isobars, the stronger the wind.</p>	<p>In the southern hemisphere the wind blows _____ around a low and _____ around a high.</p>	
<p>cold front</p>	<p>winds</p>	<p>clockwise anticlockwise</p>	<p>warm stationary</p>

High tides occur approximately twice every ___ hours.	High tides on each side of Earth are caused by the ___ attraction between Earth & Moon  Not to scale!!	___ are caused by the gravitational attraction of the sun and moon on the earth's oceans, combined with the rotation of the earth	Rotation of earth on its axis every 24 hours causes ___ & ___ 
24	gravitational	tides	day / night
Day ___ hours Year ___ days	Spring summer autumn winter - depend on orientation of hemispheres to the sun	 Southern hemisphere tilted towards sun	 Northern hemisphere tilted towards sun
24 365 & 1/4	the seasons	summer in southern hemisphere	summer in northern hemisphere
Angle of tilt of Earth on its axis	Imaginary line around the circumference of the Earth	Earth rotates ___ when seen from above the North pole	In NZ the sun rises and sets first in the ___
23.5°	equator	anticlockwise	East
"Heaped" shape clouds 	"Layer" type clouds 	"Curl of hair" type clouds 	Clouds associated with rain & thunderstorms 
cumulus	stratus	cirrus	nimbus

A green jersey absorbs all the spectrum colours except _____. It reflects the _____ to our eyes.	A red filter filters out all the colours of the spectrum except _____	This gas, O ₃ , protects us from harmful UV rays	Part of the atmosphere, damaged by chemicals called CFC's
green	red	ozone	ozone layer
Too much _____ can cause sunburn or more dangerous skin cancers (melanomas)	Features of plants that attract insects to carry out pollination	The transfer of pollen from anther to stigma is known as _____	When the pollen grain joins with the ovum (egg) this is known as _____
UV (ultra violet)	coloured petals. Scent, nectar.	pollination	fertilisation
Flower part Made up of the anther (make pollen) and filament - male part of flower	Flower part Made up of the stigma, style & ovary - female part of flower	Flower part Small green leaves that surround the flower when it is "in bud"	Flower part Cell found in ovary that will become a seed if it is fertilised
stamen	carpel	sepals	ovum / egg
Name for the distribution of seeds away from the parent plant	Seed dispersal is important to avoid competition with the parent plant for ____, __ & __	Wind, water, animals (eaten & stick to fur) and explosive fruits are all methods of _____	 Technique used to separate colours
seed dispersal	light, water, nutrients	seed dispersal	chromatography



separates 2 liquids
that don't mix

Pulse rate "at
rest" when you are
just sitting & not
doing anything is
called the ___ _

The time it takes for
the heart to return
to its normal resting
beat after stopping
exercising

distillation

**separating
funnel**

resting pulse

recovery time

Evaporation,
condensation,
precipitation, run
off & infiltration
are all parts of
the ___ _

water cycle