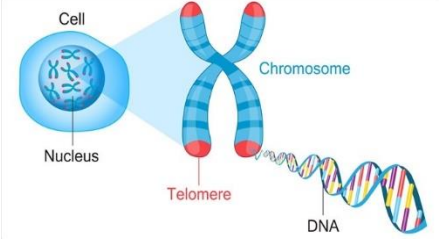
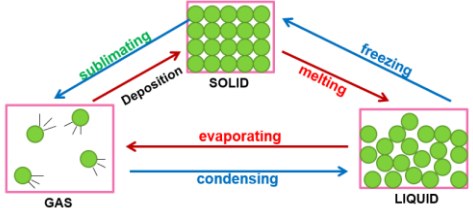


Biology		Chemistry	Physics
1	<p>Inside of every cell there is a special organelle called the '<b>nucleus.</b>' The nucleus contains all of the genetic material for an organism.</p> 	<p><b>Element</b> - Pure substance that can be found on the periodic table, it has only one type of atom  <b>Compound</b> - Pure substance made from more than one type of element chemically joined together  <b>Mixture</b> - Pure substance made from more than one type of element chemically joined together</p>	<p><b>Everything is made up of particles.</b></p> <ul style="list-style-type: none"> <li>• Solid (s) – regular structure, fixed position, vibrating.</li> <li>• Liquid (l) – randomly arranged, move freely, close together.</li> <li>• Gas (g) - Randomly arranged, move quickly and freely, spread apart.</li> </ul>
2	<p><b>Chromosomes</b> are coiled lengths of DNA which code for genes. Humans have 23 <b>pairs</b> of chromosomes = 46 individual chromosomes.</p> <p>Wilkins, Franklin, Watson and Crick played important roles in discovering the structure of DNA.</p>	<p><b>Crude oil</b> is a mixture of hydrocarbons. The <b>crude oil</b> is evaporated and its vapours condense at different temperatures in the fractionating column.</p> <ul style="list-style-type: none"> <li>• Crude oil is a finite resource found in rocks.</li> <li>• Crude oil is the remains of an ancient biomass consisting mainly of plankton that was buried in mud.</li> </ul>	<p><b>Density</b> is a measure of mass per volume.</p> <p style="text-align: center;"><b>Density = mass / volume</b> <b><math>\rho = m/v</math></b></p> <p>Density is measured in <math>\text{kg/m}^3</math>. We can find the volume of a regular object by multiplying the width, length and height.</p>
3	<p><b>Variation</b> – the differences between all living things.</p> <p>Variation can come about for two reasons:</p> <ol style="list-style-type: none"> <li>1. Some features can be inherited. That means that you get them from your parents.</li> <li>2. Other features are affected by the environment.</li> </ol>	<p>The average temperature of the Earth is <math>14^\circ\text{C}</math>. We have a blanket of gases as an atmosphere that protects us by keeping the temperatures relatively stable.</p> <p>Water vapour, carbon dioxide and methane are <b>greenhouse gases</b></p>	
4	<p><b>Gene(s)</b> – control different characteristic of an organism (e.g. eye colour) Some <b>genes</b> can affect the effects of others. A small change in a chromosome or gene can cause a genetic disorder.</p>	<p>Crude oil is not very useful until we separate the mixture into hydrocarbons with similar numbers of carbon atoms.</p> <p>These are called fractions. The process is called fractional distillation and is carried out in a refinery</p>	<p><b>Internal energy</b> = the potential energy and kinetic energy of all of the particles that make up an object</p>
5	<p><b>Mitosis</b> – cell division that results in two new (daughter) cells each identical to the original (parent) cell. They will contain the same number of chromosomes as the original (parent) cell.</p>	<p><b>Fractional distillation</b> is the separation of a mixture into its component parts, or fractions. Chemical compounds are separated by heating them to a temperature at which one or more fractions of the mixture will vaporize.</p>	<p><b>Specific Heat Capacity:</b> The amount of energy required to raise the temperature of 1 kg of a substance by <math>1^\circ\text{C}</math>.</p>

# Quiz Time

## Week 1 Quiz

1. Where is DNA stored?
2. What shape is DNA?
3. What is an element?
4. Draw particle arrangement for a liquid
5. Describe the particle arrangement of a solid

## Week 4 Quiz

1. Describe the term fractional distillation
2. Describe the term internal energy
3. G..... can signal what eye colour you have?
4. What keeps the earth temperature stable?
5. What is the unit for density?

## Week 2 Quiz

1. How many pairs of chromosomes does a human have?
2. Chromosomes are found in what part of the cell?
3. How do you calculate density?
4. Describe the term density?
5. What is crude oil made of?

## Week 5 Quiz

1. Cell division is called?
2. Describe the term specific heat capacity
3. Separating a mixture into its component parts is called?
4. Where is DNA stored?
5. How many chromosomes does a human have?

## Week 3 Quiz

1. Describe the term variation
2. A solid changing to a liquid is called?
3. A Gas changing to a liquid is called?
4. Identify 3 greenhouse gases
5. Evaporation changes a liquid to a ?

## Week 6 Quiz