

<p><b>Matter and materials</b></p>	<p><b>Properties of matter:</b> Volume, mass, density, hardness, solubility. <b>Volume:</b> describes how much space matter occupies. (ml) <b>Mass:</b> is the amount of matter in an object. (g) <b>Density:</b> is the amount of matter in a volume. (kg/l) <b>D=m/V</b></p>	<p><b>Matter composition:</b> <b>Pure:</b> one type of matter. <b>Mixtures:</b> two or more pure substances. - Homogeneous: you cannot see the individual substances in it. (sea water, air) - Heterogeneous: you can see the individual substances in it (salad, sand...)</p>	<p><b>Mixtures separation:</b> <b>Filtration</b> (pouring lemon juice or coffee in a filter) <b>Evaporation</b> heating a mixture and the liquid evaporates (heating salt and water) <b>Sieving</b> we use a sieve to separate solids of different sizes.</p>	<p><b>Changes:</b> <b>*Reversible</b> change: we can turn the substance back to its original form. <b>*Irreversible</b> change: we change the appearance of the matter but the process cannot be reversed (broken glass-physical change).</p>
<p><b>Matter is everything around us.</b> Matter is made up of tiny particles called <b>atoms</b>. Some atoms join together to make groups known as <b>molecules</b>.</p>	<p><b>Changes:</b> Combustion and oxidation.</p>	<p><b>Combustion:</b> atoms in some materials when burning react with the oxygen in the air. Burning materials: wood.</p>	<p><b>Oxidation:</b> atoms in some metals react with the oxygen in the air and with water. Rust is formed.</p>	<p><b>Putrefaction:</b> when organic matter decomposes (fresh food), (in compost bin).</p>
<p><b>Matter is anything that has mass and takes up space.</b></p>	<p><b>States of matter:</b> solid, liquid and gas. Plasma (sun)</p>	<p><b>Physical and chemical changes:</b> A <b>physical change</b> occurs when matter changes shape or state (water cycle). <b>Chemical change:</b> a new substance is produced. It has different chemical properties from the original substance. Most chemical changes are irreversible. Combustion, oxidation and putrefaction.</p>	<p>Changes of shape can be temporary or permanent: elastic or non-elastic materials.</p>	<p>Notes:</p>