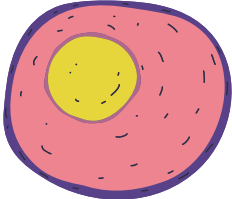
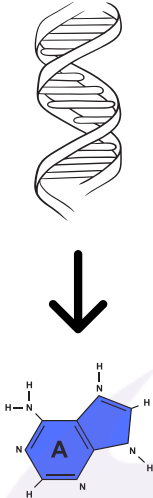
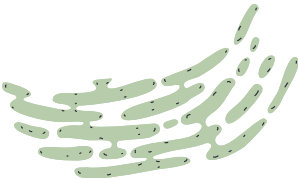
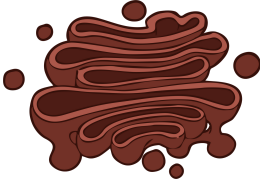
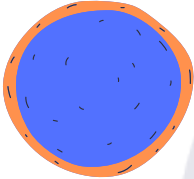
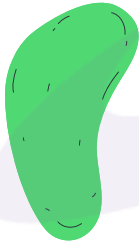




# Parts of a Cell:

Cell Components	Structure	Function
<p>Nucleus:</p> 	<ul style="list-style-type: none"> <li>Surrounded by nuclear envelope (double membrane perforated by nuclear pores)</li> <li>Nuclear envelope continuous with ER</li> </ul>	<ul style="list-style-type: none"> <li>Houses chromosomes, which re made of chromatin (DNA &amp; proteins)</li> <li>Contains nucleoli, where ribosomal subunits are made .</li> <li>Pores regulate entry &amp; exit of materials.</li> </ul>
<p>Ribosome:</p> 	<ul style="list-style-type: none"> <li>Two subunits made of ribosomal RNA's &amp; proteins.</li> <li>Can be free in cytosol or bound to ER (Endoplasmic Reticulum).</li> </ul>	<p>Protein synthesis</p>
<p>Endoplasmic Reticulum:</p> 	<ul style="list-style-type: none"> <li>Extensive network of membrane- bound tubules &amp; sacs.</li> <li>Membrane separates lumen from cytosol.</li> <li>Continuous with nuclear envelope.</li> </ul>	<p>Smooth ER:</p> <ul style="list-style-type: none"> <li>Synthesis of lipids.</li> <li>metabolism of carbohydrates.</li> <li>Stores calcium ions.</li> <li>Detoxification.</li> </ul> <p>Rough ER:</p> <ul style="list-style-type: none"> <li>Synthesis of secretory proteins.</li> <li>Adds carbohydrates to proteins to make</li> </ul>

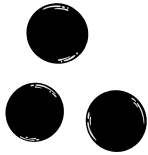
		<p>glycoproteins.</p> <ul style="list-style-type: none"> <li>• Produces new membranes.</li> </ul>
<p>Golgi apparatus:</p> 	<ul style="list-style-type: none"> <li>• Stacks of flattened membranous sacs.</li> <li>• Has polarity (cis &amp; trans faces)</li> </ul>	<ul style="list-style-type: none"> <li>• Modification of proteins.</li> <li>• Carbohydrates on proteins &amp; phospholipids.</li> <li>• Synthesis of polysaccharides.</li> <li>• Sorting of products released into vesicles.</li> </ul>
<p>Lysosome:</p> 	<p>Membranous sac of hydrolytic enzymes (in animal cells).</p>	<p>Breakdown of ingested substances, cell macromolecules, &amp; damaged organelles for recycling.</p>
<p>Vacuole:</p> 	<p>Large membrane-bound vesicle.</p>	<ul style="list-style-type: none"> <li>• Digestion</li> <li>• Storage</li> <li>• Waste disposal</li> <li>• Water balance</li> <li>• Plant cell growth</li> <li>• Protection</li> </ul>
<p>Mitochondrion:</p> 	<ul style="list-style-type: none"> <li>• Bound by double membrane.</li> <li>• Inner membrane has cristae (infoldings).</li> </ul>	<p>Cellular respiration</p>
<p>Chloroplast (Plastids):</p> 	<p>Typically two membranes</p>	<p>Photosynthesis</p>



around fluid stroma, which contains thylakoids stacked into grana.

(Chloroplasts are in cells of photosynthetic eukaryotes, including plants).

Peroxisome:



Specialized metabolic compartment bound by a single membrane.

Contains enzymes that transfer H atoms to oxygen, producing hydrogen peroxide, which is converted to H<sub>2</sub>O

