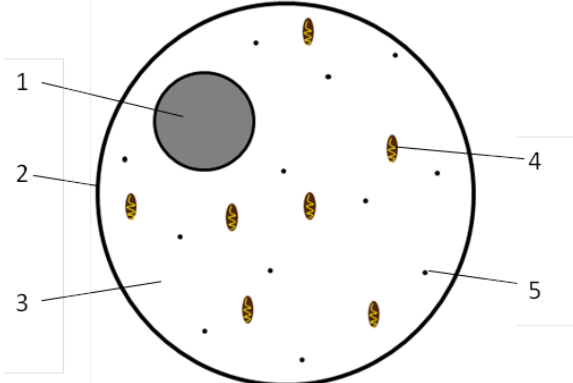
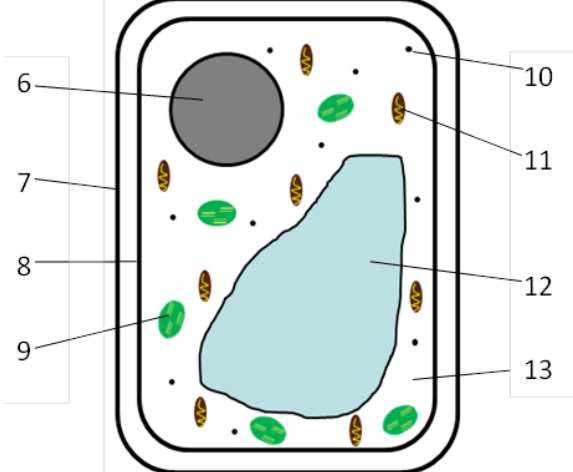
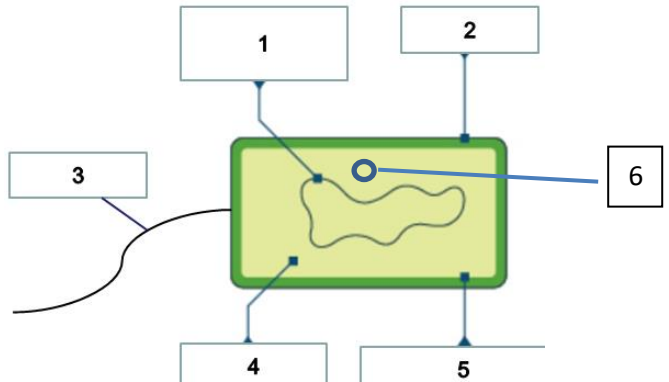


Fact sheet B1.1 Cells

<p>1. Are animal and plant cells eukaryotic or prokaryotic?</p>	<p>Eukaryotic</p>
<p>2. Name the type of cell below</p>	<p>Animal cell</p>
<p>3. Identify the parts of the cell</p> 	<ol style="list-style-type: none"> 1. Nucleus 2. Cell membrane 3. Cytoplasm 4. Mitochondria 5. Ribosome
<p>4. Name the type of cell below</p>	<p>Plant cell</p>
<p>5. Identify the parts of the cell</p> 	<ol style="list-style-type: none"> 6. Nucleus 7. Cell Wall 8. Cell membrane 9. Chloroplast 10. Ribosome 11. Mitochondria 12. Permanent vacuole 13. Cytoplasm
<p>6. Identify the parts of this cell</p> 	<ol style="list-style-type: none"> 1. DNA loop 2. Cell wall 3. Flagellum (not always present) 4. Cytoplasm 5. Membrane 6. Plasmid
<p>7. Give the function of the cell membrane</p>	<p>Controls what can enter and leave the cell</p>
<p>8. Give the function of the nucleus</p>	<p>Controls the cell and contains the DNA</p>
<p>9. Give the function of the cytoplasm</p>	<p>Where chemical reactions occur</p>
<p>10. Give the function of the mitochondria</p>	<p>Where energy is released during respiration</p>
<p>11. Give the function of the ribosomes</p>	<p>Where proteins are made</p>
<p>12. Give the function of the chloroplast</p>	<p>Where photosynthesis occurs</p>
<p>13. Give the function of the permanent vacuole</p>	<p>Filled with cell sap</p>

14. Give the function of the cell wall	Strengthens the cell
15. What do bacteria cells have instead of a nucleus?	A single DNA loop
16. Name the type of cell in fact 6	A bacteria cell
17. What are the three ways that cells can be differentiated?	1. Have a structure that other cells don't 2. They can have LOTS of a particular part 3. Have a larger surface area/ different shape
18. How is a muscle cell specialised?	Lots of mitochondria for lots of energy
19. How is a leaf cell specialised?	Lots of chloroplasts for lots of photosynthesis
20. What are the two types of microscopes?	1. Light microscope 2. Electron microscope
21. Which microscope has a higher magnification?	Electron microscope
22. What is the calculation for magnification?	magnification = $\frac{\text{size of image}}{\text{size of real object}}$
23. Put the following measurements into size order starting with the smallest: mm, μm , nm, cm	nm, μm , mm, cm
How many μm are there in a mm?	1,000
How many μm are there in a cm?	10,000
How many nm are there in a mm?	1,000,000
How many nm are there in a μm ?	1,000
24. Where are chromosomes found in a cell?	The nucleus
25. How many cells are produced by mitosis?	2
26. Why is mitosis important?	For growth and development
27. What can you say about the cells produced in mitosis?	They are identical
28. What is a stem cell?	An undifferentiated cell
29. What happens when a cell differentiates?	It becomes specialised
30. Name the 2 places where human stem cells are found	1. Embryos 2. Adult bone marrow
31. When do most types of animal cells differentiate?	At an early stage
32. When do most types of plant cells differentiate?	They can differentiate at any time in their life
33. Why might some people object to the use of embryonic stem cells?	The embryo is destroyed which some people consider to be murder
34. What is diffusion?	Net movement of particles (1) from an area of high conc. to an area of low conc. (2)
35. Name two ways that dissolved substances can move	1. Diffusion 2. active transport
36. Water moves across boundaries by...	Osmosis
37. What increases the surface area in the lungs?	Alveoli
38. What increases the surface area of the small intestines?	Villi
39. What increases the surface area of roots?	Root hairs
40. Describe osmosis	1. The diffusion of water 2. From a dilute solution to a concentrated solution 3. Through a partially permeable membrane

