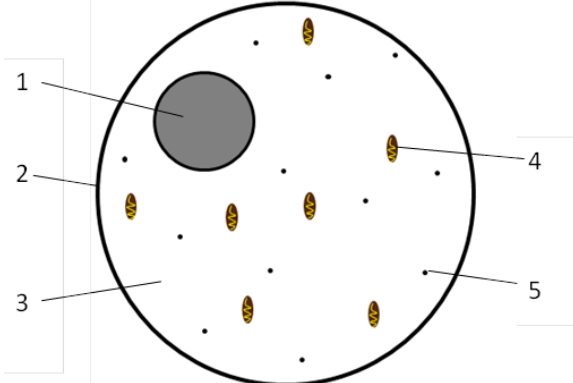
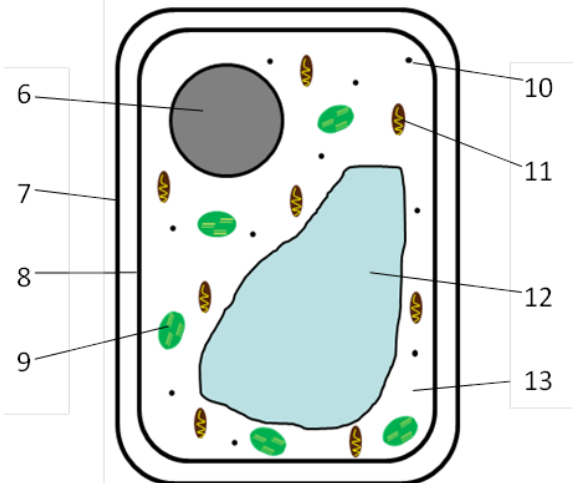
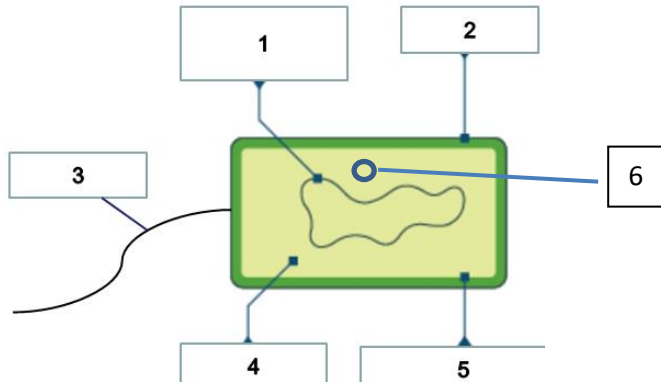


Fact sheet B1.1 Cells

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| <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 |

