

Cells Knowledge Organiser Questions

Plant & Animal Cells:

- Q1. What is the name of the small structures inside cells? **Components**
- Q2. What four structures are found in **both** plant and animal cells? **Nucleus, cell membrane, cytoplasm, and mitochondria**
- Q3. What three structure are found only in plant cells? **Cell wall, vacuole, and chloroplasts**

Microscopes:

- Q4. How does a microscope magnify an object? **Uses lenses**
- Q5. What two things do you need to remember when using a microscope? **Specimen needs to be thin so light can pass through it. A dye can be added to make the object easier to see**

Specialised Cells:

- Q6. What are the special features of a root hair cell that enables it to absorb water and nutrients from the soil? **Root hair creates a large surface area. No chloroplasts as no light underground**
- Q7. What are the special features of a red blood cell to enable it to carry oxygen? **Contains haemoglobin which joins to oxygen; no nucleus; disc shaped to increase surface area**
- Q8. What are the special features of a sperm cell? **Streamlined head and long tail; lots of mitochondria to transfer energy**

Movement In and Out of Cells:

- Q9. What is diffusion? **Movement of particles from a high concentration to a low concentration**
- Q10. What is diffusion in water called? **Osmosis**
- Q11. What substances move **into** and **out** of the cell? **In = glucose and oxygen**

Out: **Carbon dioxide and water**

Unicellular Organisms:

- Q12. Describe a unicellular organism. **Only consists of one cell**

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Q13. Describe two things about an *Amoeba*. Nucleus controls growth & reproduction; move by moving part of their body and the rest follows in the same direction; eat bacteria, algae, and plant cells by engulfing them; reproduce by splitting in half (binary fission)

Q14. Describe two things about a *Euglena*. Microscopic organisms found in fresh water; contain chloroplasts and make their own food by photosynthesis; eye spot that detects light; flagellum allows the *Euglena* to move towards the light to make more food