A1.1 Water

What the Cell · DP Biology · note-taking sheet · SL statements A1.1.1–6

Name _____ **Date** _____

How to use this sheet: go through the slides and videos with it, then close them and write from memory. Use your own words and add page numbers from the book (pp. 2–10) where you want more detail.

Guiding questions. Which features of water make life possible? What does living in water make easier and harder for organisms?

A1.1.1 The medium for life

Give two reasons why water is called the medium for life.

A1.1.2 Polarity and hydrogen bonds

Draw two water molecules with a hydrogen bond between them. Show the slight charges. Explain why the covalent bonds are polar.

A1.1.3–4 Cohesion and adhesion

	What it is	Why it matters to organisms
Cohesion		
Adhesion		

A1.1.5 Solvent properties

Why do polar and charged substances dissolve in water? How does this support metabolism?

Substance	Soluble?	How it is carried in blood
Glucose		
Oxygen		
Fats and cholesterol		

Give one example where being hydrophobic is useful to a cell.

A1.1.6 Physical properties and animals

Property	Water compared with air	Seal or loon adaptation
Buoyancy		
Viscosity		
Thermal conductivity		
Specific heat		

Before you finish

Tick the ones you can explain without notes. Circle anything to ask about.

- ☐ Polar bonds
- ☐ Hydrogen bonds
- ☐ Cohesion
- ☐ Surface tension
- ☐ Adhesion
- ☐ Capillary action
- ☐ Hydrophilic and hydrophobic
- ☐ Four physical properties