Chemistry of Life

AP Biology · Vocabulary in context

Word	Example
polar /ˈpəʊlə/	Water is **polar** because its charge is unevenly distributed.
hydrogen bonds /ˈhaɪdrədʒn bɒndz/	**Hydrogen bonds** hold water molecules together.
Cohesion /kəʊˈhiːʒn/	**Cohesion** holds water molecules together, so a drop keeps its round shape.
adhesion /ədˈhiːʒn/	**Adhesion** makes water stick to the walls of the xylem.
specific heat /spəˈsɪfɪk hiːt/	Water has a high **specific heat**: it warms up slowly.
Carbon /ˈkɑːbən/	**Carbon** forms the backbone of living molecules.
macromolecules /ˈmækrəmɒlɪkjuːlz/	Proteins and DNA are **macromolecules**. DNA
polymers /ˈpɒlɪməz/	**Polymers** are long chains of small units.
monomers /ˈmɒnəʊməz/	Small **monomers** join to make a polymer.
dehydration synthesis /ˌdiːhaɪˈdreɪʃn ˈsɪnθəsɪs/	**Dehydration synthesis** joins molecules and releases water.
hydrolysis /haɪˈdrɒləsɪs/	**Hydrolysis** uses water to break a large molecule into smaller ones.
Carbohydrates /ˌkɑːbəʊˈhaɪdreɪts/	**Carbohydrates** like sugar give us energy.

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monosaccharides /ˈmɒnəʊsækɑːraɪdz/	Glucose and fructose are **monosaccharides**.
cellulose /ˈseljuːləʊs/	Plant cell walls are made of **cellulose**.
Lipids /ˈlɪpɪdz/	**Lipids** include fats and oils.
hydrophobic /ˌhaɪdrəˈfəʊbɪk/	Oil is **hydrophobic** and forms droplets in water.
phospholipids /ˈfɒsfəlɪpɪdz/	Cell membranes are made of **phospholipids**.
saturated /ˈsætʃəreɪtɪd/	**Saturated** fats have no double bonds and are solid at room temperature.
unsaturated /ʌnˈsætʃəreɪtɪd/	**Unsaturated** fats have double bonds and are usually liquid oils.
Steroids	**Steroids** have four carbon rings.
Cholesterol /kəˈlestərɒl/	**Cholesterol** is found in animal cell membranes.
Nucleic acids /njuːˈklɪɪk ˈæsɪdz/	DNA and RNA are **nucleic acids**. DNA RNA
nucleotides /ˈnjuːklɪətaɪdz/	DNA is made of **nucleotides**. DNA
nitrogenous base	A, T, G and C are each a **nitrogenous base**. A、T、G C
purines	A and G are **purines**: they have two rings. A G
pyrimidines	C and T are **pyrimidines**: they have one ring. C T
Proteins /ˈprəʊtiːnz/	**Proteins** are polymers made from amino acids.

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amino acids /əˈmiːnəʊ ˈæsɪdz/	Proteins are made of **amino acids**.
peptide bonds /ˈpeptaɪd bɒndz/	**Peptide bonds** join amino acids.
denature /ˈdenətʃə/	High heat can **denature** an enzyme, so its active site loses its shape.
R group	Each amino acid has a different **R group**.
Secondary structure /ˈsekəndəri ˈstrʌktʃə/	**Secondary structure** includes alpha helices and beta sheets. α β
Tertiary structure /ˈtɜːʃəri ˈstrʌktʃə/	**Tertiary structure** is the overall 3D shape of a protein. 3D
antiparallel /ˌæntɪˈpærəlel/	The two DNA strands are **antiparallel**: they run in opposite directions. DNA

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