2 · Cells, Development, Biodiversity and Conservation

Pearson Edexcel · International A-Level · Biology · Vocabulary in context

Word	Example
acrosome /ˈækrəʊsəʊm/	The **acrosome** helps the sperm get into the egg.
aseptic technique /æˈseptɪk tekˈniːk/	**Aseptic technique** helps prevent microbes contaminating a culture.
blastocyst /ˈblæstəsɪst/	The **blastocyst** attaches to the womb about a week after fertilisation.
calcium /ˈkælsɪəm/	Plants use **calcium** ions to help strengthen their cell walls.
capsule /ˈkæpsjuːl/	A **capsule** helps bacteria escape being eaten by white blood cells.
cell wall /sel wɔːl/	A **cell wall** gives a plant cell its shape.
corridors /ˈkɒrɪdɔːz/	Habitat **corridors** let animals move between separated habitat patches.
cortical reaction /ˈkɔːtɪkl rɪˈækʃn/	The **cortical reaction** helps prevent another sperm fertilising the egg.
Crossing over /ˈkrɒsɪŋ ˈəʊvə/	**Crossing over** swaps pieces between chromosomes.
cytokinesis /ˌsaɪtəkəˈniːsɪs/	In **cytokinesis**, the cytoplasm splits and two new cells form.
differential gene expression /ˌdɪfəˈrenʃl dʒiːn ekˈspreʃn/	**Differential gene expression** lets cells with similar DNA perform different jobs. DNA

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Word	Example
diploid /ˈdɪplɔɪd/	Body cells are **diploid**: they have two sets of chromosomes.
double fertilisation /ˈdʌbl ˌfɜːtɪlaɪˈzeɪʃn/	**Double fertilisation** produces the zygote and endosperm in flowering plants.
egg /eg/	The **egg** supplies most of the fertilised cell's cytoplasm.
endemic /enˈdemɪk/	A species **endemic** to one island lives naturally nowhere else.
eukaryotic /ˌjuːkərɪˈɒtɪk/	A typical **eukaryotic** cell keeps its chromosomes inside a nucleus.
flagellum /fləˈdʒeləm/	A sperm swims by moving its **flagellum**, or tail.
haploid /ˈhæplɔɪd/	Sperm and egg cells are **haploid**: they have one set of chromosomes.
Hardy–Weinberg equation /ˈhɑːdi ˈwaɪnbɜːg ɪˈkweɪʒn/	The **Hardy–Weinberg equation** is $p^2 + 2pq + q^2 = 1$. $$p^2 + 2pq + q^2 = 1$$
heterozygosity index /ˌhetrəʊzɪˈgɒsɪti ˈɪndeks/	The **heterozygosity index** is the share of individuals that are heterozygous.
Independent assortment /ˌɪndɪˈpendənt əˈsɔːtmənt/	**Independent assortment** separates maternal and paternal homologues in different combinations.
Index of diversity /ˈɪndeks ɒv daɪˈvɜːsɪti/	A high **index of diversity** means many species, each with similar numbers.
magnesium /mægˈniːzɪəm/	**Magnesium** ions form part of the chlorophyll molecule.

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Word	Example
Magnification /ˌmægnɪfɪˈkeɪʃn/	**Magnification** compares image size with the object's actual size.
Meiosis /meɪˈəʊsɪs/	**Meiosis** makes sex cells with half the chromosomes.
microfibrils /ˈmaɪkrəʊfɪbrəlz/	**Microfibrils** are bundles of cellulose chains that strengthen plant walls.
Mitosis /maɪˈtəʊsɪs/	**Mitosis** gives daughter nuclei the parent's chromosome number.
mitotic index /maɪˈtɒtɪk ˈɪndeks/	If 20 of 100 cells are dividing, the **mitotic index** is 0.2. 100 20 0.2
niche /niːʃ/	Each species has its own **niche**: its role and what it eats.
nitrate /ˈnaɪtreɪt/	Potassium **nitrate** is used in fertilisers.
organ systems /ˈɔːgən ˈsɪstəmz/	Different organs work together in **organ systems**.
organs /ˈɔːgənz/	**Organs** contain several tissues contributing to one main function.
Phloem /ˈfləʊɪm/	**Phloem** carries sugars from sources to growing or storing tissues.
plasmids /ˈplæzmɪdz/	Bacteria have small rings of DNA called **plasmids**. DNA
plasmodesmata /ˌplæzməʊdˈsmɑːtə/	**Plasmodesmata** are thin channels through the walls between two plant cells.
pluripotent /ˈplʊərɪpəʊtənt/	A **pluripotent** cell can form many body tissues.

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Word	Example
polygenic /ˌpɒlɪˈdʒenɪk/	Height is **polygenic**: many genes control it.
post-transcriptional modification /pəʊst trænˈskrɪpʃənl ˌmɒdɪfɪˈkeɪʃn/	**Post-transcriptional modification** cuts out introns from the RNA. RNA
prokaryotic /ˌprɒkərɪˈɒtɪk/	A **prokaryotic** cell has DNA without a surrounding nuclear membrane. DNA
resolution /ˌrezəˈluːʃn/	High **resolution** shows small details.
seed banks /siːd bæŋks/	**Seed banks** store seeds of rare plants.
Species richness /ˈspiːsiːz ˈrɪtʃnəs/	**Species richness** counts how many different species a habitat contains.
sperm /spɜːm/	A **sperm** swims to the egg.
three-domain system /θriː dəˈmeɪn ˈsɪstəm/	The **three-domain system** divides life into archaea, bacteria and eukaryota.
tissues /ˈtɪʃuːz/	**Tissues** contain cells that work together on a function.
totipotent /ˈtəʊtɪpəʊtənt/	A **totipotent** cell can form a whole organism and supporting tissues.
turbidity /tɜːˈbɪdɪti/	Mud raises the **turbidity** of river water.
Xylem /ˈzaɪləm/	**Xylem** carries water from roots towards the leaves.
zona pellucida /ˈzəʊnə ˈpeluːsɪdə/	The **zona pellucida** surrounds the mammalian egg cell.

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