Inheritance

IGCSE Biology · Vocabulary in context

Word	Example
chromosomes /ˈkrəʊməsəʊmz/	Humans have 46 **chromosomes** in each body cell. 46
genes /dʒiːnz/	**Genes** control your eye colour.
codes /kəʊdz/	A gene **codes** for one protein.
proteins /ˈprəʊtiːnz/	Meat, eggs and beans are rich in **proteins**, which are made from amino acids. 、
allele /əˈliːl/	The gene for eye colour has a brown **allele** and a blue allele.
sex chromosomes /seks ˈkrəʊməsəʊmz/	X and Y are the **sex chromosomes**. X Y
ratio /ˈreɪʃiəʊ/	The **ratio** of tall to short plants is 3:1. 3:1
base sequence /beɪs ˈsiːkwəns/	The **base sequence** of DNA is the genetic code. DNA
bases /ˈbeɪsɪz/	DNA has four **bases**: A, T, C and G. DNA A、T、C G
amino acids /əˈmiːnəʊ ˈæsɪdz/	Proteins are made of **amino acids**.
enzymes /ˈenzaɪmz/	**Enzymes** speed up reactions in the body.
receptor proteins /rɪˈseptə ˈprəʊtiːnz/	The neurotransmitter fits into **receptor proteins** on the next cell.
neurotransmitters /ˈnjuːrətrænsmɪtəz/	**Neurotransmitters** carry messages between nerve cells.

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expresses /ek'spresɪz/	A muscle cell **expresses** the genes for muscle proteins.
nucleus /'nju:klɪəs/	The **nucleus** holds the cell's DNA. DNA
cytoplasm /'saɪtəplæzəm/	Chemical reactions happen in the **cytoplasm**.
messenger /'mesɪndʒə/	**Messenger** RNA carries the code to the ribosome. RNA
ribosome /'ri:bəʊsəʊm/	The **ribosome** builds the protein.
diploid /'dɪplɔɪd/	Body cells are **diploid**: they have two sets of chromosomes.
haploid /'hæplɔɪd/	Sperm and egg cells are **haploid**: they have one set of chromosomes.
division /dɪ'vɪʒn/	Cell **division** makes two new cells from one.
mitosis /maɪ'təʊsɪs/	**Mitosis** makes two identical cells.
replication /ˌreplɪ'keɪʃn/	DNA **replication** happens before the cell divides. DNA
daughter cell /'dɔ:tə sel/	Each **daughter cell** gets a full set of chromosomes.
asexual reproduction /eɪ'sekʃu:əl rɪprə'dʌkʃn/	Strawberry plants can make new plants by **asexual reproduction**.
stem cells /stem selz/	**Stem cells** can become many kinds of cell.
meiosis /meɪ'əʊsɪs/	**Meiosis** makes sperm and egg cells.
gametes /'gæmi:ts/	Sperm and egg cells are **gametes**.

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inheritance /ɪn'herɪtəns/	**Inheritance** passes genes from parents to children.
genotype /'dʒenətaɪp/	Bb is a **genotype**. Bb
phenotype /'fenətaɪp/	Brown eyes are a **phenotype**.
dominant /'dɒmɪnənt/	The brown-eye allele is **dominant**.
recessive /rɪ'sesɪv/	The blue-eye allele is **recessive**.
homozygous /ˌhɒmə'zɪgəs/	BB is **homozygous**: both alleles are the same. BB
pure-breeding /pjʊə 'briːdɪŋ/	**Pure-breeding** tall plants always have tall offspring.
heterozygous /ˌhetrə'zɪgəs/	Bb is **heterozygous**: the alleles are different. Bb
cross /krɒs/	A **cross** between two tall plants gave some short plants.
Punnett square /'pʌnɪt skweə/	Use a **Punnett square** to predict the offspring.
pedigree diagram /'pedɪgriː 'daɪəgræm/	A **pedigree diagram** shows a family's inheritance.
test cross /test krɒs/	A **test cross** uses a homozygous recessive parent.
codominance /'kəʊdəmɪnəns/	In **codominance**, both alleles show, as in red and white spots.
blood groups /blʌd gruːps/	A, B, AB and O are **blood groups**. A、B、AB　O
sex-linked /seks lɪŋkt/	Colour blindness is **sex-linked**.

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Word	Example
colour blindness /ˈkʌlə ˈblaɪndnəs/	People with **colour blindness** may not tell red from green.
carrier /ˈkærɪə/	A **carrier** has the allele but not the condition.

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