Coordination and response

IGCSE Biology · Vocabulary in context

Word	Example
coordinate /kəʊˈɔːdɪnət/	The brain helps to **coordinate** your movements.
nervous system /ˈnɜːvəs ˈsɪstəm/	The **nervous system** carries fast messages.
electrical impulses /ɪˈlektrɪkl ˈɪmpʌlsɪz/	Neurones carry **electrical impulses**.
neurones /ˈnjuːrəʊnz/	**Neurones** carry messages around the body.
central nervous system /ˈsentrəl ˈnɜːvəs ˈsɪstəm/	The brain and spinal cord form the **central nervous system**.
brain /breɪn/	The **brain** controls your breathing.
spinal cord /ˈspaɪnl kɔːd/	The **spinal cord** runs down inside your backbone.
peripheral nervous system /pəˈrɪfərəl ˈnɜːvəs ˈsɪstəm/	The **peripheral nervous system** connects the body to the brain and spinal cord.
regulates /ˈregjʊleɪts/	The brain **regulates** body temperature.
sensory neurones /ˈsensəri ˈnjuːrəʊnz/	**Sensory neurones** carry messages from the skin to the spinal cord.
relay neurones /ˈriːleɪ ˈnjuːrəʊnz/	**Relay neurones** pass messages inside the spinal cord.
motor neurones /ˈməʊtə ˈnjuːrəʊnz/	**Motor neurones** carry messages to the muscles.
reflex /ˈriːfleks/	Blinking when something flies at your eye is a **reflex**.

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response /rɪˈspɒns/	Pulling your hand away is a **response**.
stimulus /ˈstɪmjʊləs/	A hot plate is a **stimulus**.
reflex arc /ˈriːfleks ɑːk/	A **reflex arc** goes from the receptor to the muscle without thinking.
receptor /rɪˈseptə/	The skin has a **receptor** for heat.
effector /ɪˈfektə/	A muscle is an **effector**.
muscle /ˈmʌsl/	Your heart is made of **muscle**.
gland /glænd/	A sweat **gland** makes sweat.
synapse /ˈsɪnæps/	A **synapse** is a small gap between two nerve cells.
vesicles /ˈvesɪklz/	Small **vesicles** hold the chemical messenger.
neurotransmitter /ˈnjuːrətrænsmɪtə/	A **neurotransmitter** crosses the gap between two neurones.
synaptic gap /sɪˈnæptɪk gæp/	The **synaptic gap** is a tiny space between two neurones.
receptor proteins /rɪˈseptə ˈprəʊtiːnz/	The neurotransmitter fits into **receptor proteins** on the next cell.
diffuse /dɪˈfjuːz/	Molecules **diffuse** from high to low concentration.
sense organs /sens ˈɔːgənz/	The eyes and ears are **sense organs**.
cornea /ˈkɔːnɪə/	The **cornea** is the clear front of the eye.

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Word	Example
refracts /rɪˈfrækts/	The cornea **refracts** light: it bends it.
iris /ˈaɪrɪs/	The **iris** is the coloured part of the eye.
pupil /ˈpjuːpl/	The **pupil** is the black hole in the middle of the eye.
lens /lenz/	The **lens** focuses light onto the back of the eye.
retina /ˈretɪnə/	The **retina** detects light.
optic nerve /ˈɒptɪk nɜːv/	The **optic nerve** carries messages from the eye to the brain.
blind spot /blaɪnd spɒt/	We cannot see anything that falls on the **blind spot**.
antagonistic /ænˈtægənɪstɪk/	The two muscles are **antagonistic**: when one contracts, the other relaxes.
circular muscles /ˈsɜːkjʊlə ˈmʌslz/	The **circular muscles** of the iris make the pupil smaller.
radial muscles /ˈreɪdɪəl ˈmʌslz/	The **radial muscles** of the iris make the pupil bigger.
accommodation /əˌkɒməˈdeɪʃn/	**Accommodation** lets the eye focus on near and far objects.
vision /ˈvɪʒn/	Good **vision** helps you read the board.
ciliary muscles /ˈsɪlɪəri ˈmʌslz/	The **ciliary muscles** change the shape of the lens.
suspensory ligaments /səˈspensəri ˈlɪgəmənts/	The **suspensory ligaments** hold the lens in place.
rods /rɒdz/	**Rods** help us see in dim light.

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Word	Example
cones /kəʊnz/	**Cones** let us see colours.
fovea /ˈfəʊvɪə/	The **fovea** gives the sharpest vision.
hormone /ˈhɔːməʊn/	Insulin is a **hormone**.
target organs /ˈtɑːgɪt ˈɔːgənz/	The liver is one of the **target organs** for insulin.
endocrine glands /ˈendəʊkraɪn glændz/	**Endocrine glands** release hormones into the blood.
adrenal glands /əˈdriːnl glændz/	The **adrenal glands** sit on top of the kidneys.
adrenaline /əˈdrenəlɪn/	**Adrenaline** makes your heart beat faster when you are scared.
pancreas /ˈpæŋkrɪəs/	The **pancreas** makes insulin and digestive enzymes.
insulin /ˈɪnsjuːlɪn/	**Insulin** lowers the level of sugar in the blood.
glucagon /ˈgluːkægən/	**Glucagon** raises the level of sugar in the blood.
glucose /ˈgluːkəʊs/	Cells use **glucose** for energy.
testes /ˈtestiːz/	The **testes** make sperm.
testosterone /teˈstɒstərəʊn/	**Testosterone** causes a boy's voice to deepen.
ovaries /ˈəʊvəriz/	The **ovaries** make eggs.
oestrogen /ˈiːstrədʒn/	**Oestrogen** controls the menstrual cycle.

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Word	Example
heart rate /hɑːt reɪt/	Exercise raises your **heart rate**.
concentration /ˌkɒnsənˈtreɪʃn/	The **concentration** of the acid is 2 mol/dm^3. 2 mol/dm^3
duration /djʊəˈreɪʃn/	Hormone responses last a long **duration**.
homeostasis /ˌhəʊmiːəˈstɑːsɪs/	Sweating is part of **homeostasis**: it keeps body temperature steady.
environment /enˈvaɪrənmənt/	A fish lives in a water **environment**.
negative feedback /ˈnegətɪv ˈfiːdbæk/	**Negative feedback** brings body temperature back to normal.
set point /set pɔɪnt/	The body keeps its temperature near a **set point** of 37 °C. 37 °C
liver /ˈlɪvə/	The **liver** makes bile.
glycogen /ˈglaɪkədʒn/	The liver stores **glycogen**.
diabetes /ˌdaɪəˈbiːtiːz/	People with **diabetes** cannot control their blood sugar.
temperature /ˈtemprɪtʃə/	The thermometer shows the water's **temperature**.
sweat glands /swet glændz/	**Sweat glands** release sweat onto the skin.
sweating /ˈswetɪŋ/	**Sweating** cools you down.
hair erector muscles /heə ɪˈrektə ˈmʌslz/	**Hair erector muscles** make your hairs stand up when you are cold.
blood vessels /blʌd ˈveslz/	**Blood vessels** carry blood around the body.

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Word	Example
fatty tissue /ˈfæti ˈtɪʃuː/	**Fatty tissue** under the skin keeps you warm.
insulation /ˌɪnsjuːˈleɪʃn/	**Insulation** keeps the heat in the house.
arterioles /ɑːˈtɪəriəʊlz/	**Arterioles** are small arteries.
vasodilation /ˌvæsədɪˈleɪʃn/	**Vasodilation** makes your skin red when you are hot.
capillaries /ˈkæpɪləriz/	**Capillaries** carry blood close to every cell.
shiver /ˈʃɪvə/	You **shiver** when you are cold.
vasoconstriction /ˌvæsəkənˈstrɪkʃn/	**Vasoconstriction** makes your skin pale when you are cold.
tropism /ˈtrəʊpɪzəm/	A **tropism** is a growth response to a stimulus.
gravitropism /ˈgrævɪtrəʊpɪzəm/	Roots grow down because of **gravitropism**.
gravity /ˈgrævɪti/	**Gravity** pulls the ball back down.
phototropism /ˌfəʊtəʊˈtrəʊpɪzəm/	Shoots grow towards light because of **phototropism**.
auxin /ˈɔːksɪn/	**Auxin** makes plant cells grow longer.
shoot /ʃuːt/	The **shoot** bends towards the light.
elongate /ˈiːlɒŋgeɪt/	Cells on the dark side **elongate** more.
clinostat	A **clinostat** turns slowly so gravity acts on all sides equally.

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