

KEY BIOLOGY TERMS

Important General Science Process Terms

- Accuracy-how close you are to the correct answer
<http://www.statisticshowto.com/wp-content/uploads/2016/11/accurate-and-precision.png>
- Conclusion-a short summary of your results that agrees with OR disagrees with your hypothesis
- Controlled Variable- parts of an experiment that are kept the same each time you do an experiment
https://o.quizlet.com/hydDyaigVzYwRgqxAgaKsQ_m.png
- Data-facts or numbers that can be collected during an experiment
- Dependent Variable- the thing in the experiment that you observe/ measure each time you do an experiment
https://o.quizlet.com/hydDyaigVzYwRgqxAgaKsQ_m.png
- Empirical Knowledge-information you get from using your senses(eyes,ears,smell,taste)
- Hypothesis-an educated guess about what you think will happen during your experiment
- Independent Variable the one thing in an experiment that you change each time you do an experiment
https://o.quizlet.com/hydDyaigVzYwRgqxAgaKsQ_m.png
- Precision-how often you can get the same answer over and over
<http://www.statisticshowto.com/wp-content/uploads/2016/11/accurate-and-precision.png>
- Procedure-the steps you take to do an experiment (also called method)
- Qualitative Observation-what you see in an experiment but does not have numbers-example: colour
<http://www.goodrichscience.com/uploads/3/1/1/2/31129331/8956183.png?325>
- Quantitative Observation-what you can measure in an experiment (includes numbers)
example-the rope is 12.5 cm
<http://www.goodrichscience.com/uploads/3/1/1/2/31129331/8956183.png?325>
- Scientific Method- a specific way to complete a Scientific experiment
http://basalduscience.weebly.com/uploads/2/2/1/8/22182056/4651063_orig.jpg
- Theory-an explanation based on facts and/or what you can actually see

Body Systems

Apoptosis-normal cell death in a living organism

Anaphase-stage of mitosis when chromosomes move to opposite poles

<https://cdn.stemcellthailand.org/wp-content/uploads/2014/03/5-stage-Mitosis.jpg>

Alveolus-air sacs in your lungs where gas exchange happens

http://img.webmd.com/dtmcms/live/webmd/consumer_assets/site_images/media/medical/hw/h5550999_001.jpg

Anus-hole where feces (poo) leaves your body

Artery-muscular blood vessel that take blood away from your heart

<https://s-media-cache-ak0.pinimg.com/236x/78/d1/97/78d1973bc080afbd6fccb4a9c3cc5650--vocabulary-worksheets-circulatory-system.jpg>

Atrium-upper part of heart (left and right) plural-Atrial

<http://www.funscience.in/images/StudyZone/Biology/Transportation/HumanHeart.jpg>

Bronchus-tube that goes to bronchiole plural-bronchi

http://study.com/cimages/multimages/16/resp_system.jpg

Bronchiole-tube that goes to alveolus

http://study.com/cimages/multimages/16/resp_system.jpg

Capillary-really small tubes that carry blood

<https://s-media-cache-ak0.pinimg.com/236x/78/d1/97/78d1973bc080afbd6fccb4a9c3cc5650--vocabulary-worksheets-circulatory-system.jpg>

Cell-basic part of all living things (Animal cell or Plant Cell)

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

http://thescienceclubs.weebly.com/uploads/2/5/4/4/25442160/3552918_orig.jpg

Cell membrane-part of cell that controls what goes in and out of cell

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Centriole-part of animal cell that helps with mitosis

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Chloroplast- part of plant cell where photosynthesis occurs

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Circulatory System-human system made of blood,heart and blood vessels designed to move oxygen/carbon dioxide, hormones etc around body

<https://s-media-cache-ak0.pinimg.com/236x/78/d1/97/78d1973bc080afbd6fccb4a9c3cc5650--vocabulary-worksheets-circulatory-system.jpg>

Cloning-making an exact genetic copy of a living thing

<http://learn.genetics.utah.edu/content/cloning/whatiscloning/images/twingirls.jpg>

Conductive Tissue-plant tissue that moves water and sugar around, example, xylem and phloem

CT scan- a medical technology that combines Xrays to see hard tissue (bones) and soft tissue (organs)

https://www.bupa.co.uk/~media/Images/HealthManagement/Topics/CT_Scan.ashx

Cytokinesis-division of cytoplasm after DNA has divided

<https://cdn.stemcellthailand.org/wp-content/uploads/2014/03/5-stage-Mitosis.jpg>

Cytoplasm-liquid part of cell that has water and other nutrients

Diaphragm-stretchy membrane that separates your chest cavity from abdomen

http://study.com/cimages/multimages/16/resp_system.jpg

Differentiation-when cells take on specialized jobs

Diffusion-movement of particles from high concentration to low concentration

<https://i.ytimg.com/vi/cVAlNfR4yv4/maxresdefault.jpg>

Digestive System-group of organs that helps you make energy from food

<http://www.myschoolhouse.com/courses/C/2/Images/digestive.gif>

Dissection-cutting plant or animal to learn more about the parts inside the organism

Endoplasmic Reticulum-part of the cell that folds and moves proteins

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Enzymes-proteins that help speed up chemical reactions in the body, often end in ase.
example-amylase breaks down starch

Epidermal tissue-plant tissue used for protection

Epiglottis-small tissue that stops you from choking when you eat

Epithelial tissue-animal tissue used for protection

Esophagus-muscular tube that brings food from your mouth to your stomach

<http://www.myschoolhouse.com/courses/C/2/Images/digestive.gif>

Golgi Apparatus-part of cell that packages fats and proteins

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Heart- a 4 part muscular organ used to pump blood around the body

<https://s-media-cache-ak0.pinimg.com/236x/78/d1/97/78d1973bc080afbd6fccb4a9c3cc5650--vocabulary-worksheets-circulatory-system.jpg>

<https://s-media-cache-ak0.pinimg.com/236x/78/d1/97/78d1973bc080afbd6fccb4a9c3cc5650--vocabulary-worksheets-circulatory-system.jpg>

Interphase-stage in between mitosis where genetic material is copied

<https://cdn.stemcellthailand.org/wp-content/uploads/2014/03/5-stage-Mitosis.jpg>

Large Intestine-part of your digestive system that absorbs water before you get rid of your feces(poo)

<http://www.myschoolhouse.com/courses/C/2/Images/digestive.gif>

Larynx-part of your respiratory system that makes sounds so you can speak and sing

http://study.com/cimages/multimages/16/resp_system.jpg

Liver-part of your digestive system that gets rid of poisons and helps break down fats

<http://www.myschoolhouse.com/courses/C/2/Images/digestive.gif>

Meristematic Tissue-plant tissue used to produce new parts of plants (ex. root tips, buds)

Metaphase- stage of mitosis where chromosomes line up in the middle

<https://cdn.stemcellthailand.org/wp-content/uploads/2014/03/5-stage-Mitosis.jpg>

Mitochondria-part of cell that makes energy

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Mouth-breaks down food into smaller pieces so they can enter the digestive system

<http://www.myschoolhouse.com/courses/C/2/Images/digestive.gif>

MRI- a medical technology that uses radio waves and magnets to see more details about the human body

https://i.ytimg.com/vi/Q_Pa6KFL1Nw/maxresdefault.jpg

Muscle tissue-animal tissues used for movement

Nasal Cavity-the part inside the nose that takes air into the body

http://study.com/cimages/multimages/16/resp_system.jpg

Nervous tissue-groups of animal cells that help communicate information

Nucleus-main control centre of the cell

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Organ-a group of tissues that work together-example, heart

http://thescienceclubs.weebly.com/uploads/2/5/4/4/25442160/3552918_orig.jpg

Organelle-a small part of a cell, example, mitochondria

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Organism-living thing

http://thescienceclubs.weebly.com/uploads/2/5/4/4/25442160/3552918_orig.jpg

Organ System-a group of organs that work together, example, respiratory system

http://thescienceclubs.weebly.com/uploads/2/5/4/4/25442160/3552918_orig.jpg

Osmosis-movement of water across a cell membrane from an area of high concentration to an area of low concentration

<https://i.ytimg.com/vi/cVAlNfR4yv4/maxresdefault.jpg>

Pharynx-back of throat where air and food passes on way into body

http://study.com/cimages/multimages/16/resp_system.jpg

Phloem plant tissue used to move sugars

Plasma-liquid part of blood

<https://userscontent2.emaze.com/images/9993849d-6c90-460b-8620-eddc1a85c8d9/b3a2cf45-f0a4-4c86-8a0e-61413f602b0c.jpg>

Platelet-type of blood cell that makes your blood clot

<https://userscontent2.emaze.com/images/9993849d-6c90-460b-8620-eddc1a85c8d9/b3a2cf45-f0a4-4c86-8a0e-61413f602b0c.jpg>

Prophase-stage of mitosis before chromosomes move to opposite sides of cell

Red Blood Cell-round blood cells used to carry oxygen and carbon dioxide

<https://userscontent2.emaze.com/images/9993849d-6c90-460b-8620-eddc1a85c8d9/b3a2cf45-f0a4-4c86-8a0e-61413f602b0c.jpg>

Respiratory System-body system that takes in oxygen and removes carbon dioxide

http://study.com/cimages/multimages/16/resp_system.jpg

Ribosome-part of cell that makes protein

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Small Intestine-part of digestive system where nutrients are chemically broken down and nutrients are absorbed into body

<http://www.myschoolhouse.com/courses/C/2/Images/digestive.gif>

Stem cell

Stomach-place where food is broken down by enzymes and acids

<http://www.myschoolhouse.com/courses/C/2/Images/digestive.gif>

Telophase-last stage of mitosis when genetic material goes to two new daughter cells

<https://cdn.stemcellthailand.org/wp-content/uploads/2014/03/5-stage-Mitosis.jpg>

Tissue- a group of cells working together-example, conductive

Trachea-part of the respiratory system that branches into the left and right lung

http://study.com/cimages/multimages/16/resp_system.jpg

Transgenic organism-living things that have genetic information from another species

White blood cell-cells that are used to fight off infection

<https://userscontent2.emaze.com/images/9993849d-6c90-460b-8620-eddc1a85c8d9/b3a2cf45-f0a4-4c86-8a0e-61413f602b0c.jpg>

Vacuole-part of cell that holds liquid and minerals

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/11/25113734/Plant-Cell-and-Animal-Cell.png>

Vein-a tube that brings oxygen low blood back to the heart

<https://s-media-cache-ak0.pinimg.com/236x/78/d1/97/78d1973bc080afbd6fccb4a9c3cc5650--vocabulary-worksheets-circulatory-system.jpg>

Ventricle-low chambers of heart

<http://www.funscience.in/images/StudyZone/Biology/Transportation/HumanHeart.jpg>

Xylem- plant tube used to bring water up from roots to top of plant

Biochemistry

Please note many terms overlap with Grade 11 and 12 Chemistry so those terms will not be repeated

active transport- energy using (uses ATP) movement of molecules from low to high concentration

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/07/01055400/11.png>

alpha helix-secondary structure of protein

https://upload.wikimedia.org/wikipedia/commons/thumb/c/c5/Alpha_beta_structure_%28full%29.png/270px-Alpha_beta_structure_%28full%29.png

amino acid-building block of protein

<https://upload.wikimedia.org/wikipedia/commons/thumb/c/ce/AminoAcidball.svg/1200px-AminoAcidball.svg.png>

anabolic reactions-rxs that build small molecules into larger ones

<https://media1.britannica.com/eb-media/59/166059-004-40ACDC27.jpg>

beta pleated sheet-secondary structure of protein

https://upload.wikimedia.org/wikipedia/commons/thumb/c/c5/Alpha_beta_structure_%28full%29.png/270px-Alpha_beta_structure_%28full%29.png

carbohydrates-macromolecules made of C,H and O

<http://www.basicbiology.net/wp-content/uploads/2015/09/carbohydrate.jpg>

catabolic reactions- rxns that break molecules into smaller pieces

<https://media1.britannica.com/eb-media/59/166059-004-40ACDC27.jpg>

competitive inhibitor-substance that blocks active site of enzyme and stops it from working

https://upload.wikimedia.org/wikipedia/commons/thumb/f/fb/Comp_inhib.svg/350px-Comp_inhib.svg.png

disaccharide-double sugar

<http://eschooltoday.com/science/nutrients-in-food/images/types-of-carbohydrates.png>

enzyme-protein catalyst in biological reactions

https://upload.wikimedia.org/wikipedia/commons/thumb/2/24/Induced_fit_diagram.svg/450px-Induced_fit_diagram.svg.png

facilitated diffusion- movement of molecules that is helped by proteins

<https://figures.boundless-cdn.com/18633/large/figure-05-02-05.jpeg>

feedback inhibition-a way of controlling reactions where a product of one reaction affects a reaction before it

<http://www.opentextbooks.org.hk/system/files/resource/34/34471/34697/media/image14.png>

fluid mosaic model- most accepted model of structure and function of cell membrane

http://ib.bioninja.com.au/Media/fluid-mosaic-2d_med.jpeg

glycerol-3 carbon alcohol that serves as the backbone of a triglyceride

<http://slideplayer.com/slide/6634599/23/images/3/Lipid+Structure+Fats.+Oils.+Waxes.jpg>

glycosidic-bond formed between monosaccharides made from two hydroxyl groups

<http://images.tutorvista.com/cms/images/38/maltose-lactose.png>

hydrophilic-water loving

<http://www.buzzle.com/img/articleImages/609087-5677-7.jpg>

hydrophobic-water hating

<http://www.buzzle.com/img/articleImages/609087-5677-7.jpg>

hypertonic solution-solution that causes a cell to lose water due to osmosis

https://edc2.healthtap.com/ht-staging/user_answer/avatars/2081186/large/osmosis-on-cells.jpeg?1415585167

hypotonic solution-solution that causes a cell to gain water due to osmosis

https://edc2.healthtap.com/ht-staging/user_answer/avatars/2081186/large/osmosis-on-cells.jpeg?1415585167

induced fit model of enzyme activity-model used to show how enzymes work

<http://science.halleyhosting.com/sci/ibbio/chem/notes/chpt8/enzyme.gif>

isotonic solution- solution that does not cause a cell to lose or gain water due to osmosis

https://edc2.healthtap.com/ht-staging/user_answer/avatars/2081186/large/osmosis-on-cells.jpeg?1415585167

levels of protein structure- primary,secondary,tertiary and quarternary structure of proteins

<https://ka-perseus-images.s3.amazonaws.com/6571b727a8821a72ef7e812c6b5b9d765d0f4343.svg>

lipid-hydrophobic macromolecule made of C, H and O (sometimes P)

<http://slideplayer.com/slide/6634599/23/images/3/Lipid+Structure+Fats,+Oils,+Waxes.jpg>

macromolecules-large molecules made of grouping large number of repeating building blocks

monosaccharide-single sugar

<http://eschooltoday.com/science/nutrients-in-food/images/types-of-carbohydrates.png>

noncompetitive inhibitor-molecule that permanently stops an enzyme from working

https://upload.wikimedia.org/wikipedia/commons/thumb/f/fb/Comp_inhib.svg/350px-Comp_inhib.svg.png

osmosis-movement of water across a cell membrane

<http://static.sfdict.com/dictstatic/dictionary/graphics/ahsd/jpg/ASosmosi.jpg>

phagocytosis-active transport that means cell eating

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/07/01055400/11.png>

pinocytosis-active transport that means cell drinking

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/07/01055400/11.png>

polysaccharide-many sugars joined together

<http://eschooltoday.com/science/nutrients-in-food/images/types-of-carbohydrates.png>

receptor mediated endocytosis-active transport only for special molecules

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2016/07/01055400/11.png>

Metabolic Processes

anthocyanins-plant pigments that have a red colour

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2017/02/15070654/118.png>

aerobic cellular respiration- using oxygen to make energy for the body

alcoholic fermentation-converting sugars into ATP, alcohol and waste carbon dioxide

<https://userscontent2.emaze.com/images/1de5b0cd-fcaf-46b5-885f-496e0231abaf/14dba60d-ef6c-42c1-b00c-13ccb86eb40a.png>

Calvin cycle-light independent stage of p/s which uses CO₂ and products from light dependent reactions to make glucose

https://dr282zn36sxxg.cloudfront.net/datastreams/f-d%3A8acdf2b04aee3b1a80a38dc25d84ce54eb4871f5c2bb80b83537aa77%2BIMAGE_THUMB_POSTCARD_TINY%2BIMAGE_THUMB_POSTCARD_TINY.1

carbon fixation-putting CO₂ into carbohydrate molecules

<https://image.slidesharecdn.com/photosynthesiscalvincycle-120511142234-phpapp01/95/photosynthesis-calvin-cycle-6-638.jpg?cb=1367465803>

C3 plants and C4 plants-different types of plants that have different leaf structures to carry out first part of Calvin cycle differently (due to varying environmental conditions)

<http://www.differencebtw.com/wp-content/uploads/2015/08/c3-plants-vs-c4-plants-990x495.jpg>

carotenoids-orange pigments in plants

<http://s3-ap-southeast-1.amazonaws.com/subscriber.images/biology/2017/02/15070654/118.png>

chlorophyll-green pigments in plant molecules that capture light for photosynthesis

<http://scifun.chem.wisc.edu/chemweek/chlrphyl/chlrphyl.gif>

cyanobacteria-bacteria that carry out photosynthesis

<https://obsessedwithreality.files.wordpress.com/2008/11/c810x2cyanobacteria.jpg>

deamination-breaking down proteins into ammonia

http://www.s-cool.co.uk/assets/learn_its/alevel/biology/homeostasis/water-levels-and-the-kidney/2008-01-29_112247.gif

electron transport chain-final stage of cell respiration that produces significant ATP using many redox reactions

https://i.ytimg.com/vi/VER6xW_r1vc/maxresdefault.jpg

facultative anaerobe-organisms that can get energy with or without oxygen

http://images.slideplayer.com/38/10788271/slides/slide_15.jpg

glycolysis-first stage of cell respiration where glucose is broken down into pyruvate and some ATP and NADH are produced

https://media1.shmoop.com/images/biology/biobook_cellresp_graphik_3.png

Krebs cycle-3rd cyclic stage of cell respiration that produces ATP, NADH, FADH₂ and waste CO₂

http://media.npr.org/assets/img/2011/09/13/krebs_cycle-46b152fcf30abdad1e42cce4ded6e2d99d00f458-s900-c85.jpg

lactic acid fermentation-sugars are broken down to make energy and lactic acid (occurs when oxygen is in short supply)

<https://qph.ec.quoracdn.net/main-qimg-2d62a355a4c1fc399a411a1093c69f44-c>

leaf structure-inside details of a leaf

<https://image.slidesharecdn.com/leafstructure-130215101940-phpapp01/95/leaf-structure-9-638.jpg?cb=1416989802>

light dependent reactions of photosynthesis-first stage of ps in which ATP and NADPH is made and oxygen is given off as waste (source of Oxygen is breakdown of water)

https://upload.wikimedia.org/wikipedia/commons/thumb/4/49/Thylakoid_membrane_3.svg/450px-Thylakoid_membrane_3.svg.png

photosystem-groups of pigments inside chloroplast membranes

<http://science.halleyhosting.com/sci/ibbio/cellenergy/phototopics/photosystem1.gif>

pyruvate oxidation-second stage of cell respiration that produces NADH, acetylCoA and waste CO₂

<https://ka-perseus-images.s3.amazonaws.com/a93caa9342414da215594680e06b0e25a4fca5eb.png>

obligate aerobe-organisms that must have oxygen to get energy

http://images.slideplayer.com/38/10788271/slides/slide_15.jpg

obligate anaerobe-organisms that can not live in the presence of oxygen

http://images.slideplayer.com/38/10788271/slides/slide_15.jpg

oxidative phosphorylation-way of making ATP involving several enzyme catalyzed oxidation reduction reactions where oxygen is the final electron acceptor

http://slideplayer.com/slide/4510365/15/images/23/*+Oxidative+phosphorylation.jpg

substrate level phosphorylation-way of making ATP using a chemical reaction that uses an enzyme

http://slideplayer.com/slide/4510365/15/images/23/*+Oxidative+phosphorylation.jpg

xanthophylls-yellow plant pigments

https://1.bp.blogspot.com/-8B_1rFSIDQ4/TboBWD9XwdI/AAAAAAAAACIE/iFF4ideo_PO/w1200-h630-p-k-no-nu/yellow+tree.jpg

Genetics (Senior Biology)

allele- one form of a gene

anticodon- 3 letter part of tRNA that complements 3 letter part of mRNA codon

<http://cdn.yourarticlelibrary.com/wp-content/uploads/2013/12/b577.jpg>

antiparallel-parallel but running in opposite directions

http://www.visionlearning.com/img/library/large_images/image_4337.jpg

antibody-molecules made by blood cells

https://upload.wikimedia.org/wikipedia/commons/thumb/3/32/ABO_blood_type.svg/410px-ABO_blood_type.svg.png

antigen-markers on blood cells

https://upload.wikimedia.org/wikipedia/commons/thumb/3/32/ABO_blood_type.svg/410px-ABO_blood_type.svg.png

<http://www.differencebtw.com/wp-content/uploads/2016/07/Allele-300x225.jpg>

anaphase-stage of mitosis where chromosomes move away

<http://www.sciencehq.com/biology/images/cell-cycle-simple.gif>

amniocentesis-medical procedure used to study chromosomes of fetus

<http://www.pregnancyhealth.net/wp-content/uploads/2015/12/amniocentesis-test-in-pregnancy.jpg>

asexual reproduction-new organisms are produced from one parent (offspring are same as parent)

http://csls-text.c.u-tokyo.ac.jp/images/fig/fig12_1.gif

autosomes-body chromosomes that do not determine gender

blastula-ball of cells at embryo stage

cancer- a disease that causes abnormal cells to grow out of control

<http://www.cancerresearchuk.org/sites/default/files/cancer-cells-growing.jpg>

carcinogen-something that causes cancer

<http://cancercare.healthcareathomeindia.com/wp-content/uploads/2015/07/carcinogens-around-us.png>

Central Dogma-important principle that shows relationship between DNA, RNA and protein

<https://image.slidesharecdn.com/ibbiology2-150503115808-conversion-gate01/95/ib-biology-27-slides-transcription-translation-3-638.jpg?cb=1430654672>

centromere-middle part of a chromosome

<http://www.biologyjunction.com/images/chromatidslabeled.jpg>

chromatin-unstructured DNA material that carries genetic information

https://www.google.ca/search?q=chromatin&rlz=1CAASUD_enCA718CA719&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjA8v2_ybPVAhWi5oMKHapKD4IQ_AUICigB&biw=1366&bih=678#imgrc=h4AGbXUeRSSw1M:

chromosome-structures that carry genetic information

<http://www.biologyjunction.com/images/chromatidslabeled.jpg>

https://www.google.ca/search?q=chromatin&rlz=1CAASUD_enCA718CA719&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjA8v2_ybPVAhWi5oMKHapKD4IQ_AUICigB&biw=1366&bih=678#imgrc=h4AGbXUeRSSw1M:

cloning-making an identical genetic copy of something

https://assets.answersingenesis.org/img/cms/content/contentnode/header_image/cloning.jpg

codominant-a genetic trait when both the dominant and recessive alleles are shown

<http://genetics.thetech.org/sites/default/files/FlowersDRIDC.jpg>

codon-3 letter part of mRNA that matches anticodon site on tRNA

crossing over-exchange of genetic information between homologous pairs of chromosomes

cytokinesis-division of cell contents after the genetic material has divided

<http://www.sciencehq.com/biology/images/cell-cycle-simple.gif>

dihybrid- a genetic cross involving two traits

<https://media1.britannica.com/eb-media/46/109046-004-581CDD7E.jpg>

diploid-two copies of a chromosome

https://vignette2.wikia.nocookie.net/uvmgg/images/b/b1/Polyploidy_gen.jpg/revision/latest?cb=20121129201101

DNA fingerprinting-medical procedure used to determine genetic similarities between individuals

https://mir-s3-cdn-cf.behance.net/project_modules/disp/92edc710908733.560ed6a13f515.png

DNA replication-complex process used to make a new copy of DNA from the parent molecule (uses many different enzymes)

<https://www.pathwayz.org/Node/Image/url/aHR0cHM6Ly9pLmltZ3VyLmNvbS9UTlhzeHJrLnBuZz8y>

dominant-the stronger form of a gene

http://study.com/cimages/multimages/16/earlobe_dominant_recessive.png

embryo-early stage of human (up to 8 weeks)

<https://image.slidesharecdn.com/ch-7sec-3thehumanlifecycle-110516132337-phpapp02/95/7th-gradech-7-sec-3-the-human-life-cycle-3-728.jpg?cb=1433774724>

fertilization- a process which joins the egg and the sperm

<https://image.slidesharecdn.com/chromosomes-fertilization-120715215459-phpapp02/95/chromosomes-fertilization-1-728.jpg?cb=1342389617>

fetus-later stage of human development from 9 weeks to birth

<https://image.slidesharecdn.com/ch-7sec-3thehumanlifecycle-110516132337-phpapp02/95/7th-gradech-7-sec-3-the-human-life-cycle-3-728.jpg?cb=1433774724>

gamete-sex cell

gametogenesis-formation of sperm and egg cells

gel electrophoresis-technique used to separate molecules (DNA) based on their size

<https://image.slidesharecdn.com/dnaandgelelectrophoresis-151109161158-lva1-app6891/95/dna-and-gel-electrophoresis-6-638.jpg?cb=1447085546>

gene- part of a DNA molecule that decided which protein will be made

gene therapy-a method used to replace unhealthy genes with healthy genes

Genetic code-table that shows what mRNA sequences are made into what amino acids

<https://image.slidesharecdn.com/geneticcodeandmutation-160925143642/95/genetic-code-and-mutation-6-638.jpg?cb=1474814476>

genotype-the alleles of a gene in an individual

http://study.com/cimages/multimages/16/earlobe_dominant_recessive.png

haploid-one copy of a chromosome

https://vignette2.wikia.nocookie.net/uvmgg/images/b/b1/Polyploidy_gen.jpg/revision/latest?cb=20121129201101

heterozygous- a genetic trait that has one dominant and one recessive allele

http://study.com/cimages/multimages/16/earlobe_dominant_recessive.png

homologous chromosome-chromosomes that have the same size and genetic information

homozygous- a genetic trait that has two of the same alleles (either two dominant or two recessive alleles)

http://study.com/cimages/multimages/16/earlobe_dominant_recessive.png

hydrogen bond-attraction between nitrogen bases in DNA molecule

<http://thenorashikinrahim-biochemistry.weebly.com/uploads/6/0/8/4/60845749/2046494.gif?415>

incomplete dominance-genetic trait when there is no recessive or dominant allele

<https://image.slidesharecdn.com/incompletecodominancemultiplealleles-120127095123-phpapp02/95/incomplete-codominance-multiplealleles-3-728.jpg?cb=1327658295>

interphase-part of cell cycle where the cell is NOT dividing

<http://www.sciencehq.com/biology/images/cell-cycle-simple.gif>

karyotype- a picture of human chromosomes arranged by size

https://c1.staticflickr.com/9/8202/8252270882_60e15fbda5_b.jpg

lagging strand-new DNA strand grows away from the replication fork

https://www.yourgenome.org/sites/default/files/illustrations/diagram/dna_replication_yourgenome.png

leading strand-new DNA strand grows in the same direction that the replication fork opens

https://www.yourgenome.org/sites/default/files/illustrations/diagram/dna_replication_yourgenome.png

meiosis-a method used to produce sex cells (sperm and egg)

<https://universe-review.ca/I10-45-meiosis.png>

metaphase-stage of mitosis where chromosomes line up in the middle of the cell

<http://www.sciencehq.com/biology/images/cell-cycle-simple.gif>

metastasis-spreading of cancer from one area of body to another

mitosis-stages of cell division

<http://www.sciencehq.com/biology/images/cell-cycle-simple.gif>

monohybrid- a genetic cross involving one trait

<https://media1.britannica.com/eb-media/46/109046-004-581CDD7E.jpg>

monosomy- a genetic disorder that has a single chromosome instead of a normal pair of chromosomes (ex. Turner Syndrome)

<http://slideplayer.com/slide/9305414/28/images/5/Nondisjunction+Baby+has+wrong+chromosome+number+Trisomy+Monosomy.jpg>

mutation-changes in structure of DNA (insertion,substitution,deletion etc)

http://ib.bioninja.com.au/Media/point-mutations_med.jpeg

non-disjunction-when chromosomes do not separate properly, can lead to genetic disorders

http://study.com/cimages/multimages/16/nondisjunction_meiosisI.png

ootid-an ovum that is NOT fertilized

ovum-egg cell

pedigree-diagram showing the passing on of a genetic trait in a family

https://pmgbiology.files.wordpress.com/2014/12/600px-autosomal_dominant_pedigree_chart-e1417729128388.png

phosphodiester bond-chemical bond between sugar and phosphate group in DNA

<http://thenorashikinrahim-biochemistry.weebly.com/uploads/6/0/8/4/60845749/2046494.gif?415>

plasmid-bacterial DNA found outside the main chromosome

http://bio1151.nicerweb.com/Locked/media/ch20/20_02a.jpg

polar bodies-cells that help egg cells survive

https://www.google.ca/search?q=polar+bodies&rlz=1CAASUD_enCA718CA719&source=Inms&tbn=isch&sa=X&ved=0ahUKEwjlsIGdxrPVAhUk34MKHTUxBGQQ_AUICigB&biw=1366&bih=678#imgrc=4epJEX-GrEp6NM:

polyploid-many copies of a chromosome

https://vignette2.wikia.nocookie.net/uvmgg/images/b/b1/Polyploidy_gen.jpg/revision/latest?cb=20121129201101

phenotype-how an organism looks

http://study.com/cimages/multimages/16/earlobe_dominant_recessive.png

pluripotent cells-cells that can become MANY (but not all) different types of tissue

<https://image.slidesharecdn.com/propertiesandusesofstemcells-140205025329-phpapp02/95/properties-and-uses-of-stem-cells-26-638.jpg?cb=1391568838>

prophase-early stage of mitosis

<http://www.sciencehq.com/biology/images/cell-cycle-simple.gif>

Punnett square-chart used to solve different types of genetics problems

https://upload.wikimedia.org/wikipedia/commons/thumb/2/22/Punnett_Square.svg/768px-Punnett_Square.svg.png

recessive- the weaker form of a gene

http://study.com/cimages/multimages/16/earlobe_dominant_recessive.png

RNA-ribonucleic acid

a type of nucleic acid that has 3 types (rRNA,mRNA,tRNA)

<https://image.slidesharecdn.com/dnatornatoaminoacids-101121222953-phpapp01/95/dna-to-rna-to-amino-acids-4-638.jpg?cb=1422635060>

semiconservative replication-method used to make a copy of DNA

http://www.phschool.com/science/biology_place/biocoach/dnarep/images/repmodel.gif

sex linkage- genetic traits that are linked to sex chromosomes (example color blindness, hemophilia)

<http://learn.genetics.utah.edu/content/pigeons/sexlinkage/images/sex-linkage-04b.jpg>

sexual reproduction- new individuals are produced from two different parents (genetically different from parents)

http://csls-text.c.u-tokyo.ac.jp/images/fig/fig12_1.gif

somatic cells-cells in a living thing that are NOT the sex cells (gametes)

spindle fibre- protein structures that chromosomes move along

<https://classconnection.s3.amazonaws.com/577/flashcards/2482577/gif/metaphase1359587744927.gif>

stem cells-generalized cells that have the ability to become different types of tissue

synapsis-pairing of homologous chromosomes

telophase-end stage of mitosis

<http://www.sciencehq.com/biology/images/cell-cycle-simple.gif>

test cross- a cross used to determine the genotype of an organism

<https://swh-826d.kxcdn.com/wp-content/uploads/2010/07/test-cross1.jpg>

totipotent-stem cells that can become anything

<https://image.slidesharecdn.com/propertiesandusesofstemcells-140205025329-phpapp02/95/properties-and-uses-of-stem-cells-26-638.jpg?cb=1391568838>

transcription-making RNA from DNA

<https://image.slidesharecdn.com/ibbiology2-150503115808-conversion-gate01/95/ib-biology-27-slides-transcription-translation-3-638.jpg?cb=1430654672>

translation-making protein from RNA

<https://image.slidesharecdn.com/ibbiology2-150503115808-conversion-gate01/95/ib-biology-27-slides-transcription-translation-3-638.jpg?cb=1430654672>

trisomy- a genetic disorder that has 3 chromosomes instead of a normal pair of chromosomes

<http://slideplayer.com/slide/9305414/28/images/5/Nondisjunction+Baby+has+wrong+chromosome+number+Trisomy+Monosomy.jpg>

zygote-very early stage of human development after the sperm and egg have joined together

EVOLUTION

adaptive radiation-one organism changes into different organisms because of the environment

<https://qph.ec.quoracdn.net/main-qimg-75c7aeecd235d960db985637dd23bbbed-c>

altruism-behaviour that benefits the species but not the individual

analogous structures-structures that evolved from different origins

<http://slideplayer.com/slide/5273051/17/images/13/Homologous+Structures.jpg>

artificial selection- inherited trait chosen by humans

<https://image.slidesharecdn.com/presentation1-170327095709/95/natural-selection-vs-artificial-selection-4-638.jpg?cb=1490608928>

behavioural isolation-different behaviours prevent individuals in a species from mating with each other

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

<http://images.wisegeek.com/fish-fossil-in-rock.jpg>

co evolution-two species affect each other's evolution

http://study.com/cimages/multimages/16/moth_flower4.png

continental drift-Europe and North America are moving away from each other

http://classroomclipart.com/images/gallery/Clipart/Geography/continental_drift.jpg

directional selection-the environment causes a trait to move in ONE direction

<https://mrkubuske.files.wordpress.com/2014/03/types-of-selection.jpg>

disruptive selection-the environment causes trait to move away from the middle and towards opposite ends

<https://mrkubuske.files.wordpress.com/2014/03/types-of-selection.jpg>

ecological isolation-when two species can not breed with each other because they live in different habitats

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

fossil-mold or cast of an organism in rock

<http://images.wisegeek.com/fish-fossil-in-rock.jpg>

gametic isolation-when sperm and egg can not join together

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

gene flow-the movement of genes in or out of population

<https://image.slidesharecdn.com/chapter23h-w-110913120956-phpapp01/95/chapter-23-hw-class-2-728.jpg?cb=1315915877>

genetic drift-change in gene frequency in a population that is usually due to chance

<https://image.slidesharecdn.com/chapter23h-w-110913120956-phpapp01/95/chapter-23-hw-class-2-728.jpg?cb=1315915877>

gradualism-species change a little bit at a time (also known as Natural selection)

<https://s-media-cache-ak0.pinimg.com/originals/3e/32/53/3e3253f9801889a207d105adbfc95e98.jpg>

Hardy Weinberg Equilibrium

homologous structures-structures that look different but came from the same origin

<http://slideplayer.com/slide/5273051/17/images/13/Homologous+Structures.jpg>

hybrid infertility-two different species can mate but they can not reproduce themselves

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

hybrid inviability-two different species can mate but they can not produce an offspring that will survive

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

hybrid breakdown-first generation of two species can reproduce BUT the second generation can not reproduce

macroevolution-when evolution happens on a large scale such that different species evolve into different species

<https://s-media-cache-ak0.pinimg.com/originals/c8/51/e1/c851e11bc1cd592daaa8b7d81f7511ed.jpg>

mechanical isolation-two different species can not mate because their reproductive structures do not fit with each other

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

microevolution-when evolution happens on a small scale, often changes within a species

<https://s-media-cache-ak0.pinimg.com/originals/c8/51/e1/c851e11bc1cd592daaa8b7d81f7511ed.jpg>

mimicry-when an organism adapts physical traits of another organism to get some type of evolutionary advantage

<https://i1.wp.com/image.wistatutor.com/content/biotic-community/batesian-mimicry-viceroy-monarch-butterfly.jpeg>

natural selection-inherited trait chosen by the environment

<https://image.slidesharecdn.com/presentation1-170327095709/95/natural-selection-vs-artificial-selection-4-638.jpg?cb=1490608928>

paleontology-the study of fossils

phylogeny-the history of how species have developed

<https://classconnection.s3.amazonaws.com/462/flashcards/2750462/gif/ex03251361089407009.gif>

postzygotic isolating mechanism-things that prevent species from forming after the sperm and egg have joined

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

prezygotic isolating mechanism-things that prevent a sperm and egg from joining

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

primate-advanced mammals that stand upright and grasp tools

<http://media1.britannica.com/eb-media/51/91751-004-DE8481E9.jpg>

punctuated equilibrium-a theory of evolution that says species only change at certain times

<https://s-media-cache-ak0.pinimg.com/originals/3e/32/53/3e3253f9801889a207d105adbfc95e98.jpg>

radioisotope-a radioactive isotope that can be used to determine the age of a fossil

https://cdn-assets.answersingenesis.org/img/articles/cm/v24/i3/p35_bones.JPG

selective breeding-humans choose what traits they want in different species

http://ib.bioninja.com.au/Media/dog-breeds_med.jpeg

sexual selection-certain traits evolve more commonly in certain species because those individuals are more attractive to their mates

<https://biogeekery.files.wordpress.com/2015/02/4sexual-selection.jpg>

speciation-forming a new species

stabilizing selection-environment causes trait to stay the same

<https://mrkubuske.files.wordpress.com/2014/03/types-of-selection.jpg>

survival of the fittest-species change over time and go on to reproduce because of influence of the environment.

<https://www.cambridgenetwork.co.uk/public/news/1evolution.jpg>

temporal isolation-when two species can not reproduce because they mate at different times

http://ib.bioninja.com.au/Media/isolating-mechanisms_med.jpeg

vestigial features-structures that no longer have a function

<http://slideplayer.com/slide/5273051/17/images/13/Homologous+Structures.jpg>

DIVERSITY OF LIVING THINGS

angiosperm-flowering plants that develop fruit

<http://sbi3u-independentstudyunit-plants.weebly.com/uploads/3/8/8/1/38813625/5233433.gif>

Archaeobacteria-prokaryotic bacteria that live in extreme environments

<https://universe-review.ca/I11-29-archaea1.jpg>

Arthropoda-largest phylum of Animal kingdom

<http://nervoussystemphylums.weebly.com/uploads/1/9/2/8/19283691/9104205.jpeg?371>

asymmetry-body plan in animal that does not show a pattern

<https://snaileditblog.files.wordpress.com/2016/01/symmetry.png?w=768>

autotroph-organisms that make their own energy

<https://media1.britannica.com/eb-media/42/128842-004-73342DD8.jpg>

bacteria-small prokaryotic cell that can be helpful or harmful (can be different shapes:
cocci, bacilli, spirilla

<https://media1.britannica.com/eb-media/42/128842-004-73342DD8.jpg>

<https://media1.britannica.com/eb-media/42/128842-004-73342DD8.jpg>

bacteriophage- a virus that attacks a bacteria

https://www.kullabs.com/uploads/structure_of_bacteriophage1.jpg

bilateral symmetry-animals that have a body plan divided along one plane

<https://snaileditblog.files.wordpress.com/2016/01/symmetry.png?w=768>

binary fission-asexual method reproduction in bacteria

<http://slideplayer.com/slide/8236781/25/images/8/Bacteria+Reproduction:+Binary+Fission+vs.+Conjugation.jpg>

binomial nomenclature-two part naming system used to identify species around the world

(genus and species)

<https://i.ytimg.com/vi/DsuAULTILsY/maxresdefault.jpg>

bryophytes-small plants that are close to ground and do not have vascular tissue (mosses and liverworts)

<https://image.slidesharecdn.com/plant-apbio-1204208094459307-2/95/plant-apbio-11-728.jpg?cb=1204179295>

chemoheterotroph-bacteria that uses energy released through ammonia, hydrogen sulfide etc

Chordata-important Phylum of Animal kingdom

<http://www.bio.miami.edu/~cmallery/150/physiol/c34x2chordates.jpg>

conjugation-sexual method of reproduction in bacteria

<http://slideplayer.com/slide/8236781/25/images/8/Bacteria+Reproduction:+Binary+Fission+vs.+Conjugation.jpg>

dichotomous key-a tool that lets you identify a species

<https://s-media-cache-ak0.pinimg.com/736x/a1/95/b8/a195b83d527b3283a23d589b6b31ffce--dichotomous-key-science-projects.jpg>

eukaryote-a type of cell that has a nucleus and many organelles with membranes

<http://image.slidesharecdn.com/unit8prokaryoteseukaryotes-120417145145-phpapp02/95/unit8-prokaryotes-eukaryotes-1-728.jpg%3Fcb%3D1334674847>

fungi-single cellular or multicellular heterotrophic organisms like yeasts,moulds and fungi

<https://image.slidesharecdn.com/03a-sixkingdoms-archeabacteriafungi-v21-110908210312-phpapp02/95/03a-six-kingdoms-archea-bacteria-fungi-v21-27-728.jpg?cb=1315515944>

gymnosperm-plants that have naked seeds (coniferous plants)

<http://sbi3u-independentstudyunit-plants.weebly.com/uploads/3/8/8/1/38813625/5233433.gif>

heterotroph-organisms that must get energy by eating other organisms

<https://media1.britannica.com/eb-media/42/128842-004-73342DD8.jpg>

invertebrate-animal without backbone

<https://blogbilinguesanfelix.files.wordpress.com/2015/04/vertebrates-and-invertebrates.jpg>

lysogenic cycle-method of viral reproduction that has a state of dormancy

<http://slideplayer.com/slide/9115427/27/images/9/Lytic+Vs.+Lysogenic+Cycle.jpg>

lytic cycle-method of viral reproduction that kills host cell immediately

<http://slideplayer.com/slide/9115427/27/images/9/Lytic+Vs.+Lysogenic+Cycle.jpg>

Mollusca-important and very large Phylum of Kingdom Animalia

https://www.exploringnature.org/graphics/biology/Mollusk_classes72.jpg

morphology-the study of how things look

https://infovisual.info/storage/app/media/02/img_en/053%20Morphology%20of%20a%20bird.jpg

multicellular-an organism made of many cells

https://infovisual.info/storage/app/media/02/img_en/053%20Morphology%20of%20a%20bird.jpg

prokaryote-a type of cell that does not have a nucleus or membrane bound organelles

<http://image.slidesharecdn.com/unit8prokaryoteseukaryotes-120417145145-phpapp02/95/unit8-prokaryotes-eukaryotes-1-728.jpg%3Fcb%3D1334674847>

protist- single celled eukaryotic organism that usually lives in water (can be plant like, animal like or fungi like)

https://cnx.org/resources/1510a015c0028ec4205cef177975c425960d6197/Figure_B23_02_02.jpg

radial symmetry-animal with a round body plan arranged like pieces of a pie

<https://snaileditblog.files.wordpress.com/2016/01/symmetry.png?w=768>

taxonomic levels-hierarchical system of classifying organisms using Domain, Kingdom, Phylum, Class, Order, Family, Genus, Species (most general to most specific)

http://faculty.fortlewis.edu/dott_c/bio125-consbio/classmeetings/week01-biodiversity/01_14ClassifyingLife_L.jpg

taxonomy-branch of science used to classify species that is made of many levels

https://upload.wikimedia.org/wikipedia/commons/thumb/7/71/Taxonomic_Rank_Graph.svg/550px-Taxonomic_Rank_Graph.svg.png

tissue-groups of cells that work together

tracheophytes-plants with vascular tissue

<https://image.slidesharecdn.com/plant-apbio-1204208094459307-2/95/plant-apbio-11-728.jpg?cb=120417929>

unicellular-an organism made of one cell

https://infovisual.info/storage/app/media/02/img_en/053%20Morphology%20of%20a%20bird.jpg

vascular tissue-tube like structures (xylem and phloem) that carry water, sugar and minerals

<http://dvbiology.org/biologyweb/vastisu.gif>

vertebrate-animal with backbone

<https://blogbilinguesanfelix.files.wordpress.com/2015/04/vertebrates-and-invertebrates.jpg>

virus-a nonliving entity that can cause disease by hijacking its host cell's machinery

HUMAN BODY SYSTEMS (Grade 11 and 12 Biology)

GENERAL TERMS

Homeostasis-keeping things in body balanced despite changes in environment

<https://image.slidesharecdn.com/homeostasis-121117100359-phpapp02/95/homeostasis-2-638.jpg?cb=1353146781>

Negative Feedback-something goes back to normal after a change occurs

<https://i.pinimg.com/236x/00/87/95/00879562457416b82e57dce7dcf4f2d8--negative-feedback-positive-feedback.jpg>

Positive Feedback- a change causes more change to happen

<https://i.pinimg.com/236x/00/87/95/00879562457416b82e57dce7dcf4f2d8--negative-feedback-positive-feedback.jpg>

RESPIRATORY SYSTEM

Breathing-physical method of getting oxygen into lungs from body

<https://qph.ec.quoracdn.net/main-qimg-9a047c473184e68399456552479d94e8-c>

Respiration-using oxygen and sugar to make energy in your cells

<https://qph.ec.quoracdn.net/main-qimg-9a047c473184e68399456552479d94e8-c>

DIGESTIVE SYSTEM

absorption-digestive cells soak in nutrients to the bloodstream

<https://image.slidesharecdn.com/digestion-131209012039-phpapp02/95/digestion-11-638.jpg?cb=1386552149>

egestion-removing solid waste from digestive tract

<https://image.slidesharecdn.com/digestion-131209012039-phpapp02/95/digestion-11-638.jpg?cb=1386552149>

digestion-mechanical or chemical breakdown of food into smaller pieces

<https://image.slidesharecdn.com/digestion-131209012039-phpapp02/95/digestion-11-638.jpg?cb=1386552149>

ingestion-eating or drinking

<https://image.slidesharecdn.com/digestion-131209012039-phpapp02/95/digestion-11-638.jpg?cb=1386552149>

CIRCULATORY SYSTEM

closed circulatory system-blood flows in tubes within the organism

http://images.slideplayer.com/18/5691727/slides/slide_6.jpg

hemoglobin-blood protein specialized to carry oxygen

http://images.slideplayer.com/18/5691727/slides/slide_6.jpg

open circulatory system-blood does not stay within tubes but just diffuses to tissues

http://images.slideplayer.com/18/5691727/slides/slide_6.jpg

sphygmomanometer-instrument used to measure blood pressure

<http://img.tfd.com/medical/Davis/Tabers/th/s29.jpg>

NERVOUS SYSTEM (12)

acetylcholine- type of neurotransmitter

http://ib.bioninja.com.au/Media/types-of-neurotransmitters_med.jpeg

action potential-how the nervous system moves messages from one cell to another

<http://howmed.net/wp-content/uploads/2010/09/action-potential.bmp>

all or none principle- a certain amount of stimulus is needed to make a nerve either fire or not fire

<https://classconnection.s3.amazonaws.com/682/flashcards/3453682/png/picture7-148649601B93DFFFF67.png>

autonomic nervous system-part of nervous system that you can not control (it is automatic like your heartbeat)

<http://antranik.org/wp-content/uploads/2011/11/comparison-of-autonomic-and-somatic-motor-systems-cell-bodies-axons-effect-neurotransmitter-ach-ne.jpg>

depolarization- beginning stage of action potential

<http://howmed.net/wp-content/uploads/2010/09/action-potential.bmp>

hyperpolarization-last stage of action potential before returning to resting neuron

<http://howmed.net/wp-content/uploads/2010/09/action-potential.bmp>

neurotransmitter- chemical secreted by a nerve cell that has an effect on a different nerve cell

http://ib.bioninja.com.au/Media/types-of-neurotransmitters_med.jpeg

parasympathetic nervous system-part of NS that reacts after stress to body is over

<https://s-media-cache-ak0.pinimg.com/originals/50/f9/d2/50f9d22f435e908106845c79fdf636ae.gif>

resting potential-resting nerve cell (RMP)

<http://howmed.net/wp-content/uploads/2010/09/action-potential.bmp>

serotonin-neurotransmitter connected to mood

http://ib.bioninja.com.au/Media/types-of-neurotransmitters_med.jpeg

synapse- places where neurotransmitter go from one neuron to another

<https://d2gne97vdumgn3.cloudfront.net/api/file/iAM06xRj6yaX3wrS5eAQ>

sympathetic nervous system-part of NS that deals with reacting to stress

<https://s-media-cache-ak0.pinimg.com/originals/50/f9/d2/50f9d22f435e908106845c79fdf636ae.gif>

ENDOCRINE SYSTEM

adrenal gland-produces adrenaline when you are under stress

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

adrenal gland hormones (stress)

https://www.google.ca/search?q=adrenal+hormones+and+functions&rlz=1CAASUD_enCA718CA719&source=lnms&tbn=isch&sa=X&ved=0ahUKEwiMuaW5ucrVAhVo94MKHQrpBhsQ_AUICigB&biw=1366&bih=678#imgsrc=uappjCAMsEhBYM:

anabolic steroids-substances that build muscle that can be used to bulk up

<https://healthzmag.com/wp-content/uploads/2015/08/side-effect-of-anabolic-steroids.jpg>

endocrine gland-body tissue that produces hormones that travel through the blood

endorphins-hormones produced by the nervous system that help decrease pain

<http://altered-states.net/barry/newsletter449/endorphine.jpg>

exocrine gland-body tissue that produces substances that don't travel in your blood and often go out of your body through ducts (breasts, sweat glands, oil glands etc)

<https://image.slidesharecdn.com/endocrineglands-130606080208-phpapp01/95/endocrine-glands-5-638.jpg?cb=1370505929>

hormone-signal molecules that travel through your blood to cause a physiological response

<https://image.slidesharecdn.com/hormones1-121221061132-phpapp02/95/hormones-3-638.jpg?cb=1356070329>

hypothalamus-part of brain that produces many hormones and controls pituitary gland

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

hypothalamus hormones

[http://slideplayer.com/slide/6455143/22/images/4/HYPOTHALAMIC+HORMONE+EFFECTS+ON+THE+ANTERIOR+PITUITARY.+Thyrotropin-releasing+hormone+\(TRH\)+Stimulates+release+of+TSH+\(thyrotropin\)+and+Prolactin..jpg](http://slideplayer.com/slide/6455143/22/images/4/HYPOTHALAMIC+HORMONE+EFFECTS+ON+THE+ANTERIOR+PITUITARY.+Thyrotropin-releasing+hormone+(TRH)+Stimulates+release+of+TSH+(thyrotropin)+and+Prolactin..jpg)

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

ovaries-female body tissue that produces reproductive hormones such as progesterone and estrogen

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

ovarian hormones

<https://s-media-cache-ak0.pinimg.com/originals/4f/1f/d2/4f1fd27cdb1820d1ad3f587f9ec385e0.jpg>

pancreas-gland that produces digestive enzymes and control blood sugar levels

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

pancreas hormones (insulin and glucagon)

http://cdn.biologydiscussion.com/wp-content/uploads/2016/02/clip_image004_thumb10.jpg

parathyroid gland-beside thyroid glands

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

parathyroid hormones-control Calcium levels

<https://figures.boundless-cdn.com/23918/large/calcium-regulation.png>

peptide hormone-protein molecules that affect what molecules using an in between messenger

<http://slideplayer.com/slide/9115815/27/images/10/Classes+of+Hormones+Peptide+hormones+Steroid+hormones.jpg>

pineal gland-small gland in brain

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

pineal gland hormones (sleep)

<https://image.slidesharecdn.com/harmonescologypptfinal-131210000234-phpapp02/95/hormones-ppt-34-638.jpg?cb=1386634206>

pituitary gland-master gland of endocrine system

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

pituitary gland hormones

<https://image.slidesharecdn.com/endocrinesystem-lesson4hormoes-150824235333-lva1-app6892/95/endocrine-system-hormones-4-638.jpg?cb=1440460440>

prostaglandins-small hormones that only have a very short effect in a small area

http://vet.uga.edu/ivcvm/courses/VPAT5200/03_inflammation/04_cmi/images/prostaglandins.jpg

steroid hormone-lipid molecules that directly enter a cell's nucleus

<http://slideplayer.com/slide/9115815/27/images/10/Classes+of+Hormones+Peptide+hormones+Steroid+hormones.jpg>

target tissue-place where hormone acts

testes-produces male hormones

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

testes hormones(male reproductive)

http://images.slideplayer.com/39/10854320/slides/slide_3.jpg

thyroid gland-controls body's chemical reactions (in the neck area)

<https://www.epa.gov/sites/production/files/styles/medium/public/2015-08/endocrine-system.jpg>

thyroid hormones-affect body's metabolic rate

https://upload.wikimedia.org/wikipedia/commons/thumb/d/d1/Thyroid_system.svg/300px-Thyroid_system.svg.png

<https://image.slidesharecdn.com/hormonesaffectingmetabolism-120604023848-phpapp01/95/hormones-affecting-metabolism-8-638.jpg?cb=1369617567>

EXCRETORY SYSTEM

Bowman's capsule-beginning of nephron

<http://fb.lt.cz/wp-content/uploads/2013/12/nefron-ENG-01.jpg>

dialysis-medical procedure that performs the function of a normal kidney (hemodialysis and peritoneal dialysis are 2 methods)

<http://www.pompanodialysis.com/wp-content/uploads/2016/07/dialysistypes-1080x675.jpg>

filtration-first step in urine formation in which proteins and blood cells are removed from blood and body fluids

<https://image.slidesharecdn.com/renalsystem-140615061718-phpapp01/95/renal-system-12-638.jpg?cb=1402813279>

interstitial fluid-fluid that bathes body cells

<https://fatimachs.files.wordpress.com/2013/09/maxresdefault.jpg>

nephron-functional unit of kidney that has main parts listed in figure

<http://sketchymedicine.com/wp-content/uploads/2011/11/20111122-205912.jpg>

osmoreceptors-cells in hypothalamus (brain) that can sense the amount of fluid in the body

<http://slideplayer.com/slide/5135016/16/images/57/Osmoreceptors+are+located+in+the+hypothalamus.jpg>

reabsorption-second step in urine formation when key substances are absorbed back into body before urine is excreted

<https://image.slidesharecdn.com/renalsystem-140615061718-phpapp01/95/renal-system-12-638.jpg?cb=1402813279>

renal artery-brings oxygenated blood to kidney

<http://excretorysystem.organsofthebody.com/images/excretory-system.jpg>

renal cortex-outside part of kidney

<http://excretorysystem.organsofthebody.com/images/excretory-system.jpg>

renal medulla-inside part of kidney

<http://excretorysystem.organsofthebody.com/images/excretory-system.jpg>

renal vein-brings blood from kidney to heart

<http://excretorysystem.organsofthebody.com/images/excretory-system.jpg>

secretion-last step in urine formation when ammonia, and some drugs go into nephron so they can come out of body

<https://image.slidesharecdn.com/renalsystem-140615061718-phpapp01/95/renal-system-12-638.jpg?cb=1402813279>

ureter-tubes that take urine from kidney to bladder

<http://excretorysystem.organsofthebody.com/images/excretory-system.jpg>

urethra-tube that carries urine from bladder to outside body

<https://www.cancer.gov/images/cdr/live/CDR747935.jpg>

urinary bladder-stores urine

<http://excretorysystem.organsofthebody.com/images/excretory-system.jpg>