

WORD PARTS LIST - Introduction to Biology

WORD PART	MEANING	SCIENCE WORD
bio-	life	biology
zoo-	animal	zoology
eco-	house, surroundings	ecology
hydro-	water	hydrology
geo-	earth	geography
-ist	person who	geologist
homo-	same	homeostasis
anim-	alive	animate, animal
-ology	study of	geology
sta-	bring to a standstill	static

Look each up complete word in the dictionary or the glossary of your text. Write out the parts and their meanings and the definition for each word. An example has been done for you.

WORD	PARTS	DEFINITION
biology	BIO Life -OLOGY study of	A branch of knowledge that deals with living organisms and vital processes.
zoologist	ZOO-	
	-OLOGY	
	-IST	
homeostasis	HOMO-	
	-STA-	

static	-STA-	
animate	ANIM-	

Fill in the blanks using the appropriate word to fit the meaning of the sentence.

Last year in physical/earth science you studied non-living things

such as the study of the earth called 1. _____ or

the study of water called 2. _____. This term in

3. _____ we will be studying living things such as plants

and 4. _____. We will also look carefully at the

interaction of the living and non-living components when we

study our surroundings in the 5. _____ unit.

WORD PARTS LIST- Scientific Method

WORD PART	MEANING	EXAMPLE WORD
sci-	to know	science
-thesis	to place	hypothesis
hypo-	below	hypoallergenic
erg	to do work	energy
meter	to measure	metric
-ic, -tics	pertaining to	scientific
terra-	earth	terrestrial
sym-	together	symbiosis
sys-	to put together	system
a-	without	abiotic

Look each up each word in the dictionary or the glossary of your text. Identify the word parts, the word part meanings and the definition for each word.

WORD	PARTS	DEFINITION
hypothesis		
hypoallergenic		
scientific		

Symbiosis		
Abiotic		

D. Fill in the blanks using the appropriate word to fit the meaning of the sentence.

- _____ is a way of investigating the world, of observing nature in order to form general rules about what causes things to happen.
- Eating a healthy breakfast will give you plenty of _____ to make it through Biology.
- The _____ system is the measurement system of choice in the fields of science and technology.
- Ecosystems that occur on land are referred to as _____ biomes, and those that occur in water are called aquatic biomes.
- The non-living parts of the earth's ecosystem are called the _____ components.

Word Part List: The Nervous System

Memorize the following word parts and their meanings.

Word Part	Meaning	Example Word
Peri	Around	Peripheral
Pher	To carry	Peripheral
Neur	A nerve, cord	Neuron
Dendr	A tree	Dendrite
Cereb (L)	The brain	Cerebellum
Efferen	Carrying away	Efferent
Mening	A membrane	Meninges
Encephal (G)	The brain	Encephalitis
Somat	A body	Somatic
Synap	A falling together; a union	Synapsis
Limb	A head band	Limbic
Thalam	A chamber; inner room	Thalamus
Hypo	Below	Hypothalamus
Myel	Marrow; the spinal cord	Myelin
Pathy	Disease of	Neuropathy
Corpus	Body	Corpus luteum

Analyze the following words and then explain how their meanings relate to the word parts.

Peripheral nerves	
Encephalitis	

Synaptic cleft	
Thalamus	
Dendrite	
Neuropathy	
Efferent neuron	

Word Part List: The Endocrine System

Memorize the following word parts and their meanings.

Word Part	Meaning	Example Word
Endo	Within, inner	Endocrine
Exo	Out, outside	Exocrine
Hormon	Excite	Hormone
Thyro	A door	thyroid
Thym	The mind	Thymus
epi	On, onto	epinephrine
nephron	kidney	nephron
Ad	near	adrenal
Renal	Kidney	adrenal
Andro	Male	Androgenous
Gen	Originate; give birth to	androgens
Anti	Against	
Diure	Urinate	antidiuretic
Gastr	Stomach	Gastric
Glyc	Sweet	Glycemic
Lact	Milk	prolactin

Analyze the following words and then explain how their meanings relate to the word parts.

endocrine	
Gastric	

antidiuretic	
epinephrine	
parathyroid	

VOCABULARY/SPELLING LIST - Cells

WORD PART	MEANING	EXAMPLE WORD
micro-	small	micro-organism
-scope	to see, watch, look	microscope
magni-	large	magnify
-tion	act of	magnification
cyt(o)-	cell	cytology
-plasm	to form	cytoplasm
per-	through	permeable
oste	bone	osteocyte
eu	true	eutrophication
kary	nucleus	eukaryote
pro-	original, primitive, before	prokaryote

Look each up complete word in the dictionary or the glossary of your text. Write out the parts and their meanings and the definition for each word.

WORD	PARTS	DEFINITION
eutrophication	eu- troph- -tion	
osteocyte	oste(o)- -cyte	
magnification	magn- (i)fi- to make -tion	
permeable	per-	
microscope	micro- scope	

Fill in the blanks using the appropriate word to fit the meaning of the sentence.

- The 1. _____ is a powerful tool used to 2. _____
3. _____ (small specimen) to make them visible to us in lab. We will be using this tool in our unit on the study of cells, called 4. _____. In this unit, we will compare plant, animal, and bacterial cell structures. Plant and animal cells have true nuclei and membrane-bound organelles. Therefore, they are known as 5. _____ cells. Bacterial cells, on the other hand, lack nuclei. They are called 6. _____. All three types of cells have a cell membrane which is semi-7. _____ because it lets some substances in and out of the cell. Each contains 8. _____ which cushions cell parts and gives the animal cell its shape.

VOCABULARY/SPELLING LIST - Lab Write Ups

Follow all directions. Do both the front and the back of the page.

WORD PART	MEANING	EXAMPLE WORDS (Words you may already know)	SCIENCE WORD (This is your spelling list!)
peri-	around	perimeter	experiment
ex-	out, off, from, beyond	exit,	example
err	to wander	erratic	error
hypo-	down	thesis, theme, synthetic	Celsius
-the-	to put		hypothesis

- B. Break the following words into parts and find the meaning of each part.
- C. Look each up complete word, and perhaps some of its parts, in the dictionary and by looking through your notebook. Write out the parts and their meanings, and the definition for each word. Include what part of speech the word is. For example, is it a noun, verb, adjective or adverb? Write a sentence of your own using the word correctly. Your sentence should include context clues to reveal the word's meaning.

WORD	PARTS	DEFINITION
example	ex:	
Part of speech:		
sentence:		
error	err:	
Part of speech:		

experiment	ex:
Part of speech:	peri:
Celsius	
Part of speech:	

- D. Use the dictionary, and your notebook, to find the meanings of the example words then fill in the blanks using the appropriate word to fit the meaning of the sentence.
- When analyzing our experiment for sources of _____, we are looking for circumstances that could have affected how our data turned out.
 - When a process is set up to test a hypothesis, a _____ is conducted to collect data.
 - In the conclusion of the lab write up, specific _____ from the data should be used as evidence to show support or not for the hypothesis.
 - A _____ is an "educated guess"; it is a tentative, testable answer to the problem question.
 - In the Metric System, temperature is measured in _____ degree not Fahrenheit.

Name of Dictionary: _____
 Publisher: _____
 Copyright Date: _____

VOCABULARY/SPELLING LIST - Microscopes

Follow all directions. Do both the front and the back of the page.

A. Make flash cards for the word parts and their meanings.

WORD PART	MEANING	EXAMPLE WORD
foc	a point	focus
par	equal	par
di	double, two	diameter
opt(i)	to see	dioptr
illum	light up	illuminate
ob	in the way	
scure	to hide or conceal	obscure
bi	two	bifocal
ocul	an eye	binocular
optim	the best	optimal

B. Break the following words into parts and find the meaning of each part.

C. Look each up complete word, and perhaps some of its parts, in the dictionary, the glossary of your text, and by looking through your text. Write out the parts and their meanings, and the definition for each word.

WORD	PARTS	DEFINITION
bifocal	bi: foc:	
optimal	optim:	

obscure	ob: scure:	
par	par:	
diameter	dia: meter:	

D. Use the dictionary, the glossary of your text, and your text, to find the meanings of the example words then fill in the blanks using the appropriate word to fit the meaning of the sentence.

The microscope we will be using in Biology are a type of light microscope because they use light to 1. _____ the object to be observed. To view an object on low power using our 2. _____ scopes, you look through two eyepieces instead of one. Use the 3. _____ adjustment until a clear image is achieved. The image can then be centered and 4. _____ with the coarse adjustment knob. Moving the power to medium, make sure you re-center and re-focus the image. Because our microscopes are 5. _____, the image focused under medium power will be *almost* focused under high power without using the adjustment knob. Use the FINE ADJUSTMENT knob on high power to sharpen the focus.

WORD PARTS LIST- Biochemistry #1

Follow all directions. Do both the front and the back of the page.

A. Make flash cards for the word parts and their meanings. (Optional)

WORD PART	MEANING	EXAMPLE WORD
iso-	equal	isotope
-sacchar-	sugar	disaccharide
poly-	many	polysaccharide
mono-	one	monosaccharide
-hydro-	water	hydrolysis
de-	from; down; out	dehydration
-phobi-(a)	fear of	hydrophobic
-phil-(a)	attracted to	hydrophilia
solu-	dissolve	soluble
valen-	strength	covalent
lip-(o)	fat	lipid
in-	not; without	insoluble

B. Break the following words into parts and find the meaning of each part.

C. Look each up complete word, and perhaps some of its parts, in the dictionary, the glossary of your text, and by looking through your text. Write out the parts and their meanings, and the **DICTIONARY** definition for each word. Write a sentence that contains the word and context clues as to its meaning.

WORD	PARTS	DEFINITION
soluble	solu:	
insoluble	in: solu:	

lipid

lip:

covalent

co:

valen:

D. Explain the relationship between each set of words.

a. hydrolysis, dehydration

b. monosaccharide, polysaccharide

c. hydrophobic, hydrophilic

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homeostasis	-IST HOMO- -STA-	

static	-STA-	
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the study of water called 2. _____.

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and 4. _____.

We will also look carefully at the interaction of the living and non-living components when we study our surroundings in the 5. _____ unit.

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nephron	kidney	nephron
Ad	near	adrenal
Renal	Kidney	adrenal
Andro	Male	Androgenous
Gen	Originate; give birth to	androgens
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Diure	Urinate	Gastric
Gastr	Stomach	Glycemic
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Analyze the following words and then explain how their meanings relate to the word parts.

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Gastric	

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VOCABULARY/SPELLING LIST - Cells

WORD PART	MEANING	EXAMPLE WORD
micro-	small	micro-organism
-scope	to see, watch, look	microscope
magni-	large	magnify
-tion	act of	magnification
cyt(o)-	cell	cytology
-plasm	to form	cytoplasm
per-	through	permeable
oste	bone	osteocyte
eu	true	eutrophication
kary	nucleus	eukaryote
pro-	original, primitive, before	prokaryote

Look each up complete word in the dictionary or the glossary of your text. Write out the parts and their meanings and the definition for each word.

WORD	PARTS	DEFINITION
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osteocyte	oste(o)- -cyte	
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permeable	per-	
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hypo-	down	thesis, theme, synthetic	Celsius
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B. Break the following words into parts and find the meaning of each part.

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WORD	PARTS	DEFINITION
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Part of speech:		
sentence:		
error	err:	
Part of speech:		

experiment	ex:	
Part of speech:	peri:	
Celsius		
Part of speech:		

D. Use the dictionary, and your notebook, to find the meanings of the example words then fill in the blanks using the appropriate word to fit the meaning of the sentence.

- When analyzing our experiment for sources of _____, we are looking for circumstances that could have affected how our data turned out.
- When a process is set up to test a hypothesis, a _____ is conducted to collect data.
- In the conclusion of the lab write up, specific _____ from the data should be used as evidence to show support or not for the hypothesis.
- A _____ is an "educated guess"; it is a tentative, testable answer to the problem question.
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A. Make flash cards for the word parts and their meanings.

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par	equal	par
di	double, two	diameter
opt(i)	to see	diopler
illumin	light up	illuminate
ob	in the way	
scure	to hide or conceal	obscure
bi	two	bifocal
ocul	an eye	binocular
optim	the best	optimal

B. Break the following words into parts and find the meaning of each part.

C. Look each up complete word, and perhaps some of its parts, in the dictionary, the glossary of your text, and by looking through your text. Write out the parts and their meanings, and the definition for each word.

WORD	PARTS	DEFINITION
bifocal	bi: foc:	
optimal	optim:	

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	scure:	
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diameter	dia:	
	meter:	

D. Use the dictionary, the glossary of your text, and your text, to find the meanings of the example words then fill in the blanks using the appropriate word to fit the meaning of the sentence.

The microscope we will be using in Biology are a type of light microscope because they use light to 1. _____ the object to be observed. To view an object on low power using our 2. _____ scopes, you look through two eyepieces instead of one. Use the 3. _____ adjustment until a clear image is achieved. The image can then be centered and 4. _____ with the coarse adjustment knob. Moving the power to medium, make sure you re-center and re-focus the image. Because our microscopes are 5. _____, the image focused under medium power will be *almost* focused under high power without using the adjustment knob. Use the FINE ADJUSTMENT knob on high power to sharpen the focus.

WORD PARTS LIST- Biochemistry # 1

Follow all directions. Do both the front and the back of the page.

A. Make flash cards for the word parts and their meanings. (Optional)

WORD PART	MEANING	EXAMPLE WORD
iso-	equal	isotope
-sacchar-	sugar	disaccharide
poly-	many	polysaccharide
mono-	one	monosaccharide
-hydro-	water	hydrolysis
de-	from; down; out	dehydration
-phobi-(a)	fear of	hydrophobic
-phili-(a)	attracted to	hydrophilia
solu-	dissolve	soluble
valen-	strength	covalent
lip-(o)	fat	lipid
in-	not; without	insoluble

B. Break the following words into parts and find the meaning of each part.

C. Look each up complete word, and perhaps some of its parts, in the dictionary, the glossary of your text, and by looking through your text. Write out the parts and their meanings, and the **DICTIONARY** definition for each word. Write a sentence that contains the word and context clues as to its meaning.

WORD	PARTS	DEFINITION
soluble	solu:	
insoluble	in: solu:	

lipid	lip:	
covalent	co: valen:	

D. Explain the relationship between each set of words.

a. hydrolysis, dehydration

b. monosaccharide, polysaccharide

c. hydrophobic, hydrophilic

VOCABULARY LIST- Biochemistry #2

Follow all directions. Do both the front and the back of the page.

A. Make flash cards for the word parts and their meanings. (optional)

WORD PART	MEANING	EXAMPLE WORD
metab	change	metabolism
aer	the air	aerobic
an	without; not	anaerobic
peri	around	perimeter
-stalsis	a constriction, compression	peristalsis
therm	heat	thermal
endo	inside	endothermic
exo	outside	exothermic
gest	carried	digestion
cata	down, downward	
lys, lysis	loosen	catalyst

B. Break the following words into parts and find the meaning of each part.

C. Look each up complete word, and perhaps some of its parts, in the dictionary, the glossary of your text, and by looking through your text. Write out the parts and their meanings, and the definition for each word

WORD	PARTS	DEFINITION
digestion	di: gest:	
thermal	therm:	

perimeter	peri: meter:	
metabolism	meta:	
anaerobic	an: aer:	

D. Use the dictionary, the glossary of your text, and your text, to find the meanings of the example words then fill in the blanks using the appropriate word to fit the meaning of the sentence.

- _____ is the process when food is broken down and carried through the digestive system.
- The burning of macromolecules to release energy is the process of _____.
- When a chemical reaction produces heat, it is called a _____ reaction.
- When a chemical reaction does not produce heat but instead gets colder, it is called a _____ reaction.
- A _____ reduces the activation energy needed to start a chemical reaction.

WORD PARTS LIST Osmosis & Diffusion

Follow all directions. Do both the front and the back of the page.

A. Make flash cards for the word parts and their meanings. OPTIONAL

WORD PART	MEANING	EXAMPLE WORD
erythro	red	erythrocyte
hemo	blood	hemolysis
cyte	cell	hemocyte
hyper	excessive	hypertonic
hypo	below	hypotonic
iso	equal	isotonic
ton (tonus)	tension, pressure	
lysis	to split	cytolysis
exo	out of	exocytosis
endo	inside	endocytosis

Diffusion:

B. Break the following words into parts and find the meaning of each part.

C. Look each up complete word, and perhaps some of its parts, in the dictionary, the glossary of your text, and by looking through your text. Write out the parts and their meanings, and the definition for each word.

WORD	PARTS	DEFINITION
hematocyte	hem(o): cyte:	
osmosis	
erythrocyte	erythro: cyte:	
diffusion	
homeostasis	

D. IN YOUR OWN WORDS... Define each word and give an example of each. You will not get credit for an example already used in class or by another student.

Osmosis:

VOCABULARY/SPELLING LIST - Mitosis

A. Make flash cards for the WORD PARTS and THEIR MEANINGS.

WORD PART	MEANING	EXAMPLE WORD
kines	to move	cytokinesis
inter	between	interphase
pro	before	prophase
ana	opposite	anaphase
meta	middle	metaphase
tele(o)	far, distant	telophase
chrom	color	chromatography
som	body	chromosome
equa	equal	equator
centr	a point	centriole
mer(e)	part	centromere

B. Break the following words into parts and find the meaning of each part.

C. Look each up complete word, and perhaps some of its parts, in the dictionary, the glossary of your text, and by looking through your text. Write out the parts and their meanings, and the definition for each word

WORD	PARTS	DEFINITION
equator	equa:	
chromatography	chrom: graph:	

chromosome	chrom: som:
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D. Use your text to find the meanings of the example words then fill in the blanks using the appropriate word to fit the meaning of the sentence. Sketch the phase. Label cell parts and chromosomes.

PHASE: _____ This phase occurs between cell division. During this "resting" phase, DNA replicates

PHASE: _____ During this phase, the strands of DNA become thick rod-like structures known as _____. The _____ begins to form. Eventually this network will stretch from _____ to _____ from one end of the cell to the other.

PHASE: _____ During this phase, the chromosomes line up at the center of the cell called the _____. Their _____ attach to the spindle fibers.

PHASE: _____ In this phase, the _____ splits and the chromosomes are pulled to opposite ends of the cell.

PHASE: _____ As a result of the three previous phases, each side of the cell now has a complete set of _____ that are genetically _____ to the parent cell. A nuclear _____ forms around each set. The chromosomes _____ The spindle fibers disappear.

The last step of cell division is _____. During this step the cytoplasm and its contents divide. In plant cells, the _____ forms between the two new daughter cells.