STAAR/EOC BIOLOGY REVIEW

2016

Name:_____

Period:_____

Teacher:_____

Reporting Category 1

Cell Structure & Function. You will have a total of 11 questions from the concept

Need to know the function & type of cell

DNA:

Nucleus:

Cell membrane:

Cell Wall:

Flagella:

Ribosome:

Mitochondria:

Chloroplast:

Smooth ER:

Rough ER:

Golgi:

Lysosome:

Reporting Category 1

Cell Structure & Function. You will have a total of 11 questions from the concept

Passive Transport:

Osmosis:

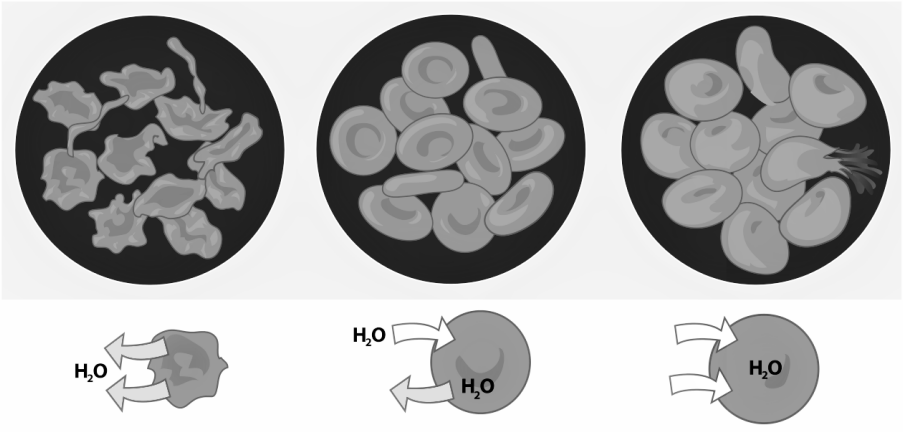
Diffusion:

Facilitated Diffusion:

Active Transport:

Endocytosis:

Exocytosis:



Reporting Category 1

Cell Structure & Function. You will have a total of 11 questions from the concept

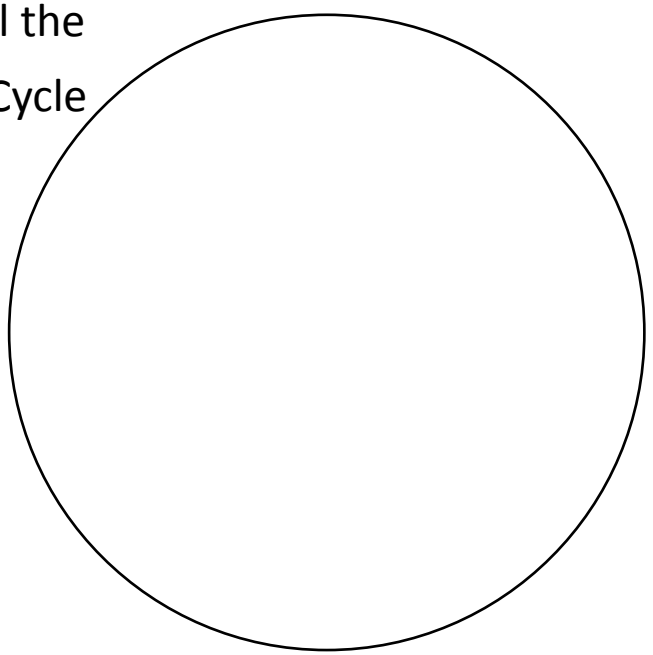
	Mitosis	Meiosis
What is the function? When does this happen?		
How many cells are made?		
Describe the cells (different or identical; haploid or diploid)		

What is the cell cycle?

What happens if there is an error in the cell cycle?

When is DNA replicated?

Label the Cell Cycle

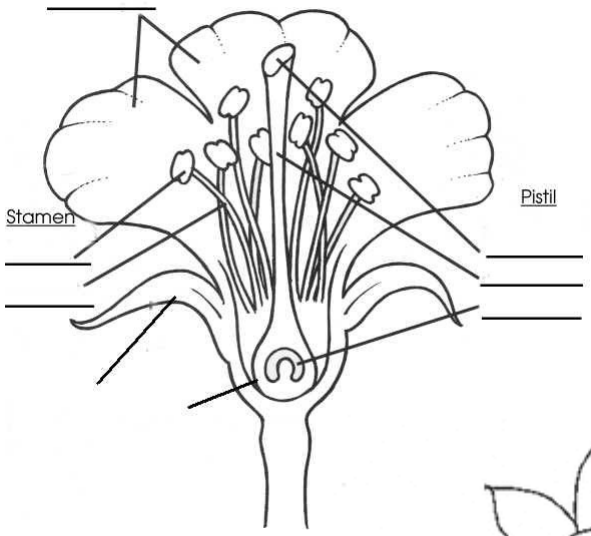


What is cell differentiation?

Define cancer:

Reporting Category 1

Cell Structure & Function. You will have a total of 11 questions from the concept



Word Bank:

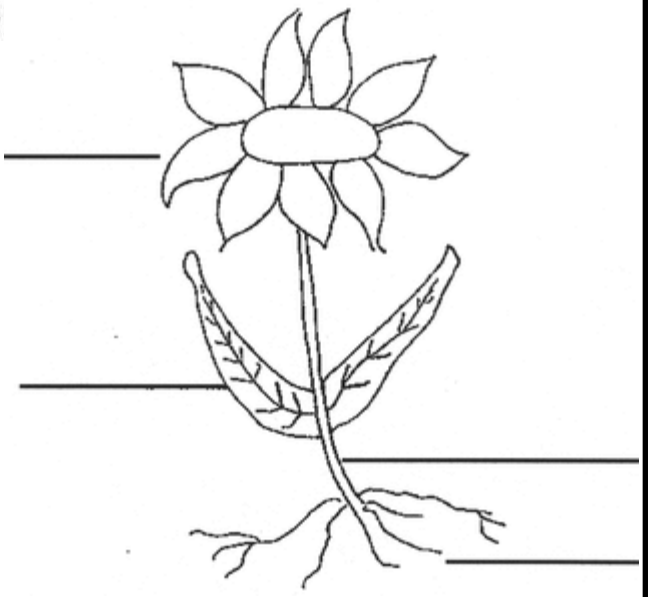
Stem Flower Anther

Ovary Filament

Roots Flower Style

Roots Stigma

Leaf Sepals



What does each specialized cell do for the plant?

Leaves:

Stems:

Xylem vs Phloem:

Roots:

Flowers:

Reporting Category 1

Cell Structure & Function. You will have a total of 11 questions from the concept

Viruses

Why NOT ALIVE?

Lytic:	Components:
Lysogenic:	Examples:

Sketch and label HIV.

What is HIV?

What does it do?

Reporting Category 1

Cell Structure & Function. You will have a total of 11 questions from the concept

	Elements	Monomers	Functions
Nucleic Acid	Ex.		
Protein	Ex.		
Lipid	Ex.		
Carbohydrate	Ex.		

Reporting Category 2

Mechanisms of Genetics. You will have a total of 11 questions from the concept

	DNA	RNA
Draw and label a nucleotide		
Double or single strand		
Type of sugar		
Nitrogenous Bases:		
Where is it found?		

A change in DNA is called a:

Gene Mutations:

Frame shift:

Point:

Chromosomal Mutations:

Translocation:

Replication → Transcription → Translation

Reporting Category 2

Mechanisms of Genetics. You will have a total of 11 questions from the concept

Dominant:

Recessive:

Homozygous:

Heterozygous:

Allele:

Trait:

Genotype:

Phenotype:

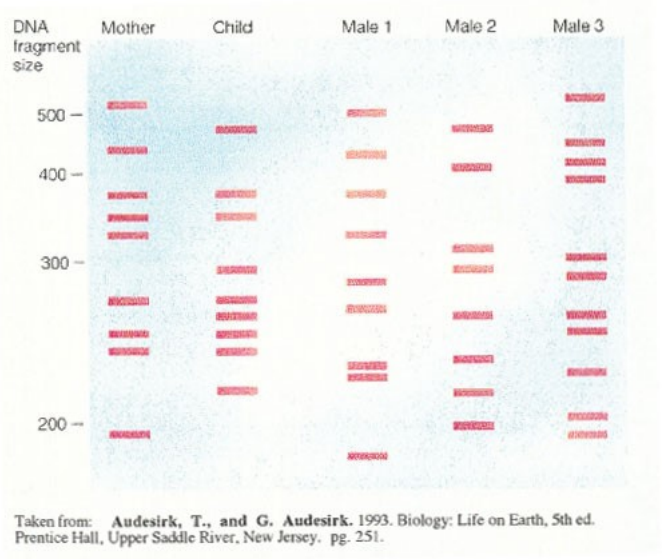
Facial dimples and free earlobes are both considered dominant human traits. What are the expected phenotypes of the offspring of a female with dimples and free earlobes (DDFf) and a male with no dimples and attached earlobes (ddff)? PHENOTYPES:_____

_____

Reporting Category 2

Mechanisms of Genetics. You will have a total of 11 questions from the concept

What is DNA profiling?



Taken from: **Audesirk, T., and G. Audesirk.** 1993. Biology: Life on Earth, 5th ed. Prentice Hall, Upper Saddle River, New Jersey. pg. 251.

Who is the father of the child?

Draw and Label a DNA molecule

What does DNA do?

What shape is DNA?

Reporting Category 3

Biological Evolution and Classification. You will have a total of 10 questions from the concept

Linnean Taxonomy

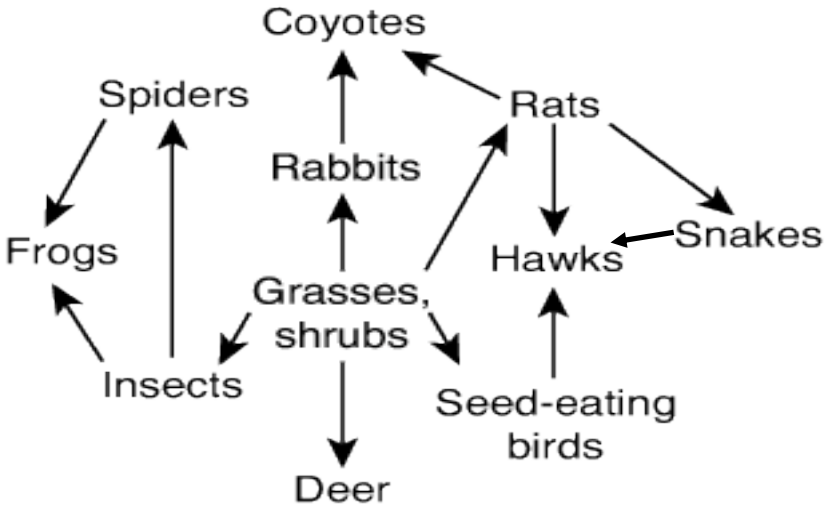
What is a scientific name?

What is binomial nomenclature?

Reporting Category 3

Biological Evolution and Classification. You will have a total of 10 questions from the concept

List the organisms in the food web below and label as producer/type of consumer, herbivore/omnivore/carnivore, and autotroph/heterotroph



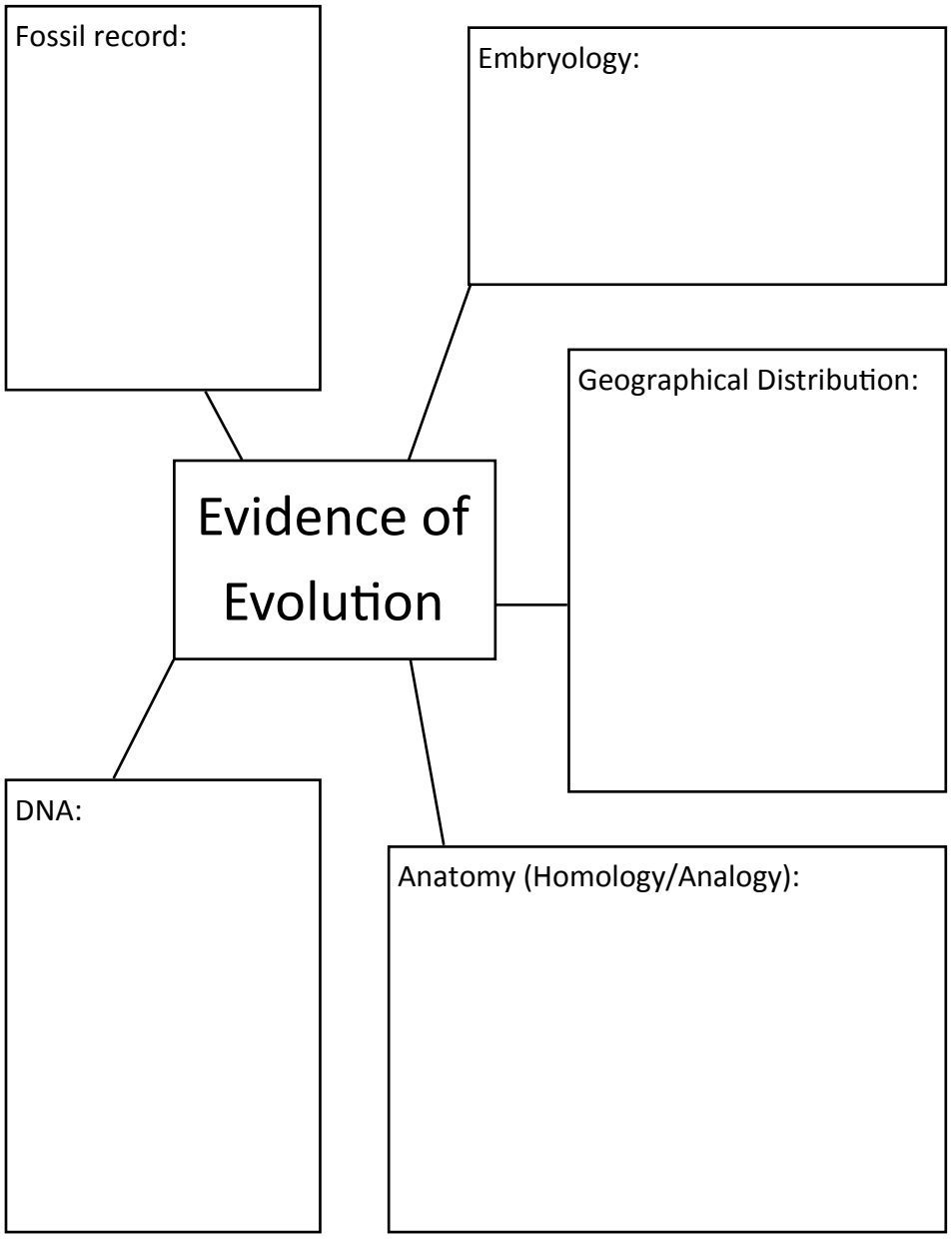
List the levels of organization in ecology from biosphere to atom:

Classification of Living Things

Domain						
Kingdoms						
Characteristics of the Kingdom						
Examples						

Reporting Category 3

Biological Evolution and Classification. You will have a total of 10 questions from the concept



Reporting Category 3

Biological Evolution and Classification. You will have a total of 10 questions from the concept

Define natural selection:

Give an example of natural selection for each of the following

A: Darwin's finches

B: Galapagos tortoises

C: Peppered Moth

What are the four principles of natural selection?

1.

2.

3.

4.

Define biological fitness and give an example:

Reporting Category 4

Biological Processes and Systems. You will have a total of 11 questions from the concept

PHOTOSYNTHESIS

Organelle Involved:

Molecular Equation:

In simple English this means…

Occurs in what type of cells:

What comes in, what goes out:

CELLULAR RESPIRATION

Organelle Involved:

Molecular Equation:

In simple English the means…

Occurs in what type of cells:

What comes in, what goes out:

Reporting Category 4

Biological Processes and Systems. You will have a total of 11 questions from the concept

Animal Body Systems

Nervous System	
Respiratory System	
Excretory System	
Muscular System	
Endocrine System	
Immune System	
Integumentary System	
Digestive System	
Skeletal System	
Circulatory System	
Reproductive System	

Reporting Category 4

Biological Processes and Systems. You will have a total of 11 questions from the concept

Interactions of PLANT systems

Transport	Tropisms
Reproduction	Examples of Adaptations:

Reporting Category 5

Interdependence within Environment Systems. You will have a total of 11 questions from the concept

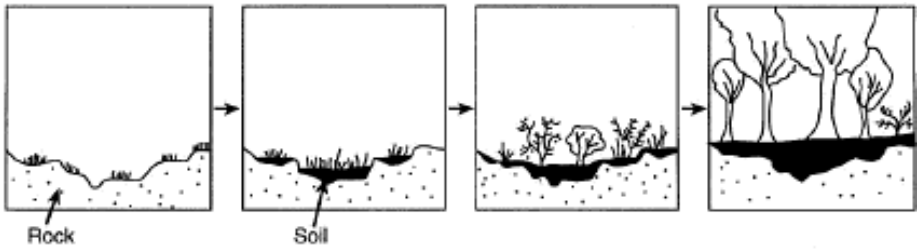
Interpret Relationships

Relationship	Description	Example
Mutualism		
Commensalism		
Parasitism		
Competition		
Predation		

Reporting Category 5

Interdependence within Environment Systems. You will have a total of 11 questions from the concept

Succession:



1.

2.

3.

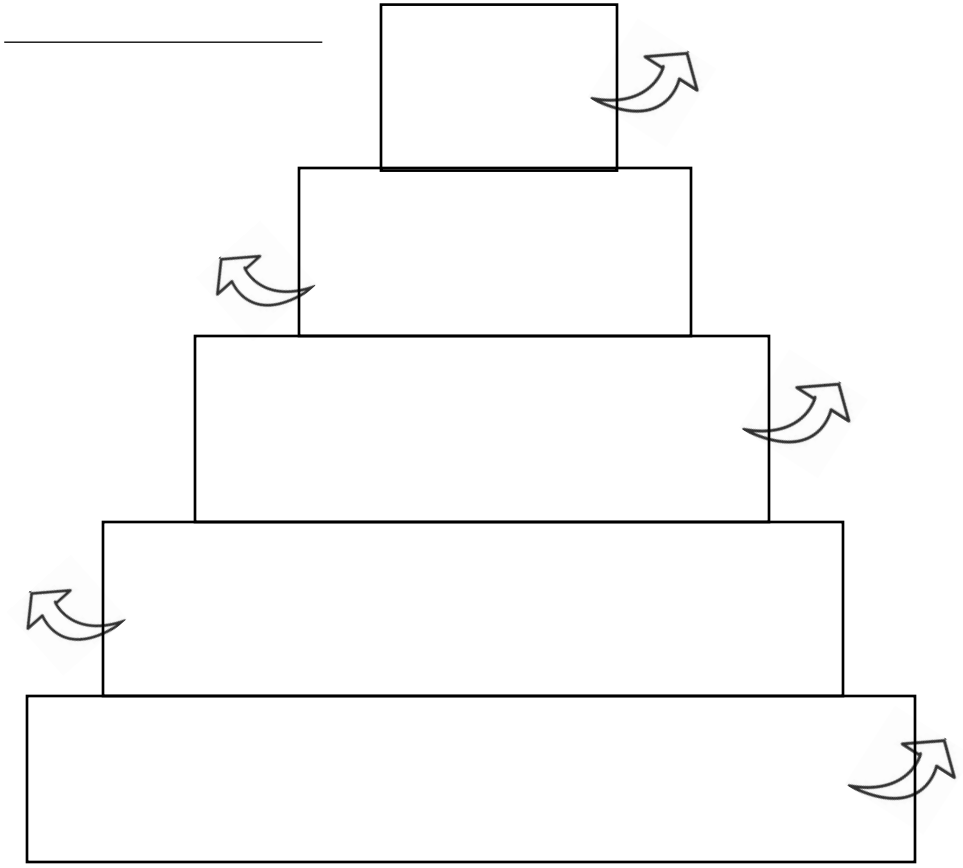
4.

	Primary Succession	Secondary Succession
Soil present?		
Example of Pioneer Species		
Cause		
Time frame		
Additional info.		

Pioneer species: Climax Community:

Reporting Category 5

Interdependence within Environment Systems. You will have a total of 11 questions from the concept



Word Bank:

Producer 1% 0.1% 0.01% Primary consumer 10% 100%

Secondary consumer trophic level Tertiary consumer Heat

Ecological pyramid Quaternary consumer Carnivore Decomposer

Omnivore Leaf Grasshopper Eagle Robin Mushroom

Processing Skills

This information is not going to be tested directly but you will have questions that use this information to test other concepts.

Define the following:

Nature of science-

Scientific theory-

Scientific law-

Hypothesis-

Homeostasis-

How did the following scientists contribute to science

Darwin-

Hooke-

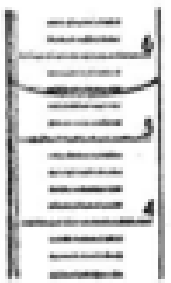
Linneaus-

Watson & Crick-

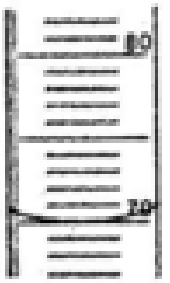
Rosalind Franklin-

Processing Skills

This information is not going to be tested directly but you will have questions that use this information to test other concepts.



_____mL



_____mL

_____mL

Codon Chart

First Letter	Second Letter: U	Second Letter: C	Second Letter: A	Second Letter: G	Third Letter
U	Phenylalanine	Serine	Tyrosine	Cysteine	U
	Phenylalanine	Serine	Tyrosine	Cysteine	C
	Leucine	Serine	(STOP)	(STOP)	A
	Leucine	Serine	(STOP)	Tryptophan	G
C	Leucine	Proline	Histidine	Arginine	U
	Leucine	Proline	Histidine	Arginine	C
	Leucine	Proline	Glutamine	Arginine	A
	Leucine	Proline	Glutamine	Arginine	G
A	Isoleucine	Threonine	Asparagine	Serine	U
	Isoleucine	Threonine	Asparagine	Serine	C
	Isoleucine	Threonine	Lysine	Arginine	A
	Methionine (START)	Threonine	Lysine	Arginine	G
G	Valine	Alanine	Aspartate	Glycine	U
	Valine	Alanine	Aspartate	Glycine	C
	Valine	Alanine	Glutamate	Glycine	A
	Valine	Alanine	Glutamate	Glycine	G

A segment of DNA produces methionine, threonine, histidine, aspartate, and glycine when translated. A substitution mutation occurs and causes the synthesis of the segment as shown.

New DNA strand: 3'-TACAGGGTGCTACCCACT-5'

What is the new peptide chain when the new DNA segment is translated?