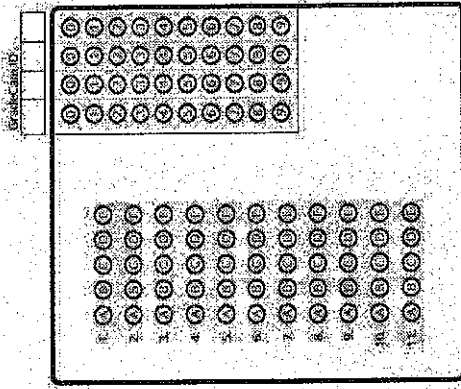


Characteristics of Life

- Which of the following is NOT a characteristic of all living things?
 - growth and development
 - ability to move
 - response to the environment
 - ability to reproduce
- Which of the following characteristics of living things best explains why birds fly south for the winter?
 - Living things respond to their environment.
 - Living things maintain internal balance.
 - Living things are made up of units called cells.
 - Living things are based on a universal genetic code.
- Which of the following characteristics of living things best explains why humans sweat when they get hot?
 - growth and development
 - maintaining a stable internal environment
 - using energy
 - ability to reproduce
- What does the term "homeostasis" mean?
 - respond to their environment.
 - maintain a stable internal environment.
 - made up of units called cells.
 - based on a universal genetic code.
- A(n) _____ is another name for a living thing.
 - organism
 - cell
 - person
 - amoeba
- Which of the following characteristics of living things best explains why your legs and arms get longer and stronger as you get older?
 - Living things respond to their environment.
 - Living things maintain internal balance.
 - Living things are made up of units called cells.
 - Living things grow and develop
- Both a fast-moving stream and a dog respond to the environment and grow and develop, but this characteristic of life is why a dog is considered alive and a stream isn't.
 - The ability to move
 - The ability to grow and develop
 - Being made of cells
 - The ability to change over time

- In all of our cells there is DNA. Which characteristic does this fact best describe?
 - Living things respond to their environment.
 - Living things maintain internal balance.
 - Living things are based on a universal genetic code.
 - Living things grow and develop
- Before a big soccer game Charlie always eats a big dinner. Which characteristic of life does this fact best describe?
 - Living things respond to their environment.
 - Living things grow and develop
 - Living things reproduce
 - Living things use energy
- Which statement is true of the 'properties of life'?
 - none of the statements below is true
 - Possession of a single one of the properties is sufficient to identify something as living
 - They are only general statements because there are no properties that are shared by all living things.
 - All living things share all the properties, but many non-living things have at least some of the properties.

- Living things respond to external stimuli. Which of the following is NOT a response to a stimulus?
 - Leaves of plants track the movements of the sun during the day.
 - A houseplant, when placed near a window, bends its stem to face the sun
 - The pupils of the human eye dilate in a dark environment
 - Organs are composed of tissues, and each tissue contains groups of similar cells



Classification

1. All the members of one species belong to the same _____
- Biosphere
 - Ecosystem
 - Genus
 - Phylum

2. The first word in the scientific name of an organism is the species name and the second word is the genus name.
- True
 - False

3. What is the correct scientific name for humans?

- sapiens homo*
- sapiens Homo*
- homo sapiens*
- Homo sapiens*

4. Molds and mushrooms belong to the kingdom _____.

- Animalia
- Plantae
- Cnidaria
- Fungi

5. Mosses and ferns belong to the kingdom _____.

- Animalia
- Plantae
- Cnidaria
- Fungi

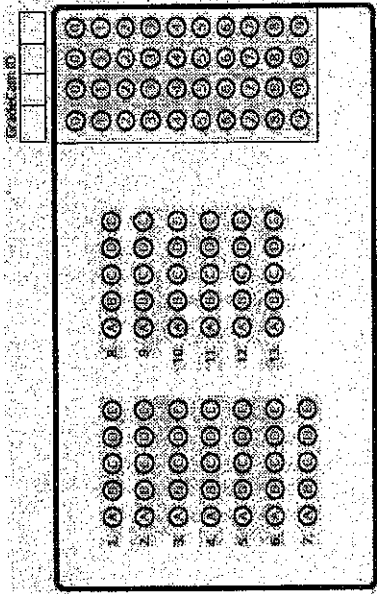
6. Which of the following taxonomic sequences is correct starting from the most specific but including the fewest in number?

- species, family, order, class, genus
- genus, species, family, order, class
- family, species, genus, class, order
- class, order, family, genus, species

7. What is taxonomy?

- the scientific study of how living things are classified
- the name of Aristotle's classification system
- the process used by geologists to classify rocks
- the process of observing an organism's behavior

8. Why do scientists organize living things into groups? so they can find them in the wild more easily so that the organisms are easier to study



- so they can make sense of the variety of rocks on Earth.
- so products from living things can be easily found in groceries

9. An organism's scientific name consists of

- its class name and its family name
- its kingdom name and its phylum name
- its genus name and its species name.
- its phylum name and its species name

10. Which is the broadest classification level?

- Family
- Kingdom
- Phylum
- Species

11. Which kingdom includes only multicellular heterotrophs

- Protists
- Archaeobacteria
- Plant
- Animal

12. A cat's scientific name is *Felix domesticus*, which genus does it belong to

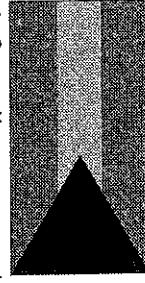
- Cat
- Felix
- binomial nomenclature
- Domesticus

A Dichotomous Key To Flags

- The flag has vertical stripes.....go to 2
 - The flag does not have vertical.....go to 3
- The flag has a round emblem in the center.....Afghanistan
 - The flag does not have a round emblem in the center.....Andorra
- The flag has a triangle on the left side.....go to 4
 - The flag does not have a triangle on the left side.....Armenia
- The flag has to least 1 star.....go to 5
 - The flag does not have at least 1 star.....Bahamas
- The flag has more than 3 stars.....Comoros
 - The flag has less than 3 stars.....Cuba

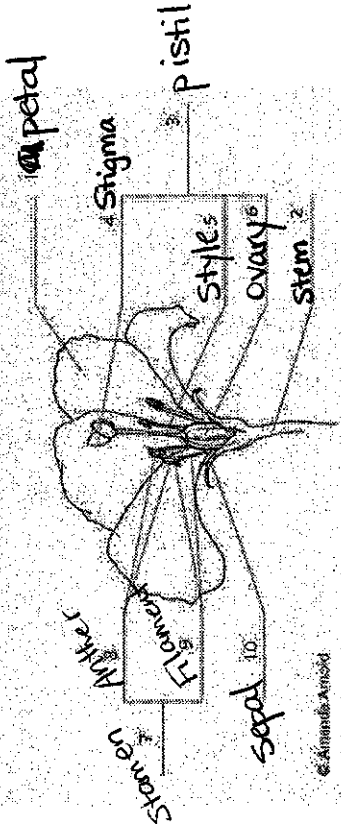
13. Using the dichotomous key to flags above, determine what type of flag is pictured above.

- Bahamas
- Afghanistan
- Comoros
- Cuba



Plants

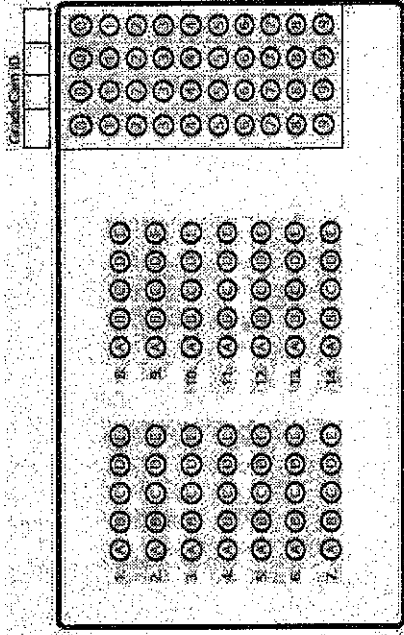
Use the diagram below to match the correct name with the correct labeled part.



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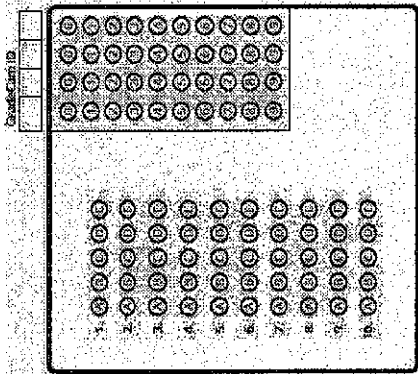
- a. Petal
- b. Sepal
- c. Ovary
- d. Stigma
- e. Style
- Aa. Pistil
- Ab. Anther
- Ac. Filament
- Ad. Stamen
- Ae. Stem

11. The structure in the leaf that regulates water loss and gas exchange is the:
 - a. Cuticle
 - b. Stomata
 - c. Epidermis
 - d. palisade mesophyll
12. Fleshy fruits that are brightly colored are often dispersed by
 - a. Insects
 - b. Water
 - c. Wind
 - d. Birds
13. The female organs of the flower are the:
 - a. Petal
 - b. Pistil
 - c. Stamen
 - d. Anther
14. Blowing water up through a drinking straw is most like
 - a. Guttation
 - b. Diffusion
 - c. mass flow in xylem
 - d. mass flow in phloem

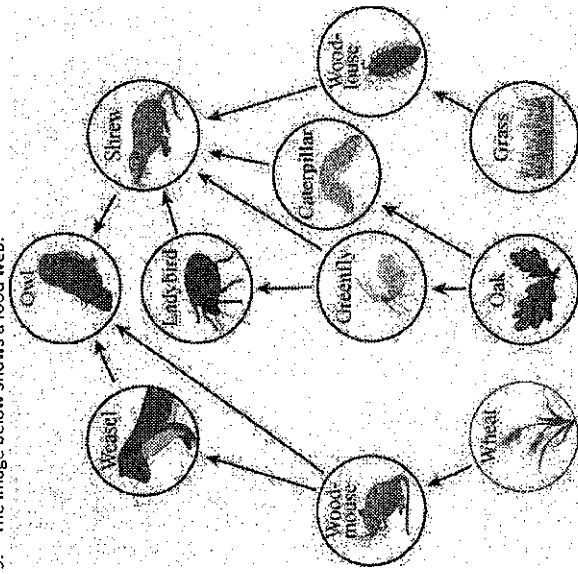


Biological Comparisons

- Identify the prokaryotic organism.
 - Rose
 - Frog
 - Mushroom
 - Bacteria
- What kingdoms are made up of prokaryotic cells?
 - Bacteria & Archea
 - Protists & Plants
 - Animals & Plants
 - Archea & Plants
- Early life forms on earth were very simple. With that said which type of cell appeared first on earth?
 - Prokaryotic cells
 - Eukaryotic cells
- If you have no other information about an organism other than the fact that it was single celled, what could you conclude?
 - it is prokaryotic
 - it is eukaryotic
 - it could be either prokaryotic or eukaryotic
 - it is neither prokaryotic or eukaryotic
- This type of cell has a nucleus.
 - Eukaryote
 - Prokaryote
 - Bacteria
- Contains membrane bound structures (organelles)
 - Eukaryote
 - Prokaryote
 - Virus
- Eukaryotes DNA is found in the
 - Nucleus
 - Cytoplasm
 - Doesn't have DNA
- Which of the following characteristics differentiates an autotroph from a heterotroph?
 - Ability to grow
 - Ability to produce its own food
 - Ability to reproduce
 - Ability to move



9. The image below shows a food web.



Identify the number of heterotrophs that directly depend on autotrophs for food?

- 4
- 6
- 8
- 11

10. The table below lists some characteristics of organisms.

- They cannot make their own food.
- They are considered as consumers in a food chain.
- They are directly or indirectly dependant on plants for food.
- They can utilize sunlight to produce chemical energy.

Which of the following statements holds true for heterotrophs?

- A, B and C
- A and D
- B, C and D
- C and D

Photosynthesis

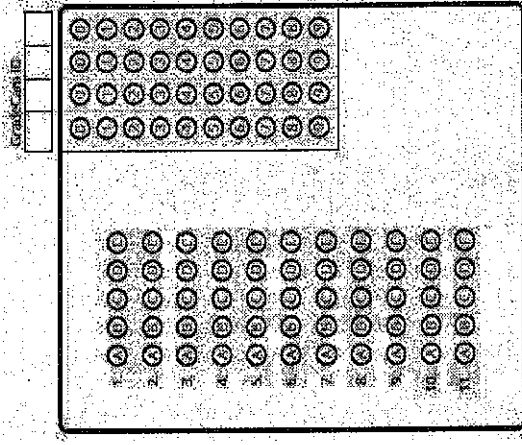
1. What organelle is responsible for photosynthesis in plants and algae?
 - a. Mitochondria
 - b. Chloroplast
 - c. Chlorophyll
 - d. Cellular Membrane
2. What is the fluid-filled space that contains enzymes for the light-independent reactions called?
 - a. Stroma
 - b. Thylakoids
 - c. Chloroplast
 - d. Chlorophyll
3. What are stacks of flattened sacs that contain the pigment chlorophyll called?
 - a. Stroma
 - b. Thylakoids
 - c. Chloroplast
 - d. Chlorophyll
4. NADPH₂ and ATP produced by the light-dependent reactions are used to reduce what?
 - a. Carbon Dioxide
 - b. Carbon Monoxide
 - c. Oxygen
 - d. Hydrogen
5. What is the site of the light-dependent reactions?
 - a. Stroma
 - b. Thylakoids
 - c. Chloroplast
 - d. Chlorophyll
6. Which of the following regarding ATP is true?
 - a. ATP is a low energy molecule
 - b. ATP has 2 phosphates
 - c. ATP is a molecule that transfers energy for cell processes
7. ADP can be converted to ATP by which of the following ways?
 - a. A phosphate is removed
 - b. A phosphate is added
 - c. A chemical reaction occurs and ADP becomes a carbohydrate
8. Which of the following is used as a primary source of energy for cells?
 - a. Carbohydrates
 - b. Lipids
 - c. Proteins
9. During light dependent reactions, which of the following occurs?
 - a. 6H₂O and sunlight are used to make energy and 6O₂
 - b. 6CO₂ is used to make C₆H₁₂O₆
 - c. 6CO₂ is made.

10. Which of the following regarding light independent reactions is true?

- a. 6CO₂ is used to make C₆H₁₂O₆
- b. Water is used to make sugar
- c. 6O₂ is used to make sugar

11. Which of the following is the equation for photosynthesis?

- a. $6CO_2 + 6H_2O + LIGHT \rightarrow C_6H_{12}O_6 + 6O_2$
- b. $CO_2 + H_2O + LIGHT \rightarrow C_6H_{12}O_6 + 6O_2$
- c. $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$



Cellular Respiration

- What must occur before cellular respiration can take place?
 - Glycolysis
 - Photosynthesis
 - Chemosynthesis
- Which of the following is true regarding glycolysis?
 - Is an anaerobic process, splits glucose into 2 three carbon molecules.
 - Is an aerobic process, splits glucose into 2 three carbon molecules.
 - Is anaerobic process, splits lipids into 2 three carbon molecules
- Where does cellular respiration take place?
 - the chloroplast
 - mitochondria
 - lysosomes
- In aerobic respiration carbohydrates are ultimately broken down into:
 - CO₂
 - O₂
 - Heat
- Most ATP produced in aerobic respiration occurs in the process of:
 - Glycolysis
 - the Krebs cycle
 - chemosmosis
 - electron transport chain
- In aerobic respiration, the energy in 1 mole of glucose is capable of producing how many ATP molecules?
 - 2 molecules of ATP
 - 38 molecules of ATP
 - 1 molecule of ATP
- Products of glycolysis include:
 - Pyruvate
 - ATP
 - NADH
 - all of the above
- In the presence of oxygen, all cells synthesize ATP via the process of glycolysis. Many cells also can metabolize pyruvate if oxygen is not present, via the process of:
 - Fermentation
 - aerobic respiration
 - oxidative phosphorylation
 - electron transport
- Cramps during exercise are caused by
 - alcohol fermentation
 - glycolysis inhibition
 - lactic acid fermentation
 - chemosmosis

10. Respiration that occurs without oxygen is classified as which of the following

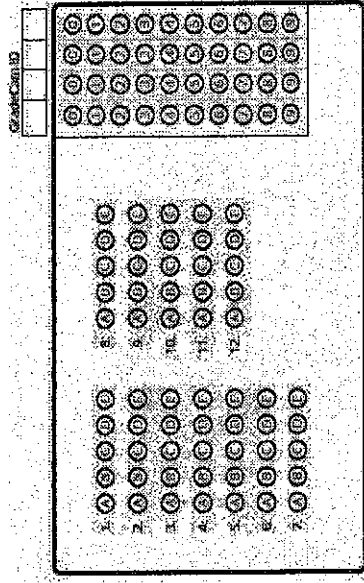
- Chemotrophic
- Phototrophic
- Aerobic
- Anaerobic

11. What is the main cellular structure involved in respiration?

- Nucleus
- Golgi apparatus
- Mitochondria
- ER

12. How many carbon atoms are found in one molecule of glucose?

- 1
- 3
- 6
- 9



Carbohydrates

- Select the storage form of carbohydrate found in mammals.
 - Glycogen
 - Starch
 - Lipid
 - Protein
- Carbohydrates are organic compounds made up of
 - Carbon and hydrogen
 - Carbon, hydrogen, and oxygen
 - Carbon, hydrogen, oxygen, and nitrogen
 - Carbon and oxygen
- The minimum number of sugar molecules in a disaccharide is
 - 1
 - 2
 - 3
 - 4

- Two monosaccharides are joined through a process called:
 - Dehydration synthesis
 - Hydration synthesis
 - Oxidation
 - Reduction

- Respiration is the process by which _____ is consumed and _____ is produced
 - carbon dioxide, oxygen
 - carbon dioxide, energy
 - oxygen, carbon dioxide
 - energy, carbon dioxide

- Carbon is essential to life because
 - It's the most common element.
 - There can't be life without it.
 - It is produced in both photosynthesis and respiration.
 - It is the molecule around which the organic molecules of life are built.

- Plants get the carbon to make their molecules from
 - The carbon dioxide in the air
 - The ground
 - The combination of oxygen and water
 - The waste of animals

- Which of the following decreases carbon dioxide levels in the atmosphere?
 - Cellular Respiration
 - Decomposition by bacteria
 - Photosynthesis
 - Burning fossil fuels

- The oxygen for your body comes from
 - Cellular Respiration
 - The ground
 - Eating plants and animals
 - Photosynthesis in plants

- The large increase in atmospheric carbon dioxide in the last 50 years most likely comes from
 - An increase in cellular respiration
 - Increased decomposition by bacteria
 - An increase in the burning of fossil fuels
 - An increase in photosynthesis

Grade	Course	1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36	37	38	39	40	41	42
43	44	45	46	47	48	49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96	97	98
99	100	101	102	103	104	105	106	107	108	109	110	111	112

