

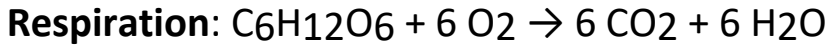
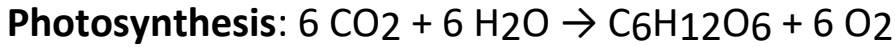
Name: _____ Date: _____ Class: _____ #: _____

LT: I can create a model that illustrates the law of conservation of matter.

LE Standards: 5.1d, 6.1b

Tasks:

1. On a separate sheet of paper, copy and complete the table shown below. Use the provided equations to write out the common names of the molecules that are found in the reactants and products.



	Reactants (ingredients)	Products (given off)
Photosynthesis		
Respiration		

2. How do the reactants and products for photosynthesis and respiration compare?
 -Be sure to explain which process(es) are autotrophic and which are heterotrophic.
 -Be sure to identify organic and inorganic molecules.
 -Be sure to identify the organelle in which each process occurs.

3. Draw a colored picture of the photosynthesis reaction using the glucose molecule picture as a reference for the rest of your diagram.

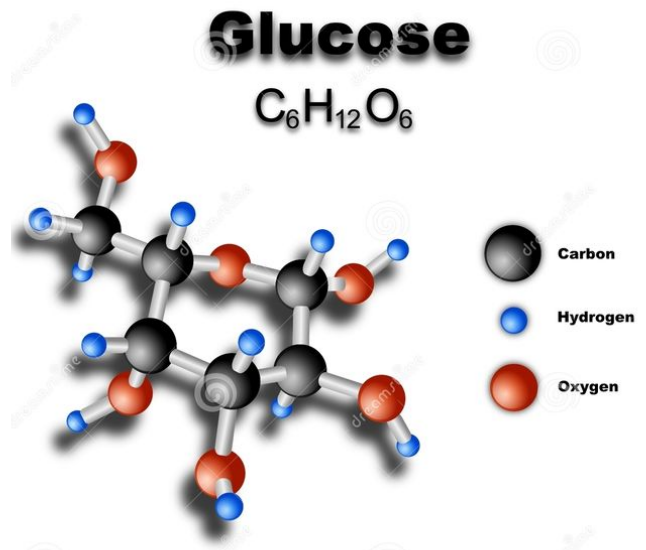
*Be sure to:

- separate products and reactants with a yield sign
- use the same color and scale for each type of atom
- research how the atoms of the remaining molecules would be positioned

4. Draw a colored picture of the cellular respiration reaction using the glucose molecule picture as a reference for the rest of your diagram.

*Be sure to:

- separate products and reactants with a yield sign
- use the same color and scale for each type of atom
- research how the atoms of the remaining molecules would be positioned



5. On a separate sheet of paper, copy and complete the table shown below to compare the total number of atoms:

	Photosynthesis		Respiration	
	Reactants	Products	Reactants	Products
Carbon				
Oxygen				
Hydrogen				

6. Describe the pattern between how many atoms are in the reactants and how many are in the products? Describe the significance of the pattern as it relates to the law of conservation of matter?

7. a. Write 1 question you have about the topic.
 b. Write down a possible answer to your question.
 c. Research and record the answer to your question.

	3	2	1
Tasks 1 & 2	The table is professional in appearance and is completed thoroughly and accurately with no errors. The reactants and products for photosynthesis and respiration are compared accurately with detail.	The table is neat in appearance and is completed thoroughly with few errors. The reactants and products for photosynthesis and respiration are compared correctly with little detail.	The table is not neat in appearance and is either incomplete or contains several errors. The reactants and products for photosynthesis and respiration are compared however there are errors and missing details.
Tasks 3 & 4	The models/diagrams are professional in appearance and is completed thoroughly and accurately with no errors.	The models/diagrams are neat in appearance and are completed thoroughly with few errors.	The models/diagrams are not neat in appearance and are either incomplete or contain several errors.
Tasks 5 & 6	The table is professional in appearance and is completed thoroughly and accurately with no errors. The reactants and products for photosynthesis and respiration are compared and related to the law of conservation of matter accurately with detail.	The table is neat in appearance and is completed thoroughly with few errors. The reactants and products for photosynthesis and respiration are compared and related to the law of conservation of matter correctly with little detail.	The table is not neat in appearance and is either incomplete or contains several errors. The reactants and products for photosynthesis and respiration are compared and related to the law of conservation of matter however there are errors and missing details.
Task 7	The student generates a thought-provoking question that is relevant to the topic/task and thoroughly answers the question.	The student generates a general question that is relevant to the topic/task and attempts to answers the question however detail is limited.	The student generates a general question that is not relevant to the topic/task and incorrectly answers the question.

Participation					
I often contributed good ideas that were relevant to the topic and task. I came to meetings prepared. I did my share of the work.	4	3	2	1	I seldom contributed good ideas. Sometimes I was talking off-task. I did not come to meetings prepared. I did not do my share of the work.
Working with Others					
I often compromised and cooperated. I did take initiative when needed and/or listened and respected the ideas of others.	4	3	2	1	I seldom compromised and cooperated. I did not take initiative when needed and/or did not listen and respect the ideas of others.
Product					
My part of the task is complete and accurate. My work was submitted on time.	4	3	2	1	I did not complete my part of the task. The information I presented was inaccurate and/or not done correctly. It was not completed on time.
Understanding Content					
I can speak about the topic and group work knowledgeably. I can sum-up the lesson.	4	3	2	1	I do not understand what I did in my group. I did not ask or answer questions. I cannot sum-up the lesson.