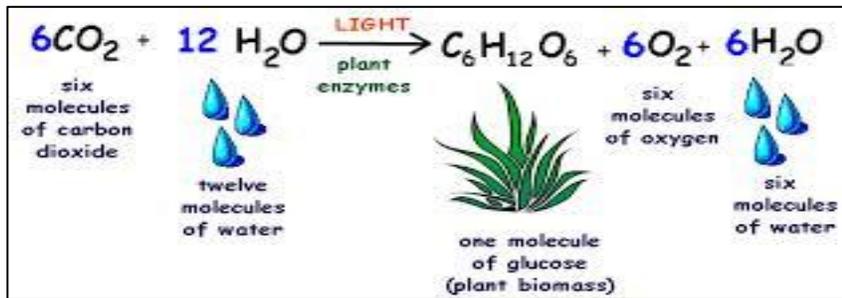




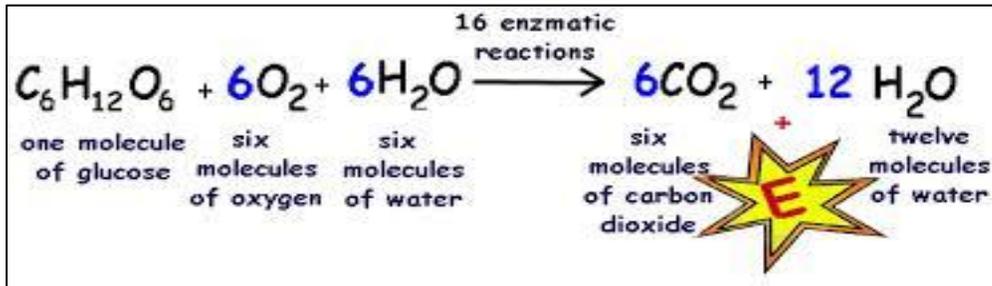
CRITICAL THINKING ACTIVITY: CARBON ON THE MOVE

NOTES: Students should be introduced to the specific steps of the carbon cycle prior to undertaking this activity. They should know, in detail, how the processes of photosynthesis and respiration work in the cycle as well as the chemical equations for both. In addition, they should have a good understanding of the other processes to the degree that they could give a general explanation to another student. They should understand that one carbon atom could go through the cycle many times or stay in one part of the cycle. The terms *sources* and *sinks* should be familiar to them as well as the idea of a *"cycle"*. By using the chemical equations for photosynthesis and respiration as examples and explaining them to the class, it should be easy for students to see the "cycling" of the carbon within the Earth system.

Photosynthesis



Respiration



OBJECTIVE: Students will:

- + Read and discuss the article "**CARBON ON THE MOVE**" with the class;
- + Design a 6 to 10 panel cartoon in story form to explain the steps and processes of the carbon cycle.
- + Explain their cartoon to class
- + Answer any questions for clarification.

MATERIALS:

- + Poster board/paper,
- + Crayons, colored pencils, markers
- + Research materials, magazines and/or computer access

PROCEDURE:

1. Explain to the class that they will be responsible for create a cartoon to explain how carbon travels through the carbon cycle.
2. The cartoon should have a main character/narrator with a name and who represents a carbon atom and a plot.
3. The cartoon should have between 6 and 10 panels.
4. You must name and explain these processes: photosynthesis, respiration, combustion, decay, decomposition and calcification.
5. You must include these: plants (herbivores), animals (omnivores), decomposers, coal, calcium carbonate, carbon dioxide, water, glucose, oxygen, hydrosphere, atmosphere, lithosphere, biosphere, sunlight;
6. The steps in the carbon cycle must be included in their correct order on your visual and connected using arrows.
7. You should be prepared to present your visual to the class, explain it and answer any questions.
8. Answer the question in the **INVESTIGATING QUESTIONS** section.

