

Modeling Photosynthesis

Question: How do you think a seed becomes a tree? Where does the mass come from?

Materials:

- a. 6 black (carbon atoms)
- b. 12 white (hydrogen atoms)
- c. 18 reds (oxygen atoms)
- d. bonds as needed

Procedure:

1. Write the formula for photosynthesis

2. Record the reactants of photosynthesis below
Reactant 1 _____
Reactant 2 _____

3. Use your pieces to construct your reactants.

4. How many of each reactant can you make?
Reactant 1 _____
Reactant 2 _____

5. Draw your reactants below.

6. What are the products of photosynthesis?

7. Take apart the models you made and now make models of these products. Use all the pieces made in the reactants to make the products.

8. Draw your product below.

Questions:

1. Write the chemical equation for the process of photosynthesis below. Use coefficients (the number you made of each)

2. Is this process endo or exothermic? Explain in terms of energy.

3. What is the glucose used for? Why don't plants just use the energy from sunlight directly?

4. How have the products of photosynthesis changed the Earth?