Modeling Cellular Respiration and Photosynthesis

Purpose:

Model the components of cellular respiration and photosynthesis

Materials:

Colored disk
- 24-black (Carbon)
- 72 white (Oxygen)
- 48 red (Hydrogen)
- 2 yellow (energy)

- Or -

1x1" paper squares labeled
- 24 - Carbon
- 72 - Oxygen
- 48 - Hydrogen
- 1 – Light energy
- 1 – ATP energy

- and -

5 - 1 x 1" squares labeled with plus signs
2 - 1x1" squares labeled with an arrow
3x5 index cards labeled
- 1 - Cellular respiration
- 1 - Photosynthesis
- 2 - Carbon dioxide
- 2 – Water
- 2 -Glucose
- 2 – Oxygen

Procedure:

1. Assign students partners and distribute materials.
2. Students should use the materials to model the formulas for cellular respiration and photosynthesis.
3. Students should use a visual (Venn diagram) to compare and constant the two formulas.

Extension:

Use marshmallows and toothpicks to form molecules of each component of the formulas.