Photosynthesis

When you get hungry, you might decide to raid the cookie jar or ask your mom to make you a sandwich. You do this because humans and animals get energy from the foods they eat.

Plants use light energy from the sun to produce the food they need to survive. This process is called photosynthesis.

**INGREDIENTS**
- **Light energy**: Rays from the sun
- **Carbon dioxide**: From the air
- **Water**: Gathered by plant’s roots in the soil
- **Chlorophyll**: Present in cells of green plants

1. **SUNLIGHT**
   - Light shining down from the sun is absorbed by the plant’s cells. These tiny cells are what make up the plant and its leaves.
   - **Typical plant cell**
     - **Cell nucleus**
     - **Cell wall**
     - **Central vacule**: Large fluid filled space
     - **Chloroplasts**: Contain the chemical chlorophyll

2. **Chlorophyll**
   - Inside some of these cells is a special ingredient called chlorophyll. This is the compound that traps the sun’s light to start the process of photosynthesis.

3. **Water**
   - Water and carbon dioxide are two of the main ingredients needed for photosynthesis. These two substances are made of many smaller parts called molecules.
   - **Water molecules**
     - Oxygen atom
     - Hydrogen atoms
   - **Carbon dioxide molecules**
     - Carbon atom
     - Oxygen atoms
     - Hydrogen atoms

Photosynthesis strips away the hydrogen atom leaving only oxygen.

Then, the hydrogen atoms are mixed together with the carbon dioxide to make a sugar the plant can use as its food.

4. **End Result**
   - The oxygen which is left from the transformation is released back into the air. The sugar created by photosynthesis is sent to the rest of the plant for food.

Sources: BBC, Science aid, University of Arizona