

PHOTOSYNTHESIS & OXYGEN RELEASE



Light-Dependent Stage

Occurs in the **Thylakoid**. Sunlight splits water molecules (Photolysis), releasing **Oxygen (O₂)** as a byproduct into the atmosphere.

Light-Independent Stage

Occurs in the **Stroma** (Calvin Cycle). Uses ATP and NADPH to convert Carbon Dioxide into energy-rich Glucose.

Inputs (Reactants)

- Solar Energy
- Water (from roots)
- Carbon Dioxide (from air)

Outputs (Products)

- Glucose (stored energy)

- **Oxygen (released gas)**
- Chemical Energy (ATP)

Educational Template & Botanical Science Reference Chart