

# Warm Up

- What are carbohydrates made of?
- How are they put together?
- What is the equation for photosynthesis?

# Objectives:

- Distinguish between anabolic and catabolic
- Write two equations specific to cell metabolism (ATP and photosynthesis/cell respiration)

# Cells and energy

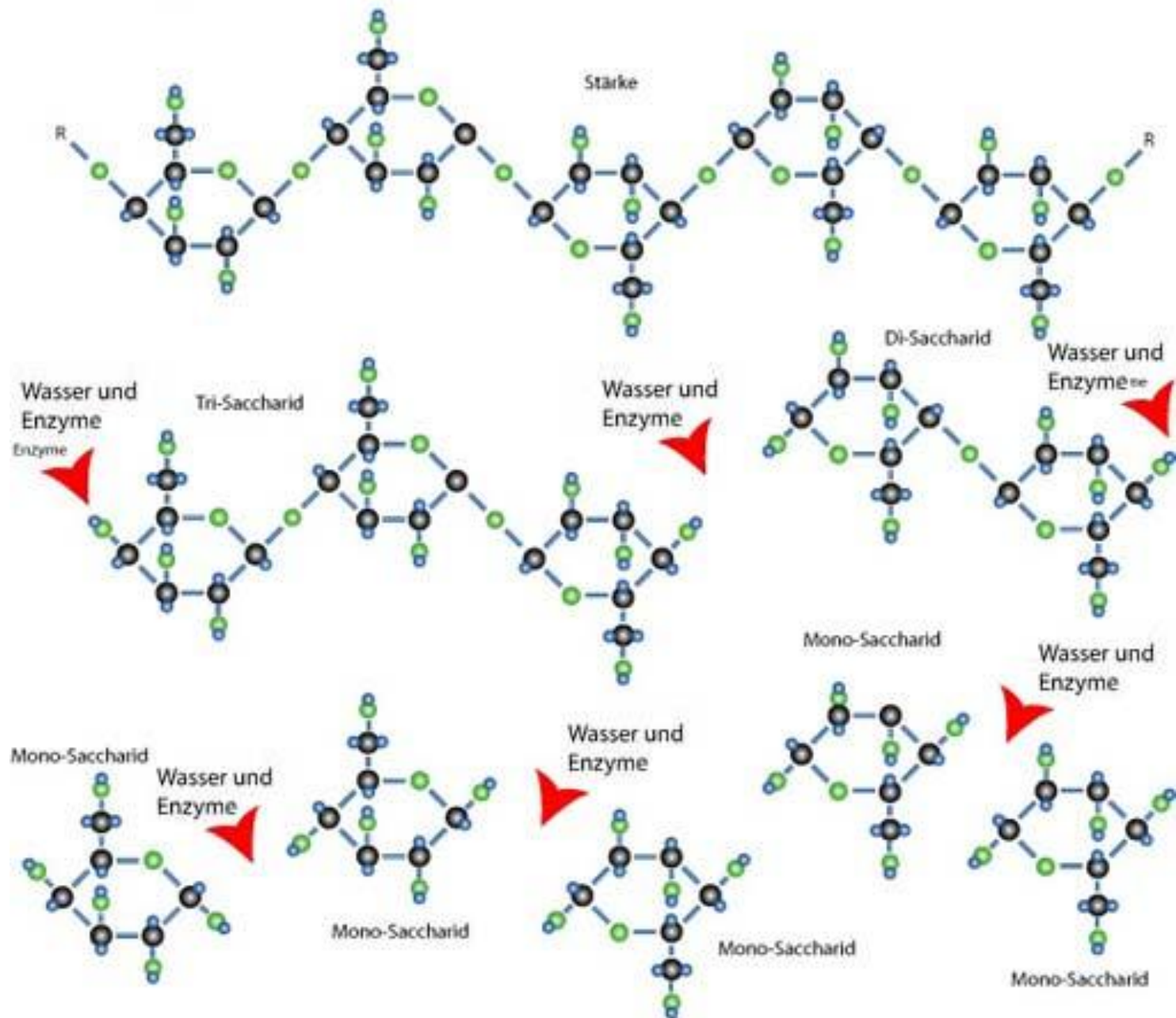
## Ch. 8.1

# Metabolism of the cell

## A. Small steps

1. Break bonds

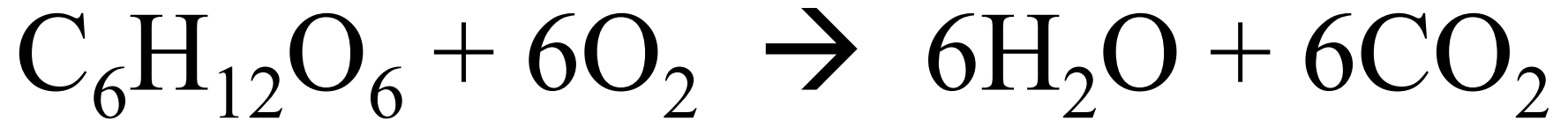
2. Starch $\xrightarrow{\quad}$ glucose $\xrightarrow{\quad}$





breaks down to





The EVIL equation ☺

Memorize it...forwards and backwards!!!

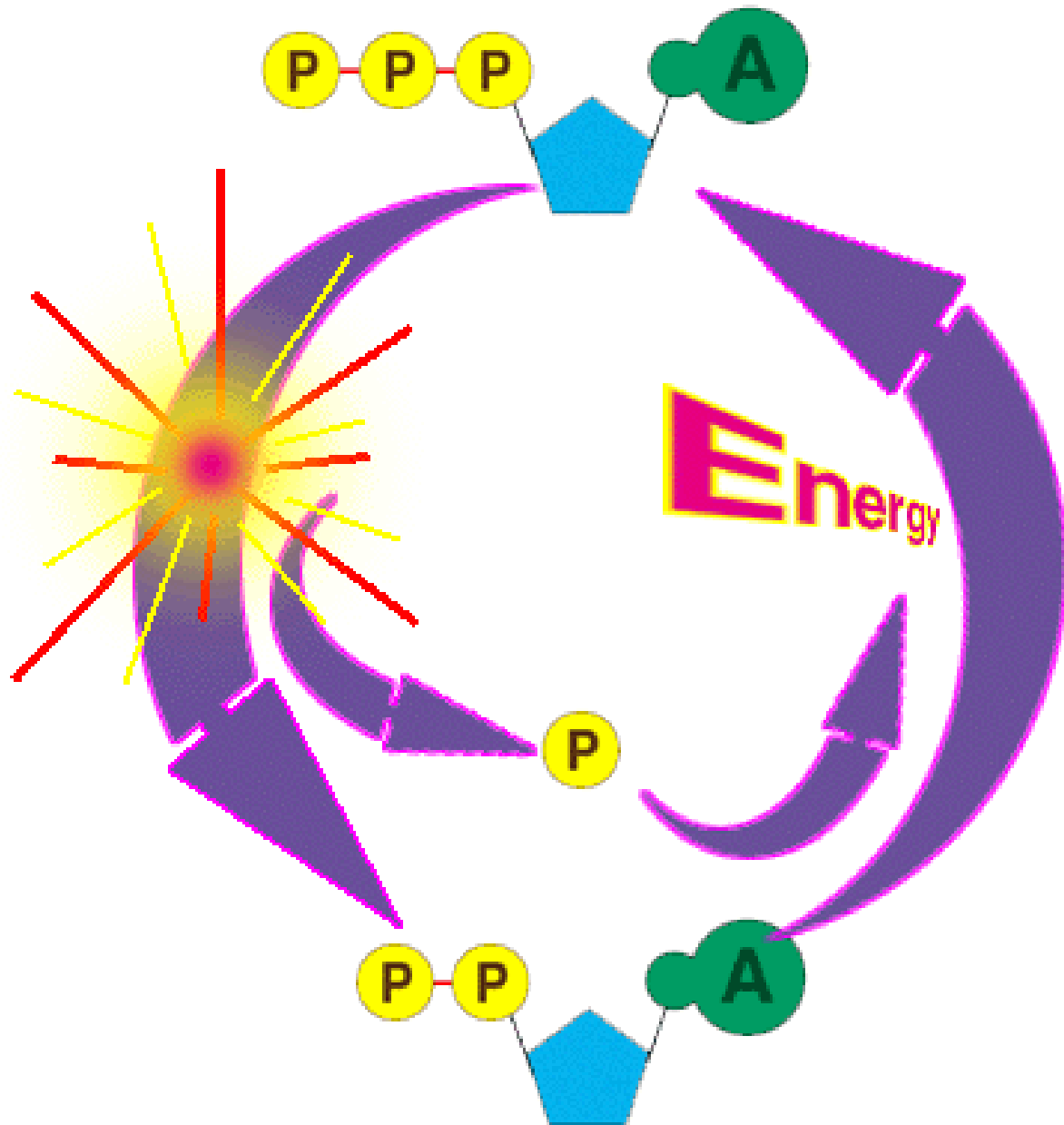
# B. Cell's energy

1. ATP

2. ADP

3. Equation





# C. Laws of Thermodynamics:

## 1. LoCoE

a. Neither c/d

b. Changes form

2. Conversion = E loss

a. Entropy

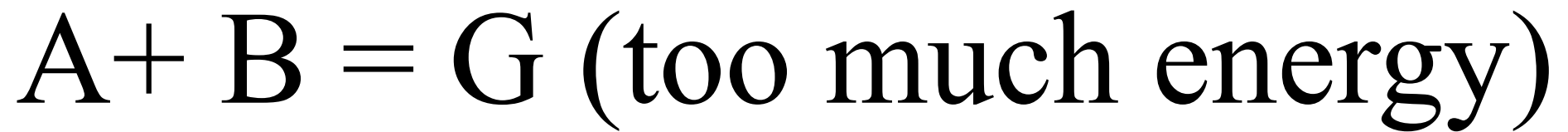
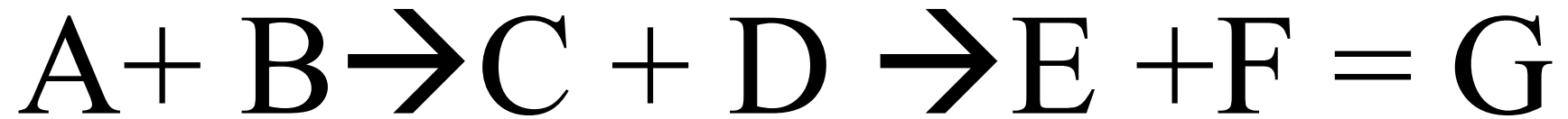
b. Often heat

Anabolic: build (P)

Catabolic: break (CR)

Metabolism = A + C

## D. Metabolic Pathway:





**A→G**

**A→B→C→D→E→F→G**

