TUESDAY NOVEMBER 15TH

LAB 8: OSMOSIS DUE RIGHT NOW!

THANKSGIVING NEXT WEEK! NO SCHOOL MONDAY/TUESDAY!

STARTER:

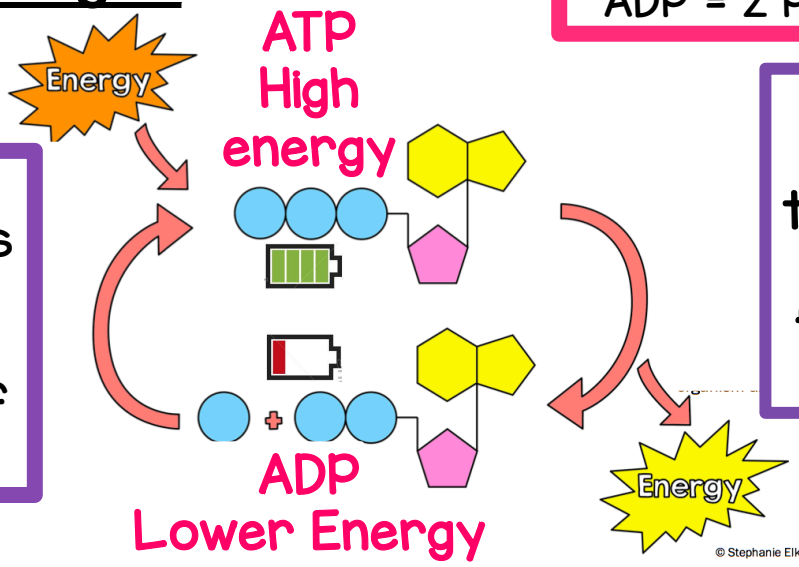
- DRAW AND LABEL THE ATP/ADP CYCLE.
- GIVE THE CHEMICAL REACTION FOR PHOTOSYNTHESIS.

3.5 Intro to Cellular Energy

ATP - ADP Cycling in Cells

ATP = 3 Phosphates (Tri)
ADP = 2 Phosphates (Di)

Energy from glucose or light is transferred to create new covalent bond of ATP.



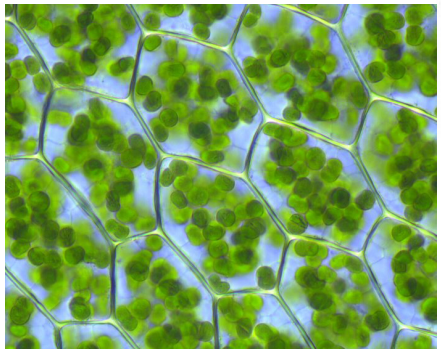
Energy from ATP bond is transferred to other energy forms for cell functions.

3.6 PHOTOSYNTHESIS

STANDARD OBJECTIVES:

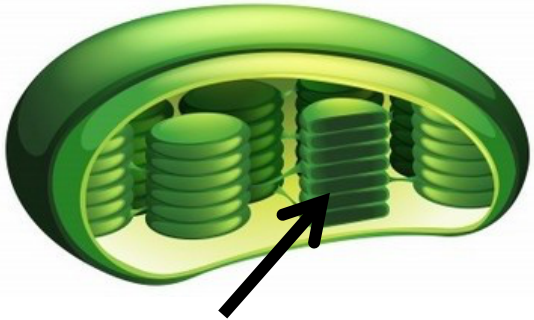
- IDENTIFY THE CELL TYPE AND THE ORGANELLE REQUIRED FOR PHOTOSYNTHESIS
- IDENTIFY THE REACTANTS AND PRODUCTS OF THE PHOTOSYNTHESIS CHEMICAL REACTION
- DESCRIBE THE PURPOSE OF THE SUB-REACTIONS OF PHOTOSYNTHESIS

3.6 PHOTOSYNTHESIS



LOCATION:

TAKES PLACE IN CHLOROPLAST ORGANELLES



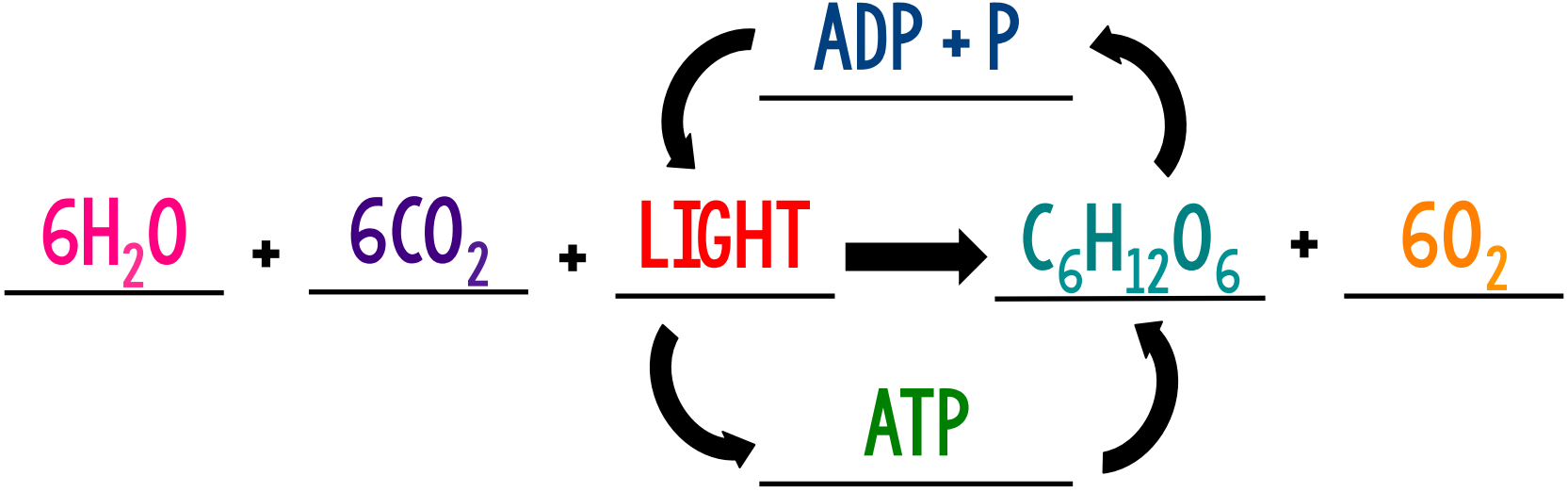
THYLAKOIDS

CHLOROPLASTS CONTAIN THYLAKOIDS

CONTAINS CHLOROPHYLL, GREEN PIGMENT THAT ABSORBS SUNLIGHT

3.6 PHOTOSYNTHESIS

GENERAL REACTION:



3.6 PHOTOSYNTHESIS

FYI:

- **LIGHT**: NOT USABLE BY CELL'S ORGANELLES, MUST TRANSFER ENERGY!
- **GLUCOSE**: ENERGY STORAGE MOLECULE
- **ATP**: ACTS AS ENERGY TRANSFER MOLECULE

3.6 PHOTOSYNTHESIS

PHOTOSYNTHESIS CAN BE DIVIDED INTO 2 SUB-REACTIONS:

LIGHT DEPENDENT RXN

TRANSFER OF LIGHT ENERGY TO A USABLE FORM OF ENERGY.

ADP + P → ATP

LIGHT ENERGY

LIGHT INDEPENDENT RXN

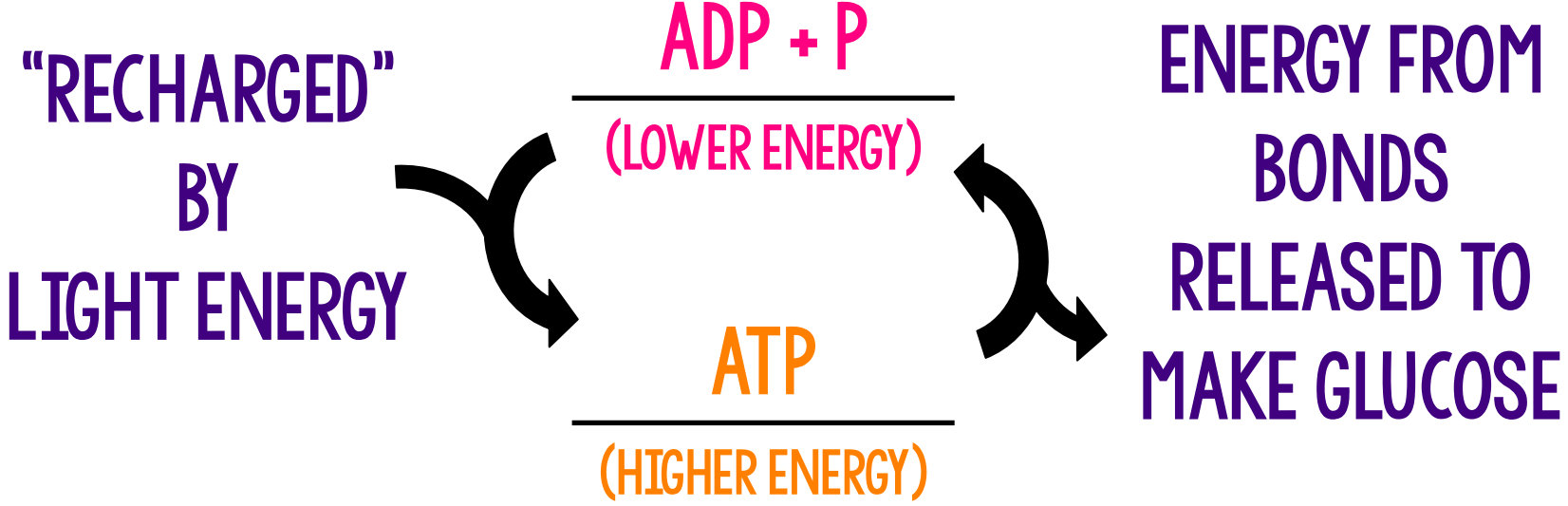
TRANSFER OF ATP BOND ENERGY TO GLUCOSE BONDS.

ATP → ADP + P

LIGHT ENERGY

3.6 PHOTOSYNTHESIS

FLOW OF ENERGY IN PHOTOSYNTHESIS:



3.6 PHOTOSYNTHESIS

LIMITING FACTORS OF PHOTOSYNTHESIS:

A LIMITING FACTOR IS ANY FACTOR THAT WILL DECREASE THE RATE OF PHOTOSYNTHESIS.

- LIGHT:

  DECREASING LIGHT = DECREASING ENERGY TO MAKE GLUCOSE BONDS

3.6 PHOTOSYNTHESIS

LIMITING FACTORS OF PHOTOSYNTHESIS:

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- CO_2:

  DECREASING CO_2 = DECREASES CARBON & OXYGEN TO MAKE GLUCOSE

3.6 PHOTOSYNTHESIS

LIMITING FACTORS OF PHOTOSYNTHESIS:

A LIMITING FACTOR IS ANY FACTOR THAT WILL DECREASE THE RATE OF PHOTOSYNTHESIS.

- H_2O:

  DECREASING H_2O = DECREASES HYDROGEN & OXYGEN TO MAKE GLUCOSE

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