**11/12/18**

**ATP (ADENOSINE TRIPHOSPHATE)**

 STORES POTENTIAL ENERGY FOR CELLULAR ACTIVITY



ATP SYNTHASE – ENZYME THAT CREATES ATP

 MOVES H+ ions ACROSS A CONCENTRATION GRADIENT IN THE MITOCHONDRIA.

PLANTS – USE LIGHT ENERGY TO FORM ATP IN CHLOROPLASTS

ANIMALS – USE ENERGY FROM RESPIRATION IN THE MITOCHONDRIA

3 USES FOR ATP

1. ACTIVE TRANSPORT (EXAMPLE: SODIUM/POTASIUM PUMP)
2. MUSCLE CONTRACTIONS
3. POLYMER SYNTHESIS (MAKING LARGE MACROMOLECULES LIKE PROTEINS)

**PHOTOSYNTHESIS 11/13/18**

AUTOTROPHS – “SELF FEEDERS”, PRODUCERS

 PHOTOAUTOTROPHS – USE LIGHT (PLANTS, ALGAE)

 CHEMOAUTOTROPHS – USE SULPHER OR AMONIA (BACTERIA)

HETEROTROPHS – “OTHER FEEDERS”, CONSUMERS

CHLOROPLASTS – SITE OF PHOTOSYNTHESIS

 CONTAINS CHLOROPHYL WHICH ABSORBS MOST LIGHT – NOT GREEN

 $CO\_{2}$ – FROM STOMATA $H\_{2}O$– FROM ROOTS

 THYLAKOID – SITE OF LIGHT RxN

 STROMA – SITE OF CALVIN CYCLE

OVERALL RxN OF PHOTOSYNTHESIS

$$6H\_{2}O+6CO\_{2} = C\_{6}H\_{12}O\_{6}+6O\_{2}$$

FROM PRODUCTS OF PHOTOSYNTHSIS PLANTS MAKE:

FOOD: GLUCOSE STRUCTURE: CELULOSE

