Mr. Ulrich
Biology

Energy Notes

Chemical **symbols** represent _____

Chemical **formulae** represent _____

Chemical **equations** represent _____

Chemical _____ produce new substances with new _____

ENERGY = _____

Energy has many units: _____

One calorie is the _____

or…

1 cal =

Measured using a _____

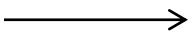
The ultimate source of energy = _____

Autotrophs – organisms that convert_____ energy to _____energy

Photosynthesis makes their fuel molecules (glucose)

Photosynthesis takes place in the _____ of plant cells.

Chemical equation of photosynthesis:



Heterotroph = "_____ _____".

Eat other things for _____ energy.

Using Chemical Energy

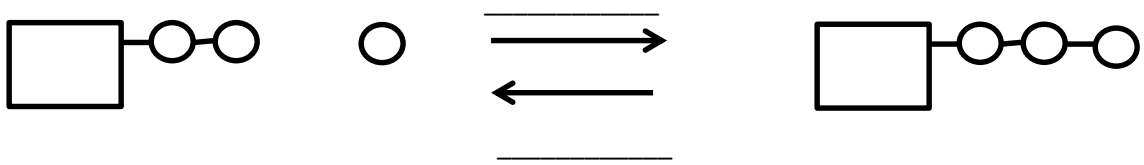
Cellular Respiration=

Combustion: a very _____chemical process (as **oxidation**) that produces

_____ and usually light from the _____ of molecules.

Cellular respiration →_____ _____ _____

Any cellular process that uses energy need __ __ __ aka _____



Active transport uses _____

_____ is synthesized in the _____ of the cell.

CELLULAR RESPIRATION

Aerobic =

Aerobic Respiration=

Three “stages”: Where?

Glycolysis → →

→ →

→ →

Chemical equation: ⟶

Anaerobic=

Starts with:

Fermentation =

Alcoholic Fermentation:

Carried out by _____

Used to make _____ and _____

Chemical Equation:

Lactic acid Fermentation:

Carried out by _____ during _____ _____

Chemical Equation:

Aerobic respirations makes _____ ATP per glucose

Anaerobic respirations makes _____ ATP per glucose

Cellular respiration is _____ the same as _____