



G. Free energy and chemical reactions.

1. Exergonic.
2. Endogonic.
3. Activation energy

H. Coupled reactions.

I. ATP

1. Adenosine triphosphate
2. Has a 3 phosphate tail

J. Factors affecting activation energy.

1. Heat.
2. Concentration.
3. Activation Energy and Catalysts.



3. To sustain life, there needs to be a constant input of chemical energy (food!)

### **III. Key Terms.**

activation energy

active site

adenosine triphosphate

anabolism

ATP

catabolism

catalyst

chemical energy

endergonic reaction

energy

energy coupling

energy of activation

entropy

exergonic reaction

first law of thermodynamics

free energy

kinetic energy

metabolism

potential energy

second law of thermodynamics

substrate