

2009

ATP and GTP are primary sources of energy for biochemical reactions

(a) Describe the structure of the ADP^{3-} or the ATP^{4-} molecule.

(b) Explain how chemosynthesis produces ATP

(c) Describe TWO specific cell processes that require ATP and explain how ATP is used in each process

(d) An energy pyramid for a marine ecosystem is shown below. Label each trophic level of the pyramid and provide an example of a marine organism found at each level of this pyramid. Explain why the energy available at the top layer of the pyramid is a small percentage of the energy present at the bottom of the pyramid

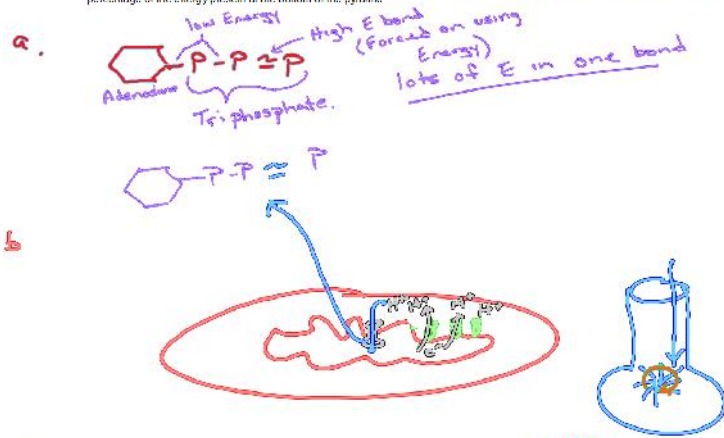


Photo
 ATP - carbon fixation ($CO_2 \rightarrow$ Glucose)
 By Calvin Cycle
 from light energy.



Producing
 - Protein } Enzymes need ATP to do
 - DNA }

