

## **ENERGY TRANSFER**

**Explain how sunlight is used to make ATP in photosynthesis**

## **ENERGY TRANSFER**

**Explain how H<sub>2</sub>O is used to make ATP in photosynthesis**

## **ENERGY TRANSFER**

**Explain how CO<sub>2</sub> is used to make sugars in C<sub>3</sub> photosynthesis**

## **ENERGY TRANSFER**

**Explain how carbon fixation differs in C<sub>4</sub> plants**

## **ENERGY TRANSFER**

**Explain how carbon fixation differs in CAM plants**

## **ENERGY TRANSFER**

**Explain how C<sub>4</sub> plant leaves differ structurally than C<sub>3</sub> plants**

## **ENERGY TRANSFER**

**Explain how sunlight is used to make NADPH in photosynthesis**

## **ENERGY TRANSFER**

**Explain how ATP & NADPH are used to build sugars in the Calvin Cycle**

## **ENERGY TRANSFER**

**Explain how the energy of organic compounds are converted to ATP**

## **ENERGY TRANSFER**

**Describe glycolysis**

## **ENERGY TRANSFER**

**Describe the oxidation of pyruvate & the Krebs cycle**

## **ENERGY TRANSFER**

**Describe the electron transport chain & explain how it functions to make ATP**

## **ENERGY TRANSFER**

**Describe the role of NADH & FADH<sub>2</sub> in cellular respiration**

## **ENERGY TRANSFER**

**Describe the role of oxygen in cellular respiration**

## **ENERGY TRANSFER**

**Describe & diagram the structure of the mitochondria**

## **ENERGY TRANSFER**

**Describe & diagram the structure of the chloroplast**

## **ENERGY TRANSFER**

**Explain how ATP serves as an energy currency molecule**

## **ENERGY TRANSFER**

**Explain how a proton gradient is used to build ATP in cellular respiration**

## **ENERGY TRANSFER**

**Explain how a proton gradient is used to build ATP in photosynthesis**

## **ENERGY TRANSFER**

**Explain chemiosmosis**

## **ENERGY TRANSFER**

**Describe the transfer of energy through a food pyramid**

## **ENERGY TRANSFER**

**Explain how the hydrolysis of ATP is used in the synthesis of macromolecules**

## **ENERGY TRANSFER**

**Explain how the hydrolysis of ATP is used to move muscle**

## **ENERGY TRANSFER**

**Explain how the hydrolysis of ATP is used to activate proteins**

## **ENERGY TRANSFER**

**Explain how energy coupling is used to drive endergonic reactions**

## **ENERGY TRANSFER**

**Explain how energy molecules are used in DNA replication**

## **ENERGY TRANSFER**

**Explain the need for enzymes in living organisms**

## **ENERGY TRANSFER**

**Explain how enzymes function**

## **ENERGY TRANSFER**

**Explain the induced fit model of enzyme function**

## **ENERGY TRANSFER**

**Draw a graph showing the effect of enzymes on an endergonic reaction**

## **ENERGY TRANSFER**

**Draw a graph showing the effect of enzymes on an exergonic reaction**

## **ENERGY TRANSFER**

**Explain how pH affects enzyme function**

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**Explain how temperature affects enzyme function**

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**Explain how salinity affects enzyme function**

**ENERGY TRANSFER**

**Give an example of a common synthesis enzyme**

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**Give an example of a common digestive enzyme**

**ENERGY TRANSFER**

**Explain primary productivity**

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**Explain gross primary productivity**

**ENERGY TRANSFER**

**Explain net primary productivity**

**ENERGY TRANSFER**

**Explain how dissolved oxygen relates to primary productivity**

## **ENERGY TRANSFER**

**Diagram and describe a marine food chain**

## **ENERGY TRANSFER**

**Diagram and describe a terrestrial food chain**

## **ENERGY TRANSFER**

**Explain alcohol fermentation**

## **ENERGY TRANSFER**

**Explain lactic acid fermentation**

## **ENERGY TRANSFER**

**Describe how enzyme function can be measured in an experiment**

## **ENERGY TRANSFER**

**Describe how rate of respiration can be measured in an experiment**

## **ENERGY TRANSFER**

**Describe how rate of photosynthesis can be measured in an experiment**

## **ENERGY TRANSFER**

**List and describe the function of all the enzymes of the digestive system**

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**Describe the structure of ATP**

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