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| **Cornell Notes** | **Topic/Objective: Organisms Energy Transfers** | | **Name:** |
|  | | **Class/Period:** |
|  | | **Date:** |
| **Essential Question: How does energy go from chemical to heat during digestion?** | | | |
| **Questions:** | | **Notes:** | |
| **What is energy needed** | | * Physical Activities; such as: growth, \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, eliminate | |
| **for?** | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_ infections, stay warm, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | | gases, etc. | |
|  | |  | |
| **What do we eat?** | | * Energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – The Law of Conservation of Energy: energy is | |
|  | | created nor destroyed, it just changes forms. | |
| **Potential and Kinetic Energy** | | * The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy that is stored in the \_\_\_\_\_\_\_\_\_\_\_\_ we eat | |
|  | | (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy – energy waiting to be used) is transferred to our | |
|  | | bodies and transformed into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy (energy in motion). | |
|  | | **ENERGY TRANSFORMATION PROVIDES THE ENERGY FOR EVERYTHING WE DO!** | |
| **Digestion** | | * breaking down large food particles to small individual biochemical molecules | |
|  | | * The basic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of transferring \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy | |
|  | | from our foods to our \_\_\_\_\_\_\_\_\_\_\_\_\_. | |
|  | | * In digestion chemical energy is also transformed to mechanical energy as an | |
|  | | organism uses its muscles to move. | |
| **How much energy is in** | | * Different \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of foods contain different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of energy. | |
| **food?** | |  | |
|  | |  | |
| **What is a calorie?** | | * The \_\_\_\_\_\_\_\_\_\_ used to measure an amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy stored | |
|  | | in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | | **DEFINITION**: the amount of heat (energy) required to raise the temperature of 1 gram (g) of | |
|  | | water 1 degree Celsius (C) | |
|  | |  | |
| **Calculating calories:** | | * (# mL of water X ∆(change) in temperature) / 1000 = Calories | |
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| **What is a calorimetry?** | | * Foods that contain many calories release large amounts of energy, and those with | |
|  | | fewer calories release less energy when burned. This method of determining the | |
|  | | amount of chemical energy stored in food is called calorimetry | |
|  | | **DEFINITION:** device used to measure the amount of energy in food. | |
| **Essential Question: How does energy go from chemical to heat during digestion?** | | | |
| **Questions:** | | **Notes:** | |
| **Energy Transformation:** | | Radiant energy 🡪 Chemical energy 🡪 Mechanical energy / Heat energy | |
|  | | SUN FOOD MOVEMENT | |
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| **Summary:** | | | |
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