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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
 |
|  |  |
| **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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