**Unit D: Energy Study Guide**

1. **Magnesium and zinc** will produce the most energy when used together in a chemical battery.
2. Putting reflecting films on your car windows helps keep the interior cool by **reflecting sunlight.**
3. On a summer day, asphalt is hot on your bare feet because the asphalt has **absorbed** heat from the sun.
4. An ice cube will not melt quickly, **by putting it in an insulating container**,
5. The energy transformation from a car’s engine after it has been driven is **motion(kinetic) -> thermal energy.**
6. **Wind, solar, hydro, and tidal** are all renewable energy sources.
7. **Calories** are the unit used for measuring energy.
8. When you open the door to the refrigerator for a minute, **the thermal energy in the air outside the refrigerator is transferred to the inside of the refrigerator.**
9. When a radio is plugged in and turned on, an **electrical to sound energy transformation** takes place.
10. If a gas powered car is 20% efficient, this means that the car uses **20% of the energy stored in the gas for motion.**
11. The Law of Conservation of Energy states that **energy can not be created or destroyed but it can change from one type to another.**
12. If objects with different masses are held at the same height, **high mass and high height** will have the greatest gravitational potential energy.

**PINK STUDY GUIDE**

* What is gravitational potential energy?
* What 2 factors affect GPE?
  + Mass
  + Height
* What is the Law of Conservation of Energy?
  + Energy cannot be created or destroyed but it can change from one type to another
* What energy transformation takes place when a TV is plugged into an outlet?
  + Electrical potential to light, sound, and heat energy
* When a refrigerator door is open, what’s happening to the energy?
  + Thermal energy in the air outside the refrigerator is transferred to the inside of the refrigerator
* What are some renewable energy sources?
  + Wind, solar, hydro, tidal
* What type of energy is “energy in motion?”
* How does putting reflective film on windows help?
  + Helps keep the interior of a car cool by reflecting light
* What is energy efficiency?
  + How much energy is used from the gas for motion
* What are 2 types of Potential energy?
  + 1.
  + 2.
* What are 2 types of Kinetic energy?
  + 1.
  + 2.
* What is the difference between renewable and NON-renewable resources?
* What is a Parallel circuit?
  + Like holiday lights, energy has many paths, one bulb goes out - others stay lit
* What is a Series circuit?
  + Energy has one path, one bulb goes out-all bulbs go out
* What is the difference between an incandescent light bulb and a fluorescent light bulb?
  + Incandescent uses more energy, produces more heat, does not last as long
* How can a house reduce the amount of energy it uses?
* What energy transformation takes place on a roller coaster ride?
* What is Potential energy?
* What unit is energy measured in?
  + Calories
* What is the difference between transferred and transformed?

**Unit D: Energy Vocabulary**

* Energy -
* Potential energy -
* Gravitational potential energy -
* Kinetic energy -
* Transferred -
* Transformed -
* Heat -
* Temperature -
* Law of Conservation of Energy -
* Efficiency -
* Conduction -
* Conductors -
* Calorimeter -
* Calorie -
* Renewable resource -
* Non-renewable resource -
* Electricity generation -
* Power plant -
* Turbine -
* Generator -
* Electrolyte -
* Circuit -
* Series circuit -
* Parallel circuit -
* Photovoltaic -
* Absorbed -
* Transmitted -
* Reflected -