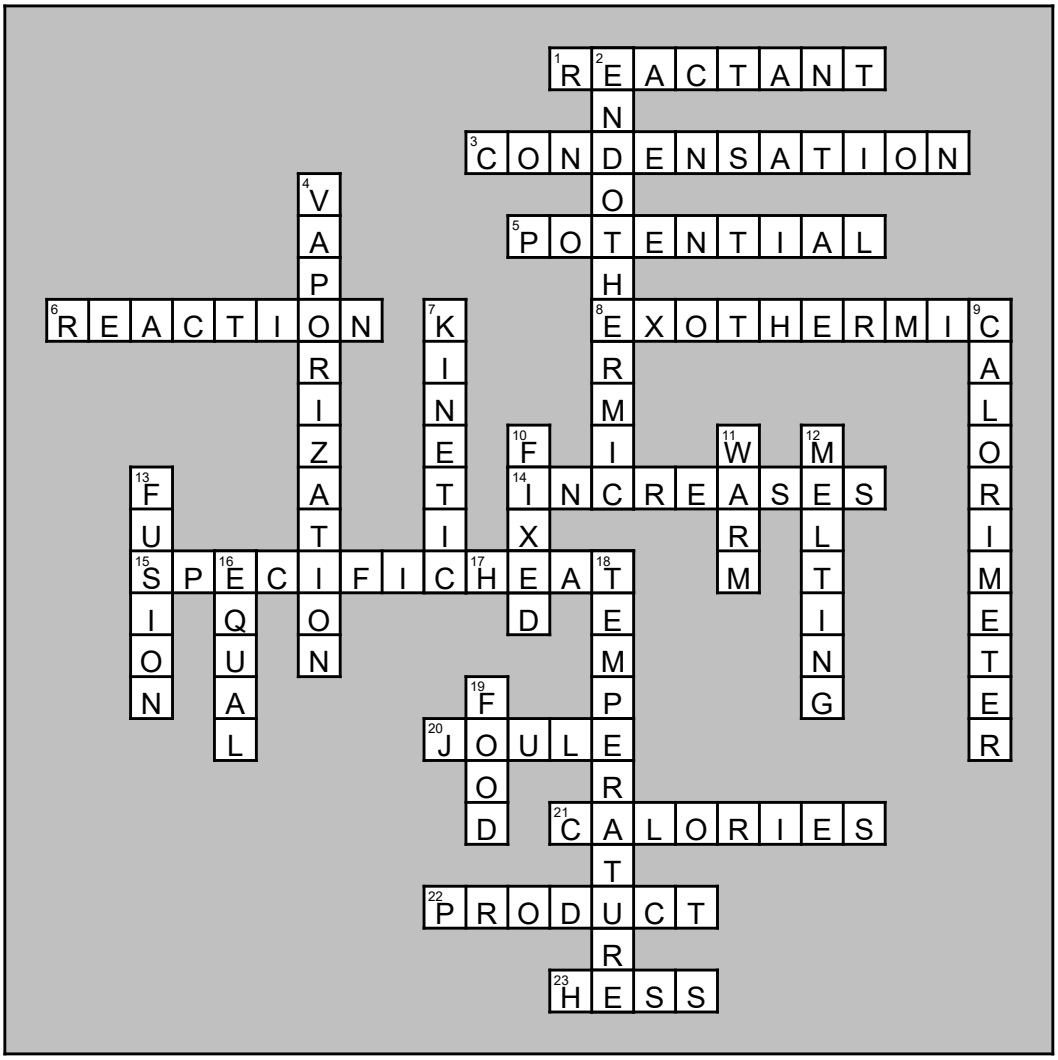
Name _____

Crossword



Across

1. In an endthermic reaction (or change), heat of reaction is a ___ in the equation. It has a positive sign.
3. How does one know that Potential Energy is involved when a gas is changing to a liquid without a temperature change?
5. Energy involved at phase changes. Fuel, food, chemical bonds.
6. Heat (delta H) based on the enthalpy difference between the products and reactants.
8. Heat is released to the surroundings from the system.
14. When the temperature of a liquid increases, what happens to the kinetic energy (KE) of the liquid?
15. "c" in the q = mCdeltaT calculation. The ability of a substance to "hold" heat. Water's is very high for a liquid.
17. Includes mass with temperature.
20. Unit of energy = 0.239 cal
21. Unit of energy = 4.18 joules.
22. In an exothermic reaction (or change), heat of reaction is a ___ in the equation. It has a negative sign.
23. This law shows that many reactions have more than one pathway (intermediates).

Down

2. Heat is added to the system from its surroundings.
4. Heat involved at the boiling and condensation points. A form of PE. ~540 cal/g for water.
7. Energy of motion ... related to temperature.
9. Device used to measure the specific heat of a substance.
10. Points in which the temperature remains constant: melting/freezing and boiling/condensation are examples.
11. Heat flows from ___ to cold, representing kinetic energy (KE).
12. How does one know that Potential Energy is involved when a solid is changing to a liquid without a temperature change?
13. Heat involved at the melting and freezing points. A form of PE. ~80 cal/g for water.
16. In a closed system, when one object loses heat, another object gains heat. The amount of loss is ___ to the amount of gain. Law of conservation of energy.
18. Average kinetic energy (KE) of molecules in a system.
19. Form of calorie = 1 kilocalorie.