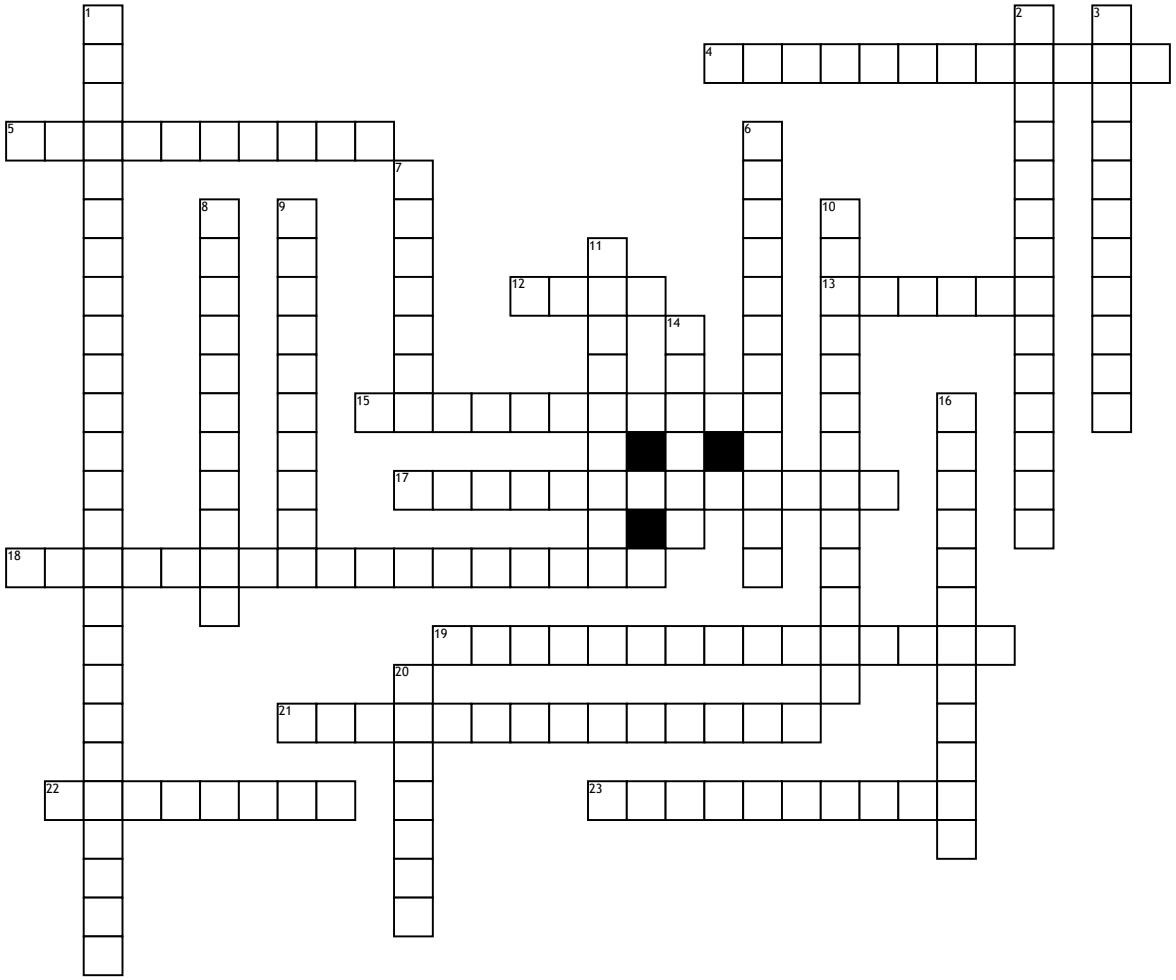
Name: _____ Date: _____ Period: _____

Thermodynamics



Across

4. the quantity of energy needed to raise the temperature of 1 kg of a substance by 1°C at constant pressure
5. energy flows out of a system
12. a flow of energy due to a temperature difference
13. the ability to do work or produce heat
15. a measure of the random motions of the components of a substance
17. energy due to the motion of the object
18. kinetic energy transferred to a surface as heat
19. energy due to position or composition
21. sum of the kinetic and potential energies of all "particles" in the system
22. to measure how much energy is produced or absorbed by a given reaction
23. heat that is transferred by movement of a fluid

Down

1. energy can be converted from one form to another but can be neither created nor destroyed
2. the study of heat energy
3. used to determine the heat associated with a chemical reaction
6. the lowest possible temperature on the Kelvin scale where all molecules would stop
7. amount of energy (heat) required to raise the temperature of one gram of water by one degree Celsius
8. energy flows into a system
9. heat transferred method between objects in contact as a result of temperature difference
10. 1 atm pressure, water freezes at 0 degrees Celsius
11. a transfer of heat energy through space by means of electromagnetic waves
14. 4.184 _____ = 1 calorie
16. 1 atm pressure, liquid water always changes to gaseous water at 100 degrees Celsius
20. a unit of measurement that was once called Centigrade because there are 100 degrees between the freezing and boiling points of water in this scale