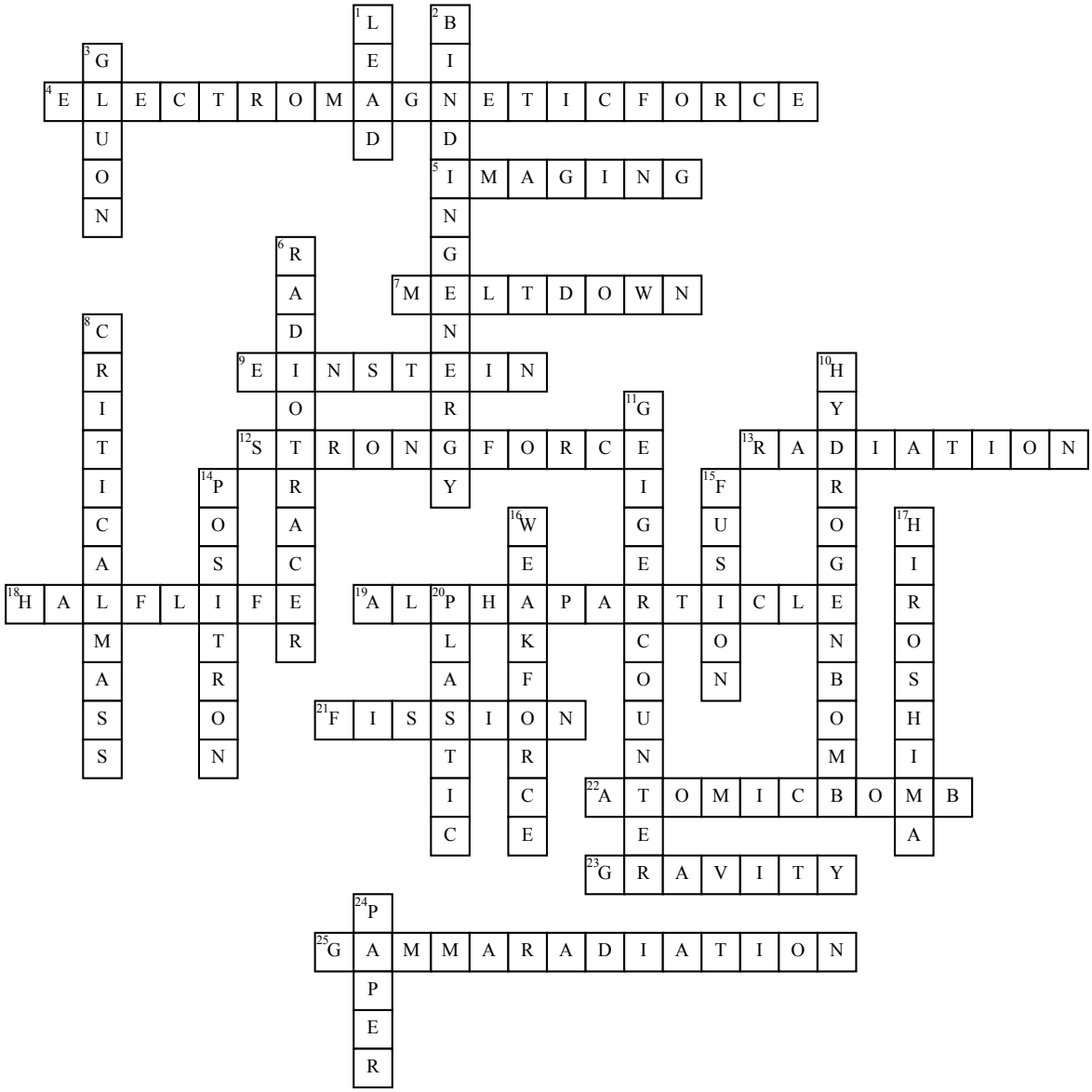
Name: _____ Date: _____ Period: _____

Nuclear Physics



Across

4. The force that causes attraction between protons and electrons and repulsion between charges of the same kind
5. Radioactive isotopes can be used for medical _____.
7. Happens when a nuclear power plant explodes
9. Last name of the man who created the equation E=mc^2
12. Force that holds the nucleus of an atom together
13. Particles emitted from a radioactive source, there are several types of these
18. The amount of time for half of a substance to undergo radioactive decay
19. Helium nuclei that have been emitted from a radioactive source
21. Splitting of an atom of one element into an element of another atom
22. Bomb made using the fission of uranium atoms
23. Force that acts on large bodies such as planets and stars
25. The most penetrating radiation, created the fictional "Hulk"

Down

1. Can block gamma radiation
2. The amount of energy needed to bind an element together
3. Very small particle that carries strong force
6. A radio-isotope that emits non-ionizing radiation and is used to signal the presence of an element or specific substance
8. Mass needed to make a fission or fusion reaction work
10. Bomb made using the fusion of hydrogen into helium
11. Uses a phosphor detector to detect radiation and emits a bright light
14. Particle with the mass of an electron but has a positive charge
15. Two Nuclei combine to produce a nuclei with more mass
16. Nuclear force that leads to beta decay
17. Name of a city in which an atomic bomb was dropped on in WWII
20. Can block beta particles
24. Can block alpha particles