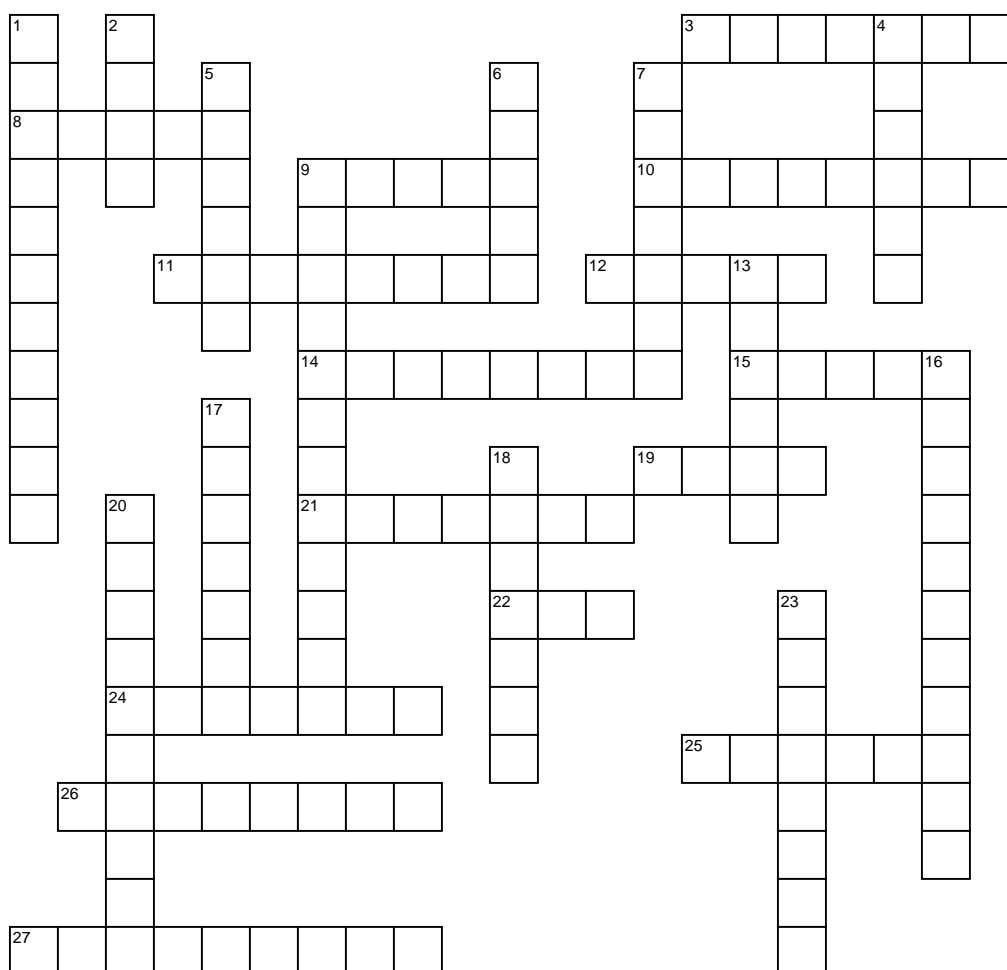


NAME: _____ DATE: _____ PERIOD: _____

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ACROSS

- 3 A proton turns into that during electron capture
- 8 Sometimes this unit of (radioactive) activity is used
- 9 These particles have 2 protons and 2 neutrons
- 10 He discovered the neutron in the year 1932
- 11 A nucleus containing one proton and one neutron
- 12 Carbon containing this number of neutrons in the nucleus is utilized for carbon dating
- 14 Beta particles have this type of charge
- 15 Gamma particles travel at the same speed as _____
- 19 The positron is also called the beta _____ particle
- 21 A nucleus containing one proton and two neutrons
- 22 After this number of half-lives 1,600 particles decrease to 25
- 24 The isotope iodine-131 is utilized in medicine to study this important human gland
- 25 A neutron changes into that during beta decay
- 26 Number of decays for U-238 to change into Pb-206
- 27 It is the SI unit of (radioactive) activity

DOWN

- 1 Gamma rays are produced by nuclear _____
- 2 _____ function is another name for binding energy
- 4 One gram of that element goes through 37 billion disintegrations per second
- 5 The _____ counter can detect charged particles
- 6 The isotope carbon-14 is used in medicine to treat tumors in that organ
- 7 Name given to any combination of protons and neutrons
- 9 The decay of a neutron produces a proton, an electron, and a(n) _____
- 13 An alpha particle is the nucleus of that element
- 16 Elements beyond atomic number 92 are called synthetic or _____
- 17 Many alchemists dreamed about turning this element into gold
- 18 Nuclear process in today's nuclear reactors
- 20 X-rays are produced by this type of excitations
- 23 A "dose" is the energy deposited per unit mass by _____ radiation

WORD BANK: Absorbed, alpha, antineutrino, becquerel, brain, chadwick, curie, deuteron, eight, electronic, excitations, fission, fourteen, geiger, helium, light, mercury, negative, neutron, nuclide, plus, proton, radium, six, thyroid, transuranic, tritium, work.

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Solution:

1 E 2 W 3 N E U T R O N 4 N E U T R O N
X O 5 G 6 B 7 N A
8 C U R I E 9 A L P H A 10 C H A D W I C K
I K I N I L U
T G N I L U
A 11 D E U T E R O N 12 E I G H T 13 L I G H T 14 N E G A T I V E 15 L I G H T 16 R A N S U R
T R I D E
I N E I
O M E 17 M E R C U R Y 18 F U S I O N 19 P L U S 20 E L E C T R O N S
S 21 T R I T I U M 22 S I X 23 A B S O R B
L C R S I O N
E U R I O N
24 T H Y R O I D
R
26 F O U R T E E N
N
I
27 B E C Q U E R E L