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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_ | Period: \_\_\_\_\_\_\_ |

atoms

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|  |  |  |  |  |  |  |  |  |  | 1  P |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | O |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 2  E | L | E | C | T | R | O | N |  | 3  P |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | O |  |  |  |  | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 4  A | T | O | M | I | C | N | U | M | B | E | R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | T |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 5  E |  |  | I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | L |  |  | C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 6  E | N | E | R | G | Y | L | E | V | E | L | S |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | C |  |  | E |  |  |  |  |  | 7  G |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | 8  P | R | O | T | O | N |  |  |  |  |  |  | R |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | R |  |  |  |  |  |  |  |  | O |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 9  A | T | O | M |  |  |  |  |  |  |  | U |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | N |  |  |  |  |  |  |  |  | N |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 10  S |  |  |  | C |  |  |  |  |  |  |  |  | D |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | U |  | 11  V | O | L | U | M | 12  E |  |  |  |  |  | S |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 13  M |  |  | B |  |  |  | O |  |  | L |  |  |  |  |  | T |  |  |  | 14  N |  |  |  |  |
|  |  |  |  |  | A |  | 15  M | A | S | S | N | U | M | B | E | R |  |  | 16  N |  | A |  |  |  | E |  |  |  |  |
|  |  |  |  |  | S |  |  | T |  |  |  | D |  |  | C |  |  |  | U |  | T |  |  |  | U |  |  |  |  |
|  |  |  |  | 17  I | S | O | T | O | P | E | S |  |  | 18  A | T | O | M | I | C | W | E | I | G | H | T |  |  |  |  |
|  |  |  |  |  |  |  |  | M |  |  |  | 19  I |  |  | R |  |  |  | L |  |  |  |  |  | R |  |  |  |  |
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|  |  |  |  |  | 20  E | L | E | C | T | R | O | N | C | O | N | F | I | G | U | R | A | T | I | O | N |  |  |  |  |
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| **Across**  **2.** an elementary particle with negative charge  **4.** This number identifies the element and is equal to the number of protons found in the nucleus.  **6.**  The possible energies that an electron in an atom can have.  **8.** a stable particle with positive charge  **9.** the smallest component of an element  **11.** the property of something that is great in magnitude  **15.** The sum of the protons and neutrons in the nucleus of an atom.  **17.** Versions of the same element with different numbers of neutrons.  **18.**  The weighted average mass of all of an element's isotopes' mass numbers (usually a decimal).  **20.** The arrangement of electrons around the nucleus of an atom. | **Down**  **1.** Positively charged subatomic particle found in the nucleus.  **3.**  (nontechnical usage) a tiny piece of anything  **5.**  A visual model showing the most likely locations for the electrons in an atom.  **7.**  When all of the electrons in an atom have their lowest possible energies.  **10.** of or relating to constituents of the atom or forces within the atom  **12.** Negatively charged subatomic particle found outside the nucleus.  **13.** the property of a body that causes it to have weight  **14.**  Neutral subatomic particle found in the nucleus.  **16.**  Dense, positively charged mass at the center of an atom.  **19.** An atom with a charge (unequal number of protons and electrons) |