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

atoms

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|  |  |  |  |  |  |  |  |  |  | 1P |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  | 2E |  L |  E |  C |  T |  R |  O |  N |  | 3P |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  O |  |  |  |  |  A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 4A |  T |  O |  M |  I |  C |  N |  U |  M |  B |  E |  R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  T |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 5E |  |  |  I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  | 6E |  N |  E |  R |  G |  Y |  L |  E |  V |  E |  L |  S |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  | 8P |  R |  O |  T |  O |  N |  |  |  |  |  |  |  R |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  | 9A |  T |  O |  M |  |  |  |  |  |  |  |  U |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  | 10S |  |  |  |  C |  |  |  |  |  |  |  |  |  D |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  U |  | 11V |  O |  L |  U |  M | 12E |  |  |  |  |  |  S |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 13M |  |  |  B |  |  |  |  O |  |  |  L |  |  |  |  |  |  T |  |  |  | 14N |  |  |  |  |
|  |  |  |  |  |  A |  | 15M |  A |  S |  S |  N |  U |  M |  B |  E |  R |  |  | 16N |  |  A |  |  |  |  E |  |  |  |  |
|  |  |  |  |  |  S |  |  |  T |  |  |  |  D |  |  |  C |  |  |  |  U |  |  T |  |  |  |  U |  |  |  |  |
|  |  |  |  | 17I |  S |  O |  T |  O |  P |  E |  S |  |  | 18A |  T |  O |  M |  I |  C |  W |  E |  I |  G |  H |  T |  |  |  |  |
|  |  |  |  |  |  |  |  |  M |  |  |  | 19I |  |  |  R |  |  |  |  L |  |  |  |  |  |  R |  |  |  |  |
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|  |  |  |  |  | 20E |  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) |