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Tags: Matter, Elements, Atoms, Chemistry, Science, Education, Middle School.

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12. What is the difference between an element and a compound?

Answer:

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13. What are valence electrons?

Answer:

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14. How do chemical reactions occur?

Answer:

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15. What are some practical applications of understanding matter, elements, and atoms?

Answer:

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14. The periodic table organizes elements by their size.

- a. True
- b. False

15. Compounds are made up of only one type of atom.

- a. True
- b. False

16. Match the following elements with their respective chemical symbols:

- | | |
|-------------|--------|
| a) Hydrogen | i) Ca |
| b) Carbon | ii) O |
| c) Oxygen | iii) H |
| d) Calcium | iv) C |

17. Match the following states of matter with their descriptions:

- | | |
|-----------|-------------------------------------|
| a) Solid | i) Takes the shape of its container |
| b) Liquid | ii) No fixed shape or volume |
| c) Gas | iii) Fixed shape and volume |

18. Match the following subatomic particles with their descriptions:

- | | |
|-------------|-------------------------|
| a) Proton | i) Positively charged |
| b) Neutron | ii) No charge |
| c) Electron | iii) Negatively charged |

19. Match the following properties with their respective locations on the periodic table:

- | | |
|---------------|--------------------------|
| a) Metals | i) Upper right corner |
| b) Nonmetals | ii) Lower left corner |
| c) Metalloids | iii) Middle of the table |

20. Match the following elements with their respective common uses:

- | | |
|-------------|--|
| a) Sodium | i) Strong and lightweight metal used in construction |
| b) Chlorine | ii) Used in bleach and disinfectants |
| c) Carbon | iii) Used in pencils and diamonds |
| d) Silicon | iv) Used in computer chips and solar panels |