Unit E

MATTER

NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

STUDY GUIDE DUE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

UNIT TEST \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FOCUS STATEMENT

(This focus Statement will be a lecture. Use the space below for notes)

Matter makes up everything around us. It comes in different sizes and shapes.

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mass \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



b.

weight \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



vol ume \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



mat ter \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



den sit y \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a.

b.

buoy an cy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. How can you describe Matter?
4. What would make up the mass of a backpack?
5. Why would the weight of a basketball in one hand make it harder to hold than a marble in the other?
6. Why would a marble placed in a graduated cylinder make water volume rise?
7. How can you change the density of a box?
8. Which would have more density, a brick or a balloon? Why?
9. Which is more dense, a solid, liquid or gas? Why?

el e ments \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



met als \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



at om \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



nu cle us \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



pro ton \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



neu tron \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. piece with no electric charge

e lec trons \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

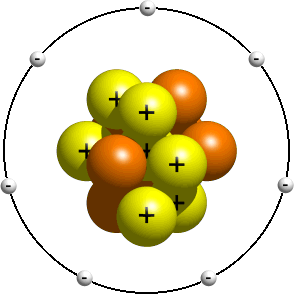


mol e cules \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a.

b.

1. Why was Aristotle wrong in his beliefs?
2. How many elements do scientists know of today?
3. If you keep cutting a piece of aluminum in half, will each piece still have the same atoms?

11. 

Label the following parts of an atom:

electron

neutron

proton

12. What forms when one or more atoms are joined together? How many kinds of molecules can be made?

1. Because elements repeat in cycles, a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_ was created. Who created it?

14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are the most common elements in space. What are the seven most common elements on earth?

15. How small is an atom?

mal le a bil I ty \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



duc til I ty \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



cur ro sion \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a.

b.

sem i con duct or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



16. What are the three groups that scientists divide the elements into?

17. Fill in the table for metals.

|  |  |
| --- | --- |
| PROPERTIES | USES |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

18. What are the properties of nonmetals and metalloids?

|  |  |
| --- | --- |
| NONMETALS | METALLOIDS |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

19. We use nonmetals and metalloids in different ways. What is the way you use them most, based on the examples in the book?

CHAPTER 10 PAGE 517

phys I cal change \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



sub li ma tion \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



melt ing point \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



boil ing point \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



freez ing point \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



ther mal ex pan sion \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



ther mal con trac tion \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. In what state of matter do particles only vibrate?

In what state of matter do particles vibrate as they move past one another?

In what state of matter do particles move quickly and far from one another?

1. Sublimation is the change of state directly from

\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. What makes particles grow closer together?
2. How does ice make your drinks cold?

*.*

5. What is the melting point of water? What is the boiling point of

water? What is the freezing point of water?

1. What would happen if you cooled a balloon with air in it?
2. Of gases, solids and liquids, which expands and contracts more?

­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ⭢ ­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ⭢ ­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MOST LEAST

1. What is something that uses expansion and contraction to operate?

mix ture \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



col loid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



so lu tion \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



al loy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



sol u bil I ty \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



dis til la tion \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. What is an example of a mixture?
4. What kind of heterogeneous mixture looks smooth or creamy to your eye, but you can see all the different parts clearly under a microscoope?
5. What is an example of a colloid?
6. Which is more soluble, sugar or salt?
7. The universal solvent is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ because it can dissolve many things.
8. What do you need to both make a mixture and take a mixture apart?
9. What can you both eat and clean up with?

com pound \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



chem i cal change \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



re ac tants \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



prod ucts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



pre cip I tate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. How are the combined elements that make up salt different from the salt compound?
4. How can you use prefixes and suffixes to help you understand the meaning of compounds?
5. What can you mix with vinegar to make a chemical change?
6. There are two sides to a chemical equation. Label the diagram below with the words that scientists use.

H2 + O = Water

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Which sign of a chemical change would be the easiest to see? Which one have you seen the most?
2. How are compounds and chemical reactions related?

ac id \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



i ons \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



base \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



a cid I ty \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



al ka lin I ty \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



neu tral I za tion \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



e lec tro lyte \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. What are some foods that you have eaten that have acid?
3. Why would you probably not eat a base?
4. Why might red cabbage juice be a different color in vinegar than in baking soda?
5. Salt is the mixture of an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and a

\_\_\_\_\_\_\_\_\_\_\_\_\_\_.