

**Complete this worksheet as you watch the video.**

1. A chemical \_\_\_\_\_ is the process of one or more substances converting to form new substances with different properties.
2. In chemical reactions, there are \_\_\_\_\_ classes of substances – those substances which are present before the chemical change and those substances which are formed by the change. \_\_\_\_\_ are substances that enter a chemical reaction. \_\_\_\_\_ are substances that are produced by a chemical reaction.
3. A chemical \_\_\_\_\_ is an expression using chemical symbols to represent a chemical reaction.
4. In chemical reactions, the overall \_\_\_\_\_ of the substances reacting does not increase or decrease. The changes that occur in a reaction involve the rearrangement of atoms, not the destruction or production of matter. This is expressed in the Law of Conservation of Mass, which states that mass cannot be \_\_\_\_\_ or \_\_\_\_\_ in a chemical reaction.
5. A \_\_\_\_\_ is a number written in front of chemical elements or compounds indicating the number of atoms or molecules of a substance present in the reaction.
6. A \_\_\_\_\_ reaction occurs when two or more simple substances combine to form a more complex substance.
7. In a \_\_\_\_\_ reaction, a substance breaks down or decomposes into two or more simpler substances.
8. In a \_\_\_\_\_ - \_\_\_\_\_ reaction, atoms of one element replace atoms of another element in a compound.
9. A \_\_\_\_\_ - \_\_\_\_\_ reaction involves atoms in two different compounds trading places with each other.
10. Chemical reactions involve \_\_\_\_\_ being given off or being absorbed. An \_\_\_\_\_ reaction releases energy, such as the burning of paper. An \_\_\_\_\_ reaction absorbs energy which results in an overall lowering of temperature.
11. The reaction rate is the \_\_\_\_\_ with which reactants turn into products.
12. An increase in temperature \_\_\_\_\_ the reaction rate.
13. \_\_\_\_\_ refers to the amount of the material that comes in contact with other reactants.
14. \_\_\_\_\_ is the amount of a substance in a given unit of volume.
15. A \_\_\_\_\_ is a substance that increases the reaction rate but is not changed by the reaction. Most animals contain catalysts called \_\_\_\_\_ that accelerate important chemical reactions such as the digestion of food.

**Video quiz on back ...**

**Video Quiz** – Write in the answers as you watch the video quiz.

1. A chemical \_\_\_\_\_ is the process of one or more substances converting to form new substances.
2. The substances that enter into a chemical reaction are called \_\_\_\_\_.
3. \_\_\_\_\_ are substances that are produced by a chemical reaction.
4. In a chemical reaction \_\_\_\_\_ cannot be gained or lost.
5. In a chemical equation the number of atoms of reactants and products must \_\_\_\_\_ .
6. Iron combining with oxygen to form a more complex substance is an example of a \_\_\_\_\_ reaction.
7. In a decomposition reaction a complex substance is broken down into \_\_\_\_\_ substances.
8. In a single-replacement reaction atoms of one element \_\_\_\_\_ atoms of another element in a compound.
9. An \_\_\_\_\_ reaction releases energy.
10. The reaction \_\_\_\_\_ is the speed with which reactants turn into products.