

NJCCCS Standards:

STANDARD 5.6 (CHEMISTRY) ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE STRUCTURE AND BEHAVIOR OF MATTER.

By the end of **Grade 8**, students will:

<p style="text-align: center;">A</p> <p style="text-align: center;">Structure and Properties of Matter</p>	<ol style="list-style-type: none">1. Know that all matter is composed of atoms that may join together to form molecules.2. Recognize that the phase of matter is determined by the arrangement and motion of atoms and molecules and that the motion of these particles is related to the energy of the system.3. Know that there are groups of elements that have similar properties, including highly reactive metals, less reactive metals, highly reactive non-metals, and some almost completely non-reactive gases.4. Recognize that a mixture often can be separated into the original substances using one or more of their characteristic physical properties.
<p style="text-align: center;">B</p> <p style="text-align: center;">Chemical Reactions</p>	<ol style="list-style-type: none">1. Show how substances can chemically react with each other to form new substances having properties different from those of the original substances.2. Show that in most chemical reactions energy is transferred into or out of a system.3. Demonstrate that regardless how substances within a simple closed system interact, the total mass of the system remains the same.4. Illustrate how atoms are rearranged when substances react, but that the total number of atoms and the total mass of the products remain the same as the original substances.