



Nutrition and Chemical Changes in the Body

Physical and Chemical Changes

This lesson is recommended for grades 3 - 6. Time frame is 40-45 minutes.

Goal: To investigate chemical and physical changes which occur in the human digestive system.

Academic Standards: Physical Science, Life Science, and Scientific Inquiry (based on the Ohio model)

Indicators:

1. Identify characteristics of a simple physical change (e.g., heating or cooling can change water from one state to another and the change is reversible). Gr. 4.
2. Identify characteristics of a simple chemical change. When a new material is made by combining two or more materials, it has chemical properties that are different from the original materials (e.g., burning paper, vinegar and baking soda). Gr. 4.
3. Describe objects by the properties of the materials from which they are made and that these properties can be used to separate or sort a group of objects (e.g., paper, glass, plastic and metal). Gr. 4.
4. Explain that matter has different states (e.g., solid, liquid and gas) and that each state has distinct physical properties. Gr. 4.
2. Describe that in a physical change new substances are formed with different properties than the original substance (e.g., rusting, burning). Gr. 6.
3. Describe that in a physical change (e.g., state, shape and size) the chemical properties of a substance remain unchanged. Gr. 6.
4. Describe that chemical and physical changes occur all around us (e.g., in the human body, cooking and industry). Gr. 6.
3. Develop, design and conduct safe, simple investigations or experiments to answer questions. Gr. 4.
2. Explain that multicellular organisms have a variety of specialized cells, tissues, organs and organ systems that perform specialized functions. Gr. 6.

3. Use evidence and observations to explain and communicate the results of investigations. Gr. 5.

Objectives:

- Students will practice lab safety.
- Students will identify physical and chemical properties of substances.
- Students will use evidence given to determine when a physical change occurs.
- Students will use evidence given to determine when a chemical change occurs.

Note: It is the responsibility of the district/school to determine which students participate in our programs. This includes, but is not limited to, the district/school identifying students with allergies, those with potential to allergies, and to identify students with special needs who may require personalized accommodations. Prior notification is necessary to develop proper consideration.