

NORTH CAROLINA ESSENTIAL STANDARDS

Occupational Course of Study Applied Science

Note: All students following the Occupational Course of Study are also required to take [English I, II, III, and IV](#), [Math I](#), [American History I](#) and [American History II](#), and [Health](#) and [Physical Education](#).

Grade: High School

Course: Forces and Motion

- **OA1.1** - Understand force and motion.
 - **OA1.1.1** - Compare weight and mass.
 - **OA1.1.2** - Classify types of force (gravity, friction, magnetism).
 - **OA1.1.3** - Describe the effects of force (gravity, friction, magnetism) on an object's weight and motion.

Course: Energy

- **OA2.1** - Understand energy and its conservation.
 - **OA2.1.1** - Identify forms of energy (solar, nuclear, wind, chemical).
 - **OA2.1.2** - Explain the effects of various forms of energy on the environment.
 - **OA2.1.3** - Identify ways that consumers can conserve energy.

Course: Electricity and Magnetism

- **OA3.1** - Understand electricity and magnetism.
 - **OA3.1.1** - Interpret a compass.
 - **OA3.1.2** - Explain how magnetic poles behave.
 - **OA3.1.3** - Understand safety procedures related to static electricity.
 - **OA3.1.4** - Understand safety procedures related to household electricity.

Course: Matter

- **OA4.1** - Understand properties of matter (color, shape, volume, density, texture).
 - **OA4.1.1** - Distinguish between the three states of matter (solid, liquid, gas).
 - **OA4.1.2** - Classify common materials according to their properties (color, shape, volume, density, texture).

Course: Chemicals

- **OA5.1** - Identify the uses and dangers of common chemicals.
 - **OA5.1.1** - Identify uses of common chemicals.
 - **OA5.1.2** - Identify dangers related to common household chemicals (chlorine bleach, antifreeze, chemicals for lawn and garden, insecticides, rodent poison, de-icing salt).

Course: The Environment



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- **OA6.1** - Understand how humans can have positive and negative effects on the environment.
 - **OA6.1.1** - Explain how humans can have a positive impact on natural resources.
 - **OA6.1.2** - Explain the effects of pollution on the earth, air and waterways and what can be done at the individual, family and community level to reduce pollution.

Course: Body Systems

- **OA7.1** - Understand the human body's basic needs and control systems.
 - **OA7.1.1** - Explain the primary functions of the major systems of the human body and the major organs within these systems.
 - **OA7.1.2** - Identify normal or desirable ranges for common health indicators (temperature, blood pressure, weight, cholesterol and blood glucose levels).
 - **OA7.1.3** - Classify health problems and symptoms in terms of whether they require or do not require medical attention.
 - **OA7.1.4** - Identify appropriate sources of medical care for identified problems/symptoms.
 - **OA7.1.5** - Understand basic first aid techniques.

