

***Eighth Grade Science Unit Objectives
Andover Middle School
Mr. Garrison***

You will be able to...



1. Weather

- a. Identify characteristics of the components of Earth's atmosphere.
- b. Explain how our sun's energy affects the atmosphere.
- c. Demonstrate knowledge of the water cycle.
- d. Interpret the role of water vapor in the atmosphere and how it affects weather.
- e. Describe and compare the weather associated with the different kinds of fronts.
- f. Discuss the differences between weather and climate.
- g. Describe the different types of climates and how they have changed over time.

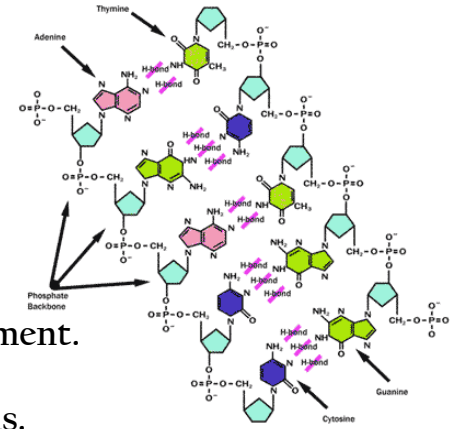
2. Astronomy

- a. Discuss the development of astronomy into a modern science.
- b. Identify constellations and describe how they are used.
- c. Differentiate between the various types of telescopes.
- d. Compare and contrast the terrestrial inner planets with the gaseous outer planets and relate other movement in our solar system.
- e. Describe the make up of the sun and other objects within our solar system.
- f. List and contrast the different types of galaxies and examine characteristics of the Milky Way.
- g. Determine what methods are used to determine composition and distance of the objects that compose our Universe.
- h. Discuss the history of space; its beginnings, where it is presently, growth of its technology, and the future of space exploration.



3. Genetics and Heredity

- Explain and draw pedigrees.
- Describe how dominant and recessive genes explain pedigrees and the results of Mendel's pea plant experiment.
- Explain the usefulness of genetic counseling.
- Differentiate between the process of meiosis and mitosis.
- Identify the parts that make up our DNA strand.



4. Electricity and Magnetism

- Demonstrate the law of electric charges.
- Distinguish electrical conductors from insulators.
- Discuss how Ohm's Law relates current, voltage, and resistance.
- Identify the essential parts of a circuit by comparing series and parallel circuits.
- Describe the relationship between an electric current and a magnetic field.
- Demonstrate the ability of a changing magnetic field to produce an electric current.
- Discuss how integrated circuits have influenced electronic technology.

