

# Science Curriculum - Grade 9

## GRADE 9

### EARTH/SPACE SCIENCE

#### Essential Skills:

- Identify and detail the five interacting spheres of influence that support life on earth (5 spheres: exosphere, atmosphere, geosphere or lithosphere, hydrosphere and biosphere)
- Identify and describe responsible use of finite resources
- Describe with supporting details material origins
- Analyze various rock samples and obtain evidence of weathering and erosion
- Construct and detail models demonstrating the effects of water, ice, wind, and waves on earth's land surfaces (e.g., stream tables and wave tanks)
- Identify and describe the basic facts about major features of earth's surface and natural changes in these features (e.g., plate tectonics, continental drift, vulcanism, earthquakes, glaciation, erosion and weathering.)
- Cite evidence supporting the (old) age of the earth
- Identify surface features of the earth using maps and globes
- List fresh water conservation measures
- Cite evidence that our fresh water supply is essential for life and for most industrial processes

Earth Science at CVHS is a NH Standards-Based and Inquiry-Centered Investigation of the five Spheres of Influence that make-up our physical environment. It is a required, one semester program for all Freshman and is offered at three levels

#### Important Skills:

- Identify the nine planets in our solar system by name and size relative to the earth
- Relate seasonal changes to earth's tilt and orbital positions
- Identify factors and forces that cause weather changes
- Explain origin and development of major weather systems, including: thunderstorms, tornadoes, hurricanes, blizzards
- Describe atmospheric the water cycle, including changes of phase, precipitation types, energy exchanges
- Demonstrate knowledge of use of certain weather instruments, including: thermometers, barometers, anemometers, hydrometers
- Diagram, label and describe the layers of regions of planet earth
- Diagram, label and describe the layers or regions of the atmosphere
- Explain the green House effect and relate impact of air pollution
- Cite the physical and chemical properties of water
- Explain Lunar influence on earth

#### Nice-to-Know Skills:

- Current events, causes and consequences
  - Navigation
  - Physical geography
- Unexplained phenomena, e.g., Bermuda triangle, Atlantis, Stonehenge (Mystery Hill in NH). Bib Bang theory, Black Holes)