Name_____ Period_____

# Earth and Space Science FCAT Learning Goals

**Earth in Space and Time**

- Compare and/or contrast the relative distance, relative size, and general composition of astronomical bodies in the universe.
- Describe distances between objects in space in the context of light and space travel.
- Describe that the universe contains billions of galaxies and stars.
- astronomical bodies - planets, stars, moons, asteroids, nebulae, galaxies, dwarf planets, and comets
- Distances - astronomical units (AU), light-years
- Compare planets or using data tables.
- Describe and/or classify physical properties of stars: apparent magnitude, temperature (color), size, and absolute brightness.
- Evaluate models of solar properties and/or explain solar characteristics, including rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.
- Main sequence stars and their properties.
- Compare and/or contrast the characteristics of objects in the Solar System.
- Identify and/or explain the role that gravity plays in the formation and motion of planets, stars, and solar systems.
- Compare and/or contrast various historical models (including geocentric and heliocentric) of the Solar System.
- The relationship between distance from the Sun and the length of year and/or the relationship between distance from the Sun and average surface temperature.
- General properties of planets
- Explain the effect of astronomical bodies on each other including the Sun's and/or the Moon's effects on Earth.

**Earth Structures**

- Identify and/or describe steps of the rock cycle and relate them to surface and sub-surface events.
- Describe and/or explain how Earth's surface is built up and torn down through the processes of physical and chemical weathering, erosion, and deposition.
- Identify different types of landforms commonly found on Earth.
- Describe similarities and/or differences among landforms found in Florida and those found outside of Florida.
- Identify and/or describe the impact that humans have had on Earth.
- Features of aquifers, caverns, and/or sinkholes
- Identify examples of and/or explain physical evidence that supports scientific theories that Earth has evolved over geologic time due to natural processes.
- Identify and/or describe current scientific methods for measuring the age of Earth and its parts.
- fossil records
- Folding and faulting as related to the law of superposition.
- Radioactive dating, half-life.
- Geologic time
- Describe the scientific theory of plate tectonics and/or how the movement of Earth's crustal plates and the flow of heat and material cause various geologic events to occur.
- Identify and/or describe the layers of Earth. (crust, the lithosphere, the hot convecting mantle, the outer (liquid) core, and the inner (solid) core)
- Different causes of volcano formation.

**Earth Systems and Patterns**

- Differentiate and/or explain interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere.
- Describe and/or explain how the cycling of water and global patterns influence local weather and climate.
- Differentiate between weather and climate.
- Describe the composition and structure of the atmosphere and/or how the atmosphere protects life and insulates the planet.
- Atmospheric conditions and their resulting weather phenomena, such as hurricanes, tornadoes, lightning, fronts, and precipitation.
- Effects of global warming and the ozone hole.
- The layers of the atmosphere and/or the function of each.
- Explain how energy provided by the Sun influences global patterns of atmospheric movement and/or the temperature differences among air, water, and land.
- Differentiate among radiation, conduction, and convection in Earth's systems.
- The causes of wind and wind pattern

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# FCAT REVIEW MENU

## Earth and Space Science

Directions: Choose from the activities in the menu below. The activities must total 10 points. Place a checkmark next to each box to show which activities you completed. Staple your work to this page and complete by _____.

**1 Point**

- ☐ Listen to a song on the FCAT review website. Write the chorus.
- ☐ Play a game on the FCAT review website. Keep track of your score.

**2 Points**

- ☐ Watch a video on the FCAT review website. Write down 3 vocabulary words (with definitions) and 1 main idea.
- ☐ Watch a Bill Nye video on the FCAT review website. Summarize 3 sections of the video (ex. Nye labs, Consider the following, song.)


**3 Points**

- ☐ Watch a Brain Pop on the FCAT review website. Complete the quiz.
- ☐ Read an article on the FCAT review website. Write down 3 vocabulary words (with definitions) and 1 main idea.