



MIDDLE SCHOOL (6 th – 8 th) EARTH AND SPACE SCIENCES	
Cardinal Newman Standards: Catholic Identity Integration	
<ul style="list-style-type: none"> • CS.S.712.GS4: Share how the beauty and goodness of God is reflected in nature and the study of the natural sciences. (NGSS.MS.ESS1.1; ESS1.2; ESS1.4; ESS2.1; ESS2.2; ESS2.3; ESS2.4; ESS2.5; ESS2.6; ESS3.1; ESS3.2) • CS.S.712.IS4: Relate how the search for truth, even when it concerns a finite reality of the natural world or of man, is never-ending and always points beyond to something higher than the immediate object of study. (NGSS.MS.ESS1.1; ESS1.2; ESS1.3; ESS1.4; ESS2.1; ESS2.2; ESS3.2; ESS3.3; ESS3.5) • CS.S.712.IS6: Evaluate the relationship between God, man, and nature, and the proper role in the totality of being and creation. (NGSS.MS.ESS1.1; ESS1.4; ESS2.1; ESS2.4; ESS2.5; ESS2.6; ESS3.1; ESS3.3; ESS3.4) • CS.S.712.IS7: Describe humanity’s natural situation in, and dependence upon, physical reality and how man carries out his role as a cooperater with God in the work of creation. (NGSS.MS.ESS1.4; ESS2.1; ESS2.4; ESS2.5; ESS2.6; ESS3.2; ESS3.3; ESS3.4; ESS3.5) • CS.S.712.DS4: Share concern and care for the environment as part of God’s creation. (NGSS.MS.ESS2.1; ESS2.4; ESS3.3; ESS3.4; ESS3.5) 	
Priority Skills	Supporting Skills
<ul style="list-style-type: none"> • Analyze and interpret data to determine scale properties of objects in the solar system. • Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth’s history. • Develop a model to describe the cycling of Earth’s materials and the flow of energy that drives this process. • Construct an explanation based on evidence for how geoscience processes have changed Earth’s surface at varying time and spatial scales. • Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. • Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment, and discern the true levels of current impacts, describing what other influences may have similar impacts. 	<ul style="list-style-type: none"> • Articulate the role of gravity in the motions of our galaxy and solar system. • Understand that Earth has a system of tectonic plates that shift over time, and recognize the results of those shifts. • Research technologies that may help mitigate the effects of catastrophic natural events. • Recognize and articulate the finite nature of Earth’s resources, and understand that nearly all human activity draws on such resources. • Understand patterns on Earth, in the solar system, and beyond.



Essential Questions

- What is Earth's place in God's Universe?
- How can we tell that the Earth and life on Earth have changed through time?
- What natural occurrences interact to influence our weather?
- How is the availability of needed natural resources related to naturally occurring processes?
- How do human activities affect Earth systems, and how can we care for such systems as part of God's creation?

Vital Vocabulary

- Axial Tilt, Atmospheric, Biosphere, Catastrophic, Composition, Consumption, Crystallization, Cyclic(al), Density, Erosion, Elliptical, Exoplanet, Geochemical, Geologic, Geoscience, Hydrosphere, Lunar (Phase), Oceanic, Orbital, Paleomagnetic, Revolution, Retrograde, Rotation, Sedimentation, Solar Flare, Solar Wind, Strata, Tectonic, Weathering

Additional Resources: [Cardinal Newman Science Resources, Appendix E](#)