



Alignment Document
State of Mississippi and Aventa Learning Earth Science

Earth Science
2005-2007 Benchmark Blueprint

| Standards | Benchmarks | Unit Name | Course Topic Description |
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| ES.1 Describe the elements and compounds related to the composition of the Earth's crust. | ES.1.a List elements in the Earth's crust and their percentages by mass. | | |
| | ES.1.b Compare the elements in the Earth's crust to the elements in the atmosphere and oceans. | | |
| ES.2 Characterize the different types of mineral deposits. | ES.2.a Research the six common minerals. | Minerals, Rocks and the rock cycle | Identifying Minerals |
| ES.3 Describe the basic types of rocks and how they are formed. | ES.3.a List the three basic types of rocks and the sources of their production. | Minerals, Rocks and the rock cycle | Minerals, Rocks and the rock cycle |
| ES.4 Explain the physical and chemical processes of weathering. | ES.4.a Research the causes of physical (mechanical) and chemical weathering. | Weathering and Erosion | Physical Weathering, Chemical Weathering |
| | ES.4.b Analyze weathering as a type of erosion. | Weathering and Erosion | Physical Weathering |
| | ES.4.c Research the effects of physical and chemical weathering. | Weathering and Erosion | Physical Weathering, Chemical Weathering |
| ES.5 Describe the processes involved in shaping the internal and external features of the Earth. | ES.5.a Research the external processes that shape the Earth's features. | Weathering and Erosion | Weathering and Erosion |
| | ES.5.b Define the internal processes that shape the Earth's features. | Planet Earth | Earth's Interrelated Subsystems |
| ES.6 Illustrate the geological timetable. | ES.6.a Research the origins of the Earth. | Geologic Time | Geological Time Scale |
| | ES.6.b Research the scientists responsible for the theories of Earth's origin. | Geologic Time | Relative Time Scale |
| | ES.6.c Investigate layering as a process of determining the Earth's origin. | Geologic Time | Relative Time Scale |
| ES.7 Explain how the oceans affect other | ES.7.a Determine how ocean currents affect | | |

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| processes on Earth. | climate. | | |
| | ES.7.b Research ocean flora and fauna and their place in the life forms of earth. | | |
| ES.8 Describe the composition of the atmosphere. | ES.8.a Investigate the different layers of the atmosphere. | Atmosphere and Climate | Structure of the Atmosphere |
| | ES.8.b Research the Greenhouse Effect as it relates to the atmosphere. | Atmosphere and Climate | The Greenhouse Effect |
| ES.9 Describe the processes involved in weather and climate. | ES.9.a Compare and contrast the terms weather and climate. | World of Weather | Introduction |
| | ES.9.b Research the circulation of the atmosphere. | World of Weather | Wind |
| | ES.9.c Explore the different climatic zones. | | |
| | ES.9.d Determine the causes of the change of seasons. | Astronomy | The Earth, Moon and Sun |
| ES.10 Describe the process of the water cycle. | ES.10.a Explore the water cycle's environmental movement. | Planet Earth | The Water Cycle |
| | ES.10.b Observe the environmental process of the water cycle. | Planet Earth | The Water Cycle |
| ES.11 Describe the structure and gravitational interaction of our planetary system. | ES.11.a Investigate the sizes and spacing of the planets in our solar system. | Astronomy | The Solar System |
| | ES.11.b Define gravity and calculate gravitational pull. | Astronomy | The Earth, Moon and Sun |
| | ES.11.c Determine the relationship between the moon's pull of gravity and the Earth's tides. | Astronomy | The Earth, Moon and Sun |
| ES.12 Explain the orderly and predictable motion of celestial bodies. | ES.12.a Investigate comets. | | |
| | ES.12.b Explore the concept of red and blue shift. | | |
| ES.13 Demonstrate the proper use of scientific methods and investigative techniques. | ES.13.a Experimentally investigate a problem utilizing the scientific process. | | |
| | ES.13.b Scientifically communicate the results of an experiment. | | |
| | ES.13.c Demonstrate safe and proper use of scientific equipment. | | |