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correlated to
Alabama Course of Study: Science

Grade 6

Standards and Objectives	Page References
Students will:	
1. Identify global patterns of atmospheric movement, including El Niño, the Gulf Stream, the jet stream, the Coriolis effect, and global winds that influence local weather.	439, 440, 441, 442, 443, 493, 494–495, 518, 519, 520
• Predicting local weather and weather patterns Examples: cold and warm fronts, high and low pressure areas	462, 471, 472, 473, 480, 485
• Describing the function of instruments and technology used to investigate Earth's weather, including barometers, thermometers, wind socks, weather vanes, satellites, radar, weather balloons, and rain gauges	16, 17, 455, 463, 470
• Using lines of latitude and longitude to locate areas of specific weather events	160, 161, 484
• Interpreting weather data through observations collected over time Example: calculating annual precipitation and average temperature	470-471, 474-475. 486
2. Describe factors that cause changes to Earth's surface over time. Examples: earthquakes, volcanoes, weathering, erosion, glacial erosion or scouring, deposition, water flow, tornados, hurricanes, farming and conservation, mining and reclamation, deforestation and reforestation, waste disposal, global climate changes, greenhouse gases	155, 182, 184, 185, 211, 212, 213, 215, 216, 217, 218, 219, 222, 223, 224, 227, 240, 241, 246, 247, 248, 454
• Comparing constructive and destructive natural processes and their effects on land formations Examples: constructive—volcanic and mountain-building processes; destructive—erosion by wind, water, and ice	155, 182, 184, 185, 211, 212, 213, 215, 216, 217, 218, 219, 222, 223, 224, 227, 240, 241, 246, 247, 248, 277, 280, 282, 285, 286, 287, 300, 301, 302, 303, 330, 331
• Distinguishing rock strata by geologic composition Examples: predicting relative age of strata by fossil depth, predicting occurrence of natural events by rock composition in a particular strata	370-375, 392-393
3. Describe water and carbon biochemical cycles and their effects on Earth.	91, 92, 93, 437, 502

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4. Explain the plate tectonic theory Example: using terminology such as *continental drift, seafloor spreading, lava, magna, eruption, epicenter, focus, seismic wave,* and *subduction zone*.	272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290–291, 304, 305, 306, 330, 331, 332, 333, 334
• Describing types of volcanoes and faults	286, 287, 288, 300, 301, 302, 303, 331, 332, 336, 339, 340, 341
• Determining energy release through seismographic data Example: using data from the Mercalli scale and the Richter scale	307, 308, 314. 320, 325
5. Describe layers of the oceanic hydrosphere, including pelagic zone, benthic zone, and abyssal zone, and intertidal zone.	437, 553, 555
6. Describe regions of the oceanic lithosphere, including the continental shelf, continental slope, and abyssal plain.	542, 543, 544, 546
7. Describe Earth's biomes. Examples: forests, aquatic biomes, grasslands, deserts, chaparrals, taigas, tundras	Ecology: 68-75
• Identifying geographic factors that cause diversity in flora and fauna, including elevation, location, and climate	Ecology: 36-42, 68-75
8. Describe how Earth's rotation, Earth's axial tilt, and distance from the equator cause variations in the heating and cooling of various locations on Earth.	661, 663, 664, 665
9. Identify the moon's phases.	667, 668, 674
• Describing lunar and solar eclipses	668, 669, 670
• Relating effects of the moon's positions on oceanic tides	529, 530
10. Describe components of the universe and their relationships to each other, including stars, planets and their moons, solar systems, and galaxies.	17, 18, 19, 660, 661, 672, 677, 678, 679, 690, 691, 692, 693, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708–709, 710, 711, 712, 713
• Identifying the impact of space exploration on innovations in technology Examples: MRI, microwave, satellite imagery, GPS	637, 649
• Mapping seasonal changes in the locations of constellations in the night sky	724-725
• Describing the life cycle of a star Example: H-R diagram	734-739
11. Describe units used to measure distance in space, including astronomical units and light years.	690-691, 727, 740