

EARTH SCIENCE

Content Outline and Pacing Guide

Quarter	SOL #	Topic	Suggested Timeframe
1	ES 1 ES 2	I. Scientific Investigation A. Experimental Design B. Measurement, Density, Mass, Volume C. Graphing, Data interpretation, Charts D. Observations about the Earth	3 blocks and integrated
	ES 3	II. Mapping A. Types of maps/map projections/globes B. Topography maps C. Latitude and longitude D. GPS/GIS	4 blocks
	ES 5 ES 6	III. Geology A. Minerals (ID, physical and chemical properties, use of) B. Rocks (Rock cycle, ID common rocks)	9 blocks
	ES 8	IV. Geologic Processes Part I (Uplifting the Surface) A. Plate Tectonics and Lithosphere Plates B. Mountain Building C. Earthquakes D. Volcanoes	4 blocks Begin unit here – content will be assessed on 2 nd Qt Benchmark Assessment
	Total		
2	ES 1 ES 2	Scientific Investigation A. Variables, Hypotheses B. Observations about the Earth C. Technology (computers, probeware) D. Data interpretation, charts, graphs	Integrated
	ES 3	Mapping A. Topography B. Geologic maps C. Aerial and satellite images D. Bathymetric maps	Integrated
	ES 8	IV. Geologic Processes Part I (Uplifting the Surface) A. Plate Tectonics and Lithosphere Plates B. Mountain Building C. Earthquakes D. Volcanoes	6 blocks Continued from 1 st quarter- all assessed this quarter

	ES 9	V. Geologic Processes Part II (Breaking Down and Reshaping the Earth's Surface) A. Weathering B. Soil development C. Erosion and deposition D. Karst topography and Groundwater E. Water cycle F. Va. Watershed system	9 blocks
	Total		9 wks.
3	ES 1 ES 2 ES 3	Scientific Investigation and Maps A. Bathymetric and ocean floor maps B. Weather maps C. Variables; Hypotheses D. Data interpretation, charts, graphs E. Observations of the Earth	Integrated
	ES 10	VI. Historical Geology A. Fossils B. Absolute and Relative Dating C. Geological periods/Rocks and Fossils in VA	4 blocks
	ES 7 ES 8	VII. Natural Resources/ Geology of Virginia A. Renewable and Nonrenewable resources B. Virginia resources C. Advantages and disadvantages D. Environmental costs and impact E. Physiographic provinces of Virginia	4 blocks
	ES 12 ES 13	VIII. Meteorology A. Atmospheres B. Weather patterns, data, phenomena C. Energy budget, Global Winds, Climate D. Atmospheric Changes	10 blocks
	ES 11	IX. Oceanography A. Physical and Chemical changes in the ocean B. Features of the Ocean Floor C. Interactions of systems D. Economic and public policy issues concerning the oceans	8 blocks
	Total		9 wks.
4	ES 1 ES 2 ES 3	Scientific Investigation A. Graphs, Diagrams, Scale models B. Star charts	Integrated
	ES 4 ES 14	X. Astronomy and Space Science A. Origin and Evolution of the Universe B. Characteristics of the Earth and the Solar System C. Earth-Moon-Sun relationships D. Deep space E. Space exploration	13 blocks
		XI. Earth Science Topics	Post SOL
	Total		9 wks.

2003

**Earth Science
Blueprint Summary Table**

Reporting Categories	Number of Items	Earth Science SOL
Scientific Investigation	10	ES.1a-e ES.2a-e ES.3a-d
Geology	21	ES.5a, b ES.6a-c ES.7a-e ES.8a-c ES.9a, b ES.10a-d
Meteorology, Oceanography, and Groundwater	10	ES.9c-f ES.11a-e ES.12a-e ES.13a-d
Astronomy and Space Science	9	ES.4a-d ES.14a-e
SOL Excluded From This Test		None
Total Number of Operational Items	50	
Field-Test Items*	10	
Total Number of Items	60	

*These field-test items will *not* be used to compute students' scores on the test.