

A Correlation of
Savvas
Environmental Science
Your World, Your Turn
©2011



To the
**DoDEA High School
Core Science Standards
Environmental Science
Grades 9-12**

**A Correlation of Environmental Science: Your World, Your Turn, ©2011
To the
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INTRODUCTION

This document demonstrates how Savvas' **Environmental Science: Your World, Your Turn, ©2011** meets the DoDEA High School Core Science Standards for Environmental Science. Correlation page references are to the Student Edition and Teacher Edition.

Real Issues. Real Data. Real Choices.

Savvas' *Environmental Science: Your World, Your Turn* is based on real, current, and relevant content that brings the world of environmental science to life. All while making it personal and actionable for every student.

Exploring Real Issues through an Integrated Case-Study Approach

Opening every chapter, and integrated throughout the text and support materials both online and in print, the Central Case provides a consistent and engaging path for teaching core environmental science principles.

Based on the Most Current Data Available

A science program is only as good as the data. *Environmental Science: Your World, Your Turn* provides the most up-to-date data available from a wide-range of trusted sources. Maps, graphs, yesterday's news articles...and more.

Motivates Students to Make Choices

Environmental Science: Your World, Your Turn empowers students to draw their own conclusions and encourages them to think and act on both local and global levels. They will build the critical thinking skills that they will need long after the class ends.

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DoDEA High School Core Science Standards - Environmental Science	
Scientific Inquiry	
Standard Ea: The student will demonstrate an understanding of how scientific inquiry and technological design, including mathematical analysis, can be used appropriately to pose questions, seek answers, and develop solutions.	
Indicators	
Ea.1: Generate hypotheses based on credible, accurate, and relevant sources of scientific information.	SE/TE: 30, 95, 123, 302, SH 20
Ea.2: Use appropriate laboratory apparatuses, technology, and techniques safely and accurately when conducting a scientific investigation.	SE/TE: 19, 80, 152, 183, 263, 356, 437, 459, 467, 564
Ea.3: Use scientific instruments to record measurement data in appropriate metric units that reflect the precision and accuracy of each particular instrument.	SE/TE: 19, 80, 194, 346, 437, 459
Ea.4: Design a scientific investigation with appropriate methods of control to test a hypothesis (including independent and dependent variables), and evaluate the designs of sample investigations.	SE/TE: 30, 123, 263, SH 20-22 *Methods of control are not specifically addressed
Ea.5: Organize and interpret the data from a controlled scientific investigation by using mathematics, graphs, models, and/or technology.	This objective is addressed throughout. See, for example: SE/TE: 61, 92, 95, 123, 161, 197, 223, 253, 319, 349, 417, 449, 471, 479, 493, 547, 552, 579, 601, 609
Ea.6: Evaluate the results of a controlled scientific investigation in terms of whether they refute or verify the hypothesis.	For related content, please see: SE/TE: 30, 123, 302, 349, 431, 530, 552, 601
Ea.7: Evaluate a technological design or product on the basis of designated criteria (including cost, time, and materials).	For related content, please see: SE/TE: 37, 428-429, 433, 539, 543, 569, 573, 588, 605
Ea.8: Compare the processes of scientific investigation and technological design.	For related content, please see: SE/TE: 14-19, 433, 442-443, 444-445
Ea.9: Use appropriate safety procedures when conducting investigations.	SE/TE: 356, 437, 459, SH 22-25

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Standard Eb: The student will identify and describe current environmental issues, and considers of the role of beliefs, attitudes, and values in proposing solutions to environmental problems.	
Indicators	
Eb.1: Utilize research methods to investigate environmental questions, reevaluates their personal beliefs to accommodate new knowledge and perspectives, and is able to effectively communicate this understanding to others.	This objective is addressed throughout. See, for example: SE/TE: 57, 91, 193, 345, 413, 445, 475, 543, 575, 605
Eb.2: Evaluate the advantages and disadvantages of balancing short term interests with long term welfare of the society.	This objective is addressed throughout. See, for example: SE/TE: 35, 39, 41, 52, 61, 123, 193, 206, 211, 246-247, 323, 333, 335-336, 349, 351, 362, 368, 376-377, 383, 389, 443, 500-501
Eb.3: Explain how individual activities and decisions can have an impact on the environment.	This objective is addressed throughout. See, for example: SE/TE: 5, 9, 29, 197, 211, 214, 223, 253, 255, 266, 280, 289, 434, 496, 535, 581, 583, 592, 595, 597, 603, 605, 609
Eb.4: Identify a variety of approaches to environmental issues and evaluates the benefits and consequences of each from a social, economic, and ecological standpoint.	This objective is addressed throughout. See, for example: SE/TE: 41, 61, 132, 153-155, 197, 391, 407, 411, 417, 483, 485, 495, 500, 513, 515, 523, 532, 540, 547, 550-555, 556, 560, 561-569, 570-573
Eb.5: Evaluating the ways in which government can influence environmental policy.	This objective is addressed throughout. See, for example: SE/TE: 40, 42-47, 48-55, 57, 89, 155, 227, 255, 292-293, 305-313, 324-329, 330-336, 337-343, 362-363, 535
Eb.6: Identify how the choices individuals make affect the environment.	This objective is addressed throughout. See, for example: SE/TE: 5, 11, 29, 88, 253, 427, 434, 496, 503, 535, 589, 592-595, 611-618

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Standard Ec: The student will identify the effect of human activities on natural processes and interrelationships within ecosystems.	
Indicators	
Ec.1: Provide evidence for how human population growth has impacted the environment and the use of natural resources.	SE/TE: 10-11, 106-109, 110-117, 227, 231, 242-253
Ec.2: Describe the ways in which the use of technology has affected the environment and standard of living.	SE/TE: 3, 35, 228-229, 246-247, 367-373, 373-383, 432-434, 439, 471-473, 495-496, 500-501, 532-533, 558, 597-603
Ec.3: Provide evidence for how people impact their environment through the use of natural resources.	SE/TE: 6-7, 9-11, 33, 82, 85-86, 88, 332-336, 345, 351, 358, 385, 405, 413, 436, 444, 462, 495-496, 515, 549, 581, 589
Ec.4: Recognize the ways in which technology, while improving our standard of living, has increased the human impact on the environment.	SE/TE: 246-247, 367-383, 432-434, 439, 471-475, 495-496, 500, 501, 532-533, 558, 597-603
Ec.5: Evaluate a variety of land management practices on their ability to restore ecosystem functioning and trophic relationships.	SE/TE: 324-329, 330-336, 337-343, 344-345, 348, 360, 362-364, 496
Ec.6: Describe how people affect biodiversity through land use practices, pollution, and their use of organisms.	SE/TE: 163, 199, 207-211, 212-217, 219, 223, 330-336, 337-343, 345, 378-380
Ec.7: Identify the effects of human activities on ecosystems at various scales in terms of ecosystem functioning.	SE/TE: 101-103, 204-205, 207-211, 212-217, 324-349, 497-501
Ec.8: Assess the environmental and societal costs and benefits of various common natural resource management strategies.	SE/TE: 37, 39, 323, 324-329, 330-336, 337-343, 345, 348-349, 362-364, 367-372, 373-383, 405-411, 426-443, 448-449
Standard Ed: The student will identify a variety of Earth's finite natural resources, assess the availability and sustainability of resources.	
Indicators	
Ed.1: Explain how fossil fuels are formed and where they can be found.	SE/TE: 8, 462, 496, 520, 522-528, 546
Ed.2: Illustrate the naturally occurring cycles of Earth's finite resources through Earth's four major systems (atmosphere, hydrosphere, lithosphere, and biosphere) by describing the path of an element or a molecule in a natural resource (for example carbon or water).	SE/TE: 79-82, 83-89

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Ed.3: Recognize that certain resources are nonrenewable because they are replenished at timescales of thousands to millions of years.	SE/TE: 7, 31, 324, 520
Ed.4: Interpret how changes to the availability of nonrenewable natural resources might affect society (considering, for example, manufacturing industries, agriculture, and transportation).	SE/TE: 37-41, 358-364, 368, 427-432, 524-525, 527-528, 534-535
Ed.5: Analyze the future availability of nonrenewable energy resources considering the trend of human consumption of energy.	For related content, please see: SE/TE: 527-528
Ed.6: Infer the effects of natural and human-caused activities that either contribute to or challenge an ecologically sustainable environment.	SE/TE: 4-11, 72-74, 81-89, 272-283, 358-364, 405-411, 435-443, 462-475
Ed.7: Hypothesize the use of renewable energies and the development of superior technologies impact upon the rate of depletion of natural resources.	For related content, please see: SE/TE: 247, 502-504, 549, 555, 558, 560
Ed.8: Explain the ways in which individuals can alter their own behavior to reduce the human carbon footprint.	SE/TE: 502-504, 507, 513
Ed.9: Summarize how changes in the availability of energy will affect society and human activities, such as transportation, agricultural systems, and manufacturing.	SE/TE: 523-528, 539-540, 546, 550-555, 556-560, 561-569, 570-573, 574-575, 577, 578
Standard Ee: The student will explain how geochemical cycles and ecological processes on Earth interact through time to cycle matter and energy and how human activity can alter the rates of these processes.	
Indicators	
Ee.1: Generate examples of the Earth as a complex system with connected and interconnected components and processes.	SE/TE: 75-75, 76-82, 83-89, 94-95
Ee.2: Organize the multiple pathways of carbon movement between reservoirs.	SE/TE: 83-85
Ee.3: Organize evidence that Earth is a system containing essentially a fixed amount of each stable chemical atom or element which moves among reservoirs in the solid Earth, oceans, atmosphere, and organisms as part of geochemical cycles.	SE/TE: 72-75, 76-82, 83-89, 94-95
Ee.4: Generate predictive hypotheses predicting the effects of carbon dioxide on Earth's systems.	For related content, please see: SE/TE: 484-485, 495-496, 497, 505-506, 512, 530

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Standard Ef: The student will analyze ecology as interrelationships, explain the transfer of matter and energy within ecosystems, relate the theory of biological evolution to geologic time and addresses speciation and biodiversity in the context of the environment.	
Indicators	
Ef.1: Describe the ways in which biodiversity is important to ecosystems and human society.	SE/TE: 163, 204-206, 331-332, 381-383
Ef.2: Assess the potential value of a single species to a particular ecosystem.	SE/TE: 126-132, 133-140, 146-148, 149-155, 204-205
Ef.3: Explain how organisms are adapted to the environment in terms of ecological niches and natural selection.	SE/TE: 126-132, 133-140, 177, 180, 191
Ef.4: Relate the importance of genetic diversity and population size to the conservation of a species.	SE/TE: 104-109, 110-117, 119, 122-123, 125, 200-206, 207-211, 212-217, 222-223
Ef.5: Identify the factors that have contributed to the growth of the human population and examine the impact this growth will have on the environment.	SE/TE: 110-117, 227, 228-233, 234-241, 242-247, 252-253, 292-298, 299-304, 318-319
Ef.6: Differentiate that the Earth's systems exist in a state of dynamic equilibrium and that certain compositions of the Earth's system(s) may fluctuate on short or long time scales but the Earth's system will generally stay within a certain narrow range for millions of years.	For related content, please see: SE/TE: 63, 72-75, 76-82, 83-89, 94
Ef.7: Recall the natural processes of change in the environment, including examples of succession, evolution, and extinction.	SE/TE: 118-119, 126-132, 133-140, 149-155, 160, 207-211, 223
Ef.8: Identify factors that influence patterns of ecological succession, including invasive species, loss of biodiversity, change in abiotic conditions, and catastrophic events.	SE/TE: 149-155, 157, 207-211, 277-283, 334
Ef.9: Identify the factors limiting population growth in a given area (carrying capacity).	SE/TE: 110-117, 149-155, 230-231, 240-241