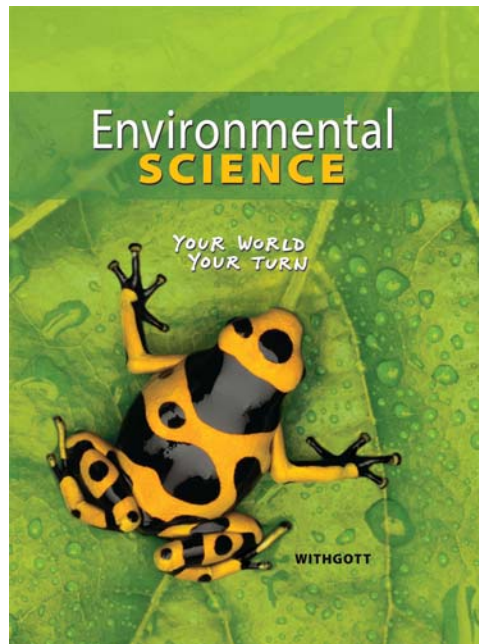


A Correlation of
Environmental Science
Your World, Your Turn
©2011



To

Ohio's
New Learning Standards
for Science, 2011
Environmental Science, High School
Science Inquiry and Application
Course Content

**A Correlation of Environmental Science, ©2011 to
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INTRODUCTION

This document demonstrates how **Savvas Environmental Science, ©2011** meets Ohio's New Learning Standards for Environmental Science, 2011, Grades 9-12. Science Inquiry and Application references are to the Student and Teacher Edition feature and page levels. Course content references are to the chapter and lesson levels.

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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Ohio's New Learning Standards for Science - Environmental Science	Environmental Science Your World, Your Turn, ©2011
COURSE DESCRIPTION	
<p>Environmental science is a high school level course, which satisfies the Ohio Core science graduation requirements of Ohio Revised Code Section 3313.603. This section of Ohio law requires a three-unit course with inquiry-based laboratory experience that engages students in asking valid scientific questions and gathering and analyzing information.</p> <p>Environmental science incorporates biology, chemistry, physics and physical geology and introduces students to key concepts, principles and theories within environmental science.</p> <p>Investigations are used to understand and explain the behavior of nature in a variety of inquiry and design scenarios that incorporate scientific reasoning, analysis, communication skills and real-world applications. It should be noted that there are classroom examples in the model curriculum that can be developed to meet multiple sections of the syllabus, so one well-planned long-term project can be used to teach multiple topics.</p>	
SCIENCE INQUIRY AND APPLICATION	
<p>During the years of grades 9 through 12, all students must use the following scientific processes with appropriate laboratory safety techniques to construct their knowledge and understanding in all science content areas:</p>	
<ul style="list-style-type: none"> • Identify questions and concepts that guide scientific investigations; 	<p>This process is met throughout the program. Please find representative pages:</p> <p>SE/TE: Quick Lab, Analyze and Conclude: p.37; Quick Lab, Analyze and Conclude: p.80; Go Outside, Analyze and Conclude: p.102; Quick Lab, Analyze and Conclude: p.152; Quick Lab, Analyze and Conclude: p.263; Quick Lab, Analyze and Conclude: p.437; Quick Lab, Analyze and Conclude: p.459; Quick Lab, Analyze and Conclude: p.520; Go Outside, Analyze and Conclude: p.564; Go Outside, Analyze and Conclude: p.467</p>
<ul style="list-style-type: none"> • Design and conduct scientific investigations; 	<p>This process is met throughout the program. Please find representative pages:</p> <p>SE/TE: Quick Lab, Procedure: p.80; Go Outside, Procedure: p.102; Quick Lab, Procedure: p.152; Go Outside, Procedure: p.183; Quick Lab, Procedure: p.263; Go Outside, Procedure: p.356; Quick Lab, Procedure: p.437; Quick Lab, Procedure: p.459; Quick Lab, Procedure: p.520; Go Outside, Procedure: p.564</p>

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<ul style="list-style-type: none"> • Use technology and mathematics to improve investigations and communications; 	<p>This process is met throughout the program. Please find representative pages:</p> <p>SE/TE: Quick Lab, Summarize: p.37; Real Data, Analyze Data: p.51; Quick Lab, Calculate: p.80; Real Data, Interpret graphs: p.51; Real Data, Calculate: p.144; Real Data, Interpret graphs: p.179; Real Data, Calculate: p.214; Real Data, Calculate: p.230; Quick Lab, Calculate: p.237; Real Data, Calculate: p.332</p>
<ul style="list-style-type: none"> • Formulate and revise explanations and models using logic and evidence (critical thinking); 	<p>This process is met throughout the program. Please find representative pages:</p> <p>SE/TE: Quick Lab, Evaluate and Revise: p.22; Real Data, Perform Error Analysis: p.112; Quick Lab, Evaluate and Revise: p.152; Go Outside, Form an Opinion: p.310; Quick Lab, Infer: p.334; Go Outside, Predict: p.356; Quick Lab, Predict: p.437; Quick Lab, Use Models: p.486; Real Data, Predict: p.493; Real Data, Predict: p.530</p>
<ul style="list-style-type: none"> • Recognize and analyze explanations and models; and 	<p>This process is met throughout the program. Please find representative pages:</p> <p>SE/TE: Quick Lab, Explain: p.37; Real Data, Infer: p.144; Quick Lab, Evaluate and Revise: p.152; Quick Lab, Calculate: p.237; Quick Lab, Interpret Visuals: p.334; Real Data, Analyze: p.431; Quick Lab, Relate Cause and Effect: p.459; Real Data, Infer: p.471; Quick Lab, Use Models: p.486</p>
<ul style="list-style-type: none"> • Communicate and support a scientific argument. 	<p>This process is met throughout the program. Please find representative pages:</p> <p>SE/TE: Real Data, Evaluate: p.51; Quick Lab, Draw Conclusions: p.80; Real Data, Apply Concepts: p.144; Quick Lab, Draw Conclusions: p.152; Go Outside, Form an Opinion: p.310; Quick Lab, Communicate: p.334; Go Outside, Predict: p.356; Quick Lab, Draw Conclusions: p.431; Quick Lab, Predict: p.437; Quick Lab, Apply Concepts: p.459</p>

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COURSE CONTENT	
The following information may be taught in any order; there is no ODE-recommended sequence.	
EARTH SYSTEMS: INTERCONNECTED SPHERES OF EARTH	
• Biosphere	SE/TE: Chapters 4, 5, 6, 7
• Evolution and adaptation in populations	SE/TE: Chapter 5: Lesson 1
• Biodiversity	SE/TE: Chapter 7: Lessons 1, 2, 3
• Ecosystems (equilibrium, species interactions, stability)	SE/TE: Chapter 5: Lessons 2, 3, 4; Chapter 6: Lessons 1, 2, 3
• Population dynamics	SE/TE: Chapter 4: Lessons 1, 2, 3; Chapter 5: Lesson 2
• Atmosphere	SE/TE: Chapter: 1, 3, 15
• Atmospheric properties and currents	SE/TE: Chapter 1: Central Case; Chapter 3: Lesson 2, 3; Chapter 15: Lesson 1
• Lithosphere	SE/TE: Chapter 3
• Geologic events and processes	SE/TE: Chapter 3: Lessons 2, 3
• Hydrosphere	SE/TE: Chapters 3, 6, 16
• Oceanic currents and patterns (as they relate to climate)	SE/TE: Chapter 6: Lesson 3; Chapter 16: Lessons 1, 2
• Surface and ground water flow patterns and movement	SE/TE: Chapter 3: Lesson 3
• Cryosphere	SE/TE: Chapter 3: Lesson 2
• Movement of matter and energy through the hydrosphere, lithosphere, atmosphere and biosphere	SE/TE: Chapters 3, 5, 16, 17
• Energy transformations on global, regional and local scales	SE/TE: Chapter 5: Lesson 3; Chapter 17 Lessons 1, 2, 4
• Biogeochemical cycles	SE/TE: Chapter 3: Lesson 4
• Ecosystems	SE/TE: Chapter 5: Lesson 3
• Climate and weather	SE/TE: Chapter 16: Lesson 1, 2, 3, 4

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EARTH'S RESOURCES	
• Energy resources	SE/TE: Chapters 8, 13, 14, 16, 18
• Renewable and nonrenewable energy sources and efficiency	SE/TE: Chapter 8: Lesson 3; Chapter 14: Lesson 1; Chapter 17: Lessons 1, 2, 3; Chapter 18: Lessons 1, 2, 3, 4
• Alternate energy sources and efficiency	SE/TE: Chapter 16: Lessons 3, 4; Chapter 17: Lesson 4; Chapter 18: Lesson 1, 2, 3, 4
• Resource availability	SE/TE: Chapter 16: Lesson 3; Chapter 17: Lesson 3
• Mining and resource extraction	SE/TE: Chapter 8: Lesson 3; Chapter 13: Lessons 2, 3; Chapter 14: Lesson 2; Chapter 17: Lesson 3
• Air and air pollution	SE/TE: Chapters 3, 9, 13, 15, 16, 17
• Primary and secondary contaminants	SE/TE: Chapter 9: Lesson 3; Chapter 13: Lesson 2; Chapter 15: Lesson 2; Chapter 17: Lesson 3
• Greenhouse gases	SE/TE: Chapter 3: Lesson 3; Chapter 16: Lessons 1, 2, 4; Chapter 17: Lesson 3
• Clean Air Act	SE/TE: Chapter 15; Lesson 3
• Water and water pollution	SE/TE: Chapters 2, 3, 9, 14
• Potable water and water quality	SE/TE: Chapter 9: Lesson 2; Chapter 14: Lessons 1, 2, 3
• Hypoxia, eutrophication	SE/TE: Chapter 3: Central Case; Chapter 3: Lesson 4; Chapter 14: Lesson 3
• Clean Water Act	SE/TE: Chapter 2: Central Case; Chapter 2: Lesson 2; Chapter 14: Lesson 3
• Point source and non-point source contamination	SE/TE: Chapter 9: Lesson 3; Chapter 14: Lesson 3
• Soil and land	SE/TE: Chapters 8, 9, 10, 12, 13
• Desertification	SE/TE: Chapter 12: Lesson 2
• Mass wasting and erosion	SE/TE: Chapter 12: Lessons 1, 2

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• Sediment contamination	SE/TE: Chapter 13: Lesson 3; Chapter 14: Lesson 3
• Land use and land management (including food production, agriculture and zoning)	SE/TE: Chapter 8: Lesson 3; Chapter 10: Lessons 1, 2, 3; Chapter 12: Lessons 2, 3, 4
• Solid and hazardous waste	SE/TE: Chapter 9: Lesson 3
• Wildlife and wilderness	SE/TE: Chapters 2, 7
• Wildlife and wilderness management	SE/TE: Chapter 2: Lesson 2; Chapter 7: Lesson 3
• Endangered species	SE/TE: Chapter 7: Lesson 3
GLOBAL ENVIRONMENTAL PROBLEMS AND ISSUES	
• Human population	SE/TE: Chapter 1: Lesson 1; Chapter 8: Lessons 1, 3
• Potable water quality, use and availability	SE/TE: Chapter 14: Lessons 1, 2
• Climate change	SE/TE: Chapter 16: Lessons 1, 2, 3, 4
• Sustainability	SE/TE: Chapter 1: Lesson 1; Chapter 10: Lesson 3; Chapter 11: Lessons 1, 2, 3; Chapter 12: Lesson 4
• Species depletion and extinction	SE/TE: Chapter 5: Lesson 1; Chapter 7: Lesson 2
• Air quality	SE/TE: Chapter 9: Lesson 3; Chapter 15: Lessons 2, 3
• Food production and availability	SE/TE: Chapter 12: Lesson 4
• Deforestation and loss of biodiversity	SE/TE: Chapter 1: Science Behind the Stories; Chapter 7: Lesson 2; Chapter 11: Lessons 1, 2, 3
• Waste management (solid and hazardous)	SE/TE: Chapter 19: Lessons 1, 2, 3