

## Environmental Science

### Curriculum Guide

Tennessee's K-12 science standards are intended to guide the development and delivery of educational experience that prepare all students for the challenges of the 21<sup>st</sup> Century. You may access these documents using the *Best for All Central* website:  
<https://bestforall.tnedu.gov/lessons-and-learning-item?content-id=9109>

| Quarter 1                                                                                                                                             |                                                                                                                                                                                 |                                                                                                 |                                      |                                                                                                                                 |        |
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| Standard(s)                                                                                                                                           | Learning Objective(s)                                                                                                                                                           | CCC/SEP                                                                                         | Savvas Alignment                     | Assessments                                                                                                                     | Pacing |
| EVSC.ESS3.1<br>EVSC.ESS3.2<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.18<br>EVSC.ETS2.2<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Explain the focus of environmental science.</li> <li>Describe the recent trends in human population and resource consumption.</li> </ul> | CCC: Patterns<br>SEP: Ask question and define problems/planning and carrying out investigations | 1.1 Our Island, Earth pgs. 4-11      | -1.1 Worksheet<br>-1.1 Quiz<br>-Graph It: An introduction to graphing pg. 8<br>-Comparing ecological footprints activity pg. 10 | 1 day  |
| EVSC.ESS3.1<br>EVSC.ESS3.2<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.18<br>EVSC.ETS2.2<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Explain what science is</li> <li>Describe the process of science</li> </ul>                                                              | CCC: Patterns<br>SEP: Ask question and define problems/planning and carrying out investigations | 1.2 The Nature of Science pgs. 12-20 | -1.2 Worksheet<br>-1.2 Quiz<br>-Outdoor measurement lab pg. 19                                                                  | 2 days |

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| EVSC.ESS3.1<br>EVSC.ESS3.2<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.18<br>EVSC.ETS2.2<br>EVSC.ETS3.1                                                                                                                           | <ul style="list-style-type: none"> <li>Describe the major roles of the scientific community in the process of science</li> <li>Explain the study of environmental ethics</li> </ul>                                                           | CCC: Patterns<br>SEP: Ask question and define problems/planning and carrying out investigations | 1.3 The Community of Science pgs. 21-27 | -1.3 Worksheet<br>-1.3 Quiz<br>-Quick lab pg. 22 | 1 day |
| All above standards                                                                                                                                                                                                                                                             | All above learning objectives                                                                                                                                                                                                                 | Above information                                                                               | All sections                            | Chapter 1 Test                                   | 1 day |
| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.1<br>EVSC.ESS3.2<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.16<br>EVSC.ESS3.17<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Describe two basic concepts of economics.</li> <li>Explain the relationship between economics and the environment.</li> <li>Describe ways that economies are working toward sustainability.</li> </ul> | CCC: Cause and Effect/System and System Models<br>SEP: Analyzing and interpreting data          | 2.1 Economics pgs. 36-41                | -2.1 Worksheet<br>-2.1 Quiz<br>-Quick lab pg. 37 | 1 day |

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| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.1<br>EVSC.ESS3.2<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.16<br>EVSC.ESS3.17<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>• Explain the purpose of environmental policy.</li> <li>• Describe the history of U.S. environmental policy.</li> <li>• Describe the direction of current U.S. environmental policy.</li> </ul>                                  | CCC: Cause and Effect/System and System Models<br>SEP: Analyzing and interpreting data | 2.2 United States Environmental Policy pgs. 42-47                | -2.2 Worksheet<br>-2.2 Quiz<br>-Find out more: Research activity pg. 47 | 1 day  |
| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.1<br>EVSC.ESS3.2<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.16<br>EVSC.ESS3.17<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>• Identify major international institutions involved in environmental policy.</li> <li>• Discuss different approaches to environmental policy.</li> <li>• List the steps involved in the environmental policy process</li> </ul> | CCC: Cause and Effect/System and System Models<br>SEP: Analyzing and interpreting data | 2.3 International Environmental Policy and Approaches pgs. 48-55 | -2.3 Worksheet<br>-2.3 Quiz<br>-Real Data exercise pg. 51               | 2 days |

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| All above standards                                                                              | All above learning objectives                                                                                                                                                                                                              | All above information                                                                                                         | All sections                                    | Chapter 2 Test                                                                       | 1 day  |
| EVSC.LS2.1<br>EVSC.LS2.3<br>EVSC.LS2.4<br>EVSC.LS2.5<br>EVSC.LS2.6<br>EVSC.ESS2.1<br>EVSC.ESS2.3 | <ul style="list-style-type: none"> <li>Differentiate among an atom, an element, a molecule, and a compound</li> <li>Discuss how various macromolecules are essential to life</li> <li>Identify some unusual properties of water</li> </ul> | CCC: Structure and function/ Energy and Matter<br>SEP: Asking questions (for science) and defining problems (for engineering) | 3.1 Matter and the Environment pgs. 64-71       | -3.1 worksheet<br>-3.1 Quiz                                                          | 2 days |
| EVSC.LS2.1<br>EVSC.LS2.3<br>EVSC.LS2.4<br>EVSC.LS2.5<br>EVSC.LS2.6<br>EVSC.ESS2.1<br>EVSC.ESS2.3 | <ul style="list-style-type: none"> <li>Describe two major ways that Earth's systems interact</li> <li>Define Earth's geosphere, lithosphere, biosphere, atmosphere, and hydrosphere</li> </ul>                                             | CCC: Structure and function/ Energy and Matter<br>SEP: Asking questions (for science) and defining problems (for engineering) | 3.2 Systems in Environmental Science pgs. 72-75 | 3.2 worksheet<br>3.2 Quiz                                                            | 2 days |
| EVSC.LS2.1<br>EVSC.LS2.3<br>EVSC.LS2.4<br>EVSC.LS2.5<br>EVSC.LS2.6<br>EVSC.ESS2.1<br>EVSC.ESS2.3 | <ul style="list-style-type: none"> <li>Describe the parts of Earth's geosphere</li> <li>Describe Earth's biosphere and atmosphere</li> <li>Discuss the water cycle</li> </ul>                                                              | CCC: Structure and function/ Energy and Matter<br>SEP: Asking questions (for science) and defining problems (for engineering) | 3.3 Earth's Spheres pgs.76-82                   | -3.3 worksheet<br>-3.3 Quiz<br>-Map It: Pangaea Activity pg. 77<br>-Quick lab pg. 80 | 2 days |
| EVSC.LS2.1<br>EVSC.LS2.3<br>EVSC.LS2.4<br>EVSC.LS2.5<br>EVSC.LS2.6<br>EVSC.ESS2.1<br>EVSC.ESS2.3 | <ul style="list-style-type: none"> <li>Explain how the law of conservation of matter applies to the behavior of nutrients in the environment</li> <li>Describe the carbon cycle</li> <li>Describe the events</li> </ul>                    | CCC: Structure and function/ Energy and Matter<br>SEP: Asking questions (for science) and defining problems (for engineering) | 3.4 Biogeochemical Cycles pgs. 83-89            | 3.4 worksheet<br>3.4 Quiz                                                            | 3 days |
| All above standards                                                                              | All above learning objectives                                                                                                                                                                                                              | All above information                                                                                                         | All sections                                    | Chapter 3 Test                                                                       | 1 day  |

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| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS2.7<br>EVSC.LS4.1<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.2<br>EVSC.ESS3.3<br>EVSC.ESS3.6<br>EVSC.ESS3.8<br>EVSC.ESS3.17<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Describe the different levels of organization studied by ecologists</li> <li>Explain the difference between biotic and abiotic factors</li> <li>Discuss how an organism's habitat relates to its survival</li> </ul>                           | CCC: Scale and proportion/ Cause and effect<br>SEP: Developing arguments from data/developing and using models | 4.1 Studying Ecology pgs. 100-103       | -4.1 worksheet<br>-4.1 Quiz<br>-Go Outside: Mini lab pg. 102 | 2 days |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS2.7<br>EVSC.LS4.1<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.2<br>EVSC.ESS3.3<br>EVSC.ESS3.6<br>EVSC.ESS3.8<br>EVSC.ESS3.17<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Explain the usefulness of tracking population size</li> <li>Define population density</li> <li>Describe the three major ways population can be distributed</li> <li>Explain what age structure diagrams tell you about a population</li> </ul> | CCC: Scale and proportion/ Cause and effect<br>SEP: Developing arguments from data/developing and using models | 4.2 Describing Populations pgs. 104-109 | 4.2 worksheet<br>4.2 Quiz                                    | 1 day  |

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| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS2.7<br>EVSC.LS4.1<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.2<br>EVSC.ESS3.3<br>EVSC.ESS3.6<br>EVSC.ESS3.8<br>EVSC.ESS3.17<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Describe the factors that influence a population's growth rate</li> <li>Explain exponential growth and logistic growth</li> <li>Explain how limiting factors and biotic potential affect population growth</li> </ul> | CCC: Scale and proportion/ Cause and effect<br>SEP: Developing arguments from data/developing and using models                                                           | 4.3 Population Growth pgs. 110-117 | -4.3 worksheet<br>-4.3 Quiz<br>-Real Data Activity pg. 112 | 1 day  |
| All above standards                                                                                                                                                                                     | All above learning objectives                                                                                                                                                                                                                                | All above information                                                                                                                                                    | All sections                       | Chapter 4 Test                                             | 1 day  |
| EVSC.LS2.3<br>EVSC.LS2.4<br>EVSC.LS2.5<br>EVSC.LS2.7<br>EVSC.LS4.1<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.13<br>EVSC.ESS3.17                                            | <ul style="list-style-type: none"> <li>Describe the four primary mechanisms of biological evolution</li> <li>Describe how speciation and extinction affect the diversity of life on Earth</li> </ul>                                                         | CCC: Stability and change/cause and effect<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)/ Engaging in argument from evidence | 5.1 Evolution pgs 126-132          | 5.1 worksheet<br>5.1 Quiz                                  | 2 days |

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| EVSC.LS2.3<br>EVSC.LS2.4<br>EVSC.LS2.5<br>EVSC.LS2.7<br>EVSC.LS4.1<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.13<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>• Discuss the factors that influence an organism's niche</li> <li>• Compare and contrast predation, parasitism, and herbivory</li> <li>• Describe mutualism and commensalism</li> </ul>                                                                                | CCC: Stability and change/cause and effect<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)/<br>Engaging in argument from evidence | 5.2 Species Interaction pgs. 133-140    | 5.2 worksheet<br>5.2 Quiz                                  | 2 days |
| EVSC.LS2.3<br>EVSC.LS2.4<br>EVSC.LS2.5<br>EVSC.LS2.7<br>EVSC.LS4.1<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.13<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>• Explain the difference between a producer and a consumer</li> <li>• Explain the effect of inefficient energy transfer on community structure</li> <li>• Describe how feeding relationships can have both direct and indirect effects on community members</li> </ul> | CCC: Stability and change/cause and effect<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)/<br>Engaging in argument from evidence | 5.3 Ecological Communities pgs. 141-148 | -5.3 worksheet<br>-5.3 Quiz<br>-Real Data Activity pg. 144 | 3 days |

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| EVSC.LS2.3<br>EVSC.LS2.4<br>EVSC.LS2.5<br>EVSC.LS2.7<br>EVSC.LS4.1<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.13<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>Describe what happens to a community after a disturbance</li> <li>Explain the conditions necessary for a species to become invasive</li> </ul> | CCC: Stability and change/cause and effect<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)/<br>Engaging in argument from evidence | 5.4 Community Stability pgs. 149-155 | -5.4 worksheet<br>-5.4 Quiz<br>-Quick lab pg. 152          | 1 day  |
| All above standards                                                                                                                                          | All above learning objectives                                                                                                                                                         | All above information                                                                                                                                                       | All sections                         | Chapter 5 Test                                             | 1 day  |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS4.1<br>EVSC.ESS3.2<br>EVSC.ESS3.17<br>EVSC.ESS3.18                                            | <ul style="list-style-type: none"> <li>Explain how biomes are characterized</li> <li>Describe how net primary production varies among biomes</li> </ul>                               | CCC: Energy and Matter/ Stability and Change<br>SEP: Obtaining, evaluating, and communicating information/<br>Developing and using models                                   | 6.1 Defining Biomes pgs. 164-167     | 6.1 worksheet<br>6.1 Quiz                                  | 1 day  |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS4.1<br>EVSC.ESS3.2<br>EVSC.ESS3.17<br>EVSC.ESS3.18                                            | <ul style="list-style-type: none"> <li>Explain how organisms are adapted to the conditions of their biomes</li> </ul>                                                                 | CCC: Energy and Matter/ Stability and Change<br>SEP: Obtaining, evaluating, and communicating information/<br>Developing and using models                                   | 6.2 Biomes pgs. 168-180              | -6.2 worksheet<br>-6.2 Quiz<br>-Real Data Activity pg. 179 | 4 days |

| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS4.1<br>EVSC.ESS3.2<br>EVSC.ESS3.17<br>EVSC.ESS3.18                                                                                                                        | <ul style="list-style-type: none"> <li>Describe the criteria ecologists use to classify aquatic ecosystems</li> <li>List major categories of freshwater ecosystems</li> <li>Explain the ecological importance of estuaries</li> <li>List the three major zones of the ocean</li> </ul> | CCC: Energy and Matter/ Stability and Change<br>SEP: Obtaining, evaluating, and communicating information/<br>Developing and using models | 6.3 Aquatic Ecosystems pgs. 181-191 | -6.3 worksheet<br>-6.3 Quiz<br>-Go Outside Activity pg. 183 | 4 days           |
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| All above standards                                                                                                                                                                                                                      | All above learning objectives                                                                                                                                                                                                                                                          | All above information                                                                                                                     | All sections                        | Chapter 6 Test                                              | 1 day            |
| <b>Quarter 2</b>                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                        |                                                                                                                                           |                                     |                                                             |                  |
| <b>Standard(s)</b>                                                                                                                                                                                                                       | <b>Learning Objective(s)</b>                                                                                                                                                                                                                                                           | <b>CCC/SEP</b>                                                                                                                            | <b>Savvas Alignment</b>             | <b>Assessments</b>                                          | <b>Timeframe</b> |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.LS4.4<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.17<br>EVSC.ESS3.18<br>EVSC.ETS2.2<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Differentiate the components of biodiversity</li> <li>Explain two ways in which biodiversity varies across groups or geography</li> <li>Describe the economic benefits of biodiversity</li> </ul>                                               | CCC: Stability and change<br>SEP: Analyzing and interpreting data/<br>Planning and carrying out investigations                            | 7.1 Our Planet of Life pgs. 200-206 | 7.1 worksheet<br>7.1 quiz                                   | 1 day            |

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| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.LS4.4<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.17<br>EVSC.ESS3.18<br>EVSC.ETS2.2<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Describe how biodiversity is monitored and explain current biodiversity trends</li> <li>List the major causes of biodiversity loss</li> </ul>                                                               | CCC: Stability and change<br>SEP: Analyzing and interpreting data/<br>Planning and carrying out investigations | 7.2 Extinction and Biodiversity Loss pgs. 207-211 | -7.2 worksheet<br>-7.2 quiz<br>-Map It Activity pg. 210    | 1 day |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.3<br>EVSC.LS2.6<br>EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.LS4.4<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.17<br>EVSC.ESS3.18<br>EVSC.ETS2.2<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Explain legal actions nations can take to protect biodiversity</li> <li>Explain the goal of Species Survival Plans</li> <li>Describe three strategies for managing whole ecosystems and habitats</li> </ul> | CCC: Stability and change<br>SEP: Analyzing and interpreting data/<br>Planning and carrying out investigations | 7.3 Protecting Biodiversity pgs. 212-217          | -7.3 worksheet<br>-7.3 quiz<br>-Real Data Activity pg. 214 | 1 day |
| All above standards                                                                                                                                                                                                                      | All above learning objectives                                                                                                                                                                                                                      | All above information                                                                                          | All sections                                      | Chapter 7 Test                                             | 1 day |

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| <p>EVSC.LS2.3<br/>EVSC.ESS3.2<br/>EVSC.ESS3.3<br/>EVSC.ESS3.8<br/>EVSC.ESS3.18<br/>EVSC.ETS2.2</p> | <ul style="list-style-type: none"> <li>Describe how technological advances have contributed to human population growth</li> <li>Explain recent trends in population growth</li> <li>Identify characteristics of human population that are studied by demographers</li> </ul>  | <p>CCC: Stability and Change<br/>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br/>Engaging in argument from evidence<br/>Obtaining, evaluating, and communicating information</p> | <p>8.1 Trends in Human Population Growth pgs. 228-233</p> | <p>-8.1 worksheet<br/>-8.1 quiz<br/>- Real Data Activity pg. 230</p> | <p>1 day</p> |
| <p>EVSC.LS2.3<br/>EVSC.ESS3.2<br/>EVSC.ESS3.3<br/>EVSC.ESS3.8<br/>EVSC.ESS3.18<br/>EVSC.ETS2.2</p> | <ul style="list-style-type: none"> <li>Describe total fertility rates and replacement fertility</li> <li>Explain how the age structure and sex ratio of a population define its potential for growth</li> <li>Discuss social factors that affect population growth</li> </ul> | <p>CCC: Stability and Change<br/>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br/>Engaging in argument from evidence<br/>Obtaining, evaluating, and communicating information</p> | <p>8.2 Predicting Population Growth pgs. 234-241</p>      | <p>-8.2 worksheet<br/>-8.2 quiz<br/>-Quick lab pg. 237</p>           | <p>1 day</p> |

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| EVSC.LS2.3<br>EVSC.ESS3.2<br>EVSC.ESS3.3<br>EVSC.ESS3.8<br>EVSC.ESS3.18<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>Describe how humans impact their environment</li> <li>Discuss the negative and positive impacts of technology</li> </ul>                                                                                                                                          | CCC: Stability and Change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 8.3 People and their Environment pgs. 242-247        | 8.3 worksheet<br>8.3 quiz | 1 day  |
| All above standards                                                                    | All above learning objectives                                                                                                                                                                                                                                                                            | All above options                                                                                                                                                                                                 | All sections                                         | Chapter 8 Test            | 1 day  |
| EVSC.LS2.3<br>EVSC.ESS3.2<br>EVSC.ESS3.3<br>EVSC.ESS3.8<br>EVSC.ESS3.18<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>List the types of environmental health hazards</li> <li>Compare and contrast epidemiology and toxicology</li> <li>Describe the reasons why individuals respond differently to the same environmental hazards</li> <li>Discuss risk assessment</li> </ul>          | CCC: Patterns and stability and change<br>SEP: Asking questions (for science) and defining problems (for engineering) and Analyzing and interpreting data                                                         | 9.1 An Overview of Environmental Health pgs. 256-260 | 9.1 worksheet<br>9.1 quiz | 1 day  |
| EVSC.LS2.3<br>EVSC.ESS3.2<br>EVSC.ESS3.3<br>EVSC.ESS3.8<br>EVSC.ESS3.18<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>Describe how infectious diseases spread</li> <li>Explain why emerging diseases are important to monitor and control</li> <li>Differentiate between social hazards that are lifestyle choices and those that cannot be controlled</li> </ul>                       | CCC: Patterns and stability and change<br>SEP: Asking questions (for science) and defining problems (for engineering) and Analyzing and interpreting data                                                         | 9.2 Biological and Social Hazards pgs. 261-266       | 9.2 worksheet<br>9.2 quiz | 2 days |
| EVSC.LS2.3<br>EVSC.ESS3.2<br>EVSC.ESS3.3<br>EVSC.ESS3.8<br>EVSC.ESS3.18<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>Explain what makes chemicals hazardous</li> <li>Discuss how chemical hazards affect human health</li> <li>List some indoor chemical hazards</li> <li>Discuss where chemical hazards can be found in the environment</li> <li>Describe biomagnification</li> </ul> | CCC: Patterns and stability and change<br>SEP: Asking questions (for science) and defining problems (for engineering) and Analyzing and interpreting data                                                         | 9.3 Toxic Substances in the Environment pgs. 267-276 | 9.3 worksheet<br>9.3 quiz | 1 day  |

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| EVSC.LS2.3<br>EVSC.ESS3.2<br>EVSC.ESS3.3<br>EVSC.ESS3.8<br>EVSC.ESS3.18<br>EVSC.ETS2.2   | <ul style="list-style-type: none"> <li>Discuss how earthquakes affect structures on Earth's surface</li> <li>Discuss how volcanoes affect human lives and property</li> <li>Describe tornadoes, hurricanes and thunderstorms</li> <li>Discuss the dangers of avalanches</li> </ul>                                                                                                                                                      | CCC: Patterns and stability and change<br>SEP: Asking questions (for science) and defining problems (for engineering) and Analyzing and interpreting data | 9.4 Natural Disasters pgs. 277-283          | -9.4 worksheet<br>-9.4 quiz<br>-Map It Activity pg. 278        | 1 day  |
| All above standards                                                                      | All above learning objectives                                                                                                                                                                                                                                                                                                                                                                                                           | All above information                                                                                                                                     | All sections                                | Chapter 9 Test                                                 | 1 day  |
| EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.7<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>Differentiate between land cover and land use, and describe how people affect both</li> <li>Explain how and where urbanization occurs</li> <li>Describe the environmental impacts of urbanization</li> </ul>                                                                                                                                                                                     | CCC: Stability and change and Scale, proportion and quantity<br>SEP: Developing and using models and developing arguments                                 | 10.1 Land Use and Urbanization pgs. 292-298 | 10.1 worksheet<br>10.1 quiz                                    | 1 day  |
| EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.7<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>Describe the contributors to sprawl and its patterns</li> <li>Explain the impacts sprawl has on an area</li> </ul>                                                                                                                                                                                                                                                                               | CCC: Stability and change and Scale, proportion and quantity<br>SEP: Developing and using models and developing arguments                                 | 10.2 Sprawl pgs 299-304                     | -10.2 worksheet<br>-10.2 quiz<br>-Real Data Activity pg. 302   | 1 day  |
| EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.7<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>Describe four different components of city planning</li> <li>Explain the importance of mass transit options to a city and its residents</li> <li>Explain the importance of open space to a livable city</li> <li>Differentiate green buildings from conventional buildings</li> <li>Discuss the progress towards sustainability some cities have made and its importance to the world</li> </ul> | CCC: Stability and change and Scale, proportion and quantity<br>SEP: Developing and using models and developing arguments                                 | 10.3 Sustainable Cities pgs. 305-313        | -10.3 worksheet<br>-10.3 quiz<br>-Go Outside: Mini Lab pg. 310 | 1 day  |
| All above standards                                                                      | All above learning objectives                                                                                                                                                                                                                                                                                                                                                                                                           | All above information                                                                                                                                     | All sections                                | Chapter 10 Test                                                | 1 day  |
| All Q1 and Q2 standards                                                                  | All Q1 and Q2 learning objectives                                                                                                                                                                                                                                                                                                                                                                                                       | All above information                                                                                                                                     | All material covered in Q1 and Q2           | Mid-Term Exam                                                  | 1 week |

| Quarter Three                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                         |                                               |                                                                                     |           |
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| Standard(s)                                                                                                                                                                                                                                                                    | Learning Objective(s)                                                                                                                                                                                                                                                                                              | CCC/SEP                                                                                                                                                                                 | Savvas Alignment                              | Assessments                                                                         | Timeframe |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.6<br>EVSC.ESS2.6<br>EVSC.ESS3.1<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.15<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Explain the importance of managing specific renewable resources</li> <li>Describe three resource management approaches</li> </ul>                                                                                                                                           | CCC: Cause and effect and systems and system models<br>SEP: Planning and carrying out investigations<br>Analyzing and interpreting data<br>Using Mathematics and Computational thinking | 11.1 Resource Management pgs. 324-329         | 11.1 worksheet<br>11.1 quiz                                                         | 3 days    |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.6<br>EVSC.ESS2.6<br>EVSC.ESS3.1<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.15<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>List some of the ecological and economical values of forest resources</li> <li>Describe the costs and benefits of the different methods of timber harvesting</li> <li>Discuss the current levels of deforestation in the United States and in developing nations</li> </ul> | CCC: Cause and effect and systems and system models<br>SEP: Planning and carrying out investigations<br>Analyzing and interpreting data<br>Using Mathematics and Computational thinking | 11.2 Forests and their Resources pgs. 330-336 | -11.2 worksheet<br>-11.2 quiz<br>- Real Data Activity pg. 332<br>-Quick lab pg. 334 | 3 days    |

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| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS2.6<br>EVSC.ESS2.6<br>EVSC.ESS3.1<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.15<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>• Explain how logging is managed in U.S. national forests</li> <li>• Describe where most logging in the United States takes place</li> <li>• Discuss the potential effects of fire suppression on an ecosystem and on future fires</li> <li>• Explain how consumer demand is important to sustainable forestry</li> </ul> | CCC: Cause and effect and systems and system models<br>SEP: Planning and carrying out investigations<br>Analyzing and interpreting data<br>Using Mathematics and Computational thinking | 11.3 Forest Management pgs. 337-343 | 11.3 worksheet<br>11.3 quiz                                    | 3 days |
| All above standards                                                                                                                                                                                                                                                            | All above learning objectives                                                                                                                                                                                                                                                                                                                                    | All above information                                                                                                                                                                   | All sections                        | Chapter 11 Test                                                | 1 day  |
| EVSC.ESS2.6<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.7<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS2.2<br>EVSC.ETS3.1                                                                          | <ul style="list-style-type: none"> <li>• Explain three processes by which soil forms</li> <li>• Describe the horizons that make up soil profile</li> <li>• List the four characteristics used to classify soil</li> </ul>                                                                                                                                        | CCC: Stability and change and structure and function/ energy and matter<br>SEP: Obtaining, evaluating, and communicating information                                                    | 12.1 Soil pgs. 352-357              | -12.1 worksheet<br>-12.2 quiz<br>-Go Outside: Mini lab pg. 356 | 2 days |

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| EVSC.ESS2.6<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.7<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS2.2<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Describe some practices that can lead to soil erosion and some that can prevent it</li> <li>Identify the causes and effects of desertification</li> <li>Discuss the activities of U.S. and international agricultural organizations</li> <li>Explain how irrigation and pesticide use can cause soil pollution</li> </ul> | CCC: Stability and change and structure and function/ energy and matter<br>SEP: Obtaining, evaluating, and communicating information | 12.2 Soil Degradation and Conservation pgs. 358-364 | 12.2 worksheet<br>12.2 quiz                               | 2 days |
| EVSC.ESS2.6<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.7<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS2.2<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Discuss the beginnings of agriculture</li> <li>Explain the importance of industrial agriculture and the green revolution</li> <li>Identify different types of pest control</li> <li>Explain the importance of pollinators to agriculture</li> </ul>                                                                       | CCC: Stability and change and structure and function/ energy and matter<br>SEP: Obtaining, evaluating, and communicating information | 12.3 Agriculture pgs. 365-372                       | -12.3 worksheet<br>-12.3 quiz<br>-Map It Activity pg. 366 | 2 days |
| EVSC.ESS2.6<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.7<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS2.2<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Explain why the world needs to grow more food and to grow it sustainably</li> <li>Discuss genetically modified food</li> <li>Describe the advantages and disadvantages of industrial food production</li> <li>Discuss sustainable agriculture</li> </ul>                                                                  | CCC: Stability and change and structure and function/ energy and matter<br>SEP: Obtaining, evaluating, and communicating information | 12.4 Food Production pgs. 373-383                   | 12.4 worksheet<br>12.4 quiz                               | 3 days |

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| All above standards                                                                                                        | All above learning objectives                                                                                                                                                                                                               | All above information                                                                                                                | All sections                                    | Chapter 12 Test                                           | 1 day  |
| EVSC.ESS2.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.15<br>EVSC.ESS3.16 | <ul style="list-style-type: none"> <li>• Explain what a mineral is</li> <li>• Describe how minerals form</li> <li>• Identify types of rocks and the stages of the rock cycle</li> </ul>                                                     | CCC: Stability and change and structure and function/ energy and matter<br>SEP: Obtaining, evaluating, and communicating information | 13.1 Minerals and Rocks pgs. 392-397            | 13.1 worksheet<br>13.1 quiz                               | 3 days |
| EVSC.ESS2.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.15<br>EVSC.ESS3.16 | <ul style="list-style-type: none"> <li>• Identify the types of resources that are mined</li> <li>• Describe different methods used for mining</li> <li>• Explain how metals are processed</li> </ul>                                        | CCC: Stability and change and structure and function/ energy and matter<br>SEP: Obtaining, evaluating, and communicating information | 13.2 Mining pgs. 398-404                        | -13.2 worksheet<br>-13.2 quiz<br>-Map It Activity pg. 402 | 3 days |
| EVSC.ESS2.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.15<br>EVSC.ESS3.16 | <ul style="list-style-type: none"> <li>• Describe the negative impacts of mining on the environment and society</li> <li>• Explain how mining is regulated</li> <li>• Describe ways that mineral use can become more responsible</li> </ul> | CCC: Stability and change and structure and function/ energy and matter<br>SEP: Obtaining, evaluating, and communicating information | 13.3 Mining Impacts and Regulation pgs. 405-411 | 13.3 worksheet<br>13.3 quiz                               | 3 days |
| All above standards                                                                                                        | All above learning objectives                                                                                                                                                                                                               | All above information                                                                                                                | All sections                                    | Chapter 13 Test                                           | 1 day  |

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| EVSC.LS2.2<br>EVSC.LS2.6<br>EVSC.ESS2.5<br>EVSC.ESS3.1<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.16<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>• Discuss how fresh water can be both renewable and limited</li> <li>• Explain the significance of a watershed</li> <li>• Explain how most groundwater is accessed</li> </ul>                                                                                                    | CCC: Energy and matter<br>SEP: Obtaining, evaluating, and communicating information | 14.1 Earth: The Water Planet<br>pgs. 420-425 | -14.1 worksheet<br>-14.1 quiz<br>-Map It Activity<br>pg. 422 | 3 days |
| EVSC.LS2.2<br>EVSC.LS2.6<br>EVSC.ESS2.5<br>EVSC.ESS3.1<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.16<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>• List the three primary categories of freshwater use</li> <li>• Relate the causes of surface water depletion to their effects</li> <li>• Explain the major causes and effects of groundwater depletion</li> <li>• Describe strategies for addressing water depletion</li> </ul> | CCC: Energy and matter<br>SEP: Obtaining, evaluating, and communicating information | 14.2 Uses of Fresh Water pgs.<br>426-434     | -14.2 worksheet<br>-14.2 quiz<br>-Real Data pg.<br>431       | 3 days |

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| EVSC.LS2.2<br>EVSC.LS2.6<br>EVSC.ESS2.5<br>EVSC.ESS3.1<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.16<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>• Discuss the main categories of water pollution</li> <li>• Explain why groundwater pollution is difficult to clean up</li> <li>• Discuss the sources and effects of major pollutants found in the ocean</li> <li>• Describe how water is regulated and treated</li> </ul>                                                                   | CCC: Energy and matter<br>SEP: Obtaining, evaluating, and communicating information                                                                                                                               | 14.3 Water Pollution pgs. 435-443             | -14.3 worksheet<br>-14.3 quiz<br>-Quick lab pg. 437           | 3 days |
| All above standards                                                                                                                                                                                               | All above learning objectives                                                                                                                                                                                                                                                                                                                                                       | All above information                                                                                                                                                                                             | All sections                                  | Chapter 14 Test                                               | 1 day  |
| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS2.3<br>EVSC.ESS2.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.13<br>EVSC.ESS3.16<br>EVSC.ESS3.17                                                 | <ul style="list-style-type: none"> <li>• Describe the properties of the atmosphere</li> <li>• Identify the four main layers of the atmosphere</li> <li>• Explain heat transfer and the interaction of air masses in the troposphere</li> </ul>                                                                                                                                      | CCC: Stability and change and cause and effect<br>SEP: Developing and using models<br>Planning and carrying out investigations<br>Analyzing and interpreting data<br>Using Mathematics and Computational thinking | 15.1 Earth's Atmosphere pgs. 452-460          | -15.1 worksheet<br>-15.1 quiz<br>-Quick lab pg. 459           | 3 days |
| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS2.3<br>EVSC.ESS2.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.13<br>EVSC.ESS3.16<br>EVSC.ESS3.17                                                 | <ul style="list-style-type: none"> <li>• Explain how both natural processes and human activities can cause air pollution</li> <li>• Describe how air pollution affects human health</li> <li>• Explain what causes smog and how temperature inversions affect it and other forms of air pollution</li> <li>• Explain how acid deposition occurs and describe its effects</li> </ul> | CCC: Stability and change and cause and effect<br>SEP: Developing and using models<br>Planning and carrying out investigations<br>Analyzing and interpreting data<br>Using Mathematics and Computational thinking | 15.2 Pollution of the Atmosphere pgs. 461-468 | -15.2 worksheet<br>-15.2 quiz<br>-Go outside activity pg. 467 | 3 days |

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| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS2.3<br>EVSC.ESS2.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.13<br>EVSC.ESS3.16<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>Explain how the provisions of the Clean Air Act have reduced air pollution in the United States</li> <li>Describe international efforts to reduce the ozone hole</li> </ul>                                                                                                                                     | CCC: Stability and change and cause and effect<br>SEP: Developing and using models<br>Planning and carrying out investigations<br>Analyzing and interpreting data<br>Using Mathematics and Computational thinking                              | 15.3 Controlling Air Pollution<br>pgs. 469-473 | -15.3 worksheet<br>-15.3 quiz<br>-Real data activity pg. 471 | 3 days           |
| All above standards                                                                                                                                               | All above learning objectives                                                                                                                                                                                                                                                                                                                          | All above information                                                                                                                                                                                                                          | All sections                                   | Chapter 15 Test                                              | <b>1 day</b>     |
| <b>Quarter Four</b>                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                |                                                |                                                              |                  |
| <b>Standard(s)</b>                                                                                                                                                | <b>Learning Objective(s)</b>                                                                                                                                                                                                                                                                                                                           | <b>CCC/SEP</b>                                                                                                                                                                                                                                 | <b>Savvas Alignment</b>                        | <b>Assessments</b>                                           | <b>Timeframe</b> |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS2.2<br>EVSC.ESS3.17<br>EVSC.ETS2.2                                                                | <ul style="list-style-type: none"> <li>Describe factors that affect how the sun warms Earth</li> <li>Discuss the role of wind patterns in determining climate</li> <li>Explain how the oceans affect climate</li> <li>Describe how climate is affected by topography, volcanoes, regional vegetation, and periodic changes in Earth's orbit</li> </ul> | CCC: Cause and effect/<br>Systems/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 16.1 Our Dynamic Climate<br>pgs. 484-490       | -16.1 worksheet<br>-16.1 quiz<br>-Quick lab pg. 486          | 3 days           |

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| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS2.2<br>EVSC.ESS3.17<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>Identify evidence of global warming</li> <li>Explain three methods used to study climate change</li> <li>State the probable cause of global climate change</li> </ul>                                                                                                                                                                          | CCC: Cause and effect/<br>Systems/Stability and<br>change<br>SEP: Constructing<br>explanations (for<br>science) and designing<br>solutions (for<br>engineering)<br>Engaging in argument<br>from evidence<br>Obtaining, evaluating,<br>and communicating<br>information | 16.2 Climate Change pgs.<br>491-496               | -16.2 worksheet<br>-16.2 quiz<br>-Real data<br>activity pg. 493 | 2 days |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS2.2<br>EVSC.ESS3.17<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>State ways in which the warming atmosphere affects ecosystems and organisms</li> <li>Explain how climate change is affecting people now</li> <li>Predict future effects of climate change on people</li> </ul>                                                                                                                                 | CCC: Cause and effect/<br>Systems/Stability and<br>change<br>SEP: Constructing<br>explanations (for<br>science) and designing<br>solutions (for<br>engineering)<br>Engaging in argument<br>from evidence<br>Obtaining, evaluating,<br>and communicating<br>information | 16.3 Effects of Climate<br>Change pgs. 497-501    | 16.3 worksheet<br>16.3 quiz                                     | 2 days |
| EVSC.LS2.1<br>EVSC.LS2.2<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS2.2<br>EVSC.ESS3.17<br>EVSC.ETS2.2 | <ul style="list-style-type: none"> <li>List ways to reduce greenhouse gases related to the use and generation of electricity</li> <li>Describe some of the ways of reducing greenhouse gases related to transportation</li> <li>Describe other strategies for reducing greenhouse gases</li> <li>Explain how nations are working together to try to address climate change</li> </ul> | CCC: Cause and effect/<br>Systems/Stability and<br>change<br>SEP: Constructing<br>explanations (for<br>science) and designing<br>solutions (for<br>engineering)<br>Engaging in argument<br>from evidence<br>Obtaining, evaluating,<br>and communicating<br>information | 16.4 Responding to Climate<br>Change pgs. 502-507 | 16.4 worksheet<br>16.4 quiz                                     | 2 days |

| All above standards                                                                                                                                                                                | All above learning objectives                                                                                                                                                                                                                                                                                                 | All above information                                                                                                                                                                                                               | All sections                          | Chapter 16 Test             | 1 day  |
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| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>Define energy and differentiate between kinetic and potential energy</li> <li>Identify different forms of energy</li> <li>Describe how human society uses energy resources</li> </ul>                                                                                                  | CCC: Matter and Energy/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 17.1 Energy: An Overview pgs. 516-521 | 17.1 worksheet<br>17.1 quiz | 2 days |
| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>Explain how fossil fuels formed</li> <li>Describe the uses of coal and how it is removed from the ground</li> <li>Describe the uses of oil and how it is extracted</li> <li>Explain the characteristics and uses of natural gas</li> <li>Predict the future of fossil fuels</li> </ul> | CCC: Matter and Energy/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 17.2 Fossil Fuels pgs. 522-528        | 17.2 worksheet<br>17.2 quiz | 2 days |

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| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>• Explain how pollutants released by fossil fuels damage health and the environment</li> <li>• Describe the environmental and health effects of mining and drilling</li> <li>• Explain the implications of dependence on foreign nations for fossil fuels</li> <li>• Explain why energy conservation is important</li> </ul> | CCC: Matter and Energy/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 17.3 Consequences of Fossil Fuel Use pgs. 529-535 | -17.3 worksheet<br>-17.3 quiz<br>-Real data activity pg. 530<br>-Map it activity pg. 534 | 3 days |
| EVSC.LS2.7<br>EVSC.LS4.2<br>EVSC.LS4.3<br>EVSC.ESS3.4<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.10<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.14<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>• Relate nuclear fission to the production of energy</li> <li>• Describe how a nuclear power plant generates electricity</li> <li>• Identify the advantages and disadvantages of nuclear power</li> <li>• Contrast nuclear fusion with nuclear fission, and explain the issues related to nuclear fusion</li> </ul>          | CCC: Matter and Energy/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 17.4 Nuclear Power pgs. 536-541                   | 17.4 worksheet<br>17.4 quiz                                                              | 2 days |
| All above standards                                                                                                                                                                                | All above learning objectives                                                                                                                                                                                                                                                                                                                                       | All above information                                                                                                                                                                                                               | All sections                                      | Chapter 17 Test                                                                          | 1 day  |

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| EVSC.ESS3.1<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>• Explain the benefits and current status of renewable energy resources</li> <li>• Define biomass energy and explain how it is used</li> <li>• Describe how geothermal energy is harnessed and used</li> </ul>                                                                              | CCC: Matter and Energy/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 18.1 Biomass and Geothermal Energy pgs. 550-555 | -18.1 worksheet<br>-18.1 quiz<br>-Real data activity pg. 552                              | 2 days |
| EVSC.ESS3.1<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>• Explain how river water can be used to generate electricity</li> <li>• Identify benefits and costs of hydropower</li> <li>• Describe how energy from the ocean can generate electricity</li> </ul>                                                                                        | CCC: Matter and Energy/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 18.2 Hydropower and Ocean Energy pgs. 556-560   | 18.2 worksheet<br>18.2 quiz                                                               | 2 days |
| EVSC.ESS3.1<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.17 | <ul style="list-style-type: none"> <li>• Describe techniques for using solar energy to heat buildings and generate electricity</li> <li>• Analyze the benefits and costs of solar energy</li> <li>• Explain how wind energy can be used to produce electricity</li> <li>• Analyze the benefits and costs of wind energy</li> </ul> | CCC: Matter and Energy/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 18.3 Solar and Wind Energy pgs. 561-569         | -18.3 worksheet<br>-18.3 quiz<br>-Go outside activity pg. 564<br>-Map it activity pg. 568 | 2 days |

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| EVSC.ESS3.1<br>EVSC.ESS3.5<br>EVSC.ESS3.6<br>EVSC.ESS3.9<br>EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.17                   | <ul style="list-style-type: none"> <li>Describe how hydrogen fuel can be produced</li> <li>Explain the way fuel cells work and how they are used</li> </ul>               | CCC: Matter and Energy/Stability and change<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 18.4 Energy from Hydrogen<br>pgs. 570-573           | 18.4 worksheet<br>18.4 quiz | 2 days |
| All above standards                                                                                                        | All above learning objectives                                                                                                                                             | All above information                                                                                                                                                                                                               | All sections                                        | Chapter 18 Test             | 1 day  |
| EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.15<br>EVSC.ESS3.16<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Identify the three categories of waste</li> <li>Describe conventional waste disposal methods</li> </ul>                            | CCC: Systems and system models<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information              | 19.1 Municipal and Industrial Waste<br>pgs. 582-588 | 19.1 worksheet<br>19.1 quiz | 3 days |
| EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.15<br>EVSC.ESS3.16<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Discuss the importance of reducing waste</li> <li>Describe how composting and recycling help reduce the amount of waste</li> </ul> | CCC: Systems and system models<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information              | 19.2 Minimizing Solid Waste<br>pgs. 589-595         | 19.2 worksheet<br>19.2 quiz | 3 days |

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| EVSC.ESS3.11<br>EVSC.ESS3.12<br>EVSC.ESS3.13<br>EVSC.ESS3.15<br>EVSC.ESS3.16<br>EVSC.ESS3.18<br>EVSC.ETS2.1<br>EVSC.ETS3.1 | <ul style="list-style-type: none"> <li>Define hazardous waste</li> <li>Describe some of the sources of hazardous wastes</li> <li>Describe current methods for hazardous waste disposal</li> <li>Describe the danger of radioactive wastes</li> <li>Identify agencies that regulate hazardous waste</li> </ul> | CCC: Systems and system models<br>SEP: Constructing explanations (for science) and designing solutions (for engineering)<br>Engaging in argument from evidence<br>Obtaining, evaluating, and communicating information | 19.3 Hazardous Waste pgs. 596-603 | -19.3 worksheet<br>-19.3 quiz<br>-Real data activity pg. 601 | 3 days |
| All above standards                                                                                                        | All above learning objectives                                                                                                                                                                                                                                                                                 | All above information                                                                                                                                                                                                  | All sections                      | Chapter 19 Test                                              | 1 day  |
| All standards covered Q1-Q4<br>(Comprehensive Final) or All standards Q3 and Q4<br>(semester final)                        | All learning objectives                                                                                                                                                                                                                                                                                       | All above information                                                                                                                                                                                                  | All sections covered              | Environmental Science Final Exam                             | 1 week |