



**Environmental Science** (½ credit)

| <b>TERM 1</b>                                       |   |
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| <b>Term 1 Dates</b>                                 | <b>MS College and Career Readiness Standards</b>  |
| <p>WK 1:<br/>Aug 6-16</p>                           | <p><b>SCIENCE and ENGINEERING PRACTICES</b></p> <ul style="list-style-type: none"> <li>• Ask Question and Define Problems</li> <li>• Develop and Use Models</li> <li>• Analyze and Interpret Data</li> <li>• Plan and Conduct Investigations</li> <li>• Use Mathematical and Computational Thinking</li> <li>• Engage in Scientific Argument from Evidence</li> <li>• Construct Explanations and Design Solutions</li> <li>• Obtain, Evaluate, and Communicate Information</li> </ul>   |
| <p>WK 2:<br/>Aug 19-23</p>                          | <p><b>ENV.1.1</b> Identify, investigate, and evaluate the interactions of the abiotic and biotic factors that determine the types of organisms that live in major biomes.</p> <p><b>ENV.1.2</b> Evaluate evidence in nonfiction text to explain how biological or physical changes within biomes affect populations and communities and how changing conditions may result in altered ecosystems.</p> <p><b>ENV.1.5</b> Develop and use models to diagram the flow of nitrogen, carbon, and phosphorus through the environment.</p> |
| <b>Unit Assessment 1</b>                            |   |
| <p>WK 3:<br/>Aug 26-30</p>                          | <p><b>ENV.1.3</b> Use models to explain why the flow of energy through an ecosystem can be illustrated by a pyramid with less energy available at the higher trophic levels compared to lower levels.</p>   |
| <p>WK 4:<br/>Sept 2-6</p>                           | <p><b>ENV.1.4</b> Describe symbiotic relationships (e.g., mutualism, parasitism, and commensalism) and other coevolutionary (e.g., predator-prey, cooperation, competition, and mimicry) relationships within specific environments.</p>  |
| <b>Mid-term OR Unit Assessment 2 (WK 4.5/ WK 5)</b> |   |
| <p>WK 5:<br/>Sept 9-13</p>                          | <p><b>ENV.1.6</b> Use mathematics, graphics, and informational text to determine how population density-dependent and density-independent limiting factors affect populations and diversity within ecosystems. Use technology to illustrate and compare a variety of population-growth curves.</p>  |
| <p>WK 6:<br/>Sept 16-20</p>                         | <p><b>ENV.1.7</b> Analyze and interpret quantitative data to construct explanations of how the carrying capacity of an ecosystem may change as the availability of resources changes.</p> <p><b>ENV.1.8</b> Utilize data to communicate changes within a given population and the environmental factors that may have impacted these changes (e.g., weather patterns, natural disasters).</p>   |
| <b>Unit Assessment 3</b>                            |   |

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| WK 7:<br>Sept 23-27     | <b>ENV.1.9</b> Evaluate and communicate data that explains how human activity may impact biodiversity (e.g., introduction, removal, and reintroduction of an organism within an ecosystem; land usage) and genetic variations of organisms, including endangered and threatened species.<br><b>ENV.1.10 Enrichment:</b> Engage in scientific argument from evidence the benefits versus harm of genetically modified organisms.* |
| WK 8:<br>Sept 30- Oct 4 | <i>Review for Assessment</i>   |
| WK 9:<br>Oct 7-11       | <b><i>Benchmark OR Unit Assessment</i></b>   |

## TERM 1

### Recurring Standards

**Standards taught the first 4-5 weeks; the mid-term data will indicate the remediation needed.**

|                     |                               |
|---------------------|-------------------------------|
| WK 5:<br>Sept 9-13  | Science Engineering Practices |
| WK 6:<br>Sept 16-20 | ENV.1.1, ENV.1.2 & ENV.1.5    |
| WK 7:<br>Sept 23-27 | ENV.1.3 & ENV.1.4             |



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| <b>TERM 2</b>                                       |  |
|---|--|
| <b>Term 2 Dates</b>                                 | <b>MS College and Career Readiness Standards</b>   |
| WK 1:<br>Oct 14-18                                  | <p><b>ENV.2.1</b> Differentiate between renewable and nonrenewable resources, and compare and contrast the pros and cons of using these resources.</p> <p><b>ENV.2.2</b> Investigate and research the pros and cons of using traditional sources of energy (e.g., fossil fuels) and alternative sources of energy (e.g., water, wind, geothermal, biomass/biofuels, solar).</p>  |
| WK 2:<br>Oct 21-25                                  |  |
| <b>Unit Assessment 1</b>                            |  |
| WK 3:<br>Oct 28- Nov 1                              | <p><b>ENV.2.3</b> Compare and contrast biodegradable and nonbiodegradable wastes and their significance in landfills.</p> <p><b>ENV.2.4</b> Examine solutions for developing, conserving, managing, recycling, and reusing energy and mineral resources to minimize impacts in natural systems (e.g., agricultural soil use, mining for coal, construction sites, and exploration of petroleum and natural gas sources).</p>   |
| WK 4:<br>Nov 4-8                                    | <p><b>ENV.2.5</b> Research various resources related to water quality and pollution (e.g., non-fictional text, EPA’s Surf Your Watershed, MDEQ publications) and communicate the possible effects on the environment and human health.</p> <p><b>ENV.2.6 Enrichment:</b> Obtain water from a local source (e.g., stream on campus, rainwater, ditch water) to monitor water quality over time, using a spreadsheet program to graphically represent collected data.*</p>         |
| <b>Mid-term OR Unit Assessment 2 (WK 4.5/ WK 5)</b> |  |
| WK 5:<br>Nov 11-15                                  | <p><b>ENV.3.1</b> Use a model to describe cycling of carbon through the ocean, atmosphere, soil, and biosphere and how increases in carbon dioxide concentrations have resulted in atmospheric and climate changes.</p> <p><b>ENV.3.2</b> Interpret data and climate models to predict how global and regional climate change can affect Earth’s systems (e.g., precipitation, temperature, impacts on sea level, global ice volumes, and atmosphere and ocean composition).</p> |
| WK 6:<br>Nov 18-22                                  | <p><b>ENV.3.3</b> Use satellite imagery and other resources to analyze changes in biomes over time (e.g., glacial retreat, deforestation, desertification) and propose strategies to reduce the impact of human activities leading to these issues.</p> <p><b>ENV.3.4 Enrichment:</b> Determine mathematically an individual’s impact on the environment (carbon footprint, water usage, landfill contribution) and develop a plan to reduce personal contribution.</p>          |
| <b>Unit Assessment 3</b>                            |  |
| WK 7:<br>Dec 2-6                                    | <p><b>ENV.4.1</b> Identify human impact and develop a solution for protection of the atmosphere, considering pollutants (e.g., acid rain, air pollution, smog, ozone layer, or increased levels of greenhouse gases) and the impacts of pollutants on human health (e.g., asthma, COPD,</p>  |

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|  | emphysema, and cancer).  |
| WK 8:<br>Dec 9-13                            | <p><b>ENV.4.2</b> Evaluate data and other information to explain how key natural resources (e.g., water sources, fertile soils, concentrations of minerals, and fossil fuels), natural hazards, and climate changes influence human activity (e.g., mass migrations, human health).</p> <p><b>ENV.4.3 Enrichment:</b> Research and analyze case studies to determine the impact of human-related and natural environmental changes on human health and communicate possible solutions to reduce/resolve the dilemma.*</p> <p><b>ENV.4.4 Enrichment:</b> Explore online resources related to air pollution to determine air quality in a geographic area and communicate the possible effects on the environment and human health.*</p> <p><b>ENV.4.5 Enrichment:</b> Research and communicate regarding geoscience career options (e.g., geologist, petroleum engineer, meteorologist, paleontologist, astronomer, and oceanographer).</p> |
| <i>Unit Assessment 4 optional due to BMA</i> |  |
| WK 9:<br>Dec 16-20                           | <b>Benchmark OR EOC Assessment</b>   |

| <b>TERM 2</b>  |                   |
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| <b>Recurring Standards</b>   |                   |
| <b>Standards taught the first 4-5 weeks; the mid-term data will indicate the remediation needed.</b> |                   |
| WK 5:<br>Nov 11-15   | ENV.2.1 & ENV.2.2 |
| WK 6:<br>Nov 18-22   | ENV.2.3 & ENV.2.4 |
| WK 7:<br>Dec 2-6   | ENV.2.5 & ENV.2.6 |



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| <b>TERM 3</b>                                       |  |
|---|--|
| <b>Term 3 Dates</b>                                 | <b>MS College and Career Readiness Standards</b> |
| WK 1:<br>Jan 6-10                                   | <i>n/a; ½ credit course</i>                      |
| WK 2:<br>Jan 13-17                                  | <i>n/a; ½ credit course</i>                      |
| WK 3:<br>Jan 20-24                                  | <i>n/a; ½ credit course</i>                      |
| WK 4:<br>Jan 27-31                                  | <i>n/a; ½ credit course</i>                      |
| <b>Mid-term OR Unit Assessment 2 (WK 4.5/ WK 5)</b> |  |
| WK 5:<br>Feb 3-7                                    | <i>n/a; ½ credit course</i>                      |
| WK 6:<br>Feb 10-14                                  | <i>n/a; ½ credit course</i>                      |
| <b>Unit Assessment 2</b>                            |  |
| WK 7:<br>Feb 17-21                                  | <i>n/a; ½ credit course</i>                      |
| WK 8:<br>Feb 24-28                                  | <i>n/a; ½ credit course</i>                      |
| <b>Unit Assessment 4 optional due to BMA</b>        |  |
| WK 9:<br>March 3-7                                  | <b>Review &amp; Benchmark OR Unit Assessment</b> |

| <b>TERM 3</b>  |                             |
|--|-----------------------------|
| <b>Recurring Standards</b>   |                             |
| <b>Standards taught the first 4-5 weeks; the mid-term data will indicate the remediation needed.</b> |                             |
| WK 5:<br>Feb 3-7   | <i>n/a; ½ credit course</i> |
| WK 6:<br>Feb 10-14   | <i>n/a; ½ credit course</i> |
| WK 7:<br>Feb 17-21   | <i>n/a; ½ credit course</i> |

## Environmental Science (½ credit)

| TERM 4                     |  |
|----------------------------|--|
| Term 4 Dates               | MS College and Career Readiness Standards  |
| WK 1:<br>March 17-21       | <i>TBD using Benchmark/ Unit Assessment data and/or remediation time needed for other grade level tested areas</i> |
| <b>Checkpoint 1</b>        |  |
| WK 2:<br>March 24-28       | <i>TBD using Benchmark/ Unit Assessment data and/or remediation time needed for other grade level tested areas</i> |
| <b>Checkpoint 2</b>        |  |
| WK 3:<br>March 31- April 4 | <i>TBD using Benchmark/ Unit Assessment data and/or remediation time needed for other grade level tested areas</i> |
| <b>Checkpoint 3</b>        |  |
| WK 4:<br>April 7-11        | <i>TBD using Benchmark/ Unit Assessment data and/or remediation time needed for other grade level tested areas</i> |
| <b>Checkpoint 4</b>        |  |
| WK 5:<br>April 14-18       | <i>N/A; benchmark testing</i>  |
| WK 6:<br>April 21-25       | <i>N/A; benchmark testing</i>  |
| WK 7:<br>April 28- May 2   | <i>N/A; benchmark testing</i>  |
| WK 8:<br>May 5-9           | <i>N/A; benchmark testing</i>  |
| WK 9:<br>May 12-21         | <b>Review &amp; EOY Assessment</b>   |

| TERM 4  |                               |
|---|-------------------------------|
| Recurring Standards   |                               |
| Standards taught the first 4-5 weeks; the mid-term data will indicate the remediation needed. |                               |
| WK 5:<br>April 14-18  | <i>N/A; benchmark testing</i> |
| WK 6:<br>April 21-25  | <i>N/A; benchmark testing</i> |
| WK 7:<br>April 28- May 2  | <i>N/A; benchmark testing</i> |