



Science 7

TERM 1

| Term 1 Dates | MS College and Career Readiness Standards |
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| WK 1: Aug 6-16 | Science & Engineering Practices <ul style="list-style-type: none">• Ask Question and Define Problems• Develop and Use Models• Analyze and Interpret Data• Plan and Conduct Investigations• Use Mathematical and Computational Thinking• Engage in Scientific Argument from Evidence• Construct Explanations and Design Solutions• Obtain, Evaluate, and Communicate Information |
| WK 2: Aug 19-23 | L.7.3.1 Analyze diagrams to provide evidence of the importance of the cycling of water, oxygen, carbon, and nitrogen through ecosystems to organisms. L.7.3.4 Explain how disruptions in cycles (e.g., water, oxygen, carbon, and nitrogen) affect biodiversity and ecosystem services (e.g., water, food, and medications) which are needed to sustain human life on Earth. |
| Unit Assessment 1 | |
| WK 3: Aug 26-30 | L.7.3.5 Design solutions for sustaining the health of ecosystems to maintain biodiversity and the resources needed by humans for survival (e.g., water purification, nutrient recycling, prevention of soil erosion, and prevention or management of invasive species).* |
| WK 4: Sept 2-6 | L.7.3.2 Analyze and interpret data to explain how the processes of photosynthesis, and cellular respiration (aerobic and anaerobic) work together to meet the needs of plants and animals. L.7.3.3 Use models to describe how food molecules (carbohydrates, lipids, proteins) are processed through chemical reactions using oxygen (aerobic) to form new molecules |
| Mid-term OR Unit Assessment 2 (WK 4.5/ WK 5) | |
| WK 5: Sept 9-13 | P.7.5D.1 Analyze evidence from scientific investigations to predict likely outcomes of chemical reactions. |
| WK 6: Sept 16-20 | P.7.5D.2 Design and conduct scientific investigations to support evidence that chemical reactions (e.g., cooking, combustion, rusting, decomposition, photosynthesis, and cellular respiration) have occurred |
| Unit Assessment 3 | |
| WK 7: Sept 23-27 | E.7.9A.1 Analyze and interpret weather patterns from various regions to differentiate between weather and climate. |

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| | E.7.9A.2 Analyze evidence to explain the weather conditions that result from the relationship between the movement of water and air masses |
| WK 8: Sept 30- Oct 4 | Review for benchmark |
| WK 9: Oct 7-11 | <i>Benchmark OR Unit Assessment</i> |

TERM 1

Recurring Standards

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

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| WK 5: Sept 9-13 | L.7.3.1 & L.7.3.4 |
| WK 6: Sept 16-20 | L.7.3.5 |
| WK 7: Sept 23-27 | L.7.3.2 & L.7.3.3 |



Science 7

TERM 2

| Term 2 Dates | MS College and Career Readiness Standards |
|---|---|
| WK 1: Oct 14-18 | E.7.9A.1 Analyze and interpret weather patterns from various regions to differentiate between weather and climate. E.7.9A.2 Analyze evidence to explain the weather conditions that result from the relationship between the movement of water and air masses. |
| WK 2: Oct 21-25 | E.7.9A.3 Interpret atmospheric data from satellites, radar, and weather maps to predict weather patterns and conditions. |
| Unit Assessment 1 | |
| WK 3: Oct 28- Nov 1 | E.7.9A.4 Construct an explanation for how climate is determined in an area using global and surface features (e.g. latitude, elevation, shape of the land, distance from water, global winds and ocean currents). |
| WK 4: Nov 4-8 | E.7.9A.5 Analyze models to explain the cause and effect relationship between solar energy and convection and the resulting weather patterns and climate conditions. |
| Mid-term OR Unit Assessment 2 (WK 4.5/ WK 5) | |
| WK 5: Nov 11-15 | E.7.9A.6 Research and use models to explain what type of weather (thunderstorms, hurricanes, and tornadoes) results from the movement and interactions of air masses, high and low pressure systems, and frontal boundaries. E.7.9A.7 Interpret topographic maps to predict how local and regional geography affect weather patterns and make them difficult to predict. |
| WK 6: Nov 18-22 | E.7.9B.1 Read and evaluate scientific or technical information assessing the evidence and bias of each source to explain the causes and effects of climate change. E.7.9B.2 Interpret data about the relationship between the release of carbon dioxide from burning fossil fuels into the atmosphere and the presence of greenhouse gases. E.7.9B.3 Engage in scientific argument based on current evidence to determine whether climate change happens naturally or is being accelerated through the influence of man. |
| Unit Assessment 3 | |
| WK 7: Dec 2-6 | E.7.9C.1 Construct models and diagrams to illustrate how the tilt of Earth’s axis results in differences in intensity of sunlight on the Earth’s hemispheres throughout the course of one full revolution around the Sun E.7.9C.2 Investigate how variations of sunlight intensity experienced by each hemisphere (to include the equator and poles) create the four seasons. |
| WK 8: Dec 9-13 | Review for benchmark |
| Unit Assessment 4 optional due to BMA | |
| WK 9: Dec 16-20 | Benchmark OR Unit Assessment |

TERM 2

Recurring Standards

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

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| WK 5: Nov 11-15 | E.7.9A.1 & E.7.9A.2 |
| WK 6: Nov 18-22 | E.7.9A.3 |
| WK 7: Dec 2-6 | E.7.9A.4 & E.7.9A.5 |



Science 7

TERM 3

| TERM 3 | |
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| Term 3 Dates | MS College and Career Readiness Standards |
| WK 1: Jan 6-10 | <p>P.7.5A.1 Collect and evaluate qualitative data to describe substances using physical properties (state, boiling/melting point, density, heat/electrical conductivity, color, and magnetic properties).</p> <p>P.7.5A.2 Analyze and interpret qualitative data to describe substances using chemical properties (the ability to burn or rust).</p> <p>P.7.5A.3 Compare and contrast chemical and physical properties (e.g., combustion, oxidation, pH, solubility, reaction with water).</p> |
| WK 2: Jan 13-17 | <p>P.7.5B.1 Make predictions about the effect of temperature and pressure on the relative motion of atoms and molecules (speed, expansion, and condensation) relative to recent breakthroughs in polymer and materials science (e.g. self-healing protective films, silicone computer processors, pervious/porous concrete).</p> <p>P.7.5B.2 Use evidence from multiple scientific investigations to communicate the relationships between pressure, volume, density, and temperature of a gas.</p> <p>P.7.5B.3 Ask questions to explain how density of matter (observable in various objects) is affected by a change in heat and/or pressure.</p> |
| Unit Assessment 1 | |
| WK 3: Jan 20-24 | <p>P.7.5C.3 Collect, organize, and interpret data from investigations to identify and analyze the relationships between the physical and chemical properties of elements, atoms, molecules, compounds, solutions, and mixtures.</p> |
| WK 4: Jan 27-31 | <p>P.7.5C.4 Predict the properties and interactions of elements using the periodic table (metals, non-metals, reactivity, and conductors).</p> |
| Mid-term OR Unit Assessment 2 (WK 4.5/ WK 5) | |
| WK 5: Feb 3-7 | <p>P.7.5C.5 Describe concepts used to construct chemical formulas (e.g. CH₄, H₂O) to determine the number of atoms in a chemical formula.</p> <p>P.7.5C.6 Using the periodic table, make predictions to explain how bonds (ionic and covalent) form between groups of elements (e.g., oxygen gas, ozone, water, table salt, and methane).</p> |
| WK 6: Feb 10-14 | <p>P.7.5D.4 Build a model to explain that chemical reactions can store (formation of bonds) or release energy (breaking of bonds).</p> <p>P.7.5D.1 Analyze evidence from scientific investigations to predict likely outcomes of chemical reactions.</p> |
| Unit Assessment 3 | |

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| WK 7: Feb 17-21 | P.7.5D.3 Collect, organize, and interpret data using various tools (e.g., litmus paper, pH paper, cabbage juice) regarding neutralization of acids and bases using common substances. |
| WK 8: Feb 24-28 | <i>Review for benchmark</i> |
| Unit Assessment 4 optional due to BMA | |
| WK 9: March 3-7 | Review & Benchmark OR Unit Assessment |

TERM 3

Recurring Standards

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

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| WK 5: Feb 3-7 | P.7.5A.1 & P.7.5A.2 |
| WK 6: Feb 10-14 | P.7.5A.3 & P.7.5B.1 |
| WK 7: Feb 17-21 | P.7.5B.2 & P.7.5B.3 |



Science 7

TERM 4

| TERM 4 | |
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| Term 4 Dates | MS College and Career Readiness Standards |
| WK 1: March 17-21 | <p>P.7.5E.1 Conduct simple scientific investigations to show that total mass is not altered during a chemical reaction in a closed system. Compare results of investigations to Antoine-Laurent Lavoisier’s discovery of the law of conservation of mass.</p> <p>P.7.5E.2 Analyze data from investigations to explain why the total mass of the product in an open system appears to be less than the mass of reactants.</p> <p>P.7.5E.3 Compare and contrast balanced and unbalanced chemical equations to demonstrate the number of atoms does not change in the reaction.</p> |
| Unit Assessment 1 | |
| WK 2: March 24-28 | <i>TBD using Benchmark/ Unit Assessment data and/or remediation time needed for other grade level tested areas</i> |
| Checkpoint 1 | |
| WK 3: March 31- April 4 | <i>TBD using Benchmark/ Unit Assessment data and/or remediation time needed for other grade level tested areas</i> |
| Checkpoint 2 | |
| WK 4: April 7-11 | <i>TBD using Benchmark/ Unit Assessment data and/or remediation time needed for other grade level tested areas</i> |
| Checkpoint 3 | |
| WK 5: April 14-18 | <i>N/A; benchmark testing</i> |
| WK 6: April 21-25 | <i>N/A; benchmark testing</i> |
| WK 7: April 28- May 2 | <i>N/A; benchmark testing</i> |
| WK 8: May 5-9 | <i>N/A; benchmark testing</i> |
| WK 9: May 12-21 | Review & EOY Assessment |

TERM 4

Recurring Standards

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

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| WK 5: April 14-18 | P.7.5E.1, P.7.5E.2 & P.7.5E.3 |
| WK 6: April 21-25 | <i>N/A; benchmark testing</i> |
| WK 7: April 28- May 2 | <i>N/A; benchmark testing</i> |