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| **Biology Priority Standards** |
| 3.1.10.B Describe concepts of models as a way to predict and understand science and technology |
| 3.2.10.C Apply the elements of scientific inquiry to solve problems |
| 3.3.10.A Explain the structural and functional similarities and differences found among living things |
| 3.3.10.B Describe and explain the chemical and structural basis of living organisms |
| 3.3.10.C Describe how genetic information is inherited and expressed |
| 3.3.10.D Explain the mechanisms of the theory of evolution |
| 3.8.10.C Evaluate possibilities, consequences, and impacts of scientific and technological solutions |
| 4.2.10.A Explain the interactions between abiotic and biotic factors of an ecosystem and their interaction |

**Other standards for this course can be found at the following links:**

<http://static.pdesas.org/content/documents/Biology%20Keystone%20Assessment%20Anchors%20and%20Eligible%20Content%20April%202014.pdf>

<http://static.pdesas.org/content/documents/academic_standards_for_environment_and_ecology.pdf>

[www.stateboard.education.pa.gov/documents/regulations%20and%20statements/state%20academic%20standards/scienceandtechnologystandards.pdf](http://www.stateboard.education.pa.gov/documents/regulations%20and%20statements/state%20academic%20standards/scienceandtechnologystandards.pdf)

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| **Chemistry Priority Standards** |
| 3.1.10.B.3 Apply mathematical models to science and technology |
| 3.1.10.D.1 Apply dimensional analysis and scale as a ratio |
| 3.1.10.E.3 Describe the effects of error in measurements |
| 3.2.10.C.4 Conduct a multiple step experiment |
| 3.4.10.A.1 Know that atoms are composed of even smaller sub-atomic structures whose properties are measurable |
| 3.4.10.A.2 Explain the repeating pattern of chemical properties by using the repeating patterns of atomic structure within the periodic table |
| 3.4.10.A.4 Describe phases of matter according to the Kinetic Molecular Theory |
| 3.4.10.A.5 Explain the formation of compounds and their resulting properties using bonding theories (ionic and covalent) |
| 3.4.10.A.7 Describe various types of chemical reactions by applying the laws of conservation of mass and energy |

**Other standards for this course can be found at the following link:**

[www.stateboard.education.pa.gov/documents/regulations%20and%20statements/state%20academic%20standards/scienceandtechnologystandards.pdf](http://www.stateboard.education.pa.gov/documents/regulations%20and%20statements/state%20academic%20standards/scienceandtechnologystandards.pdf)

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| **Physics Priority Standards** |
| 3.4.12. C.3 Analyze the principles of translational motion, velocity and acceleration as they relate to free fall and projectile motion |
| 3.4.10. C.7 Know Newton’s laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass |
| 3.4.10. B.4 Use knowledge of conservation of energy to explain common phenomena |
| 3.4.10. B.4 Use knowledge of conservation of momentum to explain common phenomena |
| 3.4.12. C.5 Interpret a model that illustrates circular motion and acceleration |
| 3.4.10. B.5 Explain resistance, current and electro-motive force (Ohm’s Law) |
| 3.4.12C.1 Evaluate wave properties of frequency, wavelength and speed as applied to sound and light through different media |

**Other standards for this course can be found at the following link:**

[www.stateboard.education.pa.gov/documents/regulations%20and%20statements/state%20academic%20standards/scienceandtechnologystandards.pdf](http://www.stateboard.education.pa.gov/documents/regulations%20and%20statements/state%20academic%20standards/scienceandtechnologystandards.pdf)

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| **Physical Science Priority Standards** |
| 3.1.10.E.1 Explain the conservation of mass and energy |
| 3.4.10.A Explain concepts about the structure and properties of matter |
| 3.2.P.B4 Develop qualitative and quantitative understanding of current voltage, resistance and the connections among them |
| 3.2.P.B5 Explain the mathematical functions of waves and how they transfer energy without transferring matter |
| 3.4.10.C.2 Distinguish among the principles of force and motion - identify elements of simple machines in compound machines |
| 3.4.10.B Analyze energy sources and transfers of heat |
| 3.2.P.B6 Use Newton's Laws of Motion to describe and predict the motion of objects |

**Other standards for this course can be found at the following links:**

[https://www.pdesas.org/Standard/View#](https://www.pdesas.org/Standard/View)

[www.stateboard.education.pa.gov/documents/regulations%20and%20statements/state%20academic%20standards/scienceandtechnologystandards.pdf](http://www.stateboard.education.pa.gov/documents/regulations%20and%20statements/state%20academic%20standards/scienceandtechnologystandards.pdf)