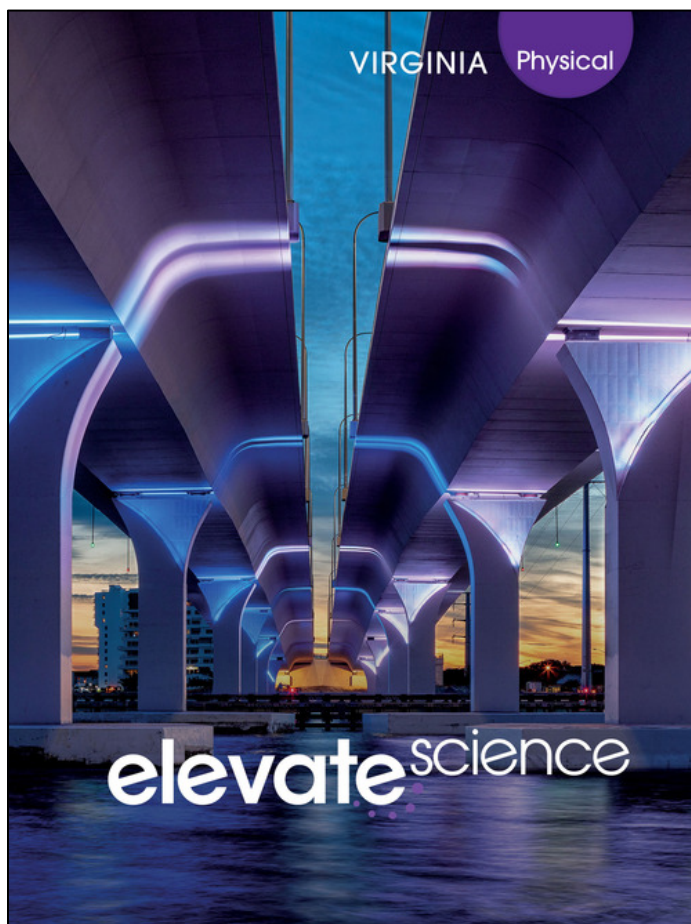


A Correlation of
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Physical ©2021**



To the
**Virginia Standards of Learning
for Science 2010
Physical Science**

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Introduction

The following document demonstrates how the **Virginia Elevate Science, Physical Science ©2021** program supports the 2010 Virginia Standards of Learning for Science. Correlation references include the Student Edition, Teacher Edition, and online Realize™ digital resources.

Savvas Learning Company is proud to introduce **Virginia Elevate Science, Physical Science**, where exploration is the heart of science! Designed to address the rigors of new science standards, students will experience science up close and personal, using real-world, relevant phenomena to solve project-based problems. Our newest program prepares students for the challenges of tomorrow, building strong reasoning skills and critical thinking strategies as they engage in explorations, formulate claims, and gather and analyze data that promote evidence-based arguments. The blended print and digital curriculum covers all Next Generation Science Standards at every grade level.

Elevate Science helps teachers transform learning, promote innovation, and manage their classroom.

Transform science classrooms by immersing students in active, three-dimensional learning. **Elevate Science** engages students with real-world phenomena, open-ended Quests, uDemonstrate performance-based tasks, and in the engineering/design process with uEngineer It! investigations.

- A new 3-D learning model enhances best practices.
- Engineering-focused features infuse STEM learning.
- Phenomena-based activities put students at the heart of a Quest for knowledge.

Innovate learning by focusing on 21st century skills.

Students are encouraged to think, collaborate, and innovate! With **Elevate Science**, students explore STEM careers, experience engineering activities, and discover our scientific and technological world. The content, strategies, and resources of Elevate Science equip the science classroom for scientific inquiry and science and engineering practices.

- Problem-based learning Quests put students on a journey of discovery.
- STEM connections help integrate curriculum.
- Coding and innovation engage students and build 21st century skills.

Manage the classroom with confidence.

Teachers will lead their class in asking questions and engaging in argumentation. Evidence-based assessments provide new options for monitoring student understanding.

- Professional development offers practical point-of-use support.
- Embedded standards in the program allow for easy integration.
- ELL and differentiated instruction strategies help instructors reach every learner.
- Interdisciplinary connections relate science to other subjects.

Designed for today's classroom, preparing students for tomorrow's world. **Elevate Science** promises to:

- Elevate thinking.
- Elevate learning.
- Elevate teaching.

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(PS.1) The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which	
(PS.1.a) chemicals and equipment are used safely;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: Shedding Light on Ions (Safety), 154-157 uConnect Lab: What Happens When Chemicals React? (Safety), 162-163 uDemonstrate Lab: Evidence of Chemical Change (Safety), 208-211 uConnect Lab: What Would Make a Card Jump? (Safety), 216-217 uDemonstrate Lab: 3, 2, 1..Liftoff! (Safety), 262-265 uConnect Lab: Magnetic Poles (Safety), 428-429 uDemonstrate Lab: Planetary Detective (Safety), 472-475</p> <p>Realize™ Digital Resources: Topic 3: Atoms and the Periodic Table >Lesson 4: Types of Bonds>uInvestigate Lab: Properties of Molecular Compounds</p>
(PS.1.b) length, mass, volume, density, temperature, weight, and force are accurately measured;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: Help Out the Wildlife (Data Table), 40-43 uDemonstrate Lab: Melting Ice (Data Table), 88-91 uDemonstrate Lab: Testing Thermal Conductivity (Data and Observations), 302-305</p> <p>Realize™ Digital Resources: Topic 2: Solids, Liquids, and Gases >Lesson 3: Gas Behavior>uInvestigate Lab: Testing Charles's and Boyle's Gas Laws Topic 5: Energy >Lesson 1: Energy, Motion, Force, and Work>uInvestigate Lab: What Work Is Topic 8: Forces and Motion >Lesson 3: Newton's Laws of Motion>uInvestigate Lab: Newton Scooters</p>

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(PS.1.c) conversions are made among metric units, applying appropriate prefixes;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>TE Only: Teach Strategies, SEP12 Connect to the Real World: Unit Conversions, SEP12</p> <p>Realize™ Digital Resources: Topic 3: Atoms and the Periodic Table >Lesson 1: Atomic Theory>uInvestigate Lab: How Far Away Is the Electron? Topic 8: Forces and Motion >Lesson 2: Speed, Velocity, and Acceleration>uInvestigate Lab: Walking the Walk</p>
(PS.1.d) triple beam and electronic balances, thermometers, metric rulers, graduated cylinders, probeware, and spring scales are used to gather data;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: Shedding Light on Ions (Materials), 154-157 uDemonstrate Lab: Melting Ice (Materials/Data Table), 88-91 uDemonstrate Lab: 3, 2, 1..Liftoff! (Materials/Data Table), 262-265 uDemonstrate Lab: Testing Thermal Conductivity (Materials/Data and Observations), 302-305 Using a Laboratory Balance, 523</p> <p>Realize™ Digital Resources: Topic 2: Solids, Liquids, and Gases >Lesson 3: Gas Behavior>uInvestigate Lab: Testing Charles’s and Boyle’s Laws Topic 5: Energy >Lesson 1: Energy, Motion, Force, and Work>uInvestigate Lab: What Work Is Topic 7: Waves and Electromagnetic Radiation >Lesson 4: Electromagnetic Waves>uInvestigate Lab: Build a Wave</p>

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(PS.1.e) numbers are expressed in scientific notation where appropriate;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: Help Out the Wildlife (Data Table), 40-43 uDemonstrate Lab: Melting Ice (Data Table), 88-91 uDemonstrate Lab: Testing Thermal Conductivity (Data and Observations), 302-305</p>
(PS.1.f) independent and dependent variables, constants, controls, and repeated trials are identified;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: Melting Ice (Design an Investigation, #2), 88-91 uDemonstrate Lab: 3, 2, 1..Liftoff! (Plan Your Investigation, #2), 262-265 uConnect Lab: Identifying Motion (Design a Procedure, #1), 374-375 uDemonstrate Lab: Stopping on a Dime (Design Your Investigation, #4), 420-423</p> <p>Realize™ Digital Resources: Topic 4: Chemical Reactions >Lesson 1: Mixtures and Solutions>Quest Check-In Lab: Energy Salts Topic 8: Forces and Motion >Lesson 2: Speed, Velocity, and Acceleration>Quest Check-In Lab: Mass, Speed, and Colliding Cars</p>

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(PS.1.g) data tables showing the independent and dependent variables, derived quantities, and the number of trials are constructed and interpreted;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: Melting Ice (Design an Investigation, #3, Data Table), 88-91 uDemonstrate Lab: 3, 2, 1..Liftoff! (Plan Your Investigation, #3, Data Table), 262-265 uConnect Lab: Identifying Motion (Design a Procedure, #2), 374-375 uDemonstrate Lab: Stopping on a Dime (Design Your Investigation, Data Table, 420-423</p> <p>Realize™ Digital Resources: Topic 4: Chemical Reactions >Lesson 1: Mixtures and Solutions>Quest Check-In Lab: Energy Salts Topic 8: Forces and Motion >Lesson 2: Speed, Velocity, and Acceleration>Quest Check-In Lab: Mass, Speed, and Colliding Cars</p>
(PS.1.h) data tables for descriptive statistics showing specific measures of central tendency, the range of the data set, and the number of repeated trials are constructed and interpreted;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: 3, 2, 1..Liftoff! (Plan Your Investigation, #3, Data Table), 262-265 uDemonstrate Lab: Stopping on a Dime (Design Your Investigation, Data Table), 420-423</p> <p>Realize™ Digital Resources: Topic 4: Chemical Reactions >Lesson 1: Mixtures and Solutions>Quest Check-In Lab: Energy Salts Topic 8: Forces and Motion >Lesson 2: Speed, Velocity, and Acceleration>Quest Check-In Lab: Mass, Speed, and Colliding Cars</p>

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(PS.1.i) frequency distributions, scatterplots, line plots, and histograms are constructed and interpreted;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: Math Toolbox: Graphing Charles's Law, 76 Math Toolbox: Graphing Boyle's Law, 78 Figure 7: Graphing Acceleration, 392 Math Toolbox: Graphing Kinetic Energy, 415</p> <p>Realize™ Digital Resources: Topic 6: Thermal Energy >Lesson 1: Thermal Energy, Heat, and Temperature>uInvestigate Lab: Temperature and Thermal Energy</p>
(PS.1.j) valid conclusions are made after analyzing data;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: Melting Ice (Analyze and Interpret Data), 88-91 uDemonstrate Lab: Shedding Light on Ions (Analyze and Interpret Data), 154-157 uDemonstrate Lab: Evidence of Chemical Change (Analyze and Interpret Data), 208-211 uDemonstrate Lab: 3, 2, 1..Liftoff! (Analyze and Interpret Data), 262-265 uDemonstrate Lab: Making Waves (Analyze and Interpret Data), 366-369 uDemonstrate Lab: Stopping on a Dime (Analyze and Interpret Data), 420-423 uDemonstrate Lab: Planetary Detective (Analyze and Interpret Data), 472-475</p>
(PS.1.k) research methods are used to investigate practical problems and questions;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: Connect It!, 164 Literacy Connection: Conduct Research Projects, 285</p>
(PS.1.l) experimental results are presented in appropriate written form;	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: Evidence of Chemical Change (Analyze and Interpret Data, #4), 208-211</p>

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(PS.1.m) models and simulations are constructed and used to illustrate and explain phenomena; and	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uConnect Lab: Solid, Liquid, or Gas?, 48-49 uDemonstrate Lab: Melting Ice, 88-91 uConnect Lab: Modeling Matter, 96-97 uDemonstrate Lab: Shedding Light on Ions, 154-157 uConnect Lab: What Would Make a Card Jump?, 216-217 uDemonstrate Lab: 3, 2, 1..Liftoff!, 262-265 uDemonstrate Lab: Making Waves, 366-369 uDemonstrate Lab: Over and Out, 518-521</p> <p>Realize™ Digital Resources: Topic 6: Thermal Energy >Lesson 2: Heat Transfer>uInvestigate Lab: Visualizing Convection Currents</p>
(PS.1.n) current applications of physical science concepts are used.	<p>This objective is met throughout <i>Virginia Elevate Science, Physical</i>. For examples, please see:</p> <p>SE/TE: uDemonstrate Lab: 3, 2, 1..Liftoff!, 262-265 uDemonstrate Lab: Stopping on a Dime, 420-423</p> <p>Realize™ Digital Resources: Topic 9: Electricity and Magnetism >Lesson 4: Electric and Magnetic Interactions>Quest Check-In Lab: Electrifying Levitation</p>
(PS.2) The student will investigate and understand the nature of matter.	
(PS.2.a) the particle theory of matter;	<p>SE/TE: Components of Matter, 10</p> <p>Realize™ Digital Resources: Topic 1: Introduction to Matter >Lesson 1: Describing and Classifying Matter>Interactivity: What Makes Up Matter</p>

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(PS.2.b) elements, compounds, mixtures, acids, bases, and salts;	<p>SE/TE: Elements, 10 Molecules, 11 Compounds, 12 Reading Check: Integrate With Visuals, 12 Types of Mixtures, 13 Lesson 1 Check, #1, #4, #5, 14 uDemonstrate Lab: Help Out the Wildlife, 40-43 Acids, 143 Properties of Bases, 146 Neutralization of Acids and Bases, 147 Types of Mixtures, 165</p> <p>Realize™ Digital Resources: Topic 1: Introduction to Matter >Lesson 1: Describing and Classifying Matter>uInvestigate Lab: Modeling Atoms and Molecules</p>
(PS.2.c) solids, liquids, and gases;	<p>SE/TE: uConnect Lab: Solid, Liquid, or Gas?, 48-49 Solids, Liquids, and Gases, 51 Describing Solids, 52 Types of Solids, 54 Describing Liquids, 55 Describing Gases, 57 Reading Check: Determine Central Ideas, 57 Explaining States of Mater, 58 Lesson 1 Check, #3, #5, 60</p> <p>Realize™ Digital Resources: Topic 2: Solids, Liquids, and Gases >Lesson 1: States of Matter>Interactivity: Particles and States of Matter;>Virtual Lab: Cooking and States of Matter</p>
(PS.2.d) physical properties;	<p>SE/TE: Physical Properties, 8 Figure 2: Physical and Chemical Properties, 8-9 Density and Temperature, 21</p> <p>Realize™ Digital Resources: Topic 1: Introduction to Matter >Lesson 2: Measuring Matter>uInvestigate Lab: Observing Physical Properties Topic 3: Atoms and the Periodic Table >Lesson 2: The Periodic Table>Worksheet: Interactive Periodic Table;>Quest Check-In Interactivity: Examining Physical Properties of the Powders</p>

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(PS.2.e) chemical properties; and	<p>SE/TE: Figure 2: Physical and Chemical Properties, 8-9 Chemical Properties, 9 Reading Check: Infer, 9</p> <p>Realize™ Digital Resources: Topic 3: Atoms and the Periodic Table >Lesson 2: The Periodic Table>Worksheet: Interactive Periodic Table >Lesson 3: Bonding and the Periodic Table>Quest Check-In Interactivity: The Iodine Test for Starch >Lesson 4: Types of Bonds>Quest Check-In Interactivity: The Vinegar Test</p>
(PS.2.f) characteristics of types of matter based on physical and chemical properties.	<p>SE/TE: Types of Mixtures, 13 Using Density, 22 Math Toolbox: Densities of Unknown Substances, 22 Physical Properties of Solids, 53 Physical Properties of Liquids, 56 Physical Properties of Gases, 57 Metals, 126-127 Nonmetals, 128 Classifying Mixtures, 167-168 Lesson 1 Check, #1, 172 Properties of Compounds, 139-140 Properties of Acids, 144-145 Properties of Bases, 146</p> <p>Realize™ Digital Resources: Topic 2: Solids, Liquids, and Gases >Lesson 1: States of Matter>Investigate Lab: Properties of Matter Topic 3: Atoms and the Periodic Table >Lesson 4: Types of Bonds>Investigate Lab: Properties of Molecular Compounds >Lesson 5: Acids and Bases>Investigate Lab: Properties of Acids and Bases</p>

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(PS.3) The student will investigate and understand the modern and historical models of atomic structure.	
(PS.3.a) the contributions of Dalton, Thomson, Rutherford, and Bohr in understanding the atom; and	<p>SE/TE: The First Theories on Atoms, 100 Literacy Connection: Determine Central Ideas, 100 Thomson’s Model, 101 Rutherford’s Model, 101-102 Bohr’s Model, 102 Reading Check: Determine Central Ideas, 103 Model It!: Models of an Atom, 103 Lesson 1 Check, #2, 107</p> <p>Realize™ Digital Resources: Topic 3: Atoms and the Periodic Table >Lesson 1: Atomic Theory>Interactivity: Models of Atoms</p>
(PS.3.b) the modern model of atomic structure.	<p>SE/TE: Cloud Model, 103 A Modern Model of the Atom, 104-106 Lesson 1 Check, #3, #5, 107</p> <p>Realize™ Digital Resources: Topic 3: Atoms and the Periodic Table >Lesson 1: Atomic Theory>Interactivity: Build an Atom</p>
(PS.4) The student will investigate and understand the organization and use of the periodic table of elements to obtain information.	
(PS.4.a) symbols, atomic numbers, atomic mass, chemical families (groups), and periods;	<p>SE/TE: Using the Periodic Table, 113 Figure 3: Information in Each Cell, 113 Figure 4: The Periodic Table, 114-115 Math Toolbox: Applying the Periodic Table, 115 Periods in the Periodic Table, 116-117 Groups in the Periodic Table, 118-120 Lesson 2 Check, #3, 121 Topic 3 Evidence-Based Assessment, 152-153</p> <p>Realize™ Digital Resources: Topic 3: Atoms and the Periodic Table >Lesson 2: The Periodic Table>Interactivity: Groups of Elements</p>

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(PS.6.a) potential and kinetic energy; and	<p>SE/TE: Quest Kickoff: How can you build a complicated machine to do something simple?, 214-215 uConnect Lab: What Would Make a Card Jump?, 216-217 Kinetic Energy, 229-230 Potential Energy, 231-233 Lesson 1 Check, #1, #3, #5, 234 Quest Check-In, 234 Lesson 3 Check, #5, 244 Quest Check-In, 244 Kinetic and Potential Energy, 248 Energy Transformation and Transfer, 249 Model It!: Transformation and Transfer in Demolition, 249 Lesson 4 Check, #4, 255 Topic 5 Evidence-Based Assessment, 260-261 uDemonstrate Lab: 3, 2, 1..Liftoff!, 262-265</p>

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Continued:	Continued: Realize™ Digital Resources: Topic 5: Energy >Lesson 2: Kinetic Energy and Potential Energy>uInvestigate Lab: Energy, Magnetism, and Electricity;>Quest Check-In Lab: Build a Chain-Reaction Machine >Lesson 3: Other Forms of Energy>Quest Check-In Lab: Test and Evaluate a Chain-Reaction Machine
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(PS.8) The student will investigate and understand the characteristics of sound waves.	
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(PS.9.c) images formed by lenses and mirrors;	<p>SE/TE: Reflecting Light, 356-358 Model It!: Fun with Mirrors, 358 Lenses, 359-360 Lesson 5 Check, #2, #4, 361 Topic 7 SOL Review, #17, 363</p> <p>Realize™ Digital Resources: Topic 7: Waves and Electromagnetic Radiation >Lesson 5: Light>uInvestigate Lab: Light Interacting With Matter;>Quest Check-In Lab: An Optimal Optical Solution: Design to Stop a Thief</p>
(PS.9.d) the electromagnetic spectrum; and	<p>SE/TE: The Electromagnetic Spectrum, 347-349 Math Toolbox: Frequencies and Wavelengths of Light, 347 Lesson 4 Check, #1, #2, 350 Topic 7 SOL Review, #12, #13, #14, 363</p> <p>Realize™ Digital Resources: Topic 7: Waves and Electromagnetic Radiation >Lesson 4: Electromagnetic Waves>uInvestigate Lab: Build a Wave;>Interactivity: Describe Electromagnetic Waves</p>
(PS.9.e) technological applications of light.	<p>SE/TE: Quest Kickoff: How can you design a system to stop a thief?, 308-309 Quest Check-In, 330 uEngineer It!: Say “Cheese!”, 331 Quest Check-In, 350 Quest Check-In, 361 Quest Findings, 365</p> <p>Realize™ Digital Resources: Topic 7: Waves and Electromagnetic Radiation >Topic Launch: Waves and Electromagnetic Radiation>Quest Kickoff: Design to Stop a Thief >Lesson 1: Wave Properties>Quest Check-In Interactivity: Light Behavior >Lesson 2: Wave Interactions>Quest Check-In Interactivity: Virtual Optics;>Worksheet: Virtual Optics >Lesson 4: Electromagnetic Waves>Quest Check-In Interactivity: Optical Demonstration >Lesson 5: Light>Quest Check-In Lab: An Optimal Optical Solution: Design to Stop a Thief</p>

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(PS.10) The student will investigate and understand the scientific principles of work, force, and motion.	
(PS.10.a) speed, velocity, and acceleration;	<p>SE/TE: Calculating Speed, 385-387 Math Toolbox: Using a Distance-Versus-Time Graph, 387 Describing Velocity, 388 Determining Acceleration, 389-392 Model It!: Acceleration, 389 Reading Check: Summarize, 392 Figure 7: Graphing Acceleration, 392 Lesson 2 Check, #1, #2, #3, 393 Topic 8 SOL Review, #5, #6, #8, #9, 416 uDemonstrate Lab: Stopping on a Dime, 420-423</p> <p>Realize™ Digital Resources: Topic 8: Forces and Motion >Lesson 2: Speed, Velocity, and Acceleration>Interactivity: Falling for Velocity;>uInvestigate Lab: Walking the Walk</p>
(PS.10.b) Newton's laws of motion;	<p>SE/TE: Newton's First Law of Motion, 397-398 Newton's Second Law of Motion, 399-400 Math Toolbox: Using Newton's Second Law, 400 Newton's Third Law of Motion, 401-402 Question It!: Applying Newton's Laws, 403 Newton's Laws Together, 403 Lesson 3 Check, #1, #3, #4, 404 Quest Check-In, 404 Topic 8 SOL Review, #12, #13, 417</p> <p>Realize™ Digital Resources: Topic 8: Forces and Motion >Lesson 3: Newton's Laws of Motion>uInvestigate Lab: Newton Scooters;>Quest Check-In Interactivity: Apply Newton's Laws of Motion</p>
(PS.10.c) work, force, mechanical advantage, efficiency, and power; and	<p>SE/TE: Connect It!, 218 Energy and Force, 220 Figure 2: Force, 220 Force and Work, 221-223 Math Toolbox: Calculating Work, 223 Work Related to Energy and Power, 224-226 Model It!, 226 Lesson 1 Check, #2, #3, #6, 227</p> <p>Realize™ Digital Resources: Topic 5: Energy >Lesson 1: Energy, Motion, Force, and Work>uInvestigate Lab: What Work Is</p>

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(PS.10.d) technological applications of work, force, and motion.	<p>SE/TE: Quest Kickoff: How can you take the crash out of a collision?, 372-373 Quest Check-In, 383 Quest Check-In, 393 Quest Check-In, 404 uEngineer It!: Generating Energy from Potholes, 405 Quest Check-In, 414 Quest Findings, 419 uDemonstrate Lab: Stopping on a Dime, 420-423</p> <p>Realize™ Digital Resources: Topic 5: Energy >Lesson 1: Energy, Motion, Force, and Work>Interactivity: Understanding Machines</p> <p>Topic 8: Forces and Motion >Topic Launch: Energy>Quest Kickoff: Build a Better Bumper Car >Lesson 2: Speed, Velocity, and Acceleration>Quest Check-In Lab: Mass, Speed, and Colliding Cars >Lesson 3: Newton’s Laws of Motion>Quest Check-In Interactivity: Apply Newton’s Laws of Motion >Lesson 4: Friction and Gravitational Interactions>Quest Check-In Lab: Bumping Cars, Bumper Solutions</p>
(PS.11) The student will investigate and understand basic principles of electricity and magnetism.	
(PS.11.a) static electricity, current electricity, and circuits;	<p>SE/TE: Electric Currents and Circuits, 434-435 Static Electricity, 436-437 Reflect, 437 Lesson 1 Check, #4, 438 Topic 9 SOL Review, #2, 468</p> <p>Realize™ Digital Resources: Topic 9: Electricity and Magnetism >Lesson 1: Electric Force>Interactivity: Electric Current;>Worksheet: Electric Current</p>

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(PS.11.b) relationship between a magnetic field and an electric current;	<p>SE/TE: Electromagnetic Principles, 449 Magnetic Fields and Current, 450-451 Reading Check: Determine Central Ideas, 450 Model It!: Magnetic Field Strength, 451 Lesson 3 Check, #1, #2, #3, 454 Topic 9 Evidence-Based Assessment, 470-471</p> <p>Realize™ Digital Resources: Topic 9: Electricity and Magnetism >Lesson 3: Electromagnetic Force>Interactivity: Electricity and Magnetism;>uInvestigate Lab: Electric Current and Magnetism</p>
(PS.11.c) electromagnets, motors, and generators and their uses; and	<p>SE/TE: Quest Kickoff: How can you lift an object without making contact?, 426-427 Figure 1: Magnetic Strength, 449 Figure 6: Electromagnets, 453 Electromagnets, 453 Lesson 3 Check, #5, 454 Quest Check-In, 454 uEngineer It!: Electromagnetism in Action, 455 Electric Motors, 459 How Generators Work, 463 Quest Check-In, 465</p> <p>Realize™ Digital Resources: Topic 9: Electricity and Magnetism >Lesson 3: Electromagnetic Force>Quest Check-In Lab: Building an Electromagnet >Lesson 4: Electric and Magnetic Interactions>Interactivity: Electric Motors;>Worksheet: Electric Motors;>Interactivity: Generators;>Worksheet: Generators</p>
(PS.11.d) conductors, semiconductors, and insulators	<p>SE/TE: Metalloids, 129 Current and Resistance, 435 Figure 6: Conductors and Insulators of Charge, 435 Lesson 1 Check, #1, 438</p> <p>Realize™ Digital Resources: Topic 9: Electricity and Magnetism >Lesson 1: Electric Force>Interactivity: Electric Current;>Worksheet: Electric Current</p>