Standard ID	Standard Text	Edgenuity Lesson Name
WA.HS-PS.	PHYSICAL SCIENCE	
HS-PS1.	Matter and Its Interactions	
	Students who demonstrate understanding can:	
HS-PS1-1.	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	The Historical Development of Atomic Theory The Modern Atomic Theory The Structure of the Atom Elements, Compounds, and Mixtures Atomic Numbers and Electron Configurations The History and Arrangement of the Periodic Table Electrons and the Periodic Table Periodic Trends
HS-PS1-2.	Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.	Periodic Trends Types of Chemical Bonds Lab: Ionic and Covalent Bonds Writing and Balancing Chemical Equations Types of Chemical Reactions Lab: Types of Reactions
HS-PS1-3.	Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.	Gases Liquids Solids and Plasmas Phase Changes Changes in Matter Lab: Physical and Chemical Changes Types of Chemical Bonds Intermolecular Forces
HS-PS1-4.	Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	Types of Chemical Bonds Lab: Ionic and Covalent Bonds

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HS-PS1-5.	Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.	Gas Laws The Ideal Gas Law Reaction Rate Lab: Reaction Rate Solutions and Solubility Lab: Solubility
HS-PS1-6.	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.	Reversible Reactions and Equilibrium Shifts in Equilibrium
HS-PS1-7.	Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.	Writing and Balancing Chemical Equations Molar Masses Introduction to Stoichiometry Limiting Reactant and Percent Yield
HS-PS1-8.	Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.	The Historical Development of Atomic Theory The Modern Atomic Theory The Structure of the Atom Types of Radioactive Decay Half-Life Nuclear Fission and Nuclear Fusion Nuclear Energy
HS-PS3.	Energy	
	Students who demonstrate understanding can:	
HS-PS3-1.	Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.	Energy Heat Calorimetry Thermochemical Equations
HS-PS3-3.	Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.	Types of Chemical Reactions

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HS-PS3-4.	Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).	Heat
HS-PS4.	Waves and Their Applications in Technologies for Information Transfer	
	Students who demonstrate understanding can:	
HS-PS4-5.	Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.	The Modern Atomic Theory
WA.HS-LS.	LIFE SCIENCE	
HS-LS2.	Ecosystems: Interactions, Energy, and Dynamics	
	Students who demonstrate understanding can:	
HS-LS2-5.	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	Photosynthesis and Cellular Respiration
WA.HS-ESS.	EARTH AND SPACE SCIENCE	
HS-ESS1.	Earth's Place in the Universe	
	Students who demonstrate understanding can:	
HS-ESS1-1.	Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation.	Nuclear Fission and Nuclear Fusion
HS-ESS1-5.	Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	Absolute Dating
HS-ESS1-6.	Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.	The Expanding Universe Geologic Time

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HS-ESS2.	Earth's Systems	
	Students who demonstrate understanding can:	
HS-ESS2-4.	Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.	Climate Change
HS-ESS2-5.	Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.	Properties of Water Properties of Acids and Bases Arrhenius, Bronsted-Lowry, and Lewis Acids and Bases pH Water and Wind Erosion Lab: Modeling Water Erosion
HS-ESS2-6.	Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.	The Importance of Carbon
HS-ESS2-7.	Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.	The Importance of Carbon Organic Compounds Macromolecules Biological Evidence and the Fossil Record
HS-ESS3.	Earth and Human Activity	
	Students who demonstrate understanding can:	
HS-ESS3-1.	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	pH Nuclear Energy Environmental Changes Human Impact on the Environment Climate Change
HS-ESS3-5.	Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.	Climate Change

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HS-ESS3-6.	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	pH Human Impact on the Environment Climate Change
WA.HS-ETS.	ENGINEERING DESIGN	
HS-ETS1.	Engineering Design	
	Students who demonstrate understanding can:	
HS-ETS1-1.	Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.	Nuclear Energy
HS-ETS1-2.	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	Nuclear Energy
HS-ETS1-3.	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.	Nuclear Energy
HS-ETS1-4.	Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.	
WA.RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects	
	Key Ideas and Details	
RST.11-12.1.	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.	Liquids
RST.11-12.2.	Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.	Liquids

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RST.11-12.3.	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.	Lab: Physical and Chemical Changes Lab: Ionic and Covalent Bonds Lab: Types of Reactions
	Craft and Structure	
RST.11-12.4.	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.	Arrhenius, Bronsted-Lowry, and Lewis Acids and Bases
RST.11-12.5.	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.	Elements, Compounds, and Mixtures
RST.11-12.6.	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	Nuclear Energy
	Integration of Knowledge and Ideas	
RST.11-12.7.	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.	Introduction to Stoichiometry
RST.11-12.8.	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.	
RST.11-12.9.	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.	Lab: Types of Reactions
	Range of Reading and Level of Text Complexity	
RST.11-12.10.	By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently.	Liquids

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WA.WHST.11-12.	Writing Standards for Literacy in Science and Technical Subjects	
	Text Types and Purposes	
WHST.11-12.1.	Write arguments focused on discipline-specific content.	
WHST.11-12.1(a)	Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.	Liquids
WHST.11-12.1(b)	Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.	Liquids
WHST.11-12.1(c)	Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.	Liquids
WHST.11-12.1(d)	Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.	Liquids
WHST.11-12.1(e)	Provide a concluding statement or section that follows from or supports the argument presented.	Liquids
WHST.11-12.2.	Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.	
WHST.11-12.2(a)	Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.	Gas Laws
WHST.11-12.2(b)	Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.	Gas Laws

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WHST.11-12.2(c)	Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.	Gas Laws
WHST.11-12.2(d)	Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.	Gas Laws
WHST.11-12.2(e)	Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).	Gas Laws
WHST.11-12.3.	(See note; not applicable as a separate requirement)	
WHST.11-12.3(a)	Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.	
	Production and Distribution of Writing	
WHST.11-12.4.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	Elements, Compounds, and Mixtures
WHST.11-12.5.	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	Liquids
WHST.11-12.6.	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	The Modern Atomic Theory

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	Research to Build and Present Knowledge	
WHST.11-12.7.	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	Lab: Types of Reactions
WHST.11-12.8.	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	Intermolecular Forces
WHST.11-12.9.	Draw evidence from informational texts to support analysis, reflection, and research.	Intermolecular Forces
	Range of Writing	
WHST.11-12.10.	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	The Historical Development of Atomic Theory