

Next Generation Science Standards Grade 5 Correlation

The Digital Resources listed in the correlation include Key Ideas Presentations, Key Ideas Videos, SEPs and CCCs Preview Presentation and Activities, Virtual Labs, and PhET Activities.

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen. Clarification Statement: Examples of evidence supporting a model could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water. Assessment Boundary: Assessment does not include the atomic-scale mechanism of evaporation and condensation or defining the unseen particles.	Topic 1, Experience 2 Student Activity Companion Volume 1: 45, 47, 49, 53–56, 57, 59, 65, 67, 69, 71 Teacher Guide, 26–30 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas PS1.A Structure and Properties of Matter Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations, including the inflation and shape of a balloon and the effects of air on larger particles or objects.	Topic 1, Experience 2 Student Activity Companion Volume 1: 45, 47, 49, 53–56, 57, 59, 65, 67, 69, 71 Teacher Guide, 26–30 Corresponding Digital Resources and Assessments
Science and Engineering Practices SEP-2 Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions. Use models to describe phenomena.	Topic 1, Experience 2 Student Activity Companion Volume 1: 45, 47, 49, 53–56, 57, 59, 65, 67, 69, 71 Teacher Guide, 26–30 Corresponding Digital Resources and Assessments
Crosscutting Concepts CCC-3 Scale, Proportion, and Quantity Natural objects exist from the very small to the immensely large.	Topic 1, Experience 2 Student Activity Companion Volume 1: 45, 47, 49, 53–56, 57, 59, 65, 67, 69, 71 Teacher Guide, 26–30 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. Clarification Statement: Examples of reactions or changes could include phase changes, dissolving, and mixing that form new substances. Assessment Boundary: Assessment does not include distinguishing mass and weight.	Topic 2, Experience 1 Student Activity Companion Volume 1: 87, 89, 91, 99, 101, 105, 107 Teacher Guide, 47–50 Topic 2, Experience 2 Student Activity Companion Volume 1: 119, 121, 123 Teacher Guide: 55–58 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
PS1.A Structure and Properties of Matter The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish.	Topic 2, Experience 1 87, 89, 91, 95–98 Teacher Guide, 47–50 Topic 2, Experience 2 Student Activity Companion Volume 1: 119, 121, 123, 127–130, 131–133, 141, 143 Teacher Guide: 55–58 Corresponding Digital Resources and Assessments
PS1.B Chemical Reactions No matter what reaction or change in properties occurs, the total weight of the substances does not change. (Boundary: Mass and weight are not distinguished at this grade level.)	Topic 2, Experience 1 Student Activity Companion Volume 1: 55–58 Teacher Guide, 47–50 Topic 2, Experience 2 Student Activity Companion Volume 1: 127–130, 131, 133, 141, 143 Teacher Guide: 55–58 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-5 Using Mathematics and Computational Thinking Mathematical and computational thinking in 3–5 builds on K–2 experiences and progresses to extending quantitative measurements to a variety of physical properties and using computation and mathematics to analyze data and compare alternative design solutions. Measure and graph quantities such as weight to address scientific and engineering questions and problems.	Topic 2, Experience 1 Student Activity Companion Volume 1: 87, 89, 91, 105, 107 Teacher Guide, 47–50 Topic 2, Experience 2 Student Activity Companion Volume 1: 119, 121, 123, 137, 139 Teacher Guide: 55–58 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-3 Scale, Proportion, and Quantity Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume.	Topic 2, Experience 1 Student Activity Companion Volume 1: 87, 89, 91, 95–98 Teacher Guide, 47–50 Topic 2, Experience 2 Student Activity Companion Volume 1: 87, 89, 91, 95–98 Teacher Guide: 55–58 Corresponding Digital Resources and Assessments
NOS-6 Scientific Knowledge Assumes an Order and Consistency in Natural Systems Science assumes consistent patterns in natural systems.	Topic 2, Experience 1 Student Activity Companion Volume 1: 91 Teacher Guide, 48, 56 Topic 2, Experience 2 Student Activity Companion Volume 1: 123 Teacher Guide, 56 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-PS1-3 Make observations and measurements to identify materials based on their properties. Clarification Statement: Examples of materials to be identified could include baking soda and other powders, metals, minerals, and liquids. Examples of properties could include color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility; density is not intended as an identifiable property. Assessment Boundary: Assessment does not include density or distinguishing mass and weight.	Topic 1, Experience 1 Student Activity Companion Volume 1: 13, 15, 19–22, 23, 25, 31, 33 Teacher Guide, 19–22 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas PS1.A Structure and Properties of Matter Measurements of a variety of properties can be used to identify materials. (Boundary: At this grade level, mass and weight are not distinguished, and no attempt is made to define the unseen particles or explain the atomic-scale mechanism of evaporation and condensation.)	Topic 1, Experience 1 Student Activity Companion Volume 1: 13, 15, 19–22, 23, 25, 31, 33 Teacher Guide, 19–22 Corresponding Digital Resources and Assessments
Science and Engineering Practices SEP-3 Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions. Make observations and measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon.	Topic 1, Experience 1 Student Activity Companion Volume 1: 13, 15, 19–22, 23, 25, 31, 33 Teacher Guide, 19–22 Corresponding Digital Resources and Assessments
Crosscutting Concepts CCC-3 Scale, Proportion, and Quantity Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume.	Topic 1, Experience 1 Student Activity Companion Volume 1: 13, 15, 19–22, 23, 25, 31, 33 Teacher Guide, 19–22 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	Topic 2, Experience 2 Student Activity Companion Volume 1: 121, 123 Teacher Guide, 55–57 Topic 2, Experience 3 Student Activity Companion Volume 1: 169 Teacher Guide, 66 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
PS1.B Chemical Reactions When two or more different substances are mixed, a new substance with different properties may be formed.	Topic 2, Experience 2 Student Activity Companion Volume 1: 127–130, 131, 133, 137, 139 Teacher Guide, 55–58 Topic 2, Experience 3 Student Activity Companion Volume 1: 157–160 Teacher Guide, 63–65 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-3 Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions. Conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered.	Topic 2, Experience 2 Student Activity Companion Volume 1: 127–130, 131, 133, 137, 139 Teacher Guide, 55–58 Topic 2, Experience 3 Student Activity Companion Volume 1: 167, 169 Teacher Guide, 66 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-2 Cause and Effect Cause and effect relationships are routinely identified, tested, and used to explain change.	Topic 2, Experience 2 Student Activity Companion Volume 1: 113, 117–120, 121, 123, 127, 129 Teacher Guide, 55–58 Topic 2, Experience 3 Student Activity Companion Volume 1: 151, 153, 157–160 Teacher Guide, 63–65 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down. Clarification Statement: “Down” is a local description of the direction that points toward the center of the spherical Earth. Assessment Boundary: Assessment does not include mathematical representation of gravitational force.	Topic 5, Experience 1 Student Activity Companion Volume 2: 113, 115, 119–122, 123, 125, 129, 131, 133, 147 Teacher Guide, 163–166 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
PS2.B Types of Interactions The gravitational force of Earth acting on an object near Earth’s surface pulls that object toward the planet’s center.	Topic 5, Experience 1 Student Activity Companion Volume 2: 113, 115, 119–122, 123, 125, 129, 131, 133, 147 Teacher Guide, 163–166 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-7 Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). Support an argument with evidence, data, or a model.	Topic 5, Experience 1 Student Activity Companion Volume 2: 113, 115, 123, 125, 129, 131 Teacher Guide, 163–166 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-2 Cause and Effect Cause and effect relationships are routinely identified, tested, and used to explain change.	Topic 5, Experience 1 Student Activity Companion Volume 2: 113, 115, 119–122, 123, 125, 129, 131, 133, 147 Teacher Guide, 163–166 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. Clarification Statement: Examples of models could include diagrams, and flow charts.	Topic 6, Experience 2 Student Activity Companion Volume 2: 253, 255, 259–262, 263, 265, 271, 273, 275, 277 Teacher Guide, 215–218 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
PS3.D Energy in Chemical Processes and Everyday Life The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water).	Topic 6, Experience 2 Student Activity Companion Volume 2: 253, 255, 259–262, 263, 265, 271, 273, 275, 277 Teacher Guide, 215–218 Corresponding Digital Resources and Assessments
LS1.C Organization for Matter and Energy Flow in Organisms Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion.	Topic 6, Experience 2 Student Activity Companion Volume 2: 253, 255, 259–262, 263, 265, 271, 273, 275, 277 Teacher Guide, 215–218 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-2 Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions. Develop a model to describe phenomena.	Topic 6, Experience 2 Student Activity Companion Volume 2: 253, 255, 259–262, 263, 265, 271, 273, 275, 277 Teacher Guide, 215–218 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-5 Energy and Matter Energy can be transferred in various ways and between objects.	Topic 6, Experience 2 Student Activity Companion Volume 2: 253, 255, 259–262, 263, 265, 271, 273, 275, 277 Teacher Guide, 215–218 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water. Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.	Topic 6, Experience 1 Student Activity Companion Volume 2: 245, 247, 251–254, 261, 263, 265, 267 Teacher Guide, 207–210 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
LS1.C Organization for Matter and Energy Flow in Organisms Plants acquire their material for growth chiefly from air and water.	Topic 6, Experience 1 Student Activity Companion Volume 2: 245, 247, 251–254, 261, 263, 265, 267 Teacher Guide, 207–210 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-7 Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). Support an argument with evidence, data, or a model.	Topic 6, Experience 1 Student Activity Companion Volume 2: 245, 247, 251–254, 261, 263, 265, 267 Teacher Guide, 207–210 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-5 Energy and Matter Matter is transported into, out of, and within systems.	Topic 6, Experience 1 Student Activity Companion Volume 2: 245, 247, 251–254, 261, 263, 265, 267 Teacher Guide, 207–210 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth. Assessment Boundary: Assessment does not include molecular explanations.	Topic 6, Experience 2 Student Activity Companion Volume 2: 275, 277, 281–284, 285, 287, 293, 295, 297, 299 Teacher Guide, 215–218 Topic 6, Experience 3 Student Activity Companion Volume 2: 215–218 Teacher Guide, 211–214 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
LS2.A Interdependent Relationships in Ecosystems The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as “decomposers.” Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem.	Topic 6, Experience 2 Student Activity Companion Volume 2: 275, 277, 281–284, 285, 287, 293, 295, 297, 299 Teacher Guide, 215–218 Topic 6, Experience 3 Student Activity Companion Volume 2: 215–218 Teacher Guide, 211–214 Corresponding Digital Resources and Assessments
LS2.B Cycles of Matter and Energy Transfer in Ecosystems Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment.	Topic 6, Experience 2 Student Activity Companion Volume 2: 275, 277, 281–284, 285, 287, 293, 295, 297, 299 Teacher Guide, 215–218 Topic 6, Experience 3 Student Activity Companion Volume 2: 317–320, 321, 323, 327, 329, 331, 333 Teacher Guide, 223–226 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-2 Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions. Develop a model to describe phenomena.	Topic 6, Experience 2 Student Activity Companion Volume 2: 275, 277, 281–284, 285, 287, 293, 295, 297, 299 Teacher Guide, 215–218 Topic 6, Experience 3 Student Activity Companion Volume 2: 215–218 Teacher Guide, 223–226 Corresponding Digital Resources and Assessments
NOS-4 Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena Science explanations describe the mechanisms for natural events.	Topic 6, Experience 2 Student Activity Companion Volume 2: 275, 277 Teacher Guide, 215–216 Topic 6, Experience 3 Student Activity Companion Volume 2: 307, 309, 311, 313 Teacher Guide, 223–225 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-4 Systems and System Models A system can be described in terms of its components and their interactions.	Topic 6, Experience 2 Student Activity Companion Volume 2: 275, 277, 297, 299 Teacher Guide, 215–216, 218 Topic 6, Experience 3 Student Activity Companion Volume 2: 307, 309, 311, 313, 321, 323, 331, 333 Teacher Guide, 223–226 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-ESS1-1 Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. Assessment Boundary: Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, stage).	Topic 5, Experience 2 Student Activity Companion Volume 2: 143, 145, 149–152, 153, 155, 159, 161, 163, 165 Teacher Guide, 171–174 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
ESS1.A The Universe and its Stars The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth.	Topic 5, Experience 2 Student Activity Companion Volume 2: 143, 145, 149–152, 153, 155, 159, 161, 163, 165 Teacher Guide, 171–174 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-7 Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). Support an argument with evidence, data, or a model.	Topic 5, Experience 2 Student Activity Companion Volume 2: 143, 145, 153, 155, 159, 161, 163, 165 Teacher Guide, 171–174 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-3 Scale, Proportion, and Quantity Natural objects exist from the very small to the immensely large.	Topic 5, Experience 2 Student Activity Companion Volume 2: 143, 145, 153, 155, 159, 161, 163, 165 Teacher Guide, 171–174 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. Clarification Statement: Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months. Assessment Boundary: Assessment does not include causes of seasons.	Topic 5, Experience 3 Student Activity Companion Volume 2: 173, 175, 179–182, 183, 185, 189, 191, 193, 195 Teacher Guide, 179–182 Topic 5, Experience 4 Student Activity Companion Volume 2: 203, 205, 213–216, 217, 219, 223, 225, 227, 229 Teacher Guide, 187–190 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
ESS1.B Earth and the Solar System The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year.	Topic 5, Experience 3 Student Activity Companion Volume 2: 173, 175, 179–182, 183, 185, 189, 191, 193, 195 Teacher Guide, 179–182 Topic 5, Experience 4 Student Activity Companion Volume 2: 203, 205, 213–216, 217, 219, 223, 225, 227, 229 Teacher Guide, 187–190 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-4 Analyzing and Interpreting Data Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used. Represent data in graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships.	Topic 5, Experience 3 Student Activity Companion Volume 2: 173, 175, 179–182, 183, 185, 189, 191, 193, 195 Teacher Guide, 179–182 Topic 5, Experience 4 Student Activity Companion Volume 2: 223, 225 Teacher Guide, 190 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-1 Patterns Similarities and differences in patterns can be used to sort, classify, communicate and analyze simple rates of change for natural phenomena.	Topic 5, Experience 3 Student Activity Companion Volume 2: 173, 175, 179–182, 183, 185, 189, 191, 193, 195 Teacher Guide, 179–182 Topic 5, Experience 4 Student Activity Companion Volume 2: 203, 205, 213–216, 217, 219, 223, 225, 227, 229 Teacher Guide, 187–190 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-ESS2-1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. Clarification Statement: Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system. Assessment Boundary: Assessment is limited to the interactions of two systems at a time.	Topic 3, Experience 1 Student Activity Companion Volume 1: 191, 193, 197–200, 201, 203, 211, 213 Teacher Guide, 83–86 Topic 3, Experience 2 Student Activity Companion Volume 1: 221, 223, 227–230, 231, 233, 239, 241 Teacher Guide, 91–94 Topic 3, Experience 4 Student Activity Companion Volume 1: 285, 287, 291–294, 295, 297, 301, 303, 305, 307, 309 Teacher Guide, 107–110 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas ESS2.A Earth Materials and Systems Earth’s major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth’s surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather	Topic 3, Experience 1 Student Activity Companion Volume 1: 191, 193, 197–200, 201, 203, 211, 213 Teacher Guide, 83–86 Topic 3, Experience 2 Student Activity Companion Volume 1: 221, 223, 227–230, 231, 233, 239, 241 Teacher Guide, 91–94 Topic 3, Experience 4 Student Activity Companion Volume 1: 285, 287, 291–294, 295, 297, 301, 303, 305, 307, 309 Teacher Guide, 107–110 Corresponding Digital Resources and Assessments
Science and Engineering Practices SEP-2 Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions. Develop a model using an example to describe a scientific principle.	Topic 3, Experience 1 Student Activity Companion Volume 1: 191, 193, 197–200, 201, 203, 211, 213 Teacher Guide, 83–86 Topic 3, Experience 2 Student Activity Companion Volume 1: 221, 223, 227–230, 231, 233, 239, 241 Teacher Guide, 91–94 Topic 3, Experience 4 Student Activity Companion Volume 1: 285, 287, 291–294, 295, 297, 301, 303, 305, 307, 309 Teacher Guide, 107–110 Corresponding Digital Resources and Assessments
Crosscutting Concepts CCC-4 Systems and System Models A system can be described in terms of its components and their interactions.	Topic 3, Experience 1 Student Activity Companion Volume 1: 191, 193, 197–200, 201, 203, 211, 213 Teacher Guide, 83–86 Topic 3, Experience 2 Student Activity Companion Volume 1: 221, 223, 227–230, 231, 233, 239, 241 Teacher Guide, 91–94 Topic 3, Experience 4 Student Activity Companion Volume 1: 285, 287, 291–294, 295, 297, 301, 303, 305, 307, 309 Teacher Guide, 107–110 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-ESS2-2 Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. Assessment Boundary: Assessment is limited to oceans, lakes, rivers, glaciers, ground water, and polar ice caps, and does not include the atmosphere.	Topic 3, Experience 3 Student Activity Companion Volume 1: 253, 255, 257, 261–264, 265, 267, 271, 273 Teacher Guide, 99–102 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas	
ESS2.C The Roles of Water in Earth’s Surface Processes Nearly all of Earth’s available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere.	Topic 3, Experience 3 Student Activity Companion Volume 1: 253, 255, 257, 261–264, 265, 267, 271, 273 Teacher Guide, 99–102 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-5 Using Mathematics and Computational Thinking Mathematical and computational thinking in 3–5 builds on K–2 experiences and progresses to extending quantitative measurements to a variety of physical properties and using computation and mathematics to analyze data and compare alternative design solutions. Describe and graph quantities such as area and volume to address scientific questions.	Topic 3, Experience 3 Student Activity Companion Volume 1: 253, 255, 257, 261–264, 265, 267, 271, 273 Teacher Guide, 99–102 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
CCC-3 Scale, Proportion, and Quantity Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume.	Topic 3, Experience 3 Student Activity Companion Volume 1: 253, 255, 257, 261–264, 265, 267, 271, 273 Teacher Guide, 99–102 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.	Topic 4, Experience 1 Student Activity Companion Volume 2: 13, 15, 19, 21–24, 25, 27, 31, 33, 35, 37 Teacher Guide, 127–130 Topic 4, Experience 2 Student Activity Companion Volume 2: 47, 49, 51–54, 55, 57, 61, 63 Teacher Guide, 135–138 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77, 81–84, 85, 87, 91, 93, 95, 97 Teacher Guide, 143–146 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas ESS3.C Human Impacts on Earth Systems Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth’s resources and environments.	Topic 4, Experience 1 Student Activity Companion Volume 2: 13, 15, 19, 21–24, 25, 27, 31, 33, 35, 37 Teacher Guide, 127–130 Topic 4, Experience 2 Student Activity Companion Volume 2: 13, 15, 19, 25, 27, 31, 33, 35, 37 Teacher Guide, 135–138 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77, 81–84, 85, 87, 91, 93, 95, 97 Teacher Guide, 143–146 Corresponding Digital Resources and Assessments
Science and Engineering Practices SEP-8 Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluate the merit and accuracy of ideas and methods. Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem.	Topic 4, Experience 1 Student Activity Companion Volume 2: 13, 15, 19, 21–24, 25, 27, 31, 33, 35, 37 Teacher Guide, 127–130 Topic 4, Experience 2 Student Activity Companion Volume 2: 55, 57, 61, 63 Teacher Guide, 137–138 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77, 85, 87, 95, 97 Teacher Guide, 143–146 Corresponding Digital Resources and Assessments
Crosscutting Concepts CCC-4 Systems and System Models A system can be described in terms of its components and their interactions.	Topic 4, Experience 1 Student Activity Companion Volume 2: 13, 15, 19, 25, 27, 31, 33, 35, 37 Teacher Guide, 127–130 Topic 4, Experience 2 Student Activity Companion Volume 2: 47, 49, 51–54, 55, 57, 61, 63 Teacher Guide, 135–138 Topic 4, Experience 3 Student Activity Companion Volume 2: 81–84, 85, 87, 91, 93, 95, 97 Teacher Guide, 143–146 Corresponding Digital Resources and Assessments
NOS-8 Science Addresses Questions About the Natural and Material World. Science findings are limited to questions that can be answered with empirical evidence.	Topic 4, Experience 3 Student Activity Companion Volume 2: 84 Teacher Guide, 65 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 2, Experience 1 Student Activity Companion Volume 1: 109, 111, 113 Teacher Guide, 50 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 3 Student Activity Companion Volume 1: 275, 277 Teacher Guide, 102 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77 Teacher Guide, 135–137 Topic 4, Experience 3 Student Activity Companion Volume 2: 95, 97 Teacher Guide, 146 Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Topic 6, Experience 1 Student Activity Companion Volume 2: 265, 267 Teacher Guide, 210 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas ETS1.A Defining and Delimiting Engineering Problems Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 3 Student Activity Companion Volume 1: 275, 277 Teacher Guide, 102 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77 Teacher Guide, 143–145 Topic 4, Experience 3 Student Activity Companion Volume 2: 95, 97 Teacher Guide, 146

Next Generation Science Standards	WHERE YOU WILL FIND IT
	Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Topic 6, Experience 1 Student Activity Companion Volume 2: 265, 267 Teacher Guide, 210 Corresponding Digital Resources and Assessments
Science and Engineering Practices	
SEP-1 Asking Questions and Defining Problems Asking questions and defining problems in 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships. Define a simple design problem that can be solved through the development of an object, tool, process, or system and includes several criteria for success and constraints on materials, time, or cost.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 3 Student Activity Companion Volume 1: 275, 277 Teacher Guide, 102 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77 Teacher Guide, 143–145 Topic 4, Experience 3 Student Activity Companion Volume 2: 95, 97 Teacher Guide, 146 Topic 6, Experience 1 Student Activity Companion Volume 2: 1 Teacher Guide, 210 Corresponding Digital Resources and Assessments
Crosscutting Concepts	
STSE-1 Influence of Science, Engineering, and Technology on Society and the Natural World People’s needs and wants change over time, as do their demands for new and improved technologies.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 3 Student Activity Companion Volume 1: 275, 277 Teacher Guide, 102 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77 Teacher Guide, 143–145 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 2, Experience 3 Student Activity Companion Volume 1: 171, 173, 285 Teacher Guide, 66 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 3 Student Activity Companion Volume 1: 275, 277 Teacher Guide, 102 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77, 95, 97 Teacher Guide, 143–146 Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas ETS1.B Developing Possible Solutions • Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. • At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 2, Experience 1 Student Activity Companion Volume 1: 109, 111, 113 Teacher Guide, 50 Topic 2, Experience 3 Student Activity Companion Volume 1: 171, 173, 285 Teacher Guide, 66 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 3 Student Activity Companion Volume 1: 275, 277 Teacher Guide, 102 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77, 95, 97 Teacher Guide, 143–146 Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Science and Engineering Practices SEP-6 Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems. • Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design problem.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 2, Experience 3 Student Activity Companion Volume 1: 171, 173, 285 Teacher Guide, 66 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77, 95, 97 Teacher Guide, 143–146 Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Corresponding Digital Resources and Assessments
Crosscutting Concepts STSE-1 Influence of Science, Engineering, and Technology on Society and the Natural World • Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands.	Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 2, Experience 3 Student Activity Companion Volume 1: 171, 173, 285 Teacher Guide, 66 Topic 3, Experience 3 Student Activity Companion Volume 1: 275, 277 Teacher Guide, 102 Topic 4, Experience 3 Student Activity Companion Volume 2: 73, 75, 77, 95, 97 Teacher Guide, 143–146 Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Performance Expectation 3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Corresponding Digital Resources and Assessments
Disciplinary Core Ideas ETS1.B Developing Possible Solutions • Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 2, Experience 1 Student Activity Companion Volume 1: 109, 111, 113 Teacher Guide, 50 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Corresponding Digital Resources and Assessments

Next Generation Science Standards	WHERE YOU WILL FIND IT
Science and Engineering Practices ETS1.C Optimizing the Design Solution • Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Topic 5, Experience 4 Student Activity Companion Volume 2: 227, 229 Teacher Guide, 190 Corresponding Digital Resources and Assessments
Crosscutting Concepts SEP-3 Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions. • Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered.	Topic 1, Experience 1 Student Activity Companion Volume 1: 35, 37 Teacher Guide, 22 Topic 1, Experience 2 Student Activity Companion Volume 1: 69, 71 Teacher Guide, 30 Topic 2, Experience 3 Student Activity Companion Volume 1: 171, 173, 285 Teacher Guide, 66 Topic 3, Experience 1 Student Activity Companion Volume 1: 211, 213 Teacher Guide, 86 Topic 3, Experience 2 Student Activity Companion Volume 1: 243, 245 Teacher Guide, 94 Topic 3, Experience 4 Student Activity Companion Volume 1: 305, 307, 309 Teacher Guide, 110 Corresponding Digital Resources and Assessments

Notes:

Dotted lines for note-taking.

ELA/Literacy Standards Grade 5

Correlation

The Digital Resources listed in the correlation include Key Ideas Presentations, Key Ideas Videos, SEPs and CCCs Preview Presentation and Activities, Virtual Labs, and PhET Activities.

ELA/Literacy: Reading	WHERE YOU WILL FIND IT
Key Ideas and Details Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	
RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-PS2-1) (5-LS1-1) (5-ESS1-1) (5-ESS3-1) (3-5-ETS1-2)	Student Activity Companion, Volume 2: 161, 163 Teacher Guide, 127, 129, 171, 173, 217 Corresponding Digital Resources and Assessment
Craft and Structure Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.	
RI.5.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.	Student Activity Companion, Volume 1: 27, 29, 61, 63, 103, 135, 165, 205, 235, 237, 269, 299 Volume 2: 29, 59, 89, 127, 157, 187, 221, 259, 289, 291, 325 Teacher Guide, 14, 40, 76, 122, 158, 211 Corresponding Digital Resources and Assessment
Integration of Knowledge and Ideas Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.	
RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-PS1-1) (5-PS3-1) (5-LS2-1) (5-ESS1-1) (5-ESS2-1) (5-ESS2-2) (5-ESS3-1) (3-5-ETS1-2)	Student Activity Companion, Volume 1: 52–55, 57, 59, 197–200, 201, 203, 211, 213, 227–230, 233, 251, 261–264, 265, 267, 275, 277, 286–294, 295, 297, 305, 307, 309 Volume 2: 21–24, 25, 27, 35, 37, 51–54, 55, 57, 81–84, 85, 87, 149–152, 153, 155, 317, 333 Teacher Guide, 19, 21, 83, 85, 86, 91, 93, 94, 99, 101, 102, 107, 109, 110, 127, 129, 130, 135, 137, 143, 145, 171, 173, 222 Corresponding Digital Resources and Assessment
Integration of Knowledge and Ideas Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.	
RI.5.8 Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s). (5-ESS1-1)	Student Activity Companion, Volume 2: 149–152, 153, 155 Teacher Guide, 171, 173 Corresponding Digital Resources and Assessment
Integration of Knowledge and Ideas Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.	
RI.5.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably. (4-PS3-1) (4-PS4-3) (4-ESS3-2)	Student Activity Companion, Volume 1: 211, 213, 243, 245, 275, 279, 305, 307, 309 Volume 2: 21–24, 25, 27, 35, 37, 51–54, 55, 57, 81–84, 85, 87, 119–122, 123, 125, 149–152, 153, 155, 317–320, 321, 323, 331, 333 Teacher Guide, 86, 94, 102, 110, 127, 129, 130, 135, 137, 143, 145, 163, 165, 171, 173, 223–226 Corresponding Digital Resources and Assessment

ELA/Literacy: Writing		WHERE YOU WILL FIND IT
Text Types and Purposes Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.		
W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-PS2-1) (5-LS1-1) (5-ESS1-1)		Student Activity Companion, Volume 1: 93, 95, 111, 113, 149–152, 153, 155 Teacher Guide, 146, 163, 164, 171, 173 Corresponding Digital Resources and Assessment
Text Types and Purposes Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.		
W.5.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (5-PS1-2)		Student Activity Companion, Volume 1: 212, 213, 239, 241, 271, 273 Teacher Guide, 86, 94, 102 Corresponding Digital Resources and Assessment
Research to Build and Present Knowledge Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.		
W.5.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (5-PS1-2) (5-PS1-3) (5-PS1-4) (3-5-ETS1-3)		Student Activity Companion, Volume 1: 19–22, 23, 25, 109, 111, 113, 171, 173, 175, 211, 213, 243, 245, 275, 277, NaN, 305, 307, 309 Volume 2: 95, 97 Teacher Guide, 19, 21, 50, 66, 86, 94, 95, 102, 107, 109, 110, 190 Corresponding Digital Resources and Assessment
Research to Build and Present Knowledge Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.		
W.5.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (5-PS1-2) (5-PS1-3) (5-PS1-4) (5-ESS2-2) (5-ESS3-1) (3-5-ETS1-3) (3-5-ETS1-3)		Student Activity Companion, Volume 1: 19–22, 23, 25, 31–33, 53–56, 57, 59, 95–98, 101, 99, NaN, 161, 163, 211, 213, 275, 277 Volume 2: 21–24, 25, 27, 51–54, 55, 57, 81–85, 85, 87 Teacher Guide, 19, 21, 22, 27, 29, 47, 49, 63, 65, 102, 127, 129, 135, 137, 143, 145 Corresponding Digital Resources and Assessment
Research to Build and Present Knowledge Draw evidence from literary or informational texts to support analysis, reflection, and research.		
W.5.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. (5-PS1-2) (5-PS1-3) (5-PS1-4) (5-ESS3-1) (3-5-ETS1-3)		Student Activity Companion, Volume 1: 19–22, 23, 25, 31, 33, 127–130, 131, 133, 167, 169, 197–200, 201, 203, 211, 213, 243, 245, 275, 277, 291–294, 295, 297, 305, 307, 309 Volume 2: 21–24, 25, 27, 51–54, 55, 57, 81–84 Teacher Guide, 19, 21, 22, 63, 65, 66, 83, 85, 86, 94, 102, 107, 109, 110, 127, 129, 135, 137, 143, 145 Corresponding Digital Resources and Assessment

ELA/Literacy: Speaking and Listening	WHERE YOU WILL FIND IT
Comprehension and Collaboration Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others’ ideas and expressing their own clearly and persuasively.	
SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly.	Student Activity Companion, Volume 1: 99, 101, 121, 123; Volume 2: 245, 247, 255, 257, 275, 277 Teacher Guide, 47, 49, 55, 56, 207–210, 215–216 Corresponding Digital Resources and Assessment
Presentation of Knowledge and Ideas Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.	
SL.5.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.	Student Activity Companion, Volume 1: 35, 37, 69, 71 Volume 2: 265, 267, 285, 287, 297, 299, 331, 333 Teacher Guide, 22, 30, 210, 212, 214, 218, 226 Corresponding Digital Resources and Assessment
Presentation of Knowledge and Ideas Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.	
SL.5.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-PS3-1) (5-LS2-1) (5-ESS1-2) (5-ESS2-1) (5-ESS2-2)	Student Activity Companion, Volume 1: 197–200, 201, 203, 275, 277, 291–294, 295, 297 Volume 2: 183, 185, 193, 195, 217, 219, 285, 287, 297, 299, 331, 333 Teacher Guide, 83, 85, 102, 107, 109, 181, 189, 182, 215–218, 226 Corresponding Digital Resources and Assessment



Notes:

Mathematics Standards Grade 5

Correlation

The Digital Resources listed in the correlation include Key Ideas Presentations, Key Ideas Videos, SEPs and CCCs Preview Presentation and Activities, Virtual Labs, and PhET Activities.

Mathematics Standards	WHERE YOU WILL FIND IT
Operations and Algebraic Thinking Write and interpret numerical expressions; Analyze patterns and relationships.	
3-5.OA Operations and Algebraic Thinking (3-ETS1-1, 3-ETS1-2)	Student Activity Companion, Volume 1: 201, 203, 207, 209, 221, 223, 285, 287, 295, 297, 301, 303, 305, 307, 309 Teacher Guide, 83–85, 86, 91–93, 107–109, 110 Corresponding Digital Resources and Assessment
Number and Operations in Base Ten Understand the place value system; Perform operations with multi-digit whole numbers and with decimals to hundredths.	
5.NBT.A.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. (5-PS1-1)	Student Activity Companion, Volume 1: 49 Teacher Guide, 28 Corresponding Digital Resources and Assessment
5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. (5-ESS1-1)	Student Activity Companion, Volume 1: 35, 255, 257, 273; Volume 2: 153, 155 Teacher Guide, 99–101, 171–173 Corresponding Digital Resources and Assessment:
5.NBT.B.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	Student Activity Companion, Volume 1: 49, 253, 255, 257 Teacher Guide, 28, 99–101 Corresponding Digital Resources and Assessment
Number and Operations—Fractions Use equivalent fractions as a strategy to add and subtract fractions; Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	
5.NF.B.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. (5-PS1-1)	Student Activity Companion, Volume 1: 49 Teacher Guide, 28 Corresponding Digital Resources and Assessment
Measurement and Data Convert like measurement units within a given measurement system; Represent and interpret data; Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	
5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real-world problems. (5-PS1-2, 5-LS1-1, 5-ESS2-2)	Student Activity Companion, Volume 1: 141, 143, 253, 255, 257, 271, 273 Teacher Guide, 58, 99–101, 102 Corresponding Digital Resources and Assessment
5.MD.C.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. (5-PS1-1, 5-PS1-1)	Student Activity Companion, Volume 1: 19–22, 31, 33, 57, 59, 65, 67, 69, 71 Teacher Guide, 19–21, 22, 27–29, 30 Corresponding Digital Resources and Assessment

5.MD.C.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. (5-PS1-1, 5-PS1-1)	Student Activity Companion, Volume 1: 19–22, Teacher Guide, 19–21 Corresponding Digital Resources and Assessment
Geometry Graph points on the coordinate plane to solve real-world and mathematical problems; Classify two-dimensional figures into categories based on their properties.	
5.G.A.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. (5-ESS1-2, 5-ESS2-1, 5-ESS2-2)	Student Activity Companion, Volume 1: 253, 255, 257, 271, 273; Volume 2: 173, 175, 183, 185, 193, 195 Teacher Guide, 99–101, 102, 179–181, 182 Corresponding Digital Resources and Assessment
The Standards for Mathematical Practice These standards describe varieties of important processes and proficiencies. Processes include: problem solving, reasoning and proof, communication, representation, and connections. Proficiencies include: adaptive reasoning, strategic competence, conceptual understanding, procedural fluency, and productive disposition.	
MP.2 Reason abstractly and quantitatively. (5-PS1-1, 5-PS1-2, 5-PS1-1, 5-LS1-1, 5-LS2-1, 5-ESS1-1, 5-ESS1-2, 5-ESS2-1, 5-ESS2-2, 5-ESS3-1, 3-ETS1-1, 3-ETS1-2, 3-ETS1-3)	Student Activity Companion, Volume 1: 13, 15, 31, 33, 35, 37, 45, 47, 49, 57, 59, 65, 67, 69, 71, 131, 133, 191, 193, 253, 255, 257, 271, 273; Volume 2: 45, 47, 65, 67, 75, 77, 143, 145, 163, 165, 189, 191, 193, 195 Teacher Guide, 19–21, 22, 27–29, 30, 55–57, 83–85, 99–101, 102, 135–137, 138, 143–145, 171–173, 174, 182 Corresponding Digital Resources and Assessment
MP.3 Construct viable arguments & critique the reasoning of others.	Student Activity Companion, Volume 2: 113, 115, 123, 125, 129, 131, 245, 247, 261, 263 Teacher Guide, 163–165, 166, 207–209, 210 Corresponding Digital Resources and Assessment
MP.4 Model with mathematics. (5-PS1-1, 5-PS1-2, 5-PS1-1, 5-LS1-1, 5-LS2-1, 5-ESS1-1, 5-ESS1-2, 5-ESS2-1, 5-ESS2-2, 5-ESS3-1, 3-ETS1-1, 3-ETS1-2, 3-ETS1-3)	Student Activity Companion, Volume 1: 47, 49, 69, 71, 141, 143, 191, 193, 253, 255, 257, 271, 273; Volume 2: 45, 47, 65, 163, 165 Teacher Guide, 27–29, 30, 58, 83–85, 99–101, 102, 135–137, 174 Corresponding Digital Resources and Assessment
MP.5 Use appropriate tools strategically. (5-PS1-2, 5-PS1-1, 5-LS1-1, 3-ETS1-1, 3-ETS1-2, 3-ETS1-3)	Student Activity Companion, Volume 1: 13, 15, 31, 33, 35, 37, 121, 123, 171, 173, 175, 243, 245 Teacher Guide, 19–21, 22, 55, 57, 66, 94 Corresponding Digital Resources and Assessment

