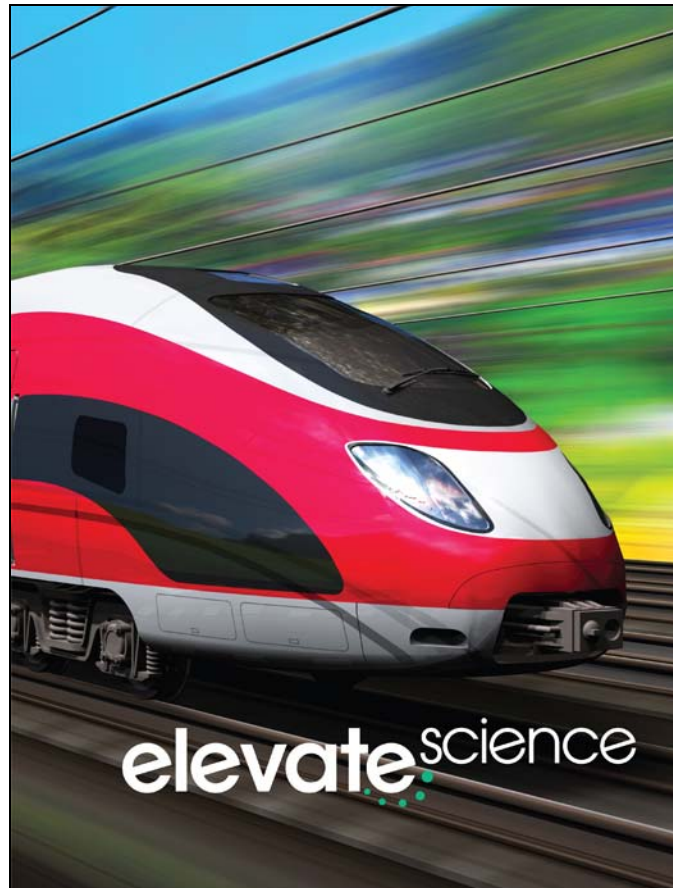


A Correlation of
Elevate Science
Grade 4, ©2019



To the
**Nebraska College and Career Ready
Standards for Science
Grade 4**

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Introduction

The following document demonstrates how the ***Elevate Science, ©2019*** program supports the Nebraska College and Career Ready Standards for Science, Grade 4. For each standard, correlation references are to the Student Edition and Teacher Edition where applicable.

Elevate Science is a comprehensive K-5 science program that focuses on active, student-centered learning. It builds students' critical thinking, questioning, and collaboration skills, and fuels interest in STEM and creative problem solving while supporting literacy development for elementary-age learners. Developed to support Next Generation Science Standards (NGSS), ***Elevate Science*** integrates three dimensional learning of the Scientific and Engineering Practices, Crosscutting Concepts (CCC), and Disciplinary Core Ideas (DCIs).

The ***Elevate Science*** blended print and digital curriculum engages students in phenomena-based inquiry and hands-on investigations.

- Problem-based learning Quests put students on a journey of discovery
- Engineering-focused features infuse STEM learning
- Coding and innovation engage students and build 21st century skills

The Teacher's Edition of ***Elevate Science*** helps elementary educators teach science with confidence: Scaffolding, ELD, differentiated instruction, and an instructional organization based upon the 5E learning model, (Engage, Explore, Explain, Extend/Elaborate, Evaluate), provide all the support needed for successful teaching practices. Professional development offers point-of-use support. A full-view approach to inquiry and testing provides new options for a variety of hands-on labs and assessments for three-dimensional learning.

Elevate Science 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 argument. 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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Nebraska College and Career Ready Standards for Science, Grade 4		Elevate Science, ©2019
SC.4.2	Waves: Waves and Information	
SC.4.2.1	Gather, analyze, and communicate evidence of waves and the information they transfer.	
SC.4.2.1.A	Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	SE/TE: uConnect Lab: How do we describe waves?, 104 uInvestigate Lab: How does a wave carry energy?, 107 uInvestigate Lab: What patterns can waves make?, 117 uBe a Scientist Ripples, 118 Visual Literacy Connection: How do wave patterns move?, 120-121 uDemonstrate Lab: How can you model a light or sound wave?, 148-149
SC.4.2.1.B	Generate and compare multiple solutions that use patterns to transfer information.	SE/TE: Quest Check-In: Communicating Tent to Tent, 113 uEngineer It: Crack That Code, 114-115 Quest Check In How can you send a message with sound?, 123 STEM Quest Check In :How can you send a message with light?, 132-133 uInvestigate Lab: How can information from waves be translated?, 135 Quest Check In: Compare Codes, 140

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SC.4.4	Energy: Conservation and Transfer	
SC.4.4.2	Gather, analyze and communicate evidence of energy conservation and transfer.	
SC.4.4.2.A	Use evidence to construct an explanation relating the speed of an object to the energy of that object.	SE/TE: Quest Kickoff: Energy Changes in Collisions, 2-3 uConnect Lab: How can you compare the energy of objects?, 4 uInvestigate Lab: How does starting height affect and object's energy?, 7 Motion and Energy, 12 Quest Check-In: Energy, Speed, and Motion, 13 uInvestigate Lab: How does energy transfer between objects?, 17 Evidence-Based Assessment, 46-47 uDemonstrate Lab: What affects energy transfer?, 48-49
SC.4.4.2.B	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents.	SE/TE: Visual Literacy Connection: How does energy affect particles of matter?, 10-11 uInvestigate Lab: How does energy transfer between objects?, 17 Model It!, 20 Other Energy Changes, 20-21 uInvestigate Lab: How does heat move?, 25 How is energy transferred?, 26-27 uInvestigate Lab: How does electric energy flow in circuits?, 35 Quest Findings: Energy Changes in Collisions, 42 uDemonstrate Lab: What affects energy transfer?, 48-49

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SC.4.4.2.C	Ask questions and predict outcomes about the changes in energy that occur when objects collide.	SE/TE: Quest Kickoff: Energy Changes in Collisions, 2-3 uInvestigate Lab: How does energy transfer between objects?, 17 Other Energy Changes, 20-21 uBe a Scientist: Construct a Cradle, 21 STEM Quest Check-In Lab: How does modeling help you understand a collision?, 22-23 Quest Findings: Energy Changes in Collisions, 42
SC.4.4.2.D	Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	SE/TE: STEM Quest Check-In Lab: How can an electric circuit help prevent collisions?, 40-41 uInvestigate Lab: How can a potato provide energy to a light bulb?, 57 uInvestigate Lab: How does a windmill capture wind energy?, 75 STEM Quest Check-In Lab: How can the sun make a motor work?, 80
SC.4.4.2.E	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.	SE/TE: uEngineer It!: Pump It Up!, 348-349

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SC.4.4.2.F	Obtain and combine information to describe that energy and fuels are derived from natural resources and that their uses affect the environment.	SE/TE: uConnect Lab: How are energy resources used?, 54 Crosscutting Concepts: Toolbox, 66 Petroleum, 67 Visual Literacy Connection: Where do fossil fuels come from?, 68-69 Visual Literacy Connection: Is renewable energy all around?, 76-77 Quest Connection, 87 Visual Literacy Connection: How can the use of energy damage ecosystems?, 88-89 Quest Check-In: Impact Inspections, 91 Evidence-Based Assessment, 96-97 uDemonstrate Lab: How can energy resource usage change?, 98-99
SC.4.6	Structure, Function, and Information Processing	
SC.4.6.3	Gather and analyze data to communicate an understanding of structure, function and information processing of living things.	
SC.4.6.3.A	Develop a model to describe that light reflecting from objects and entering the eyes allows objects to be seen.	SE/TE: uInvestigate Lab: How is light reflected?, 125 Design It!, 127 Seeing Objects, 127 Topic Assessment, 144-145

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SC.4.6.3.B	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	<p>SE/TE: Quest Kickoff: Let Plants and Animals Inspire You!, 278-279 uConnect Lab: How do your eyes respond to differences in lighting?, 280 Curriculum Connection, 282 uInvestigate Lab: What parts are inside a flower?, 283 Plant Systems, 284 Functions of Plant Structures, 285 Visual Literacy Connection: What are some functions of internal leaf structures?, 286-287 Lesson 1 Check, 289 Quest Check-In Lab: How can you observe a plant's vascular system in action?, 290-291 uInvestigate Lab: How are leaf coverings different?, 293 External Structures of a Plant, 294 Stems and Their Coverings, 295 Visual Literacy Connection: What structures do flowering plants use to reproduce?, 296-297 Adaptations of Flowers, 298 Lesson 2 Check, 298 uInvestigate Lab: How can you compare the stomachs of cows and dogs?, 301 Animal Structures for Support, 302 Structure of the Animal Heart, 303 Visual Literacy Connection: How do lungs and gills compare?, 304-305 Structure of the Animal Brain, 306 Quest Check-In: Fish Float and Sink, 307 Curriculum Connection, 308 uInvestigate Lab: How can you design a protective insect shell?, 309 Visual Literacy Connection: What do exoskeletons do?, 310-311 Other External Structures of Animals, 312 Lesson 4 Check, 313</p>

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SC.4.6.3.B	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	<p>(Continued) SE/TE: Quest Check-In: Lobster Claws, 314 Solve it with Science: Why do animals shed their exoskeletons?, 315 Quest Findings: Let Plants and Animals Inspire You!, 326 Topic Assessment, 328-329 Evidence-Based Assessment, 330-331</p>
SC.4.6.3.C	Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information.	<p>SE/TE: Engineering Connection, 316 uInvestigate Lab: How can you locate an object using only sound?, 317 Visual Literacy Connection: How do elephants respond to stimulus?, 318-319 Animal Responses to Smells, 320 Lesson 5 Check, 322 Quest Check-In: Sound Off!, 323 uDemonstrate Lab: How do earthworms respond to stimuli?, 332-333 uInvestigate Lab: Which parts of the body are more sensitive?, 359 Visual Literacy Connection: What are sensory organs?, 360-361 STEM Quest Check-In Lab: How can you test signals to and from your brain?, 364-365</p>

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SC.4.13	Earth's Systems: Processes That Shape the Earth
SC.4.13.4	Gather and analyze data to communicate an understanding of Earth's systems and processes that shape the Earth.
SC.4.13.4.A	<p>Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.</p> <p>SE/TE: Quest Kickoff: Dig for the Truth, 244-245 uConnect Lab: Where are fossils found in rock layers?, 246 uInvestigate Lab: What patterns do fossils follow?, 249 Fossils, 250 Quest Connection, 250 Rock Formations, 251 Rock Strata Can Change, 251 A Colorful Change, 252 Lesson 1 Check, 253 Quest Check-In: Existing Evidence, 254 STEM Math Connection: Canyonlands, 255 uInvestigate Lab: How can rock layers show change?, 259 Fossil Clues on Earth, 260 Crosscutting Concepts Toolbox: Patterns, 261 Index Fossils, 261 Visual Literacy Connection: How can layers of rock change?, 262-263 Comparing Rock Layers, 264 Quest Connection, 264 uBe a Scientist: Be a Rock Hound, 264 Lesson 2 Check, 265 Quest Check-In Lab: What does a core sample tell us?, 266-267 Quest Findings: Dig for the Truth, 268 Topic Assessment, 270-271 Evidence-Based Assessment, 272-273 uDemonstrate Lab: How can you correlate rock layers?, 274-275</p>

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SC.4.13.4.B	Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	<p>SE/TE: uConnect Lab: How can rain affect land?, 154 uInvestigate Lab: How can a rock wear away?, 185 uBe a Scientist: Weathering, 186 Quest Connection, 187 Erosion, 188 STEM Quest Check-In Lab: How does water affect landforms?, 192 Quest Findings: Does X Mark the Spot? That's Up to You!, 194 Evidence-Based Assessment, 198-199</p>
SC.4.13.4.C	Analyze and interpret data from maps to describe patterns of Earth's features.	<p>SE/TE: Quest Kickoff: Does X Mark the Spot? That's Up to You!, 152-153 Sports Connection, 156 Quest Connection, 158 Visual Literacy Connection: How can you see the same place in different ways?, 160-161 Lesson 1 Check, 162 Quest Check-In: The Making of a Legend, 163 Patterns of Mountains, 168 Crosscutting Concepts Toolbox: Patterns, 169 Patterns of Earthquakes and Volcanoes, 169 Visual Literacy Connection: How can a physical map help me locate different landforms?, 170-171 Lesson 2 Check, 172 Quest Check-In: A Changing Landscape, 173 Evidence-Based Assessment, 198-199</p>

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SC.4.13.4.D	Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	<p>SE/TE:</p> <p>Quest Kickoff: Protect the City! Hazard Incoming!, 204-205</p> <p>uConnect Lab: How can you reduce the impact of rapidly sliding soil?, 206</p> <p>uInvestigate Lab: How can a large wave affect land?, 209</p> <p>Quest Check-In: Beware: Hot Ash!, 215</p> <p>uEngineer It!: Warning!, 216-217</p> <p>Quest Check-In: Water Warnings, 224</p> <p>Solve it With Science: Where is the greatest earthquake risk?, 225</p> <p>STEM Engineering Connection, 226</p> <p>uInvestigate Lab: Where should you build an earthquake-safe structure?, 227</p> <p>Plan It!, 228</p> <p>Lesson 3 Check, 231</p> <p>Quest Check-In Lab: How can you reduce hazard damage?, 232-233</p> <p>Quest Findings: Hazard incoming!, 234</p> <p>Evidence-Based Assessment, 238-239</p> <p>uDemonstrate Lab: How can homes be designed to be more earthquake resistant?, 240-241</p>