

Science Scope & Sequence for 2018-2019 School Year

1a

CEW

UNIT	FOURTH GRADE	
Unit 1: Quarter 1	Unit 1 Teaching Window: August 20 - September 7 Unit 1 AND 2 Assessment Window: October 1- 5	Discovery Techbook Resource Alignment
Topic/Genre: Real World Engineers Essential Question: How can the engineering design process help us solve problems in our daily lives?	I Can Statements	*THESE STANDARDS SHOULD SPIRAL THROUGH EVERY UNIT. THE FOLLOWING LABS ARE A GOOD PLACE TO START, BUT NOTE THAT THERE ARE MANY TO CHOOSE FROM (ALL WITH TEACHER AND STUDENT GUIDES)
	I can define a design problem (question) that includes criteria for successes and constraints. (4.ETS1.A)	Virtual Lab 1 <u>Erosion-Here Today, Gone Tomorrow:</u> Teacher's Virtual Lab Guide: Lab Link: Student Guide:
	I can generate and compare multiple solutions (ex: experiment) to a problem that include criteria for successes and constraints. (4.ETS1.B)	Virtual Lab 2 <u>Pond-er This:</u> Teacher's Virtual Lab Guide: Lab Link: Student Guide:
	I can plan and conduct a fair test (ex: experiment). (4.ETS1.C)	Virtual Lab 3 <u>How Does Your Garden Grow:</u> Teacher's Virtual Lab Guide: Lab Link: Student Guide:
	I can identify controlled variables. (4.ETS1.C)	Virtual Lab 4- <u>How Big is Your Footprint?:</u> Teacher's Virtual Lab Guide Lab Link: Student Guide:
	I can identify ways a prototype or model can be improved. (4.ETS1.C)	*PLEASE NOTE THAT THE TEACHER'S GUIDES TO ALL LABS CAN BE FOUND UNDERNEATH THE LAB

Science Scope & Sequence for 2018-2019 School Year

		ITSELF WHEN FOLLOWING THE LAB LINK IN TECHBOOK.
Unit 2: Quarter 1	Unit 2 Teaching Window: September 10 - September 28 Unit 1 AND 2 Assessment Window: October 1 - 5	Discovery Techbook Resource Alignment
Topic/Genre: Life Science Essential Question: What makes objects move the way they do?	I Can Statements	4th Grade Science TechBook Unit (Life Science)
	I can construct an argument identifying ways that plant and animal structures help them survive (ex: thorns, claws, stems, roots, heart, stomach). (4.LS1.A)	Unit - Systems for Survival Concept - Physical Features TechBook - https://goo.gl/LbKE3S Model Lesson: 5 E's in Techbook: Videos - https://goo.gl/1ngDAC https://goo.gl/wyMGzs Exploration Virtual Lab
	I can use a model to demonstrate how animals receive, process and respond to information (Clarification Statement: emphasis on systems of information transfer). (4.LS1.D)	Unit - Systems for Survival Concept - Retrieving and Using Information TechBook - https://goo.gl/6GvqcE Reading Passages - https://goo.gl/cBBwg6 https://goo.gl/Xqq9kX Hands On Lab

Science Scope & Sequence for 2018-2019 School Year

Unit 3: Quarter 2	Unit 3 Teaching Window: October 8 - November 30 Unit Assessment Window: December 3 - 7	Discovery Techbook Resource Alignment
Topic/Genre: Force and Motion Essential Question: What makes objects move the way they do?	I Can Statements	4th Grade Science TechBook (Physical Science)
	I can make observations about an object's motion. (4.PS2.A.1)	Unit - Properties and Interactions of Matter Concept - Changing Direction TechBook - https://goo.gl/5szXyV Hands On Labs - https://goo.gl/FmkXGP https://goo.gl/NmxvBg Video - https://goo.gl/xFbCjr https://goo.gl/35LyAD Reading Passages - https://goo.gl/QMcZMY https://goo.gl/SnnXKW Exploration - https://goo.gl/M3Qhwz Assessment - https://goo.gl/hgEACD Same as standard 4.PS2.A.1 Same as standard 4.PS2.A.1
	I can measure an object's motion. (4.PS2.A.1)	
	I can identify a pattern and predict future motion with evidence. (4.PS2.A.1)	
	I can plan and conduct an investigation (ex: experiment) on the effects of balanced and unbalanced force on an object. (4.PS2.A.2)	Unit - Properties and Interactions of Matter Concept - About Force TechBook - https://goo.gl/KV961y Hands On Lab - https://goo.gl/EQU38N Hands On Activities - https://goo.gl/tVXACS Video Field Trip - https://goo.gl/m1eCBB Exploration - https://goo.gl/atzs3q Videos - https://goo.gl/dzvL2m

Science Scope & Sequence for 2018-2019 School Year

		https://goo.gl/XJHPeD https://goo.gl/MqvHRS Reading Passage - https://goo.gl/ox68yu
Unit 3: Quarter 2 (CONTINUED)	I can plan and conduct a fair test (ex: experiment) to compare and contrast the forces required to move objects over different surfaces. (4.PS2.B.1)	Same as standard 4.PS2.A.2 (Above)
	I can describe the amount of force needed to overcome friction. (4.PS2.B.1)	
	I can predict how changes in either the amount of force applied to an object or the mass of an object affects the motion. (4.PS2.B.2)	
	I can use models to explain how simple machines change the amount or direction in the force of an object. (4.PS3.C)	Unit - Properties and Interactions of Matter Concept - Changing Direction TechBook - https://goo.gl/5szXyV Hands On Labs - https://goo.gl/FmkXGP https://goo.gl/NmxvBg Video - https://goo.gl/xFbCjr https://goo.gl/35LyAD Reading Passages - https://goo.gl/QMczMY https://goo.gl/SnnXKW Exploration - https://goo.gl/M3Qhwz Assessment - https://goo.gl/hgEACD
	I can develop a model of waves to describe patterns and how waves can cause objects to move. (4.PS4.A)	Unit - Energy Transfer in Waves Concept - Waves TechBook - https://goo.gl/QQ57WX More Resources - https://goo.gl/jTqiJM

Science Scope & Sequence for 2018-2019 School Year

Unit 4: Quarter 3	Unit 4 Teaching Window: January 8 - March 1 Unit Assessment Window: March 4-8	Discovery Techbook Resource Alignment
Topic/Genre: Energy Essential Question: How is energy conserved as it transforms from one form to another/one object to another?	I Can Statements	4th Grade Science TechBook
	I can explain with evidence the relationship between speed and energy of an object. (4.PS3.A)	Unit - About Energy Concept - Forms of Energy TechBook - https://goo.gl/gFR7fH Videos - https://goo.gl/b5EiJV https://goo.gl/UcdjNY https://goo.gl/bHyCrD https://goo.gl/P6sa2C Reading Passages - https://goo.gl/9Yh7um Explorations - https://goo.gl/d5MhLu https://goo.gl/roQ1fj
	I can explain with evidence the transformation of energy (e.g. temperature change, light, sound, motion, and magnetic effects). (4.PS3.B.1)	Unit - About Energy Concept - Changing the Form of Energy TechBook - https://goo.gl/JQ2pCk Additional Resources - https://goo.gl/mGz8zj
	I can design, test, and refine a device that converts energy from one form to another (ex: circuit to light a bulb). (4.PS3.B.2)	Hands On Lab - https://goo.gl/KzYg41 Virtual Lab - https://goo.gl/tA7T9R Unit - Electrical and Thermal Energy Transfer Concept - Electric Circuits TechBook - https://goo.gl/JQ2pCk More Resources - https://goo.gl/y82mhb Scrimmage Board: https://goo.gl/4av8Rs

Science Scope & Sequence for 2018-2019 School Year

Unit 5: Quarter 4	Unit 5 Teaching Window: March 25 - May 3 Unit Assessment Window: May 6 - 10	Discovery Techbook Resource Alignment
Topic/Genre: Our Earth Essential Questions: Why is it important to understand Earth's Systems?	I Can Statements	4th Grade Science TechBook
	I can identify evidence from patterns that explains changes in landscape over time. (4.ESS1.4)	Unit - Changing Earth Concept - Fossils TechBook - https://goo.gl/iWAcWx Videos - https://goo.gl/3QrZxo https://goo.gl/bBmT16 https://goo.gl/kzRrpJ Virtual Lab - https://goo.gl/4hF65U Reading Passages - https://goo.gl/Musrvy https://goo.gl/NkDG6D Exploration - https://goo.gl/sfoHC8
	I can plan and conduct a scientific investigation to show how weathering and erosion shape Earth's surfaces. (4.ESS2.A)	Unit - Changing Earth Concept - Erosion and Deposition TechBook - https://goo.gl/Q1gnxX Exploration - https://goo.gl/XLRBJN Video - https://goo.gl/mfvzEG https://goo.gl/JGRWvF Virtual Lab - https://goo.gl/Mp853Z Hands on Activity - https://goo.gl/eAayqJ Fun-Da-Mental - https://goo.gl/CiH298
	I can analyze and interpret data from maps to describe patterns in Earth's features (landforms, volcanoes, bodies of water, etc). (4.ESS2.B)	Unit - Changing Earth Concept - Landforms TechBook - https://goo.gl/Y2dwoF Videos - https://goo.gl/Nyghys https://goo.gl/4854fy https://goo.gl/tT51KY

Science Scope & Sequence for 2018-2019 School Year

		https://goo.gl/3m5XTt Exploration - https://goo.gl/PRdruk Hands On Activities - https://goo.gl/6da6e3 https://goo.gl/7zDqgg
	<p>I can generate and compare solutions to natural occurrences to help reduce the impact on humans (ex: tsunami warnings, earthquake resistant buildings, hurricane glass). (4.ESS3.A)</p>	Unit - Changing Earth Concept - Earthquakes TechBook - https://goo.gl/ofBmcA More Resources - https://goo.gl/Q7KG3r Unit - Changing Earth Concept - Volcanoes TechBook - https://goo.gl/atiJf7 Hands On Activity - https://goo.gl/WwVm2h Videos - https://goo.gl/MNpq8g https://goo.gl/NQb9iL https://goo.gl/U2KXtS Reading Passages - https://goo.gl/CK9dLf https://goo.gl/z2hHmh