Fourth Grade Science Curriculum 2022

Pacing Guide	Disciplinary Core Ideas	Sample Learning Activities	Sample	Additional Standards
			Assessments	

August-September	3-5-ETS1-1 Define a	What are scientific questions?	Formative Assessments:	Interdisciplinary Standard:
Engineering Design	simple design problem	Analyze and discuss how scientists find	Discussion	RI.4.7 Apply
Engineering Design	reflecting a need or a want	answers to their questions.	Classwork/Activities	
	that includes specified	answers to their questions.	Teacher Observation	understanding of
	criteria for success and	Identify and use science tools properly	Student Participation	nonfiction text features
	constraints on materials,	identify and use science tools property	Student 1 articipation	when reading the science
	time, or cost.	Describe and apply the scientific method	Summative	textbook
	diffe, or costs	2 comes and apply the committee inclined	Assessments:	
		Discuss how data is used to share	Completed Labs &	Technology Standard:
	3-5-ETS1-2 Generate and	information and conclusions	Investigations	8.2.5.ED.2: Collaborate
	compare multiple possible		Chapter Test	with peers to collect
	solutions to a problem	Discuss scientific careers		information, brainstorm
	based on how well each is		Benchmark	to solve a problem, and
	likely to meet the criteria	Identify ways in which technology can	Assessment:	evaluate all possible
	and constraints of the	be used to solve problems.	BOY Benchmark	solutions to provide the best results with
	problem.			supporting sketches or
		Collect, analyze, interpret, and present	Accommodations	models.
	2 5 ETC1 2 Di1	data through the completion of various	and Modifications	models.
	3-5-ETS1-3 Plan and carry out fair tests in	labs		
	which variables are	Apply the steps of the design process		
	controlled and failure	when looking to for solutions		
	points are considered to	when looking to for solutions		
	identify aspects of a model			
	or prototype that can be	Instructional Resources		
	improved.	National Geographic Science		
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		Student Technology:		
		Kahoot		
		Google Classroom		
		Chromebook/ IPad		
		Teacher Technology:		
		Promethean Board/Activ Panel		
		YouTube Videos		
		ActiView		
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Scholastic BrainPop Bill Nye Video

October-November	4-PS3-1 Use evidence to	Define and Discuss: types of Energy	Formative	Interdisciplinary
_	construct an explanation		Assessments:	Standard:
Energy	relating the speed of an	Investigate different forms of energy	Energy Quiz	4.NF.B.3 Calculating at
	object to the energy of that	through labs	Discussion	average speed
	object.	D: 1.1	Classwork/Activities	
		Discuss and observe what energy can do	Teacher Observation	
	4-PS3-2 Make	Brainstorm and create a model to	Student Participation	
	observations to provide	demonstrate a way to transfer energy		Technology Standard
	evidence that energy can	demonstrate a way to transfer energy	Summative	8.2.5.ED.2: Collaborate
	be transferred from place	Investigate and observe: transfer of	Assessments:	with peers to collect
	to place by sound, light,	energy	Completed Labs &	information, brainstorn
	heat, and electric currents.	chergy	Investigations	to solve a problem, and
	,	Apply understanding to create an electric	Chapter Test	evaluate all possible
		circuit	1	solutions to provide the
	4-PS3-3 Ask questions		Accommodations	best results with
	and predict outcomes	Discuss, brainstorm and observe ways to	and Modifications	
	about the changes in	obtain energy		supporting sketches or
	energy that occur when			models.
	objects collide.	Investigate and reflect on the relationship		
		between an object's mass and needed		
	4 7000 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	force		
	4-PS3-4 Apply scientific	Toronticate allowers in an area from to		
	ideas to design, test, and refine a device that	Investigate change in energy due to		
	converts energy from one	speed		
	form to another.	Using the design process, create a device		
	Torm to unother.	that gives energy from one form to		
		another		
		Instructional Resources		
		National Geographic Science		
		Student Technology:		
		Kahoot		
		Google Classroom		
		Chromebook/ IPad		
		Teacher Technology:		
		Promethean Board/Activ Panel		
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December &	4-PS4-1 Develop a model of waves to describe	Define and discuss: What is a wave?	Formative Assessments:	Interdisciplinary Standard:
January		Identify years to make a vyeve through		
Waves and Their	patterns in terms of amplitude and wavelength	Identify ways to make a wave through exploration	Waves Quiz Discussion	W 4.2 Write a step by
Applications in	and that waves can cause	Make observations and describe patterns	Classwork/Activities	step explanation on waves
Technologies for	objects to move.	of waves	Teacher Observation	can cause objects to move
Information	objects to move.	or waves	Student Participation	using unit specific
Transfer		Create a model demonstrating the		vocabulary and
	4-PS4-2 Develop a model	properties of a wave		supporting details.
	to describe and entering		Summative	
	the eye allows objects to	Define: amplitude and wavelength	Assessments:	
	be seen.		Completed Labs &	Technology Standard:
		Explore light waves	Investigations	8.2.5.ED.3: Follow step
	4-PS4-3 Generate and		Chapter Test	by step directions to solve
	compare multiple	Investigate and observe how waves can		a problem, using
	solutions that use patterns to transfer information.	cause objects to move	Accommodations	appropriate tools to
	to transfer information.	Explore ways that patterns are used to	Accommodations and Modifications	accomplish the task.
		transfer information	and wodifications	_
		transfer information		
		Develop a new way to use patterns to		
		transfer information		
		Compare designs with classmates		
		Instructional Resources		
		National Geographic Science		
		Student Technology:		
		Kahoot		
		Google Classroom		
		Chromebook/ IPad		
		Teacher Technology:		
		Promethean Board/Activ Panel		
		YouTube Videos		
		ActiView		
		Scholastic		
		BrainPop		
		Bill Nye Video		
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Science Spin

February	4-LS1-1 Construct an	Classify plants and animals based on		Interdisciplinary
5 16 1 1 4	argument that plants and	physical characteristics.	Formative	Standard:
From Molecules to	animals have internal and	114:61	Assessments: Plants & Animals	W.4.1: Write about Plant
Organisms: Structures and	external structures that function to support	Identify plants and animals internal and external structures	and their Structures	& Animal Structure
Processes	survival, growth, behavior,	external structures	Quiz	supporting their writing
10005505	and reproduction.	Use models to describe the structures that	Discussion	with reasons and
	and reproduction.	help plants survive and reproduce.	Classwork/Activities	information.
		Took keeps and the second second	Teacher Observation	
	4-LS1-2 Use a model to	Analyze how physical features and	Student Participation	Technology Standard:
	describe that animals	behaviors help organisms interact with		8.2.5.ED.2: Collaborate
	receive different types of	their environments.		with peers to collect
	information through their	5.	Summative	information, brainstorm
	senses, process the	Discuss and explore how	Assessments:	to solve a problem, and
	information in their brain, and respond to the	internal/external structures support the organism	Completed Labs & Investigations	evaluate all possible
	information in different	Organism	Chapter Test	solutions to provide the
	ways.	Determine the function of identified	Chapter rest	best results with
		structures		supporting sketches or
			Accommodations	models.
		Conduct a research project to observe	and Modifications	
		and report on the chosen plant/animal's		
		structures and their interactions		
		Instructional Resources		
		National Geographic Science		
		Student Technology:		
		Kahoot		
		Google Classroom		
		Chromebook/ IPad		
		Teacher Technology:		
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		YouTube Video		
		ActiView		
		Scholastic		
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Science Spin

March/April	4-ESS3-1 Obtain and	Define and list: Natural Resources	Formative	
•	combine information to		Assessments:	Interdisciplinary
Earth and Human	describe that energy and	Renewable vs nonrenewable natural	Natural Resources	Standard:
Activity	fuels are derived from	resources	Quiz	
•	natural resources and their		Discussion	SL 4.1 Participate in
	uses affect the	Analyze and observe natural resources'	Classwork/Activities	discussions to analyze
	environment	effect on the earth	Teacher Observation	student solutions to
			Student Participation	natural processes impac
	4.ESS3-2 Generate and	Discuss: natural resources and energy		on humans
	compare multiple			
	solutions to reduce the	Analyze and research how energy used	Summative	Technology Standard:
	impact of natural Earth	from natural resources affect the earth	Assessments:	8.1.5.DA.3: Organize and
	processes on humans		Completed Labs &	present collected data
		Brainstorm solutions to reduce impact of	Investigations	visually to communicate
		natural Earth processes on humans	Chapter Test	insights gained from
				different views of the
		Create and present on a solution		data.
			<u>Accommodations</u>	
			and Modifications	
		Instructional Resources		
		Instructional Resources		
		National Geographic Science		
		Student Technology:		
		Kahoot		
		Google Classroom		
		Chromebook/ IPad		
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		Teacher Technology: Promethean Board/Activ Panel		
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		Student Technology:		
		Kahoot		

Google Classroom

May/June	4-ESS1-1 Identify	Observe patterns in rock formations and	Formative	Interdisciplinary
T 41 D	evidence from patterns in	fossils	Assessments:	Standard:
Earth's Place in the	rock formations and fossils	5	Weathering and	L 4.5 Use figurative
Universe & Earth's	in rock layers to support	Discuss changes in a landscape over time	Erosion Quiz	language (of student's
Systems	an explanation for changes	D: 1 1 : 1: 1: 6	Discussion	choice) to describe the
	in a landscape over time.	Discuss and analyze implications of	Classwork/Activities	impact of
		certain fossils/rock layers	Teacher Observation	weathering/erosion on
	4-ESS2-1 Make	Define and discuss: weather and erosion	Student Participation	chosen landscape.
	observations and/or	Define and discuss, weather and crosion	Summative	
	measurements to provide	Identify impact of weathering and	Assessments:	
	evidence of the effects of	erosion on world around us	Completed Labs &	Technology Standard:
	weathering or the rate of	crosion on world around as	Investigations	8.1.5.DA.1: Collect,
	erosion by water, ice,	Make observations evidence of the	Chapter Test	organize, and display data
	wind, or vegetation.	effects of weathering		in order to highlight
	, 8	8		relationships or support a
		Explore and measure the rate of erosion	Benchmark:	claim.
	4-ESS2-2 Analyze and	by water, ice, wind, or vegetation	EOY Benchmark	
	interpret data from maps to			
	describe patterns of	Investigate: what can affect the rate or		
	Earth's features.	impact of weathering/erosion	Accommodations	
			and Modifications	
		Create a model to demonstrate		
		understanding of weather/erosion		
		Collect and analyze data on variables for		
		created model		
		Analyze and observe impact plants have		
		on erosion/weathering		
		Identify landscapes and discuss the		
		evidence of weathering/erosion		
		Instructional Resources		
		National Geographic Science		
		Student Technology:		
		Kahoot		
		Google Classroom		
		Cl 1 1/ID 1		

Chromebook/ IPad

Alternate Assessments: Weathering and Erosion Photo Scavenger Hunt, Natural Resource Protection Plan, Worksheets/Activities

21st Century Standards: 9.1.4.F.2 & 9.2.4.A.1
21st Century Skills: Critical Thinking; Collaboration; Technology Literacy

Career Ready Practices: CRP 2, CRP 4, CRP 10