

## **NEXT GENERATION SCIENCE STANDARDS BY CHAPTER**

Component	Performance Expectations	Disciplinary Core Ideas	Science and Engineering Practices	Crosscutting Concepts
Into the Okavango		PS4.C, LS2.C, LS4.D, ESS2.D, ESS3.C	Scientific Investigations Use a Variety of Methods Scientific Knowledge Is Based on Empirical Evidence	Stability and Change Science Is a Human Endeavor
UNIT 1				
Chapter 1	HS-ESS3-2, HS-ESS3-4	LS2.C, LS4.D, ESS3.A, ESS3.C	Developing and Using Models Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Scientific Investigations Use a Variety of Methods	Patterns Cause and Effect Scale, Proportion, and Quantity Stability and Change Science Is a Human Endeavor
Chapter 2	HS-LS2-2, HS-ESS2-2	PS3.A, PS3.B, PS3.D LS1.C, LS2.C, ESS2.A	Developing and Using Models Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions Obtaining, Evaluating, And Communicating Information Scientific Investigations Use a Variety of Methods Scientific Knowledge Is Based on Empirical Evidence	Patterns Cause and Effect Scale, Proportion, and Quantity Systems and System Models Energy and Matter Stability and Change Scientific Knowledge Assumes an Order and Consistency in Natural Systems Scientific Knowledge Is Open to Revision in Light of New Evidence Science Is a Human Endeavor
Chapter 3	HS-LS2-3, HS-LS2-4, HS-LS2-5, HS-LS2-6	PS3.A, PS3.B, PS3.D, LS1.A, LS1.C, LS2.B, LS2.C, LS4.D, ESS2.C, ESS2.D, ETS1.B	Developing and Using Models Using Mathematics and Computational Thinking Engaging in Argument from Evidence Scientific Investigations Use a Variety of Methods Scientific Knowledge Is Open to Revision in Light of New Evidence	Scale, Proportion, and Quantity Systems and System Models Energy and Matter Stability and Change Science Is a Human Endeavor



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Engineering Project 1	HS-ESS3-2, HS-ESS3-4, HS-ETS1-1, HS-ETS1-2, HS-ETS1-3	ETS1.A	Asking Questions And Defining Problems Developing And Using Models Planning and Carrying Out Investigations Analyzing and Interpreting Data Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	Cause and Effect
UNIT 2				
Chapter 4	HS-LS2-2, HS-LS2-6, HS-LS4-5	LS2.A, LS2.C, LS4.A, LS4.B, LS4.C, LS4.D, ESS2.B, ESS3.C	Asking Questions and Defining Problems Using Mathematics and Computational Thinking Engaging in Argument from Evidence	Patterns Cause and Effect Stability and Change Science Is a Human Endeavor
Chapter 5	HS-LS2-1, HS-LS2-2, HS-LS2-6, HS-LS2-7, HS-LS4-5	LS2.A, LS2.C, LS4.B, LS4.C, LS4.D	Developing and Using Models Analyzing and Interpreting Data Using Mathematics and Computational Thinking Obtaining, Evaluating, and Communicating Information	Cause and Effect Scale, Proportion, and Quantity Stability and Change
Chapter 6	HS-LS2-7	LS1.A, LS2.C, LS4.D, ESS2.A, ESS2.C, ESS2.C, ESS3.C, ESS3.D	Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	Patterns Structure and Function Stability and Change Science Is a Human Endeavor
Engineering Project 2	HS-LS2-7, HS-ETS1-1, HS-ETS1-2, HS-ETS1-3	PS3.A, LS2.C, ETS1.A, ETS1.B, ETS1.C	Asking Questions and Defining Problems Developing and Using Models Planning and Carrying Out Investigations Analyzing and Interpreting Data Constructing Explanations and Designing Solutions Engaging in Argument from Evidence	Cause and Effect
Partners in Sustainability		LS2.C, LS4.D, ESS3.C		Science Is a Human Endeavor Science Addresses Questions About the Natural and Material World

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UNIT 3				
Chapter 7	Chapter 7	LS2.C, LS4.D,	Developing and Using Models	Cause and Effect
		ESS3.C,	Analyzing and Interpreting Data	Stability and Change
		EISI.D	Using Mathematics and Computational Thinking	Science Addresses Questions About the Natural
			Constructing Explanations and Designing Solutions	and Material World
			Engaging in Argument from Evidence	
Chapter 8	HS-LS2-2 LS2.C	LS2.C, LS4.D,	Developing and Using Models	Patterns
		ESS2.D, ESS3 A	Using Mathematics and Computational Thinking	Scale, Proportion, and Quantity
		ESS3.A, ESS3.C	Constructing Explanations and Designing Solutions	Stability and Change Science Is a Human Endeavor
			Engaging in Argument from Evidence	
			Obtaining, Evaluating, and Communicating Information	
Engineering	HS-PS3-3,	S3-3, PS3.A,	Asking Questions and Defining Problems	Cause and Effect
Project 3	HS-ETS1-1,	ETS1.A	Developing and Using Models	
	HS-ETST-2, HS-ETS1-3		Planning and Carrying Out Investigations	
			Analyzing and Interpreting Data	
			Using Mathematics and Computational Thinking	
			Constructing Explanations and Designing Solutions	
			Engaging in Argument from Evidence	
			Engaging in Argument from Evidence	
			Obtaining, Evaluating, and Communicating Information	
UNIT 4				
Chapter 9	HS-LS2-2, HS-LS2-7	LS2.C, ESS3.A, ESS3.C, ETS1.A, ETS1.B	Developing and Using Models	Cause and Effect
			Using Mathematics and Computational Thinking	Systems and System Models
			Engaging in Argument from Evidence	Energy and Matter
				Stability and Change
				Science Is a Human Endeavor
Chapter 10	HS-LS2-7	LS2.C, ESS3.A, ESS3.C, ETS1.A	Asking Questions and Defining Problems	Stability and Change
			Analyzing and Interpreting Data	Science Is a Human Endeavor
			Using Mathematics and Computational Thinking	
			Constructing Explanations and Designing Solutions	
			Engaging in Argument from Evidence	
			Obtaining, Evaluating, and Communicating Information	

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Chapter 11	HS-ESS3-2, HS-ESS3-4	LS2.C, ESS2.A, ESS2.B, ESS3.A, ESS3.C, ETS1.B	Developing and Using Models Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	Patterns Stability and Change Science Is a Human Endeavor
Chapter 12	HS-ESS3-2, HS-ESS3-4	PS1.C, PS3.D, PS4.A, PS4.C, ESS2.D, ESS3.A, ESS3.C, ETS1.A	Asking Questions and Defining Problems Developing and Using Models Analyzing and Interpreting Data Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information Scientific Investigations Use a Variety of Methods Scientific Knowledge Is Based on Empirical Evidence	Scale, Proportion, and Quantity Energy and Matter Stability and Change
Chapter 13	HS-PS3-3, HS-ESS3-4	PS3.A, PS3.D, LS2.C, ESS2.D, ESS3.A, ESS3.C, ETS1.A, ETS1.B	Asking Questions and Defining Problems Developing and Using Models Planning and Carrying Out Investigations Analyzing and Interpreting Data Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	Patterns Science Is a Human Endeavor
Engineering Project 4	HS-PS3-3, HS-ETS1-1, HS-ETS1-2, HS-ETS1-3	PS3.A, ETS1.A, ETS1.B, ETS1.C	Asking Questions and Defining Problems Developing and Using Models Planning and Carrying Out Investigations Analyzing and Interpreting Data Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	Cause and Effect

Component	Performance Expectations	Disciplinary Core Ideas	Science and Engineering Practices	Crosscutting Concepts
Citizen Science		LS2.C, LS4.C, LS4.D	Scientific Investigations Use a Variety of Methods	Stability and Change Science Is a Human Endeavor
			Evidence	
UNIT 5			-	
Chapter 14	HS-LS2-1,	PS3.A, LS2.A, LS2.C, ESS3.C, ETS1.A,	Developing and Using Models	Scale, Proportion, and Quantity
	HS-LS2-7		Analyzing and Interpreting Data	Systems and System Models
			Using Mathematics and Computational Thinking	Structure and Function
		ETS1.B,	Constructing Explanations and Designing	Stability and Change
		EISI.U	Solutions	Science Is a Human Endeavor
			Engaging in Argument from Evidence Scier	Science Addresses Questions About the Natural
			Scientific Knowledge Is Based on Empirical Evidence	and Material World
Chapter 15		LS1.A, LS2.C,	Asking Questions and Defining Problems	Patterns
		LS3.B, ESS3.C	Developing and Using Models	Cause and Effect
			Analyzing and Interpreting Data	Scale, Proportion, and Quantity
			Using Mathematics and Computational Thinking	Systems and System Models
			Constructing Explanations and Designing Solutions	Science Is a Human Endeavor
			Engaging in Argument from Evidence	and Material World
			Obtaining, Evaluating, and Communicating Information	
			Scientific Knowledge Is Open to Revision in Light of New Evidence	
			Scientific Knowledge Is Based on Empirical Evidence	
Chapter 16	HS-ESS2-2,	LS2.C, LS4.D, ESS2.A, ESS2.D, ESS3.A, ESS3.B, ESS3.C, ESS3.D, ETS1.A, ETS1.B	Developing and Using Models	Patterns
	HS-ESS3-5, HS-ETS1-3, HS-ETS1-4		Analyzing and Interpreting Data	Cause and Effect
			Using Mathematics and Computational Thinking	Scale, Proportion, and Quantity
			Constructing Explanations and Designing	Systems and System Models
			Solutions	Stability and Change
			Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	Scientific Knowledge Assumes an Order and
				Consistency in Natural Systems
				Science Is a Human Endeavor
			Methods	Scientific Knowledge Is Based on Empirical Evidence
			Scientific Knowledge Is Open to Revision in Light of New Evidence	Science Addresses Questions About the Natural and Material World

Component	Performance Expectations	Disciplinary Core Ideas	Science and Engineering Practices	Crosscutting Concepts
Chapter 17	Chapter 17 HS-LS2-3	LS2.C, ESS3.A, ESS3.C, ETS1.A, ETS1.B	Asking Questions and Defining Problems	Cause and Effect
			Developing and Using Models	Scale, Proportion, and Quantity
			Analyzing and Interpreting Data	Systems and System Models
			Using Mathematics and Computational Thinking	Energy and Matter
			Engaging in Argument from Evidence	Science Is a Human Endeavor
			Obtaining, Evaluating, and Communicating Information	Science Addresses Questions About the Natural and Material World
Chapter 18	HS-LS2-7,	LS2.C, LS4.D,	Asking Questions and Defining Problems	Systems and System Models
	HS-ETS1-1,	ESS2.A, ESS3.A, ESS3.C, ETS1.A, ETS1.B	Using Mathematics and Computational Thinking	Science Is a Human Endeavor
ПЗ-ЕТЗТ-З	113-L131-3		Constructing Explanations and Designing Solutions	Science Addresses Questions About the Natural and Material World
			Engaging in Argument from Evidence	
			Obtaining, Evaluating, and Communicating Information	
Engineering	HS-ESS3-4, HS-ETS1-1, HS-ETS1-2, HS-ETS1-3	ESS2.D, ETS1.A, ETS1.B, ETS1.C	Asking Questions and Defining Problems	Cause and Effect
Project 5			Developing and Using Models	Scale, Proportion, and Quantity
			Planning and Carrying Out Investigations	Stability and Change
			Analyzing and Interpreting Data	
			Using Mathematics and Computational Thinking	
			Constructing Explanations and Designing Solutions	
			Engaging in Argument from Evidence	
			Obtaining, Evaluating, and Communicating Information	