



## NEXT GENERATION SCIENCE STANDARDS BY CHAPTER

Component	Performance Expectations	Disciplinary Core Ideas	Science and Engineering Practices	Crosscutting Concepts
<i>Into the Okavango</i>		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
<b>UNIT 1</b>				
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
<b>UNIT 2</b>				
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.D, 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
<i>Partners in Sustainability</i>		LS2.C, LS4.D, ESS3.C		Science Is a Human Endeavor Science Addresses Questions About the Natural and Material World

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

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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

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<i>Citizen Science</i>		LS2.C, LS4.C, LS4.D	Scientific Investigations Use a Variety of Methods Scientific Knowledge Is Based on Empirical Evidence	Stability and Change Science Is a Human Endeavor
<b>UNIT 5</b>				
Chapter 14	HS-LS2-1, HS-LS2-7	PS3.A, LS2.A, LS2.C, ESS3.C, ETS1.A, ETS1.B, ETS1.C	Developing and Using Models Analyzing and Interpreting Data Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Scientific Knowledge Is Based on Empirical Evidence	Scale, Proportion, and Quantity Systems and System Models Structure and Function Stability and Change Science Is a Human Endeavor Science Addresses Questions About the Natural and Material World
Chapter 15		LS1.A, LS2.C, LS3.B, ESS3.C	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 Knowledge Is Open to Revision in Light of New Evidence Scientific Knowledge Is Based on Empirical Evidence	Patterns Cause and Effect Scale, Proportion, and Quantity Systems and System Models Science Is a Human Endeavor Science Addresses Questions About the Natural and Material World
Chapter 16	HS-ESS2-2, HS-ESS3-5, HS-ETS1-3, HS-ETS1-4	LS2.C, LS4.D, ESS2.A, ESS2.D, ESS3.A, ESS3.B, ESS3.C, ESS3.D, ETS1.A, ETS1.B	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 Open to Revision in Light of New Evidence	Patterns Cause and Effect Scale, Proportion, and Quantity Systems and System Models Stability and Change Scientific Knowledge Assumes an Order and Consistency in Natural Systems Science Is a Human Endeavor Scientific Knowledge Is Based on Empirical Evidence Science Addresses Questions About the Natural and Material World

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Chapter 17	HS-LS2-3	LS2.C, ESS3.A, ESS3.C, ETS1.A, ETS1.B	Asking Questions and Defining Problems Developing and Using Models Analyzing and Interpreting Data Using Mathematics and Computational Thinking Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	Cause and Effect Scale, Proportion, and Quantity Systems and System Models Energy and Matter Science Is a Human Endeavor Science Addresses Questions About the Natural and Material World
Chapter 18	HS-LS2-7, HS-ETS1-1, HS-ETS1-3	LS2.C, LS4.D, ESS2.A, ESS3.A, ESS3.C, ETS1.A, ETS1.B	Asking Questions and Defining Problems Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	Systems and System Models Science Is a Human Endeavor Science Addresses Questions About the Natural and Material World
Engineering Project 5	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 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 Scale, Proportion, and Quantity Stability and Change