Nitty Gritty Science Physical Science Curriculum Suggested Pacing Guide NGSS and TEKS Alignment Unit Chapters Page # Chapter 1: Nature of Science 2 3 Chapter 2: Intro to Physical Science Chapter 3: Motion and Forces 4 5 Chapter 4: Energy, Work, & Simple Machines Chapter 5: Electricity & Magnetism 6 Chapter 6: Waves & Electromagnetic Spectrum 7 Chapter 7: Sound, Light, Mirrors, & Lenses 8 Chapter 8: Matter q Chapter 9: Atoms & the Periodic Table 10 Chapter 10: Chemical Bonds & Equations 11 Chapter 11: Solutions, Acids, & Bases 12 Chapter 12: Thermal Energy 13

Digital options are included for interactive notebooks, task cards, study guides, and chapter tests.

Nature of Science Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
	• Teacher Demo – The Ice Issue	×					PS3- 4	6.3, 7.3, 8.3
1	• Section 1 Notes – The Method of Science		x					
	 PowerPoint/INB Activity 			х				
	• Mini-quiz					×		
2	• Section 2 Notes – Standards of Measurement		×					6.2, 7.2,
	 PowerPoint/INB Activity 			×				8.2
	• Mini-quiz					х		
3	• Guided Inquiry Lab -							6.4,
	Colorful Observations			X				7.4, 8.4
4	• Section 3 Notes - Graphing		×					6.2,
	 PowerPoint/INB Activity 			×				7.2, 8.2
5	• Mini-quiz					Х		
5	 Science Stations 				×			6.2,
6	 Science Stations 				х			6.3, 6.4,
7	• Final Draft and testing for creation station	Ó		\mathbb{R}	×	x		7.2, 7.3, 7.4, 8.2, 8.3, 8.4
	• Task Card Review and/or				Рx			
8	 Study Guide 				×			
	• Chapter Test					х		
9	 Have students complete notes for next chapter 	х						

Intro to Physical Science Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
	• Teacher Demo –	х						
1	• Section 1 Notes – The Scope of Physical Science		x					
	 PowerPoint/INB Activity 			×				
	• Mini-quiz					Х		
2	 Section 2 Notes – Science Lab Safety 		×					
	 PowerPoint/INB Activity 			×				
	• Mini-quiz					Х]	
3	• Guided Inquiry Lab -			x				
4	 Section 3 Notes – Methods of Science and Technology 		x					
	 PowerPoint/INB Activity 			×]	
5	• Mini-quiz					х		
5	 Science Stations 				х			
6	 Science Stations 				×			
7	• Final Draft and testing for creation station				х	х		
8	• Task Card Review and/or		5-		х			
0	 Study Guide 				Х			
	• Chapter Test					Х		
9	 Have students complete notes for next chapter 	Х			2			

Motion & Forces Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
1	• Teacher Demo - Crash Test Teddy	x					PS2- 1, PS2- 2, PS2- 4	6.8, 7.7, 8.6
	 Section 1 Notes – Describing Motion PowerPoint/INB Activity 		X	×			PS2-2	6.3, 6.8, 7.3, 8.3,
	• Mini-quiz					х		8.6
2	 Section 2 Notes – Acceleration 		×					
	 INB Activity 			x			PS2-2	8.6
	• Mini-quiz					Х		
3	• Guided Inquiry Lab - Newton's Racers			x			PS2- 1, PS2-2	7.7
4	 Section 3 Notes - Motion and Forces 		×				PS2-2	6.8,
	 PowerPoint/INB Activity 			×			-	8.6
5	 Mini-quiz Section 4 Notes - Newton's Laws of Motion 		×			X	PS2-	6.3,
	 PowerPoint/INB Activity 			x			1,	7.3, 8.3,
	 Mini-quiz 						PS2-2	8.6
6	 Section 5 - Gravity 							
	 PowerPoint/INB Activity 						PS2- 4	7.7
	• Mini-quiz					×		
7	 Science Stations 				×		PS2-	
8	Science Stations				×		4, PS3-	6.8,
9	• Final Draft and testing for creation station				x	х	1, PS3- 2	7.7, 8.6
10	 Task Card Review and/or 				x			
10	• Study Guide				x			
	• Chapter Test					х		
11	 Have students complete notes for next chapter 	×						

Energy, Work, and Simple Machines Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
1	• Teacher Demo - Mystery Machines	x					PS2- 4	6.3, 6.8, 7.3, 8.3
	• Section 1 Notes - Nature of Energy		×				PS3- 1,	6.0
	 PowerPoint/INB Activity 			х			PS3- 2	6.8
	• Mini-quiz					Х	2	
2	 Section 2 Notes – Conservation of Energy 		×				PS3-	6.8,
	 INB Activity 			×			5	6.9
	• Mini-quiz					Х		
3	• Guided Inquiry Lab – Potential Energy of Food			x			PS3- 1, PS3- 5	6.9, 7.7
	 Section 3 Notes - Work 						5	
4	· Section 5 Notes - Work		×				PS-	
	 PowerPoint/INB Activity 			×			3-2	7.7
	• Mini-quiz					х		
5	• Section 4 Notes - Using Machines		x	7			PS3-	
	 PowerPoint/INB Activity 			х			2	6.8
	• Mini-quiz							
6	• Section 5 - Simple Machines			\bigcirc			PS3-	
	 PowerPoint/INB Activity 						2	6.8
7	• Mini-quiz					Х		
/	 Science Stations 				×		PS3-	
8	Science Stations				х		1, PS3-	6.8,
9	• Final Draft and testing for creation station				x	х	2, PS3– 5	6.9, 7.7
10	 Task Card Review and/or 				x			
10	• Study Guide				x			
	• Chapter Test					х		
11	 Have students complete notes for next chapter 	х						

Electricity and Magnetism Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
1	• Teacher Demo – Feeling Jumpy	Х					PS2- 3, PS2- 5	6.6
-	• Section 1 Notes - Electricity		×				PS2-	6.9
	PowerPoint/INB Activity			×			3	6.9
	• Mini-quiz					×		
2	 Section 2 Notes - Electric Current 		×				PS2-	6.7,
	 INB Activity 			×			3	6.9, 8.3
	• Mini-quiz					х		
3	 Guided Inquiry Lab - Constructing Circuits 			x				6.6, 6.9
4	• Section 3 Notes - Electrical Circuits		×				PS2-	
	 PowerPoint/INB Activity 			х			5	6.9
	• Mini-quiz					×	<u> </u>	
5	• Section 4 Notes - Magnetism		×				PS2-	
	 PowerPoint/INB Activity 			×			3	6.6
	• Mini-quiz							
6	 Section 5 - Magnetism and Electricity 	0	A				PS2-	6.6,
	 PowerPoint/INB Activity 						5	6.9
7	• Mini-quiz					Х		
	 Science Stations 				х		PS2-	
8	 Science Stations 				X		3,	6.6, 6.7,
9	• Final Draft and testing for creation station				х	х	PS2- 5	6.9
10	• Task Card Review and/or				х			
10	• Study Guide				х			
	• Chapter Test					х		
11	 Have students complete notes for next chapter 	х						

Waves and Electromagnetic Spectrum Pacing

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
1	 Teacher Demo – Waves and Energy 	Х					PS4- 1, PS4- 2	8.8
	• Section 1 Notes - Waves		x				PS4-	
	 PowerPoint/INB Activity 			Х			1	8.8
	• Mini-quiz					Х		
2	 Section 2 Notes – Features of Waves 		×				PS4-	
	 INB Activity 			×			1	8.8
	• Mini-quiz					х		
3	• Guided Inquiry Lab - Build a Spectroscope			X			PS4- 2	6.3, 7.3, 8.3, 8.8
4	 Section 3 Notes - Behavior of Waves 		х				PS4-	
	 PowerPoint/INB Activity 			×			2	8.8
	• Mini-quiz					Х	1	
5	• Section 4 Notes – Electromagnetic Spectrum		x	7			PS4-	
	 PowerPoint/INB Activity 			х			2	8.8
	• Mini-quiz							
6	 Section 5 – Communicating with Radio Waves 							
	 PowerPoint/INB Activity 						PS4- 3	8.8
	• Mini-quiz					×		
7	 Science Stations 				×		PS4-	6.3,
8	 Science Stations 				х		1,	7.3,
9	• Final Draft and testing for creation station				х	х	PS4– 2	8.3, 8.8
10	• Task Card Review and/or				Х			
	• Study Guide				х			
	• Chapter Test					×		
11	 Have students complete notes for next chapter 	х						

Sound, Light, Mirrors, & Lenses Spectrum Pacing

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
1	• Teacher Demo – Bird in a Cage	×					PS4- 1, PS4- 2	8.8
	 Section 1 Notes - Sound 		Х				PS4-	
	 PowerPoint/INB Activity 			х			2	8.8
	• Mini-quiz					х		
2	 Section 2 Notes - Music and Uses of Sound 		×				PS4-	
	 INB Activity 			x			2	8.8
	• Mini-quiz					×		
3	 Guided Inquiry Lab - Using Sound and Light 			x				8.8
4	 Section 3 Notes – Reflection and Refraction of Light 		х				PS4-	8.8
	 PowerPoint/INB Activity 			×			2	0.0
	• Mini-quiz					х		
5	• Section 4 Notes – Mirrors		×	7			PS4-	
	 PowerPoint/INB Activity 			×			2	8.8
	• Mini-quiz							
6	 Section 5 - Lenses and Optical Instruments 						PS4-	
	 PowerPoint/INB Activity 						2	8.8
7	• Mini-quiz					Х		
8	Science StationsScience Stations				X		PS4- 1,	6.3,
0	 Science Stations Final Draft and testing for 				X		PS4- 2,	7.3,
9	creation station				Х	Х	PS4– 3	8.3, 8.8
10	• Task Card Review and/or				Х			
10	• Study Guide				Х			
	• Chapter Test					×		
11	 Have students complete notes for next chapter 	х						

Matter Pacing Guide The following is a *suggested pacing guide* which is based on 50-minute class periods.

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
	• Teacher Demo - Matter Misconceptions	x					PS1- 1, PS1-4	6.5, 7.8
1	 Section 1 Notes – Composition of Matter 		Х					
	 PowerPoint/INB Activity 			х			PS1-1	6.5
	• Mini-quiz					×		
2	 Section 2 Notes - Types of Mixtures 		х				PS 1-	
	 INB Activity 			х			2, PS 1-3	6.5
	• Mini-quiz					×		
3	• Guided Inquiry Lab - Monster Muck			x				6.3, 6.5, 7.3, 8.3
	 Section 3 Notes - Describing 							0.0
4	Matter		×				PS 1- 2, PS	6.5,
	 PowerPoint/INB Activity 			x			1-3	ø.5, 8.5
	• Mini-quiz					×		
5	 Section 4 Notes – States of Matter 		×			,	PS1-1	
	 PowerPoint/INB Activity 			x				6.6
	• Mini-quiz							
6	• Section 5 – Changes in States of Matter	-0		-			PS 1-	
	 PowerPoint/INB Activity 						2, PS 1-4	7.6
	• Mini-quiz							
7	 Section 6 - Fluids: Behaviors of Liquids and Gases 		0				PS1- 1, PS	6.3, 6.5,
	 PowerPoint/INB Activity 						1-4	7.3, 8.3
0	• Mini-quiz					x		0.0
8	Science Stations				х			
9	Science Stations				х		PS1- 1,	6.5,
10	• Final Draft and testing for creation station				х	х	PS1-4	7.6
11	• Task Card Review and/or				х			
11	• Study Guide				х			
	• Chapter Test					х		
12	 Have students equalsts 							

Atoms & the Periodic Table Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
	• Teacher Demo – Scientific Speculation	×						7.6
1	 Section 1 Notes – Atomic Structure 		×				PS1-	6.3, 7.3,
	 PowerPoint/INB Activity 			×			1	8.3,
	• Mini-quiz					х		8.5
2	 Section 2 Notes - Masses of Atoms 		×				PS1-	
	 PowerPoint/INB Activity 			×			1	8.5
	• Mini-quiz					х		
3	• Guided Inquiry Lab – Crunchinumium			x				6.3, 6.5, 7.3, 8.3, 8.5
4	• Section 3 Notes - The Periodic Table		×				PS1-	6.3, 6.5,
	 PowerPoint/INB Activity 			×			3	7.3, 8.3,
	• Mini-quiz					х		8.5
5	• Section 4 Notes - Metals, Nonmetals, & Metalloids		×				PS1-	6.6,
	 PowerPoint/INB Activity 			х			3	8.5
(• Mini-quiz					х		
6	Science Stations				Х			6.3,
7	 Science Stations 				×		PS1-	6.5, 7.3,
8	• Final Draft and testing for creation station				×	х	1	8.3, 8.5
9	• Task Card Review and/or				х			
	• Study Guide				х			
	• Chapter Test					х		
10	 Have students complete notes for next chapter 	x						

Chemical Bonds and Equations Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
1	• Teacher Demo - Synthesis Reaction	X					PS1- 1, PS1- 2, PS1- 5	6.3, 7.3, 8.3
	 Section 1 Notes - Types of Chemical Bonds PowerPoint/INB Activity 		×	×			PS1- 1	8.5
	• Mini-quiz					×		
2	 Section 2 Notes - Writing Formulas and Naming Compounds 		×				PS1-	8.5
	• INB Activity			x			5	0.5
	• Mini-quiz					х		
3	• Guided Inquiry Lab - Active Metals			x				8.5
4	• Section 3 Notes - Chemical Reactions		×				PS1- 2,	6.3,
	 PowerPoint/INB Activity 			x			PS1-	7.3, 8.3
	• Mini-quiz					Х	5	
5	 Section 4 Notes - Balancing Chemical Equations 		×				PS1- 2,	0.5
	PowerPoint/INB Activity			×			PS1-	8.5
	• Mini-quiz						5	
6	 Section 5 – Chemical Rxns: Types, Rate, & Energy 						PS1- 2,	0.5
	 PowerPoint/INB Activity 						PS1- 5	8.5
7	• Mini-quiz					х		
	Science Stations				×		PS1- 1,	6.3,
8	Science Stations				×		PS1-	7.3,
9	• Final Draft and testing for creation station				×	х	2, PS1- 5	8.3, 8.5
10	• Task Card Review and/or				×			
10	• Study Guide				×			
	• Chapter Test					х		
11	 Have students complete notes for next chapter 	×						

Solutions, Acids, and Bases Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
	• Teacher Demo – Effects of Solute Particles	х					PS1- 2, PS1- 4	7.6
1	 Section 1 Notes – Solution, Solubility, and Concentration 		x				PS1-	7.6
	 PowerPoint/INB Activity 			×			4	
	• Mini-quiz					Х		
2	 Section 2 Notes - Acids, Bases, and Salt 		×				PS1-	
	 PowerPoint/INB Activity 			x			3	7.6
	• Mini-quiz					Х]	
3	• Guided Inquiry Lab - pH Indicators			x			PS1- 2, PS1- 4	7.6
4	 Section 3 Notes – Strengths of Acids and Bases 		×				PS1-	7.6
	 PowerPoint/INB Activity 			×			2	1.0
_	• Mini-quiz					x		
5	Science Stations				х		PS1-	6.3,
6	Science Stations				х		3,	7.3,
7	• Final Draft and testing for creation station			$\mathbf{>}$	х	х	PS1- 6	7.6, 8.3
0	• Task Card Review and/or				×			
8	 Study Guide 				X			
	• Chapter Test					×		
9	• Have students complete notes for next chapter	x						

Thermal Energy Pacing Guide

Day	Lesson/Activity	Engage	Explain	Explore	Elaborate	Evaluate	NGSS	TEKS
1	• Teacher Demo – Water as Coolant	×					PS1- 3, PS1- 4, PS1- 6, PS3- 4	6.9
	 Section 1 Notes - Temperature & Heat PowerPoint/INB Activity 		×	×			PS3- 1	6.9
2	 Mini-quiz Section 2 Notes - Transferring Thermal Energy PowerPoint/INB Activity 		x	x		X	PS3- 1	6.9
3	 Mini-quiz Guided Inquiry Lab - Layer of Insulation 			x		X	PS1- 2, PS1- 4	6.9
4	 Section 3 Notes - Using Heat PowerPoint/INB Activity 		×	×			. PS1- 4	6.9
5	 Mini-quiz Science Stations 	0			x	X		
6	Science Stations				x		PS1- 3,	
7	• Final Draft and testing for creation station				×	x	PS1- 4, PS1- 6, PS3- 3, PS3- 4	6.9
8	• Task Card Review and/or				x			
	• Study Guide				×			
	• Chapter Test					Х		
9	 Have students complete notes for next chapter 	×						