

Nitty Gritty Science Earth Science Curriculum
Suggested Pacing Guide
NGSS and TEKS Alignment

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

Nature of Science 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
1	• Teacher Demo - The Ice Issue	x					PS3-4	6.3, 7.3, 8.3
	• Section 1 Notes - The Method of Science		x					
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x		6.2, 7.2, 8.2
	• Section 2 Notes - Standards of Measurement		x					
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x		6.4, 7.4, 8.4
	• Guided Inquiry Lab - Colorful Observations			x				
4	• Section 3 Notes - Graphing		x					6.2, 7.2, 8.2
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x		6.2, 6.3, 6.4, 7.2, 7.3, 7.4, 8.2, 8.3, 8.4
	• Science Stations				x			
6	• Science Stations				x			
7	• Final Draft and testing for creation station				x	x		
8	• Task Card Review and/or				x			
	• Study Guide				x			
9	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Intro to Earth Science 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
1	• Teacher Demo - Eye Safety	x						
	• Section 1 Notes - The Study of Earth Science		x					
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x		
	• Section 2 Notes - Science Lab Safety		x					6.1, 7.1, 8.1
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x		
	• Guided Inquiry Lab - Measure with SI Units			x				
4	• Section 3 Notes - Methods of Science		x					
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x		
	• Science Stations				x			
6	• Science Stations				x			
7	• Final Draft and testing for creation station				x	x		
8	• Task Card Review and/or				x			
	• Study Guide				x			
9	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Mapping Earth's Surface Science 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
1	• Teacher Demo - An Imaginary Grid	x						6.3, 7.3, 8.3
	• Section 1 Notes - Mapping Earth's Surface		x					6.3, 7.3, 8.3
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x		6.3, 7.3, 8.3
	• Section 2 Notes - Models of Earth		x					
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x		8.9
	• Guided Inquiry Lab - Topographic Mapping			x				
4	• Section 3 Notes - Maps & Computers		x					8.9
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x		6.3, 7.3, 8.3
	• Science Stations				x			
6	• Science Stations				x			
7	• Final Draft and testing for creation station				x	x		
8	• Task Card Review and/or				x			
	• Study Guide				x			
9	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Rocks and Minerals 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
1	• Teacher Demo - Sweet Rock Cycle	x					ESS2-2	6.3, 6.10, 7.3, 8.3
	• Section 1 Notes - Properties of Minerals • PowerPoint/INB Activity		x					
2	• Mini-quiz					x	ESS2-1, ESS2-2	6.10
	• Section 2 Notes - Mineral Formation and Resources • PowerPoint/INB Activity		x					
3	• Mini-quiz					x		6.3, 6.10, 7.3, 8.3
	• Guided Inquiry Lab - Abrasive Minerals				x			
4	• Section 3 Notes - Classifying Rocks		x				ESS2-1, ESS2-2	6.10
	• PowerPoint/INB Activity				x			
5	• Mini-quiz					x	ESS2-1	6.10
	• Section 4 Notes - Rock Groups • PowerPoint/INB Activity		x					
6	• Mini-quiz					x	ESS2-1, ESS2-2	6.3, 6.6, 7.3, 8.3
	• Science Stations							
7	• Science Stations							
8	• Final Draft and testing for creation station							
9	• Task Card Review and/or						ESS2-1, ESS2-2	6.3, 6.6, 7.3, 8.3
	• Study Guide							
10	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Plate Tectonics 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
1	• Teacher Demo - Convection Current	x					ESS2-2, ESS2-3	6.3, 6.10, 7.3, 8.3, 8.9
	• Section 1 Notes - Earth's Interior		x				ESS2-3	6.3, 6.10, 7.3, 8.3
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x	ESS2-2	6.10, 8.9
	• Section 2 Notes - Convection & the Mantle		x					
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x	ESS2-3	6.3, 6.10, 7.3, 8.3, 8.9
	• Guided Inquiry Lab - Burning Ring of Fire			x				
4	• Section 3 Notes - Continental Drift & Seafloor Spreading		x				ESS2-1, ESS2-3	6.3, 6.10, 7.3, 8.3, 8.9
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS2-2, ESS2-3	8.9
	• Section 4 Notes - Theory of Plate Tectonics		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz					x	ESS2-2, ESS2-3	6.3, 6.10, 7.3, 8.3, 8.9
	• Science Stations				x			
7	• Science Stations				x			
8	• Final Draft and testing for creation station				x	x		
9	• Task Card Review and/or				x			
	• Study Guide				x			
10	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Forces that Shape the Earth 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
1	• Teacher Demo - Seismic Activity	x					ESS2-2, ESS2-3	6.3, 6.10, 7.3, 8.3
	• Section 1 Notes - Forces that Shape Earth		x					
	• PowerPoint/INB Activity			x			ESS2-2, ESS3-3	6.10, 7.8
2	• Mini-quiz					x		
	• Section 2 Notes - Earthquakes		x					
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x		6.3, 6.10, 7.3, 8.3
	• Guided Inquiry Lab - A Volcanic Eruption			x				
4	• Section 3 Notes - Volcanoes		x				ESS2-2, ESS3-3	6.10, 8.9
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS2-2	6.10, 8.9
	• Section 4 Notes - Volcanic Landforms		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz					x	ESS2-2, ESS2-3	6.3, 6.10, 7.3, 8.3, 8.9
	• Science Stations				x			
7	• Science Stations				x			
8	• Final Draft and testing for creation station				x	x		
9	• Task Card Review and/or				x			
	• Study Guide				x			
10	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Earth's Changing Surface 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
1	• Teacher Demo - Factors of Weathering Rates	x					ESS2-1, ESS2-2	6.3, 7.3, 7.8, 8.3
	• Section 1 Notes - Weathering		x					
	• PowerPoint/INB Activity			x			ESS2-1	7.8
2	• Mini-quiz					x	ESS2-1	7.5
	• Section 2 Notes - Soil Formation		x					
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x	ESS2-1, ESS2-2	6.3, 7.3, 7.8, 8.3
	• Guided Inquiry Lab - Agents of Weathering			x				
4	• Section 3 Notes - Erosion & Deposition: Wind and Water		x				ESS2-2	7.8
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS2-2	7.8
	• Section 4 Notes - Erosion & Deposition: Glaciers		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz					x	ESS2-1, ESS2-2	6.3, 7.3, 7.8, 8.3
• Science Stations					x			
7	• Science Stations					x		
8	• Final Draft and testing for creation station					x	x	
9	• Task Card Review and/or					x		
	• Study Guide					x		
10	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

A Trip Through Earth's History 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	TEK S
1	• Teacher Demo - Fossil Identification	x					ESS1-4, ESS2-3	6.3, 7.3, 8.3
	• Section 1 Notes - Fossils		x				ESS1-4, ESS2-3	
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x	ESS1-4, ESS2-3	
	• Section 2 Notes - Determining Ages of Rocks		x					
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x	ESS1-4, ESS2-3	6.3, 7.3, 8.3
	• Guided Inquiry Lab - Core Samples			x				
4	• Section 3 Notes - Geological Time Scale		x				ESS1-4	
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS1-4	
	• Section 4 Notes - Earth's Eras		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz					x	ESS1-4, ESS2-3	6.3, 7.3, 8.3
	• Science Stations				x			
7	• Science Stations				x			
8	• Final Draft and testing for creation station				x	x		
9	• Task Card Review and/or				x			
	• Study Guide				x			
10	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Earth's Waters 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
1	• Teacher Demo - Convection Currents	x					ESS2-4	6.3, 6.5, 7.3, 8.3, 8.10
	• Section 1 Notes - Earth - the Water Planet		x				ESS2-4	8.10
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x	ESS2-2	7.8
	• Section 2 Notes - Fresh Water		x					
	• INB Activity			x				
3	• Mini-quiz					x	ESS2-4, ESS2-5, ESS2-6	6.3, 6.5, 7.3, 8.3, 8.10
	• Guided Inquiry Lab - Coriolis Effect			x				
4	• Section 3 Notes - Characteristics & Compositions of Oceans		x				ESS2-6	6.5
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS2-4	8.7
	• Section 4 Notes - Ocean Waves and Tides		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz						ESS2-6	8.10
	• Section 5 - Ocean Currents and Climates							
7	• PowerPoint/INB Activity						ESS2-4, ESS2-6	6.3, 6.5, 7.3, 8.3, 8.10
	• Mini-quiz					x		
8	• Science Stations				x			
9	• Final Draft and testing for creation station				x	x		
10	• Task Card Review and/or				x			
	• Study Guide				x			
11	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Earth's Atmosphere 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
1	• Teacher Demo - Smog	x					ESS3-4	8.11
	• Section 1 Notes - The Atmosphere		x				ESS2-2	6.3, 6.5, 7.3, 8.3
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x	ESS2-6	6.9
	• Section 2 Notes - Atmosphere Energy Transfer		x					
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x	ESS2-2, ESS3-5	8.11
	• Guided Inquiry Lab - Particulate Sampling			x				
4	• Section 3 Notes - Wind & Water		x				ESS2-4	8.10
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS3-5	8.11
	• Section 4 Notes - Air Quality		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz					x	ESS2-2	6.3, 6.9, 7.3, 8.3, 8.11
	• Science Stations				x			
7	• Science Stations				x		ESS2-6	
8	• Final Draft and testing for creation station				x	x		
9	• Task Card Review and/or				x			
	• Study Guide				x			
10	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Weather and Climate 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	TEK S
1	• Teacher Demo - Air Masses	x					ESS2-5	6.3, 7.3, 8.3, 8.10
	• Section 1 Notes - Weather Patterns		x				ESS2-5	6.3, 7.3, 8.3, 8.10
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x	ESS2-5	8.10
	• Section 2 Notes - Weather Forecasts		x					
	• INB Activity			x				
3	• Mini-quiz					x		8.10
	• Guided Inquiry Lab - Cloud Formation			x				
4	• Section 3 Notes - Climates of Earth		x				ESS2-5	7.10
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS2-6	8.11
	• Section 4 Notes - Climate Cycles		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz						ESS3-5	8.11
	• Section 5 -Recent Climate Change							
	• PowerPoint/INB Activity							
7	• Mini-quiz					x	ESS2-5, ESS2-6	6.3, 7.3, 7.8, 8.3, 8.10
	• Science Stations				x			
8	• Science Stations				x			
9	• Final Draft and testing for creation station				x	x		
10	• Task Card Review and/or				x			
	• Study Guide				x			
11	• Chapter Test					x		
	• Have students complete notes for next chapter	x						

Astronomy and Space Science 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
1	• Teacher Demo - Orbits of Inner Planet	x					ESS1-2, ESS1-3	6.11
	• Section 1 Notes - Earth's Motion		x				ESS1-1	6.3, 7.3, 8.3, 8.7
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x	ESS1-1	6.3, 7.3, 8.3, 8.7
	• Section 2 Notes - The Moon - Earth's Satellite		x					
	• INB Activity			x				
3	• Mini-quiz					x	ESS1-3	6.11
	• Guided Inquiry Lab - Space Suit Challenge			x				
4	• Section 3 Notes - Solar System		x				ESS1-2	6.11, 8.8
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS1-3	6.3, 7.3, 8.3
	• Section 4 Notes - The Planets		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz						ESS1-2	
	• Section 5 - Stars & Galaxies							
	• PowerPoint/INB Activity							
7	• Mini-quiz							7.9, 8.8
	• Section 6 - Space Exploration							
	• PowerPoint/INB Activity							
8	• Mini-quiz					x	ESS1-1, ESS1-2, ESS1-3	6.3, 6.11, 7.3, 8.3, 8.11
	• Science Stations				x			
9	• Science Stations				x			
10	• Final Draft and testing for creation station				x	x		
11	• Task Card Review and/or				x			
	• Study Guide				x			
12	• Chapter Test					x		
	• Have students complete							

Natural Resources 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	TEK S
1	• Teacher Demo - Recognizing Resource Use	x					ESS3-3	6.3, 7.3, 8.3
	• Section 1 Notes - Energy & Mineral Resources		x				ESS3-1	6.7, 8.11
	• PowerPoint/INB Activity			x				
2	• Mini-quiz					x	ESS3-1	6.7, 8.11
	• Section 2 Notes - Renewable Energy Resources		x					
	• PowerPoint/INB Activity			x				
3	• Mini-quiz					x	ESS3-4	6.7, 7.8, 8.11
	• Guided Inquiry Lab - Testing the Waters			x				
4	• Section 3 Notes - Land Resources & Human Impact		x				ESS3-1, ESS3-3, ESS3-4	8.11
	• PowerPoint/INB Activity			x				
5	• Mini-quiz					x	ESS3-1, ESS3-3	6.5, 7.8, 8.11
	• Section 4 Notes - Air/Water Resources & Human Impact		x					
	• PowerPoint/INB Activity			x				
6	• Mini-quiz					x	ESS3-1, ESS3-3, ESS3-4	6.3, 6.7, 7.3, 7.8, 8.3, 8.11
	• Science Stations				x			
7	• Science Stations				x			
8	• Final Draft and testing for creation station				x	x		
9	• Task Card Review and/or				x			
	• Study Guide				x			
10	• Chapter Test					x		
	• Have students complete notes for next chapter	x						