

# Seventh Grade Science Curriculum Map

Note: The following timeline and sequence is meant to be a guide only and is subject to change.  
(Revised 2008-09 school year)

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## Grade Level Content Expectations

	1st Trimester			2nd Trimester			3rd Trimester			Ongoing
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
S.IP.07.11 Generate scientific questions based on observations, investigations, and research.										X
Resources:										
S.IP.07.12 Design and conduct scientific investigations.										X
Resources:										
S.IP.07.13 Use tools and equipment (spring scales, stop watches, meter sticks and tapes, models, hand lens, thermometer, models, sieves, microscopes, hot plates, pH meters) appropriate to scientific investigations.										X
Resources:										
S.IP.07.14 Use metric measurement devices in an investigation.										X
Resources:										
S.IP.07.15 Construct charts and graphs from data and observations.										X
Resources:										
S.IP.07.16 Identify patterns in data.										X
Resources:										
S.IA.07.11 Analyze information from data tables and graphs to answer scientific questions.										X
Resources:										
S.IA.07.12 Evaluate data, claims, and personal knowledge through collaborative science discourse.										X
Resources:										
S.IA.07.13 Communicate and defend findings of observations and investigations.										X
Resources:										
S.IA.07.14 Draw conclusions from sets of data from multiple trials of a scientific investigation to draw conclusions.										X
Resources:										
S.IA.07.15 Use multiple sources of information to evaluate strengths and weaknesses of claims, arguments, or data.										X
Resources:										
S.RS.07.11 Evaluate the strengths and weaknesses of claims, arguments, and data.										X
Resources:										
S.RS.07.12 Describe limitations in personal and scientific knowledge.										X
Resources:										
S.RS.07.13 Identify the need for evidence in making scientific decisions.										X
Resources:										
S.RS.07.14 Evaluate scientific explanations based on current evidence and scientific principles.										X
Resources:										

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S.RS.07.15 Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.										X
Resources:										
S.RS.07.16 Design solutions to problems using technology.										X
Resources:										
P.EN.07.31 Identify examples of waves, including sound waves, seismic waves, and waves on water.	X									
Resources:										
P.EN.07.32 Describe how waves are produced by vibrations in matter.	X									
Resources:										
P.EN.07.33 Demonstrate how waves transfer energy when they interact with matter (for example: tuning fork in water, waves hitting a beach, earthquake knocking over buildings).	X									
Resources:										
P.EN.07.61 Identify that nuclear reactions take place in the sun, producing heat and light.		X								
Resources:										
P.EN.07.62 Explain how only a tiny fraction of light energy from the sun is transformed to heat energy on Earth.		X								
Resources:										
P.PM.07.11 Classify substances by their chemical properties (flammability, pH, acid-base indicators, reactivity).		X								
Resources:										
P.PM.07.21 Identify the smallest component that makes up an element.		X								
Resources:										
P.PM.07.22 Describe how the elements within the Periodic Table are organized by similar properties into families (highly reactive metals, less reactive metals, highly reactive nonmetals, and some almost completely non-reactive gases).			X							
Resources:										
P.PM.07.23 Illustrate the structure of molecules using models or drawings (water, carbon dioxide, salt).			X							
Resources:										
P.PM.07.24 List examples of physical and chemical properties of elements and compounds (boiling point, density, color, conductivity, reactivity).				X						
Resources:										
P.CM.07.21 Identify evidence of chemical change through color, gas formation, solid formation, and temperature change.				X						
Resources:										
P.CM.07.22 Compare and contrast the chemical properties of a new substance with the original after a chemical change.					X					



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E.ES.07.11 Demonstrate, using a model or drawing, the relationship between the warming by the sun of the Earth and the water cycle as it applies to the atmosphere (evaporation, water vapor, warm air rising, cooling, condensation, clouds).							X			
Resources:										
E.ES.07.12 Describe the relationship between the warming of the atmosphere of the Earth by the sun and convection within the atmosphere and oceans.							X			
Resources:										
E.ES.07.13 Describe how the warming of the Earth by the sun produces winds and ocean currents.							X			
Resources:										
S.RS.07.17 Describe the effect humans and other organisms have on the balance in the natural world.								X		
Resources:										
S.RS.07.19 Describe how science and technology have advanced because of the contributions of many people throughout history and across cultures.								X		
Resources:										
E.ES.07.71 Compare and contrast the difference and relationship between climate and weather.								X		
Resources:										
E.ES.07.72 Describe how different weather occurs due to the constant motion of the atmosphere from the energy of the sun reaching the surface of the Earth.								X		
Resources:										
E.ES.07.73 Explain how the temperature of the oceans affects the different climates on Earth because water in the oceans holds a large amount of heat.								X		
Resources:										
E.ES.07.74 Describe weather conditions associated with frontal boundaries (cold, warm, stationary, and occluded) and the movement of major air masses and the jet stream across North America using a weather map.								X		
Resources:										
E.ES.07.81 Explain the water cycle and describe how evaporation, transpiration, condensation, cloud formation, precipitation, infiltration, surface runoff, ground water, and absorption occur within the cycle.									X	
Resources:										
E.ES.07.41 Explain how human activities (surface mining, deforestation, overpopulation, construction and urban development, farming, dams, landfills, and restoring natural areas) change the surface of the Earth and affect the survival of organisms.										X
Resources:										
E.ES.07.42 Describe the origins of pollution in the atmosphere, geosphere, and hydrosphere, (car exhaust, industrial emissions, acid rain, and natural sources), and how pollution impacts habitats, climatic change, threatens or endangers species.										X
Resources:										

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E.ES.07.82 Analyze the flow of water between the components of a watershed, including surface features (lakes, streams, rivers, wetlands) and groundwater.									X	
Resources:										
E.FE.07.11 Describe the atmosphere as a mixture of gases.										X
Resources:										
E.FE.07.12 Compare and contrast the composition of the atmosphere at different elevations.										X
Resources:										