

The *National Science Education Standards* are available via WWW at <http://www.nap.edu/> or order via WWW at <http://www.nap.edu/order.html> or to order by phone, call toll free 1.800.624.6242.

National Science Content Standards K-4	Polymer Lessons	Oil Lessons	Biotechnology Lessons
A: Science as Inquiry			
<ul style="list-style-type: none"> Abilities necessary to do scientific inquiry 	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	13, 14, 15, 16, 17, 18, 19	20, 21
<ul style="list-style-type: none"> Understanding about scientific inquiry 	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	13, 14, 15, 16, 17, 18, 19	20, 21
B: Physical Science			
<ul style="list-style-type: none"> Properties of objects and materials 	1, 3, 4, 5, 6, 8, 10, 12	14, 15, 16, 17, 18, 19	21
<ul style="list-style-type: none"> Position and motion of objects 			
<ul style="list-style-type: none"> Light, heat, electricity, and magnetism 	6	19	21
C: Life Science			
<ul style="list-style-type: none"> The characteristics of organisms 	2		20, 21
<ul style="list-style-type: none"> Life cycles of organisms 	2		
<ul style="list-style-type: none"> Organisms and environments 	2		
D: Earth and Space Science			
<ul style="list-style-type: none"> Properties of earth materials 			
<ul style="list-style-type: none"> Objects in the sky 			
<ul style="list-style-type: none"> Changes in earth and sky 			
E: Science and Technology			
<ul style="list-style-type: none"> Abilities of technological design 	9, 10		
<ul style="list-style-type: none"> Understanding about science and technology 	9		20
<ul style="list-style-type: none"> Abilities to distinguish between natural objects and objects made by humans 	3, 9	18	20, 21
F: Science in Personal and Social Perspectives			
<ul style="list-style-type: none"> Personal health 	2, 7		
<ul style="list-style-type: none"> Characteristics and changes in populations 			
<ul style="list-style-type: none"> Types of resources 	7	18, 19	
<ul style="list-style-type: none"> Changes in environments 	10, 11	19	
<ul style="list-style-type: none"> Science and technology in local challenges 	2, 7, 9	19	20, 21
G: History and Nature of Science			
<ul style="list-style-type: none"> Science as a human endeavor 	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	13, 14, 15, 16, 17, 18, 19	20, 21

National Science Content Standards 5-8	Polymer Lessons	Oil Lessons	Biotechnology Lessons
A: Science as Inquiry			
<ul style="list-style-type: none"> Abilities necessary to do scientific inquiry 	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	13, 14, 15, 16, 17, 18, 19	20, 21
<ul style="list-style-type: none"> Understanding about scientific inquiry 	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	13, 14, 15, 16, 17, 18, 19	20, 21
B: Physical Science			
<ul style="list-style-type: none"> Properties and changes of properties in matter 	4, 6, 9, 10	14, 15, 16, 17, 18	21
<ul style="list-style-type: none"> Motions and forces 			
<ul style="list-style-type: none"> Transfer of energy 	6	15, 16, 18, 19	
C: Life Science			
<ul style="list-style-type: none"> Structure and function in living systems 			20, 21
<ul style="list-style-type: none"> Reproduction and heredity 			20, 21
<ul style="list-style-type: none"> Regulation and behavior 	2		
<ul style="list-style-type: none"> Populations and ecosystems 			
<ul style="list-style-type: none"> Diversity and adaptations of organisms 			20, 21
D: Earth and Space Science			
<ul style="list-style-type: none"> Structure of the earth system 			
<ul style="list-style-type: none"> Earth's history 			
<ul style="list-style-type: none"> Earth in the solar system 			
E: Science and Technology			
<ul style="list-style-type: none"> Abilities of technological design 	9, 10		
<ul style="list-style-type: none"> Understanding about science and technology 	9		20
F: Science in Personal and Social Perspectives			
<ul style="list-style-type: none"> Personal health 			
<ul style="list-style-type: none"> Populations, resources, and environments 			
<ul style="list-style-type: none"> Natural hazards 			
<ul style="list-style-type: none"> Risks and benefits 	10, 11	19	
<ul style="list-style-type: none"> Science and technology in society 	2, 7, 9	19	20, 21
G: History and Nature of Science			
<ul style="list-style-type: none"> Science as a human endeavor 	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	13, 14, 15, 16, 17, 18, 19	20, 21
<ul style="list-style-type: none"> Nature of science 	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	13, 14, 15, 16, 17, 18, 19	20, 21
<ul style="list-style-type: none"> History of science 			

Unit/Lesson	Academic Science Standards Write your state's grade level standards below.
POLYMERS	
Lesson 1: Chains in the Classroom	
Lesson 2: Germinating and Growing Soybeans	
Lesson 3: Polymers in Your Life	
Lesson 4: It Does What? Oobleck	
Lesson 5: Links in the Classroom	
Lesson 6: It Does What? Gluep	
Lesson 7: What's in a Soybean?	
Lesson 8: Chromatography Using Soybean Leaves	
Lesson 9: Many Kinds of Glue	
Lesson 10: Glue Tests	
Lesson 11: Chains in Ink	
Lesson 12: Polymers Everywhere Evaluation	
OILS	
Lesson 13: Marbleizing	
Lesson 14: Salad Dressing	
Lesson 15: Lip Balm	
Lesson 16: Soybean Hand Cream	
Lesson 17: Oil and Water Emulsion	
Lesson 18: Candles and Crayons	
Lesson 19: Putt-Putt Boats	
BIOTECHNOLOGY	
Lesson 20: Making a DNA Model	
Lesson 21: DNA Extraction and Spooling	