

**Helena Public Schools
Gr 8 Teacher Desk Reference**

Eighth Grade Standard	IDEA	Skill	Subject completed? (Y/N)	Resources available?	Knowledge of Subject	Was this effective?	Comments
1.1	D	Demonstrate the use of proper laboratory safety procedures					
1.1	D	Apply the scientific method to problem solving skills					
1.2	D	Utilize basic metric measurements in science and its relationship to the English system.					
1.2	D	Distinguish between the concepts of weight, mass, volume, density, linear measurement and temperature					
1.2	D	Compare measurement systems					
1.3	D	Students will use critical thinking skills to present and defend the results of investigations					
1.4	D	Produce electrical circuits with multiple systems and describe their purpose and function					
1.4	D	Identify atoms within molecules and compounds and the forces that hold them together					
1.4	D	Identify parts and functions of complex machines					
1.4	D	Predict outcomes through the use of machines					
1.5	D	Create and analyze graphs and tables for collecting data					
1.6	D/E	Apply and relate controls and variables in scientific investigations					
2.1	D	Distinguish between the physical and chemical properties of matter					
2.1	D	Compare and contrast physical and chemical changes					
2.1	D	Describe the physical and chemical properties of common elements					

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2.2	D	Interpret the atomic theory of atoms and molecules					
2.2	D	Distinguish between atoms and molecules					
2.2	D	Interpret the periodic table of elements					
2.2	D	Demonstrate the use of the pH scale and a variety of indicators					
2.2	D	Identify the properties of acids, bases and salts					
2.2	D	Distinguish between organic and inorganic compounds					
2.3	D	Explain the nature of nuclear reactions					
2.3	E	Explain the Law of Conservation of Matter and Energy					
2.4	E	Predict how elements combine to form compounds					
2.4	D	Identify types of chemical reactions					
2.4	D	Recognize balanced equations					
2.4	E	Summarize the laws of conservation of matter, mass, and energy					
2.4	D	Explain the nature of nuclear reactions					
2.5	D	Define the nature and measurements of forces					
2.5	D/E	Describe energy transformations through the application of simple and compound machines					

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2.5	D	Differentiate between kinetic and potential energy					
2.5	D	Demonstrate the application of forces involved in the principles of buoyancy and flight					
2.6	D	Describe and measure static and current electricity					
2.6	D	Demonstrate the difference between parallel and series circuits					
2.6	D	Relates the principles of light and sound					
2.6	D	Relates electricity and magnetism to the production of electricity					
5.1	D	Investigate the career opportunities in the physical sciences					
5.2	D	Recognize scientific views on energy topics that connect with physical science					
5.3	D	Analyze local environmental problems and identify variables as relates to physical sciences					
5.4	D	Apply technology to the physical sciences, and understand how science and technology affect society					
5.4	D	Recognizes the integration of physical science with other sciences					
6.1	D	Appraise how the physical sciences will affect lives now and in the future					
6.2	D	Identify major contributions and events in the advancement of physical science					