

Unified School District of De Pere Course Overview

Course Name: Grade 6 Science

Link to Standards Booklet: [WI Standards for Science](#)

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Module A-Engineering and Science

Important Concepts/Skills	Standards Addressed	Page Number (in Standards booklet)
Describe the relationships between engineering, science and society.	MS-ETS1	67
Describe natural and engineered systems and identify the role of system models in engineering and science.	MS-ETS1	67
Define the criteria and constraints of an engineering design problem in a way to ensure a successful solution.	MS-ETS1	67
Explain the importance of precisely defining engineering problems before developing solutions.	MS-ETS1	67
Explain the practice of developing and testing solutions to engineering problems.	MS-ETS1	67
Design and perform tests and analyze the results in order to optimize a design solution.	MS-ETS1	67

Module I-Energy and Energy Transfer

Important Concepts/Skills	Standards Addressed	Page Number
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		(in Standards booklet)
Describe how energy interacts with and changes objects.	MS-PS3-1.	53
Analyze a system's kinetic and potential energy.	MS-PS3-4	53
Model and describe how relative positions of objects in a system change the amount of potential energy in the system.	MS-PS3-2.	53
Demonstrate that a transfer of energy to or from an object results in a change in the total energy of an object.	MS-PS3-3.	53
Explain the relationships between temperature, thermal energy and heat.	MS-PS3-3.	53
Explain how thermal energy is transferred and use this knowledge to design a device to minimize thermal energy transfer.	MS-PS3-3.	53

Module J-Chemistry

Important Concepts/Skills	Standards Addressed	Page Number (in Standards booklet)
Describe the physical properties of solids, liquids, and gasses and model particles to explain their differences.	MS-PS1-1.	48
Model and explain how a change in the thermal energy can influence a change of state	MS-PS1-4.	48
Explain ways to analyze data about substances before and after they interact to determine whether their identities have changed.	MS-PS1-2.	48
Explain how chemical equations model chemical reactions and demonstrate the law of conservation of matter.	MS-PS1-5.	48
Design, construct, and test a device that uses a chemical process to transfer thermal energy.	MS-PS1-6.	48
Explain how synthetic materials are designed and made to have properties that make them useful.	MS-PS1-3.	48
Describe how our use of synthetic materials impacts society.	MS-PS1-3.	48

Module K-Forces in Motion

Important Concepts/Skills	Standards Addressed	Page Number (in Standards booklet)
Model the effects of a force or a combination of forces acting on an object.	MS-PS2-1.	51
Support an argument that interactions involving gravity or friction depend on the properties of objects.	MS-PS2-2.	51
Model and describe how unbalanced forces cause changes in motion.	MS-PS2-2.	51
Apply Newton's laws of motion to design a solution to a problem involving two colliding objects.	MS-PS2-1.	51
Describe the variables that affect the strength and direction of the magnetic force.	MS-PS2-3.	51
Explain how electric charges cause a force and what factors affect the strength of that force.	MS-PS2-3.	51
Describe and model the effects of electric, magnetic and gravitational fields on objects within these fields.	MS-PS2-4.	51
Analyze electromagnetic data to explain the interaction between electric and magnetic phenomena.	MS-PS2-5.	51