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Discover the creative engineer in you

Lesson Plans

Lesson Plan Survey



Lesson Plans

TryEngineering offers a variety of lesson plans that align with education standards to allow teachers and students to apply engineering principles in the classroom. The matrix below will allow you to select a lesson that will be age and content appropriate for your classroom.

Download the full lesson plan PDF file to see how the lesson plan aligns with Educational Standards.

List of Plans, by Age:

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HIGHLIGHTED
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A Century of Plastics

Lesson Focus: Lesson focuses on how plastics of all sorts have been engineered in to everyday products over the past century, with emphasis on materials selection and engineering.

Ages 8-18

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Adaptive Device Design

Lesson Focus: Lesson focuses on the engineering of adaptive or assistive devices, such as prosthetic devices, wheelchairs, eyeglasses, grab bars, hearing aids, lifts, or braces.

Ages 8-18

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Design and Build a Better Candy Bag

Lesson Focus: Demonstrate how product design differences can affect the success of a final product -- in this case a bag for holding candy. Students work in pairs to evaluate, design, and build a better candy bag.

Ages 8-18

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Build Your Own Robot Arm

Lesson Focus: Develop a robot arm using common materials. Students will explore design, construction, teamwork, and materials selection and use.

Ages 8-18

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Clipper Creations

Lesson Focus: Develop a working model of a nail clipper.

Ages 8-18

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EE-101

Cracking the Code

Lesson Focus: Lesson focuses on how computerized barcodes have improved efficiency in product distribution; explores the barcoding process and engineering design.

Ages 8-18

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Critical Load

Lesson Focus: Lesson focuses on issues civil engineers face, including critical load and how to reinforce the design of a structure to hold more weight.

Ages 8-14

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EE-101

EEEEK- A Mouse!

Lesson Focus: Lesson focuses on computer and mechanical engineering and explores how computer mice operate and how engineering provided an interface between man and machine.

Ages 8-18

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EE-101

Electric Switches

Lesson Focus: Demonstrate how electric circuits can

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		be controlled with a simple switch. Note: This lesson plan is designed for classroom use only, with supervision by a teacher familiar with electrical and electronic concepts.	Ages 8-11	Download PDF Take Survey
	EE-101	Electric Messages: Then and Now Lesson Focus: Lesson focuses on exploring electric message systems, from light signals using International Morse Code to text messaging. Students construct a simple telegraph using a battery, wires, a switch, and bulb, and explore the impact of communications on society.	Ages 8-14	View Detail Download PDF Take Survey
MARCH 2007	EE-101	Flashlights and Batteries Lesson Focus: Lesson focuses on the concept of electron flow through the demonstration of electrical circuits in a flashlight, and how batteries operate.	Ages 8-11	View Detail Download PDF Take Survey
		Getting Your Bearings Lesson Focus: Lesson focuses on the concept of friction and the use of ball bearings to reduce friction.	Ages 8-18	View Detail Download PDF Take Survey
		Give Me a Brake Lesson Focus: Lesson focuses on brakes, force, and friction, using bicycle rim brakes to demonstrate basic braking mechanisms to stop, slow, or prevent motion.	Ages 8-18	View Detail Download PDF Take Survey
JANUARY 2007		Heart of the Matter Lesson Focus: Lesson focuses on the engineering and operation of artificial heart valves, and the interface between man and machine.	Ages 8-18	View Detail Download PDF Take Survey
APRIL 2007	EE-101	Here Comes the Sun Lesson Focus: Lesson focuses on solar panel design, and its application in the standard calculator. It explores how both solar panels and calculators operate and explores simple circuits using solar power.	Ages 8-18	View Detail Download PDF Take Survey
	EE-101	Insulators and Conductors Lesson Focus: Demonstrating the concept of conducting or insulating electricity. Note: This lesson plan is designed for classroom use only, with supervision by a teacher familiar with electrical and electronic concepts.	Ages 8-11	View Detail Download PDF Take Survey
		Pulleys and Force Lesson Focus: Lesson focuses on the concept of force and the use of pulleys to reduce required force.	Ages 8-11	View Detail Download PDF Take Survey
	EE-101	Series and Parallel Circuits Lesson Focus: Demonstrate and discuss simple circuits and the differences between parallel and serial circuit design and functions. Note: This lesson plan is designed for classroom use only, with supervision by a teacher familiar with electrical and electronic concepts.	Ages 8-14	View Detail Download PDF Take Survey
		Simple Machines Lesson Focus: Simple machines: their principles and uses.	Ages 8-11	View Detail Download PDF Take Survey
	EE-101	Two Button Buzzer Circuit Lesson Focus: Demonstrate how two switches interact in an electrical circuit such as that used to sound a buzzer. Note: This lesson plan is designed for classroom use only, with supervision by a teacher familiar with electrical and electronic concepts.	Ages 8-14	View Detail Download PDF Take Survey
	EE-101	All About Electric Motors Lesson Focus: Electric Motors: their principles and everyday uses. Note: This lesson plan is designed for classroom use only, with supervision by a teacher familiar with electrical and electronic concepts.	Ages 10-18	View Detail Download PDF Take Survey
	EE-101	Get Connected With Ohm's Law		

Lesson Focus: Demonstrate Ohm's Law using digital multi-meters. Fun hands-on activities are presented that demonstrate Ohm's Law. Teachers use digital multi-meters to collect data that are plotted to show that voltage and current are related by linear functions for ordinary resistors and by power functions for light bulbs.

Ages 10-18

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