

Title: Simple Machines at Sloss Lesson Plan	
	Simple Machines at Sloss
Estimated Time:	
	1 hour
Grade Levels:	
	Grades 3-5
Concept/Topic:	
	Students will have an opportunity to explore the use of two simple machines, the wheel and axle and the pulley system, in everyday life.
Goals:	
	<ul style="list-style-type: none"> • Students will be able to define the term simple machine, identify and describe the pulley system and the wheel and axle system. • Students will identify examples of the use of the pulley and wheel and axle in real life situations.
Objectives:	
	<ul style="list-style-type: none"> • Identify the different parts of the wheel and axle and pulley systems. • Describe the tasks that can be accomplished by each simple machine and compare their uses. • Provide specific examples of the wheel and axle and pulley systems in use.
Engage:	
	Ask students to describe an example of the use of a pulley system and the wheel and axle.
Procedure:	
	<p>1.) Introduce the video by describing it as providing examples of the use of simple machines to accomplish difficult tasks. Have the class view the APTPlus™ online video Simple Machines at Sloss located in the APTPLUS Digital Media Library.</p> <p>2.) Distribute copies of the Simple Machine Chart (see handouts) to students. Inform students that they will watch the video a second time and complete the chart while viewing the video.</p> <p>3.) Instruct students to list information related to the headings on the chart, including the tasks performed by each simple machine, its parts and the benefits provided while relocating the train to Sloss Furnaces. Ask volunteer to share their responses.</p> <p>4.) Encourage the class to share by asking: "Can you think of an example of your use of a pulley system or wheel and axle?" Provide them with examples such as driving a car or lifting up the window blinds in your house.</p> <p>5.) Ask students to keep a list of examples of the pulley system or wheel and axle in their everyday lives, including a brief description of how it made a certain task easier.</p>

Lesson Plan for Simple Machines at Sloss

Extensions:	
	Students that already have a good understanding of simple machines may be challenged to learn about compound machines. Have the student research compound machines in their textbook, school library, or Internet.
Materials:	
	<ul style="list-style-type: none"> • Dry-erase/Chalkboard • Pen/Pencil • Smart board (or other device to show online video) • Simple Machines chart • Loose-leaf paper
Course of Study	
	<p>Science (2005), Grade 2 4.) Describe observable effects of forces, including buoyancy, gravity, and magnetism. a.) Identifying simple machines, including the inclined plane, lever, pulley, wedge, screw, and wheel and axle</p> <p>Grade 3 5.) Identify the relationship of simple machines to compound machines.</p> <p>Grade 8 9.) Describe how mechanical advantages of simple machines reduce the amount of force needed for work.</p>
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	Alabama Public Television
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