

## ESL Curriculum Exemplar

Aligned to the 2007 WIDA Standards

ENGAGING STUDENTS • FOSTERING ACHIEVEMENT • CULTIVATING 21<sup>ST</sup> CENTURY GLOBAL SKILLS

### Simple Machines Lesson Plan #1

**Content Area:** English as Second Language

**Lesson Title:** Simple Machines are Everywhere!

**Timeframe:** 3 – 5 days

#### Lesson Components

#### 21<sup>st</sup> Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy:
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#### 21<sup>st</sup> Century Skills

X	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication	X	Collaboration
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**Interdisciplinary Connections:** Language Arts Literacy, Technology

**Integration of Technology:**

**Equipment needed:** Computer/projection setup, student computers, Internet

Goals/Objectives	Learning Activities/Instructional Strategies	Assessment Tasks
<p>Students will:</p> <p><i>Speaking &amp; Writing</i></p> <ul style="list-style-type: none"> <li>Identify orally and in writing the simple machines in the home.</li> <li>Create a virtual poster showing simple machines in the real world.</li> </ul> <p><i>Reading</i></p> <ul style="list-style-type: none"> <li>Match names with pictures of simple machines from written description.</li> </ul> <p><i>Speaking &amp; Listening</i></p> <ul style="list-style-type: none"> <li>Describe and/or demonstrate what simple machines do.</li> </ul> <p><i>Speaking</i></p>	<p><b>Key Vocabulary:</b> Push/ pull, lift, move, turn, open, simple machine, change, hold.</p> <p><b>Key Language Structures:</b> verb forms, declarative sentences We use a _____ to _____. Describing actions. We found a _____ in the _____.</p> <p><b>Warm-up:</b> Teacher: Post several sheets of chart paper around the room for a “Gallery Walk”. Students: Write/draw their responses on charts that have been labeled with different question/tasks, such as:</p> <ol style="list-style-type: none"> <li>What is work?</li> <li>Create a list of machines.</li> <li>Draw a machine you use daily.</li> </ol> <p><b>Lesson Sequence:</b></p>	<p><b>Formative</b></p> <ul style="list-style-type: none"> <li>Warm-up responses</li> <li><a href="#">Simple Machines Pre Test</a> found at EdHeads)</li> <li><a href="#">Simple Machines Post Test</a></li> <li>Graphic organizers</li> <li>Glogster interactive poster</li> <li>Voice Thread conversations</li> <li>Homework</li> </ul>

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<ul style="list-style-type: none"><li>• Explain how simple machines work.</li><li>• Persuade others to invest in your product.</li></ul>	<ol style="list-style-type: none"><li>1. Teacher: Introduces simple machines using the website <a href="#">EdHeads Simple Machines</a>, goes to game link and demonstrates how it works, selects an object and asks students “<i>What does this simple machine do?</i>”</li><li>2. Students: Work in pairs on the EdHeads website, exploring simple machines in different rooms of the home. They are encouraged to speak to each other, using sentence frames the teacher has posted, such as: <i>The _____ is in/on the _____ .</i> <i>I see a _____ in the _____ .</i></li><li>3. Teacher: “Butterflies” from group to group, guiding students toward identifying simple machines, asking students to verbally name and describe them. As they “discover” simple machines on the site, student pairs can make a list of what they’ve found. They can then “report” at the end of the session: <i>We saw a _____ in the _____ .</i></li><li>4. Teacher: Elicits a discussion and list of <b>verbs</b> related to objects encountered on the website. Teacher can form her/his questions in order to elicit key vocabulary (see above): <i>push, lift, move, pull, turn, open, change, hold</i>. Students can also be invited to “act out” these verbs, after teacher models a related action (TPR).</li><li>5. Students: Complete a Graphic Organizer, where they match names and pictures of simple machines in the home, as well as supply (by drawing/magazine picture/or web image) a picture of a real-world example.</li><li>6. Teacher: Introduces <a href="#">Glogster Edu</a> (which teacher has set up with student usernames) and models how to create a virtual poster.</li><li>7. Students: Discuss procedures, expectations, and standards of behavior and online safety (prior to using Glogster).</li><li>8. Students: Create virtual posters (individually and/or in pairs, according to computer skills). Virtual posters will highlight a specific simple machine. Students will work together,</li></ol>	
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	<p>discuss and plan their poster, assist each other in maneuvering site tools, and write on their poster (using the site's gadgets).</p> <p>9. Students: Write sentences using the verbs and vocabulary generated in the previous lessons.</p> <p>10. Students: Collaborate on a <a href="#">VoiceThread</a>. Teacher posts a picture of a person doing work, or using a simple machine. Students leave comments describing the picture, explaining how the machine works, etc.</p> <p><b>Closure:</b> Students: Create an "Important Book" about simple machines. (Teacher's Note: Teacher uses this book at beginning of year and follows pattern as a closing activity about new topics throughout the year.)</p> <p><b>Expansion/Extension/Homework:</b> Students: Answer the following questions in a science journal:</p> <ul style="list-style-type: none"><li>• What simple machines do you use in your home?</li><li>• What simple machines are used in school?</li><li>• What do simple machines do?</li></ul>	
<p><b>Differentiation:</b> Use flexible grouping; deliberately pair students homogeneously or heterogeneously by proficiency level depending on the objective. Simple machines literature will be available on a variety of reading levels to accommodate ELP Levels. During Activity #4, use <a href="#">Total Physical Response</a> . For Activity #9, teacher can help student write their comment and allow them to read it for VoiceThread.</p>		
<p><b>Resources:</b></p> <ul style="list-style-type: none"><li>• Edheads: <a href="http://www.edheads.org/activities/simple-machines/">http://www.edheads.org/activities/simple-machines/</a></li><li>• Power Point presentations: <a href="http://science.pppst.com/simplemachines.html">http://science.pppst.com/simplemachines.html</a></li><li>• <i>The Important Book</i> by Margaret Wise Brown</li><li>• <a href="#">Glogster EDU website</a></li><li>• <a href="#">VoiceThread</a></li></ul>		