

ESL Curriculum Exemplar

Aligned to the 2007 WIDA Standards

ENGAGING STUDENTS • FOSTERING ACHIEVEMENT • CULTIVATING 21ST CENTURY GLOBAL SKILLS

Simple Machines		Lesson Plan #2	
Content Area: English as a Second Language			
Lesson Title: Types of simple machines and their uses		Timeframe: 7-10 days	
Lesson Components			
<u>21st Century Themes</u>			
Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy	Civic Literacy
			Health Literacy
<u>21st Century Skills</u>			
X	Creativity and Innovation	X	Critical Thinking and Problem Solving
		X	Communication
			X
			Collaboration
Interdisciplinary Connections: Language Arts			
Integration of Technology: Internet use, Power Point presentation			
Equipment needed: Computers, Internet			

Goals/Objectives	Learning Activities/Instructional Strategies	Assessment Tasks
<p>Students will:</p> <p><i>Speaking</i></p> <ul style="list-style-type: none"> Explain the 6 types of simple machines. <p><i>Listening & Writing</i></p> <ul style="list-style-type: none"> Define and illustrate each simple machine after listening to group presentation. <p><i>Writing</i></p> <ul style="list-style-type: none"> Write a minimum of two paragraphs (5-6 sentences each) comparing and contrasting two simple machines of the student's choice. Write a caption about school-based simple machine. 	<p>Key Vocabulary: Lever, inclined plane, screws, wedge, pulley, wheel, and axle.</p> <p>Key Language Structure: Conjunctions, comparative adjectives, adverbs.</p> <p>Warm-up: Teacher: Shows images or examples of the several simple machines. Students: Respond on white board how and where they have seen the simple machines used in real life. Teacher: Leads discussion on students' responses, clarifying misconceptions.</p> <p>Lesson Sequence:</p> <ol style="list-style-type: none"> Teacher: Divide students into several groups and assign one type of simple machine to each group. Students: Refer to teacher-selected websites to research their simple machine. 	<p>Formative</p> <ul style="list-style-type: none"> Whiteboard entries Think-pair-share: describe simple machines, in pairs, to show that they understand their unique uses. Student created book Complete graphic organizer Write a compare and contrast essay on two simple

ESL Curriculum Exemplar

Aligned to the 2007 WIDA Standards

ENGAGING STUDENTS • FOSTERING ACHIEVEMENT • CULTIVATING 21ST CENTURY GLOBAL SKILLS

	<p>Individually (with group support), students complete graphic organizer describing the simple machine and its function, and provide examples. Think-pair-share.</p> <ol style="list-style-type: none">3. Students: Each group presents their simple machine to the class. At the end of each group's presentation, whole class summarizes the purpose of each simple machine.4. Students: Use the "Speaking Rubric of the WIDA Consortium" to provide feedback on peers' presentations.5. Students: Individually create a simple machines book. After each summary, students will use one to two pages for each simple machine. The book will include all of the simple machines researched. The following details for each simple machine should be included: 1) the name of the simple machine 2) a student-drawn illustration 3) a text book definition 4) a student-created definition.6. Students: Use this book to complete a graphic organizer, comparing and contrasting two simple machines at a time, using appropriate language structures.7. Students: Refer back to this graphic organizer when drafting their compare and contrast essay. Students should self-select two simple machines to compare and contrast.8. Students: Read essays aloud, in pairs, and then to whole class. Classmates provide feedback on peers' essays using student-friendly version of the "Writing Rubric of the WIDA Consortium, Grades 1-12." Teacher uses this rubric to provide feedback.9. Students: Use a digital camera to explore school grounds, locating and taking pictures of the several simple machines.10. Teacher: Uploads photos and create a Power Point presentation.	<p>machines of their choice</p> <ul style="list-style-type: none">• Present their machine to the whole class the purpose of their simple machine. Classmates use teacher-created rubric to provide feedback for one another.• Writing in daily journals <p><u>Summative</u> Interactive quiz</p>
--	---	--

ESL Curriculum Exemplar

Aligned to the 2007 WIDA Standards

ENGAGING STUDENTS • FOSTERING ACHIEVEMENT • CULTIVATING 21ST CENTURY GLOBAL SKILLS

	<p>11. Students: Create captions for each slide.</p> <p>Closure: Students: Access the following website: http://www.edheads.org/activities/simple-machines/index.htm and take the interactive quizzes on simple machines</p> <p>Expansion/Extension/Homework: Students: Answer the question in daily journal: Which simple machine is most useful and explain why?</p>	
<p>Differentiation: Use flexible grouping; deliberately pair students homogeneously or heterogeneously by proficiency level depending on the objective. ELP 1 and 2 - Write captions comparing two simple machines using a sentence frame. ELP 3 to 5 – Write two paragraphs comparing and contrasting two machines.</p>		
<p>Suggested Resources:</p> <ul style="list-style-type: none">• An example or image of each of the following simple machines: lever, inclined plane, screw, wedge, pulley, wheel, and axle• Construction paper• Colored pencils• Computer with internet access		