# Simple Machines Lesson Plan #3

| Content Area: ESL | Lesson Title: How to Lift a Zoo Animal | Timeframe: 3 - 5 days |

## Lesson Components

### 21st Century Themes

| Global Awareness | X | Financial, Economic, Business, and Entrepreneurial Literacy | Civic Literacy | Health Literacy |

### 21st Century Skills

| Creativity and Innovation | x | Critical Thinking and Problem Solving | x | Communication | X | Collaboration |

### Interdisciplinary Connections:
Language Arts, Science

### Integration of Technology:
Power Point presentations; interactive websites

### Equipment needed:
Computer/projection setup/Smartboard, student computers, Internet

## Goals/Objectives

**Students will:**

- **Speaking & Writing**
  - Respond to a speculative writing prompt about lifting a zoo animal using cause and effect and sequential transitional phrases. Upon completion, share their writing orally.

- **Reading**
  - Identify similarities among simple machines.

## Learning Activities/InSTRUCTIONAL Strategies

### Key Vocabulary:
- Gear, exert, force, raise, weight, distance.

### Key Language Structures:
- Cause/effect transitional phrases, modals.

### Warm-up:
- Students: Review the simple machines that they have learned about and briefly explain their functions.

### Lesson Sequence:
1. **Teacher:** Connect to prior knowledge about simple machines.
2. **Students:** Complete a “machine” picture sort activity and justify the categories chosen (e.g. home/school; gear/pulley; size; weight).
3. **Teacher:** Introduces and models a cause-effect graphic organizer and

## Assessment Tasks

### Formative
- Machine picture sort
- Speaking rubric; writing rubric
- Completion of cause-effect graphic organizers, i.e., fishbone graphic organizer
- Individual writing conferences
- Anecdotal records
- Informal observations

9/26/2011
the key language targets necessary to write a cause and effect essay using known or previously learned vocabulary (e.g. If it rains, then I wear my raincoat; As a result of the rain, I put on my raincoat.)

4. Students: Practice using the language structures with known concepts.

5. Students: Respond to the speculative writing prompt about simple machines. Prompt: Imagine you are working at the zoo when a new, large animal arrives. You must figure out how to lift this animal to get it into its cage. Think about the simple machines you have studied. Draw a picture to show how you will do it! Then, write a step by step explanation of how you use one or more simple machines to lift your zoo animal.


**Closure:**
Students: Share their writings in groups.

**Differentiation:**
Use flexible grouping; deliberately pair students homogeneously or heterogeneously by proficiency level depending on the objective. Weather literature will be available on a variety of reading levels to accommodate ELP Levels

- Lower proficiency students can dictate their responses.
- Lower proficiency students can write with bullets in words and phrases.
- Cloze activities with ELP 2 students
- Sentence frames with ELP 2-3 students
- Word banks for ELP 2-3 students

**Suggested Resources:**
## ESL Curriculum Exemplar

**Aligned to the 2007 WIDA Standards**

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

- [http://www2.scholastic.com/browse/lessonplan.jsp?id=384](http://www2.scholastic.com/browse/lessonplan.jsp?id=384)
- [www.proteacher.org](http://www.proteacher.org)
- [www.science.pppst.com/simlemachines.html](http://www.science.pppst.com/simlemachines.html)
- [www.languagearts.pppst.com/cause-effect.html](http://www.languagearts.pppst.com/cause-effect.html)
- [http://www.educationoasis.com/curriculum/GO/cause_effect.htm](http://www.educationoasis.com/curriculum/GO/cause_effect.htm)

- Paper
- Pencils
- Colored Pencils
- Writer’s Notebooks