

Title:	Simple and Compound Machines
Grade(s):	3 rd
Subject(s):	Science
Author:	ICAC Team
Overview:	Identifying Simple Machines
Content Standards:	<p>SC(4) 4. Describe effects of friction on moving objects.</p> <ul style="list-style-type: none"> • Identifying momentum and inertia as properties of moving objects • Identifying ways to increase or decrease friction <p>TC (3-5) 1. Use input and output devices of technology systems.</p> <p>TC (3-5) 2. Use various technology applications, including word processing and multimedia software.</p>
Local/National Standards:	
Primary Learning Objectives:	Students will be able to identify the six categories of simple machines with complete accuracy. (Examples: pencils sharpener composed of a wheel and axle, inclined plane, and wedge).
Additional Learning Objectives:	
Approximate Duration of Lesson:	30 Minutes per day for 3 days Day 1- Scratch Presentation and Overview of Definitions Day 2- Create Prezi Day 3- Group Presentations Simple Machines Definitions Handout
Materials and Equipment:	
Technology Resources Needed:	Computer with Internet access and Scratch program, and Promethium Board
Background/Preparation:	Teacher will give the basic meaning of a simple machine and ask students to give examples.
Procedures/Activities:	<p>Step 1. Begin the lesson by asking the class what they know about machines (purpose of machines, definition of a simple machine, types of simple machines). After establishing the baseline of the students' knowledge of simple machines, the teacher will present the attached Scratch presentation ("Simple Machines") to define and show examples of simple machines. As an additional example, show the "Six Simple Machines" Scratch presentation (use the space bar and the 1-6 keys to operate the presentation).</p> <p>Step 2. The teacher will present the Prezi on the Promethium board and ask students to identify which types of simple machines are shown in the pictures. Discuss as</p>

a class what makes each one different from the other. Brainstorm more examples of simple machines.

Step 3. Next, define compound machines. Give the students examples of compound machines.

Step 4. Divide the students into groups and have each group identify 3 different compound machines and find the following answers: what simple machines make up each compound machine, how each compound machine works (mechanical structure), and what each compound machine does.

Step 5. During the next class, have the students go to the computer lab and create their own Prezi about the 3 compound machines they found, along with the information they were told to explain.

Step 6. Have the students present their group Prezi to the class to show what they have learned.

Attachments:

[Simple Machine Prezi](#)
[Simple Machines Scratch](#)
[Six Simple Machines Scratch](#)

Rubric
See rubric attached.

**Assessment
Strategies:
Extension:**

Have the students make Scratch animations about a specific compound machine and how it works.

Remediation:

Have the students bring various objects from around their house to build their own simple machines.

Rubric for Multimedia Project: Simple Machines

Student Name: _____

CATEGORY	4	3	2	1
Presentation	Well-rehearsed with smooth delivery that holds audience attention.	Rehearsed with fairly smooth delivery that holds audience attention most of the time.	Delivery not smooth, but able to maintain interest of the audience most of the time.	Delivery not smooth and audience attention often lost.
Workload	The workload is divided and shared equally by all team members.	The workload is divided and shared fairly by all team members, though workloads may vary from person to person.	The workload was divided, but one person in the group is viewed as not doing his/her fair share of the work.	The workload was not divided OR several people in the group are viewed as not doing their fair share of the work.
Content	Covers topic in-depth with details and examples. Subject knowledge is excellent.	Includes essential knowledge about the topic. Subject knowledge appears to be good.	Includes essential information about the topic but there are 1-2 factual errors.	Content is minimal OR there are several factual errors.
Requirements	All requirements are met and exceeded.	All requirements are met.	One requirement was not completely met.	More than one requirement was not completely met.

*Rubric created through rubistar.4teachers.org