

Automotive Brakes

Group Presentation Project

This is your chance to become a teacher for a day. “There is no better way to learn than to teach” (someone famous once said that) so, to that end, I will be your facilitator to help you gather the information you need to present your lesson. You **must** include *all Required Objectives* and *2 Choice Objectives*. Your lesson will be delivered using Microsoft Power Point as a visual aid and to help you dialog the information you are teaching to the class. You will choose your team members today (no more than 3 to a team) and have until **DECEMBER 12TH** to finish; be ready to present your lesson **DECEMBER 15TH** (10 work days). This project is worth 100 points. You must also print a copy to turn in after you present.

A brief list of potential information resources is included at the bottom of the page.

Required Objectives

- Explain how fluids can be used to transmit motion or force
- Explain the “basic” principle of “Pascal’s Law”
- Describe the effects of pressure on a confined liquid
- Describe the relationship between area and force in a hydraulic system
- Explain what happens when air is incorporated in a hydraulic svstem

Choice Objectives

- Identify the purpose and describe the operation of the master cylinder
- Describe the purpose and function of a drum brake system
- Describe the purpose and function of a disc brake system
- Explain the advantages of a disc brake system over a drum brake system
- Explain the differences between a 2-wheel and 4-wheel disc brake system
- Describe the correct bleeding procedures for brake systems

1.1. Use word recognition skills and strategies to read and comprehend text.

3.2. Read to perform a task.

The student communicates ideas clearly and effectively.

2.1 communicate clearly to a range of audiences for different purposes

2.3 use effective delivery

adjust speaking strategies for a variety of audiences and purposes by varying tone, pitch, and pace of speech to create effect and aid communication

2.5 effectively use action, sound, and/or images to support presentations

Modern Automotive Technology, Chapter 71 pp 1331-1352

<http://www.howstuffworks.com>

http://web.mit.edu/2.972/www/reports/anti_lock_brakes/anti_lock_brakes.html

<http://hyperphysics.phy-astr.gsu.edu/hbase/pasc.html>

<http://www.1aiaa.com/brakes.html>

<http://www.cdxetextbook.com/brakes/brakes.html>

Oral Presentation Rubric : Automotive Brakes

Teacher Name: **Mr. jacobus**

Student Name: _____

CATEGORY	4	3	2	1
Speaks Clearly	Speaks clearly and distinctly all (100-95%) the time, and mispronounces no words.	Speaks clearly and distinctly all (100-95%) the time, but mispronounces one word.	Speaks clearly and distinctly most (94-85%) of the time. Mispronounces no more than one word.	Often mumbles or can not be understood OR mispronounces more than one word.
Posture and Eye Contact	Stands up straight, looks relaxed and confident. Establishes eye contact with everyone in the room during the	Stands up straight and establishes eye contact with everyone in the room during the presentation.	Sometimes stands up straight and establishes eye contact.	Slouches and/or does not look at people during the presentation.
Volume	Volume is loud enough to be heard by all audience members throughout the presentation.	Volume is loud enough to be heard by all audience members at least 90% of the time.	Volume is loud enough to be heard by all audience members at least 80% of the time.	Volume often too soft to be heard by all audience members.
Collaboration with Peers	Almost always listens to, shares with, and supports the efforts of others in the group. Tries to keep people working well together.	Usually listens to, shares with, and supports the efforts of others in the group. Does not cause "waves" in the group.	Often listens to, shares with, and supports the efforts of others in the group but sometimes is not a good team member.	Rarely listens to, shares with, and supports the efforts of others in the group. Often is not a good team member.
Content	Shows a full understanding of the topic.	Shows a good understanding of the topic.	Shows a good understanding of parts of the topic.	Does not seem to understand the topic very well.