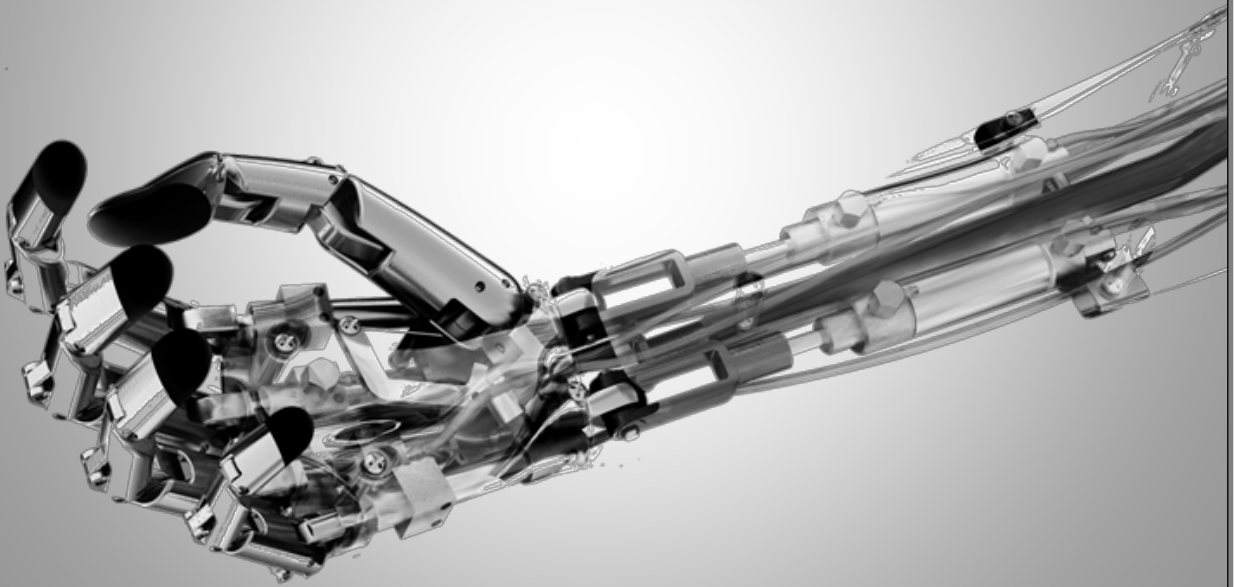


# GRADE 8 SCIENCE

## UNIT 5: HYDRAULIC SYSTEM DESIGN



## Project Groups

Prior to discussing the hydraulic system design project you will be put into your groups. Please re-arrange yourselves to sit in your assigned groups. These will be your seats for the remainder of the year.

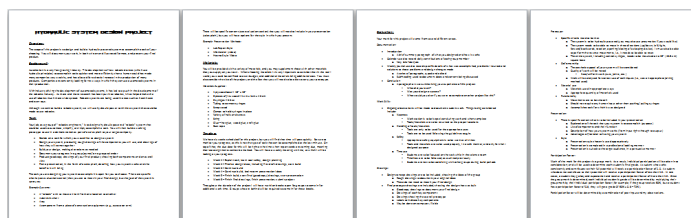
Put groups here



# Project Outline

This project will be, by far, the most in-depth science project you have completed to date. We will take a large portion of this period to discuss the outline, noting details about what you will aim to accomplish, what you will be producing, what you will submit, the timeline of the project, and how you will be evaluated. Each group will get a copy of the document we are about to review, to be kept in a project duo-tang. All information for this will also be posted online.

If you have questions, as I read through the outline, please write them down, as I may answer them as I proceed. If they are not answered by the time I am done, I will allow for questions to be posed then.



# Observations

As indicated, throughout the entire timeline of this project, I will be making observations, looking at the areas indicated on the outline.

Also indicated in the outline, is the fact that you will receive peer input towards your participation factor. Below is the assessment form that will be filled out to record that input.

**HYDRAULIC SYSTEM DESIGN PROJECT -- PEER ASSESSMENT**

Please assess each of your group members (including yourself) based on the following criteria:

**Contributions to Group**  
Ideally each group member should do the same amount of work, which would give all of you a 3. If one person does more of the work than they may earn themselves a 4, which would mean someone else would get a 2. If someone in the group takes it upon themselves to do extra work that does not interfere with the rest of the group, then they can earn a 4 without others' marks being affected.

**Attitude Towards Task**  
Whether or not someone likes the task, they you were assigned, they should respect the assignment and enter a positive attitude. A level 3 is someone who is consistently positive. A level 4 is someone who not only is positive throughout, but also helps to keep the group positive and on task.

Group Members	Contributions to Group	Attitude Towards Task
(Name)	😊 😐 😞	😊 😐 😞
	😊 😐 😞	😊 😐 😞
	😊 😐 😞	😊 😐 😞
	😊 😐 😞	😊 😐 😞





# Paper Work

Although you are welcome to complete work digitally for this project, each group will also be required to maintain a duo-tang with some specific paperwork. This includes:

- Project Outline
- Linkage Examples
- Initial Design Concept Drawings

Any other work you complete can also be stored in this duo-tang.

At this point can one member of your group please come pick up your duo-tang.

A copy of all of these files may also be found on the project [webpage](#).

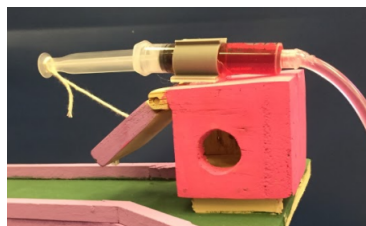


# Examples

In past years there have been several successful builds, with students coming up with some really creative ideas. The images that I have linked here will not only show you some ideas of the type of system you can build, but it will also show some good examples of how you can use the materials provided to produce the desired movements.



I will put a link to these images on the [webpage](#).



## Attachments

---

Group Peer Assessment Sheets.pdf

5-1 Outline.pdf

Bottle Cap Remover Commercial.mov

Hydraulic Firetruck.mov