

Alternative Energy Prototype Car – Task 9 Role Play (Working Together) – Task 12

Background:

The Forces Auto-manufacturing Company, a major auto-manufacture, has hired you and your team members to create a car. The goal for your team is to create a prototype of a vehicle that will run on alternative energy. Forces Auto-manufacturing Company has been in a decline since the mid 1990's. They are hoping that through new ideas, this will put them back on the map.

Tasks:

You and your team will be presenting your prototype to the head executives of the company. Each team member will be responsible to present to the other team members any information or materials needed to complete the required task. Each member has a specific role in the completion of the car: ***inventor (head designer), accountant (lead presenter), head of materials (parts manager), and engineer.***

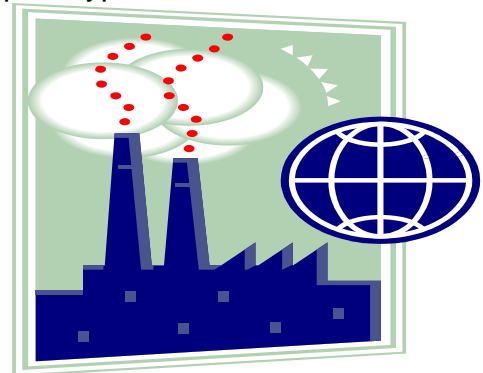
Your team needs to communicate on a regular basis to make sure each member has completed his or her assigned role, everyone is on task, and the project is proceeding as scheduled. Your team will need to take the information that you have been studying about force, motion, and change to incorporate into your project. The project will consist of designing a vehicle out of the energy of a mousetrap. Your team will need to take the force of the mousetrap and cause it to change into motion. The executives of the company are looking for the vehicle of the 21st century.

As inventors, your team is very knowledgeable about forces and your team's car should demonstrate the change of force into motion. Your team will also need to look at the forces involved both from within the car, and the forces outside of the car. The prototype of the car will be presented to the board along with a projected budget of expenses and cost to the consumer. This will be presented in a PowerPoint presentation with an excel spread sheet.

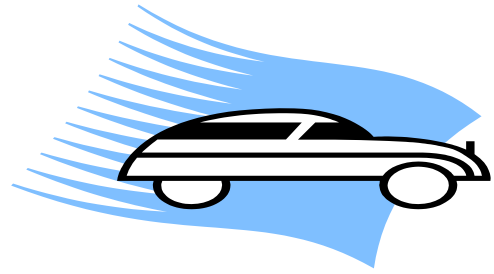
The prototype should be able to move at least 5 feet, be able to make multiple runs, can be used by anyone, and will be compared to similar cars constricted by other teams. A successful car will be cost effective, and be able to successfully change the force of the mousetrap into motion.

Roles:

- **Inventor (Head designer)** - In charge of building the prototype vehicle. Research on the internet sites to help in construction of vehicle.
- **Lead presenter-** creating a budget and excel spread sheet.
- **Parts Manager-** Obtaining materials and building vehicle.
- **Engineer** – Working with head presenter. In charge of PowerPoint presentation and presentation.



Evaluation for Prototype of Car and Budget. – Task 9



Name _____

Score _____/_____

project followed guidelines	5	3	1/0	project did not follow guidelines
car is well constructed	5	3	1/0	car is constructed without much thought
the concepts used in class are easily identifiable	5	3	1/0	concepts used in class are not easily identifiable
prototype shows signs of preplanning and preparation		3	1/0	prototype shows signs of haste in planning and preparation
exceeds the 5 foot mark in trial runs	5	3	1/0	does not meet the 5ft mark in trial runs
capable of multiple trials		3	1/0	unable to complete multiple runs.
easy to use over and over		3	1/0	difficult to use over and over again without major modifications.
parts to build car are outlined		3	1/0	few parts are included in the budget in budget including cost
full spread sheet provided		3	1/0	spread sheet not provided
spread sheet structured correctly	5	3	1/0	spread sheet data not structured correctly
brief summary provided with explanation of project	5	3	1/0	summary not provided or does not provide a clear explanation
Name on all materials			1/0	name missing on parts
proof read for spelling			1/0	not proofread for spelling
proof read for grammar			1/0	not proofread for grammar
included a cover page			1/0	
entire project neat and organized			1/0	