



A SuperAwesome Group-- Making Rocket!!!

SPH4U Laboratory Project

Date - 16/11/11 Submitted by: Cassie Bao, Sherry Chen, Rachel Zhang



1. Our cost estimate:

Material:

Items	Cost(\$)
15" NEON ORANGE NYLON PARACHUTE	\$9.40
1.637" 18"long BT-60 BODY TUBE	\$1.70
1.637" 5.5"long BT-60 NOSE CONE (14g)	\$9.60
BARRACUDA STYLE FIN * 4	$\$7.40 * 4 = \29.60
BT-60 18 MM MOTOR MOUNT	\$3.30
48" RUBBER SHOCK CORD 1/4" WIDE.	\$1.25
SMALL SCREW EYE. 4 PACK	\$1.00
TOTAL:	\$55.85

Labour:

Job Activity	Wage	Hours	Total Cost	Description
Assembly	8.00	1.50	12.00	Assembler built rocket
Drawing	12.00	3.00	36.00	Artist made CAD drawing
Procedure	70.00	1.00	70.00	Engineer wrote assy proc.
Schedules	100.00	0.50	50.00	Manager made schedule
Cost Analysis	80.00	1.00	80.00	Bean counter total expenses
Phys Analysis	75.00	2.00	150.00	Chief scientist analyzed perf.
First Report	75.00	1.50	112.50	Prepared by chief scientist
Check Report	400.00	2.50	1000.00	Everyone reviewed
Final Report	150.00	3.00	450.00	Prepared by head honcho
			\$1960.50	Total Expenses

Overhead = $3 * \$1960 = \5880.00

Total cost:

cost = $\$5585.00(\text{parts}) + \$1960.50(\text{labour}) + \$5880.00(\text{overhead}) = \13425.50

2. Schedule

Time	events
Nov, 7 — Nov, 10	The Brainstorming and Proposal Phase: Rocket's rough sketch cost estimate list of responsibilities rough sketch to customer
Nov, 11 — Nov, 20	The Design and Assembly Phase: Complete a detailed drawing of rocket Write a part list of everything Build rocket Write an assembly procedure for making the rocket
Nov, 21 — Nov, 30	The Test and Evaluation Phase: Launch the rocket Perform a physical analysis for the rocket
Dec, 1 — Dec, 11	The Final Check and Improving Phase: Complete the business report and powerpoint Do some market survey Check the whole process Improve our products

3. Individual Responsibilities

Sherry Chen

Main designer:
Drawing the rough sketch
Complete the detailed drawing of
rocket using 3D TINKERCAD
write the assembly procedure
Build rocket

Cassie Bao

Finance and Business:
Cost estimate
Write report and schedule
Business Powerpoint
Build rocket

Rachel Zhang

Market and Popularize:
Make business LOGO and
advertisement
Do marketing survey
Business Powerpoint
Build rocket

4. Advertisement & Business LOGO



SUPER AWESOME ROCKET GROUP



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MEMBERS

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PURPOSE

WE ARE DESIGNING A
SPECIAL ROCKET THAT CAN
HELP STUDENTS TO LEARN
ABOUT HOW DOES A
ROCKET WORK DUE TO THE
GRAVITY AND AIR
RESISTANCE ETC.

DESIGN

The main designer of our rocket is Sherry. The main idea for her design is coming from a game which is called KERBAL SPACE PROGRAM. It shows how a rocket works and the basic structures a rocket has. It also can simulate the launching of the rocket to see if the design of our rocket will influence the launching. She also used SKETCHING which gives her professional advises for designing.

PURCHASING

Cassie is the one who decides what we need to buy for our rocket. She looks for our rocket's stuff from ALLROCKETENGINES.CA which is a website sells the rocket's stuff. Before she orders them, she will have conversations with Sherry who is our main designer. They have to figure out that which kind of stuff and which material is the best for our rocket. She tries to find out the cheapest way but also has high quality to make sure that our rocket will not break during the launching.

ANALYSIS

We are going to find out the physical related problems of the rockets launching. An example of this is how much forces the rocket needs to against the gravity. We also will figure out the potential and kinetic energy of the rocket from the beginning and the end of the launching. We are going to use the knowledges from the physic class to deal with those problems.



5. Our rough sketch

