

Rocket Unit

Purpose

To design and build a rocket to be launched at the end of the unit that will achieve the greatest height.

Requirements

- 1) The total length of the rocket cannot exceed 46cm.
- 2) The rocket cannot exceed 150g in total mass, including the engine.
- 3) The rocket must be fully painted and/ or decorated with a particular theme of your choice.
- 4) Most of the materials for the project will be supplied.
- 5) You must show your calculations of the theoretical height your rocket can achieve prior to the launch.

Marking Scheme

1) Project (Practical)

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|--|-----|
| a) weight-(1 mark for every 10g over) | /5 |
| b) height-(1 mark for every 5mm over) | /5 |
| c) nose cone construction (symmetrical, smooth, fit, aerodynamic shape)- | /5 |
| d) tail fins, guide straw (design, square, proper size and placement) | /5 |
| e) matches drawing, correct materials - | /15 |
| f) decorations (well painted, smooth finish, personal theme)- | /5 |
| g) motor mount (fit, assembly)- | /5 |
| h) recovery system (parachute design, sequence of parts)- | /5 |

2) **Rocket Performance** 1 mark for every meter obtain obtained up to 100 /50

3) Report

Use the standard Gr. 9 report outline-

/100