THE MISSILE VAN ORANJE

#1 MAIN ASPECTS
- shape & dimension
- aerodynamics & weight distribution
- timing & reliability
- size & shape

#2 DESIGN OPTIONS
- MATERIALS: cardboard (cheap, less aerodynamic)
- acrylic (aerodynamic, lightweight)
- SAFETY: no added tail to the bottle
- DESIGN: straight forms = less drag
- DESIGN: - #1 too much drag
- #2 deployment uncertain
- #3 early deployment
- #4 most accurate deployment
- DESIGN: - hole (better airflow)
- 2 parachutes = risk of entanglement and miss launch

#3 EXPERIMENTAL METHOD
- #1 fin position towards the front = less stable flight
- #2 fin position starts at the center of pressure = more stable flight
- attachment of fins to the body with glue gun
- TIME TEST:
  - #1 small parachute no hole: slow descent 3.3s
  - #2 small parachute with hole: fast descent 3.0s
  - #3 large parachute no hole: slow descent 4.0s
  - #4 large parachute with hole: fast descent 4.4s
- attachment of parachute with nylon strings onto the body + folded into the nose cone of the deployment system

#4 MANUFACTURE
- Centre of Pressure
- Centre of Gravity
- facing the deployment system and the timer onto the body with tape aerodynamically
- Launch