

STATE THE PROBLEM:

A SCALE-MODEL PARACHUTE WILL BE DESIGNED AND CONSTRUCTED TO FALL SAFELY FOR THE ATTACHED LEGO MAN TO SURVIVE. THE PARACHUTE WILL PROVIDE ENOUGH AIR RESISTANCE TO COUNTERACT GRAVITY.

CRITERIA:

- **MUST BE BUILT AT SCHOOL** • **TIME LIMIT**
- **STUDENT WILL SUPPLY CANOPY MATERIAL**
- **MUST USE A LEGO PERSON AS THE CARGO**
- **CANOPY SIZE MUST BE NO LARGER THAN
30 cm X 60 cm OR 40 cm DIAMETER**
- **STRING NO MORE THAN 2 m** • **MUST LAND THE
PARACHUTE SAFELY AT A SPEED OF ≤ 1.30 m/s**

CONSTRAINTS:

- **CANNOT BE BUILT AT HOME** • **CANNOT BUY A READY-
MADE PARACHUTE** • **CANOPY CANNOT BE MORE
THAN ONE LAYER, (all one canopy)** • **DO NOT USE
MORE THAN 30 cm X 60 cm OR 40 cm DIAMETER FOR
THE CANOPY**
- **DO NOT USE MORE THAN 2 m OF STRING**
- **STRING CANNOT BE TAPED ON**

TRADE-OFFS: (TELL WHY THE TRADE WAS MADE)

- **INSTEAD OF HUMANS --> LEGO PERSON**
- **INSTEAD OF SKYDIVING --> DROP OFF 2ND FLOOR**
- **INSTEAD OF REAL PARACHUTE --> SCALE-MODEL
PARACHUTE** • **INSTEAD OF REAL MATERIALS -->
STRING, CANOPY MATERIAL, TAPE**

