



# **EPro8 Challenge**

*Engineer Problem Solve Innovate*

## **Up, Up and Away – Teacher’s Notes**

### **Summary**

Teams will calculate the lift generated by one helium balloon, then calculate how many balloons will be required to lift a small child, a car and a house.

This challenge requires the use of a helium balloons (\$50 from The Warehouse). This makes it our most expensive piece of extra equipment but it is a great challenge and worth the cost.

Helium is a very small molecule which means it easily escapes from the balloon – so the balloons only last 4-5 hours.

This challenge doesn’t use a lot of the EPro8 equipment, so two teams can do the challenge at the same time using one set of EPro8 School Equipment.

### **Principles**

Weights and Measures, Balance and Levers, Practical Mathematics.

### **Extra Equipment**

Bunch of six balloons filled with helium (available from The Warehouse for \$50).  
Calculator.

### **What to Aim For**

See the “Getting the Most from your Equipment” document for guidelines on what to aim for from these challenges.

### **Our Solution**

