

## Lesson 5

Analysing data in order to reach a conclusion is the foundation of scientific method.

### Goal

Data can be analysed and compared with other experimental results to identify trends, draw conclusions and to identify discrepancies in the data.

### New Information Presented

Explanations on how to download the data from the CubeSat data logger described in *Downloading and Using the Data* information sheet.

Explanations on the analysis of the data from the CubeSat data logger using the *Analysis of Data* information sheet.

### **Information Sources**

- *Downloading and Using the Data* information sheet
- *Analysis of Data* Information sheet
- GoPro camera still images and/or video. Note: Because of the potential different orientations of the cameras on each of the balloons, the images and videos may need to be shared between schools.
- BLog.txt file from the data logger on the CubeSat.

### Access Prior Knowledge

Briefly discuss with the students the experimental tasks that had been investigated in the design process.

### Application Task

The team leaders and sub-team leaders may allocate the investigations to the respective groups, although the groups who designed the investigations in lesson 2 should continue with their investigation.

### **Activities:**

- Land Use under the Flight Path (As part of this activity one or more groups may produce a 2 to 3 minute edited video of the flight showing the flight highlights (launch, selected images, balloon burst and parachute descent)
- Distance to the horizon
- Altitude vs temperature, pressure and speed.

Class can be divided into a number of groups to do the scientific investigations and prepare a report. Note: if desired the reports can be sent to [phillip.spencer@vssec.vic.edu.au](mailto:phillip.spencer@vssec.vic.edu.au) to be put on the website.

### Goal Revisited

Class discussion of results of the investigations, highlighting the conclusions drawn from the investigations.