

## **Authenticity**

The work I hand in is my own. The work is based on my own experiences, thought, research and reading; it changes in some significant way the words, forms and ideas of other people. I understand that if I am found to have submitted work that is not my own I will receive no grade for this assessment. I have read the statement above and understand that the work I hand in for my assessment must be my own.

Signature \_\_\_\_\_

Date

## **Planning**

**The Investigative question:** (e.g The relationship the height of a person and his/her hand span)

### **Variables investigating**

#### **Independent Variable:**

e.g. Height ( cm) / length

#### **Dependent:**

hand span Length (cm) Width

### **Sample size**

40 Students/ 40 leaves

### **Equipment:**

Measuring Tape Ruler (x2)

Book + Pen

### **Names of Group members**

### **How will you measure your variables:**

Height (cm) – with measuring tape and a ruler for accuracy hand span Length (cm) – with measuring tape/ruler

**How to collect our data:** We are going to get 40 students from forest whanau, 20 girls

and 20 boys. Measure their height with measuring tape and also measure their hand span length ( **The distance between the outstretched tips of the little finger and thumb when used as a unit of measurement.** )

### **What things might affect the measure you take?**

#### **different examples**

- \*If they move their arm we could get the wrong measurement
- \*If they're wearing their jackets
- \*If they're wearing shoes we could get a different height measurement
- \*If they have spiky hair (height difference)
- \*They could either stand straight or crouch a bit, but then it will be our job to make sure they stand straight up for an accurate measurement
- \*Uneven ground
- \* Fractured leg with a moon-boot

- Uneven growth of a leaf
- different type of a leaf
- deceased tree sample
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### **How will we minimize the effect:**

- \*Measure them in bare feet or with socks on (for height)
  - \*Make sure they are standing tall and straight
  - \*Keeping their arm still
  - \*Use another ruler to press down on the head to the tip, and align that with the measuring tape
- How will you manage the sources of variation:
- \*We might test each student 3 times and find their average, but time wise we will not have enough, so we may just stay with one test each
- work cooperatively to minimise error and stick to the job decided.  
Take three measurement when in doubt and take the average  
overgrown nails to be clipped

### **How you will record your results:**

We will have our book and pen with a maximum of 40 numbers, for our 40 selected students who are to participate in this investigation. We will go through each student using measuring tape and a ruler to figure out their height, we will then record that down in our books, and secondly, we may then use the measuring tape to test the cubit length which is from their elbow to their finger tips and record that also into our books. When all 40 students results have been recorded down, we will then take that to be analysed.