

The objective of this activity is to determine which species has shown an increase or decrease in growth rate using Excel.

1. Go to [www.measureup.ca](http://www.measureup.ca).
2. Click on Research. Under Planting for Change, Click on one of the schools that participated in the program. Click on Data Comparison 08-09.
3. Each school has collected data on the health and annual growth of their tree plantings. The table compares tree measurements taken in 2008 and 2009. The measurements taken are Root Collar Diameter (RC), Total Height (HT) (If the Height is greater than 130 cm, then do DBH at 130 cm), Crown Diameter (W1 and W2) and Trunk Diameter (DBH).
4. Highlight the Common Names column and variable columns (eg RC) in 2008 and 2009. Copy and paste the highlighted columns in a blank area in the excel sheet and Click to Sort Alphabetically. Determine which species has grown the most.
5. For each species, calculate the Total and Average measurements (eg RC) in 2008 and 2009. Subtract the 2009 average from the 2008 average to get the difference in growth rate. Account for the differences seen.
6. Repeat this step for all schools and other variables.

### **Bonus**

The objective of this activity is to determine which species has shown an increase or decrease in growth rate by location.

1. Once you have compiled the data for all schools, copy it into a new excel spreadsheet.
2. Graph the data according to difference in growth rate and location. The x-axis will be the schools and the y-axis will be the difference in growth rate for that particular species.
3. Click on Insert, Chart and choose Column as the chart type. For each variable, determine which location has shown an increase in growth rate? Which location has shown a decrease in growth rate?