

# ICT Skills through Mathematics

## Lesson One

**Learning Intention:** Use Google spreadsheet to do Mathematical calculations

**Success Criteria:** By the end of this lesson Students should be able to solve a mathematical calculation with the excel spreadsheet

Produce this spreadsheet. It will show the results of adding, subtracting, multiplying and dividing two numbers.

|    | A            | B             | C       | D           | E           | F        |
|----|--------------|---------------|---------|-------------|-------------|----------|
| 1  | First Number | Second Number | Adding  | Subtracting | Multiplying | Dividing |
| 2  | 10           | 5             | $A2+B2$ | $A2-B2$     | $A2*B2$     | $A2/B2$  |
| 3  | 8            | 4             |         |             |             |          |
| 4  | 12           | 6             |         |             |             |          |
| 5  | 99           | 100           |         |             |             |          |
| 6  | 6.45         | 3.18          |         |             |             |          |
| 7  | 256          | 512           |         |             |             |          |
| 8  | 6.0001       | 5.9999        |         |             |             |          |
| 9  | 100          | 0.01          |         |             |             |          |
| 10 | 0.003        | 0.0006        |         |             |             |          |

## **Lesson Two**

**Learning Intention:** Use google sheets to create charts to display statistical data.

**Success Criteria:** By the end of this lesson students should be able to sort out given data using toolbars in Excel worksheet.

Here are the maximum temperatures one day in winter in several New Zealand cities.

| City             | Maximum temperature (*C) |
|------------------|--------------------------|
| Whangarei        | 15                       |
| Auckland         | 15                       |
| Tauranga         | 17                       |
| Hastings         | 10                       |
| Palmerston North | 10                       |
| Wellington       | 10                       |
| Nelson           | 12                       |
| Christchurch     | 10                       |
| Timaru           | 7                        |
| Dunedin          | 8                        |
| Invercargill     | 9                        |

- Enter this information into a spreadsheet
- go to the table and click on sort. It will ask ascending or descending click on ascending.
- Sort the cities into alphabetical order. Print out the spreadsheet.

d. Sort the cities from the highest temperature to lowest. Print out the spreadsheet.

\* Note: Click the tools on the toolbars and go to sort your data.

### **Lesson Three**

**Learning Intention:** Use Google Sheets to display statistical data in many different graphs.

**Success Criteria:** By end of this lesson students should be able to use the Chart wizard button on the toolbar.

Enter the following information in the spreadsheet.

Kerikeri College roll numbers 2020

|               |     |
|---------------|-----|
| Junior school | 430 |
| Middle School | 225 |
| Senior School | 588 |

| New Zealand  | In Millions |
|--------------|-------------|
|              | 4.886       |
| Australia    | 24.99       |
| USA          | 328.2       |
| South Africa | 57.78       |

Use a chart tool and insert a pie chart followed by using the customise charts button

- Tasks
- Change the background colour- find it charts
  - - Change the slice colours ( Each slice needs to be different coloured)
  - - Change the border colour and size
  - -add the donut hole
  - -add values and percentages

Display this information in many different graphs. (pie graph, bar graph etc)

\*Note: All you need to do is go to the chart wizard:

- Use the mouse to select a block
- Choose what kind of graph you want
- Choose where to place the graph.
- Use the mouse (click and Drag) to select from A3 down to A6 and across to B6
- Click on the Chart-Wizard button
- Step1 of 4(chart Type): Choose the graph type (click on Next to confirm)
- Step2 of 4(chart Source Data): Click on Next to confirm the graph is what you want
- Step 3 of 4(chart Options): enter the title in box (click on Finish)
- Step 4 of 4: if you want to move the graph, click inside it and drag to a suitable position

**Lesson Four: ( This is part of your assessment)**

**Learning Intention:** Use the data from Science experiments and create graphs.

1. Your own graph - a bar graph
2. Class graph for the first round - line graph
3. Sort the numbers in the first column in an ascending order
4. Make a comparative graph for three different tries for the whole class

**Lesson Five ( Only when we are learning Measurement)**

**Learning Intention:** Use the Internet effectively

**Success Criteria:** By the end of this lesson students should be able to use the Internet effectively by using research techniques using right key words

Students should research from the web and find information about ‘Old Measuring Devise’

\*Note: How did the Ancient people measured?

What type of instrument did they use?

Name the different type of measuring devise?

**Lesson Five:**

**Learning Intention:** Use open office to create and Format documents

**Success Criteria:** By the end of this lesson student should be able to open the word document and learn to use the entire tool from the toolbars

Create a Cover page on ‘**OLD MEASURING device**’

Type all the information that you have collected from the web and present your work neatly in documents.