Study Skills-Using Tables, Charts & Graphs

Tables, charts and graphs are easy and efficient ways to present information, facts, figures and data. They are often used to summarize a large amount of information into a smaller package of information that is easier to interpret. There are several simple skills required when using these graphical representations but generally no matter what they look like, the process or method of understanding them is the same.

Tables

Tables are a simple way to display your information. Tables are a little like a map with grid references. You simply find the item you want to know something about on one axis and then read across until you find where they intersect with the variable you are looking for ion the adjoining axis. This is the figure you are looking for.

In the example shown below, we want to know the amount of people who went hiking in 2011. Follow these steps. The sections are highlighted for you.

1. Simply find "2011" on the table and look across to the right.
2. Then find "hiking" on the table and look down.
3. Where they intersect is the answer which in this case is 102. This means 102 people went hiking in 2011.
4. A good tip is to use a ruler and draw a thin pencil line across, then down, therefore finding the right information.

Year	Rock climbing	Abseiling	Hiking
2009	96	200	
2010	125	185	
2011			102

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Multiple Table View: Sometimes there is similar information displayed in a table that have some different variables or items displayed. In the table below, we are displaying the participation figures and the revenues earned from those activities in the Mount Sonder area.

Mount Sonder Participation Rates and Revenue 2009-2011

Item	Year	Rock climbing	Abseiling	Hiking
Participation	2009	96	200	56
	2010	125	185	66
	2011	201	165	102

Item	Year	Rock climbing	Abseiling	Hiking
Revenue (in dollars)	2009	1152	9000	392
	2010	1500	8325	462
	2011	2412	7425	714

Activity 1: Look at the table above and answer the following questions about Leisure Participation Rates, Revenues and Trends.

1. *What year was the most profitable for Rock Climbing?* _____

2. *How many people went hiking in 2010?* _____

3. *How many different activities seem to be on offer in 2011?* _____

4. *How much money did we make from Abseiling in 2011?* _____

5. *Which activity appears to be growing in participation?* _____

Now use your table to CALCULATE some answers.

6. *How many people in total used Mt Sonder in 2010?* _____

7. *How much revenue in total did we generate in 2010?* _____

8. *In 2011, which activity had the highest price per participant?* _____

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Multiple Data Interpretation: Sometimes there is similar information displayed in a table about many different things that requires you to calculate or interpret. In the table below, the breeding cycle of various Australian wildlife species is displayed. In this case, there are no numbers; rather the table is showing you when the animals breed. So the breeding cycle is the same thing that is being displayed, however the month or months they breed in will be different. The months they breed in are indicated with a symbol.

Breeding Cycle of Common Australian Wildlife

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wallabies	◆	◆										
Kangaroos		◆	◆	◆	◆							
Wombats									◆	◆	◆	◆
Koalas							◆					
Dingos		◆	◆	◆								
Goats	◆	◆	◆				◆	◆	◆			

◆   Denotes the animal is active in this month.

Activity 2: Look at the table above and answer the following questions about breeding cycles.

1. *What months do Wombats breed in?*   _____

2. *How many months a year are Dingos active?*   _____

3. *How many different species are active in March?*   _____

4. *What is the gap in months between the breeding cycles of Kangaroos?* _____

5. *What is the "quietest" month of the year in terms of breeding?* _____

Activity 3: Use the following information from the cricket scorebook for 2011. The batsmen played 10 rounds of cricket for the "Batchelor Bashers". In the order of the ten rounds played, their scores were as follows.

Andy   3, 31, 25, 106, 12, 0, 0, 0, 45, 22

Ben   75, 56, 45, 73, 10, 12, 15, 13, 12, 14

Ray   45, 39, 45, 45, 42, 38, 36, 75, 45, 46

Tony   12, 12, 13, 45, 46, 56, 64, 45, 78, 101

Mike   0, 12, 0, 2, 35, 14, 15, 12, 15, 9

You should include the following information: Player names, Rounds, number of rounds, total runs scored for each player, average for the season for each player.

Charts and Graphs: Look at this Chart (also known as a Graph) and read the table below for an explanation of what the items represented mean.
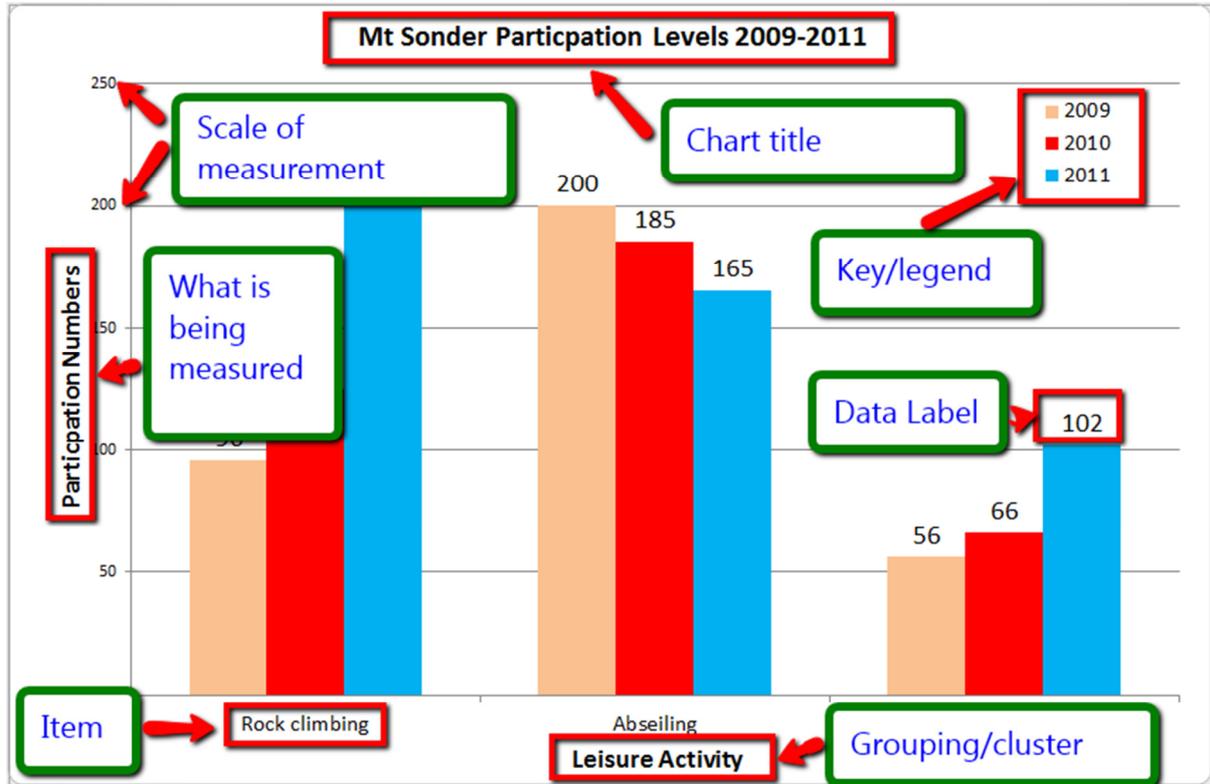

| Chart title	This is the title of the chart and should give the reader some idea of what the data is about. In this case, *Mt Sonder Participation Levels 2009-2011.*
Key/Legend	The Key or Legend tells the reader what the series are. In this case, *years from 2009 to 2011.*
What is being measured	In this case, we are looking at the *Participation Numbers*. This title is also known as the primary vertical axis title.
Grouping / cluster	The different items being displayed on the chart can be grouped. In this case, they are a grouping of *Leisure Activity.*
Item	The actual things being displayed. In this case, *3 different leisure activities.*
Data Label	The actual value of a series. In this example, the *2011 Hiking figure was 102.*

The following are ways in which you can increase your understanding of charts.

Observation: Take time to really look at the table and examine what information is presented and in what format. Tables should be logically constructed and should be consistent. However, it is important for you as the reader to investigate the information and make a judgement as to whether or not the information is making sense.

Activity 4: Look at the chart below and answer the following questions:

1. *What does the chart appear to be displaying?*   _____

2. *What is the weight of the items measured in?*   _____

3. *What are the things displayed known as collectively?*   _____

4. *What is the scale of the measurement being used?*   _____

5. *How many different items are displayed?*   _____

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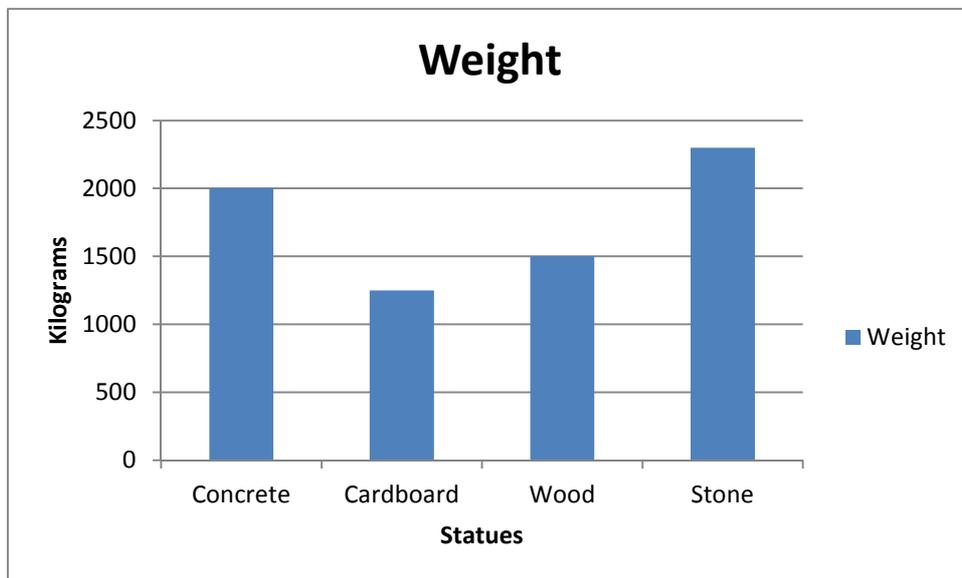
Comparison: Charts, graphs and tables are a good way to compare one thing or several things against each other. This is the reason why they should be consistent in what they show. For example, we could compare the weights of identical objects to make a comparison about the relative density of the item.

Activity 5: Look at the chart below and analyses it carefully. Then rank the density of the four items, with the densest being a 1 through to the least dense as a 4.
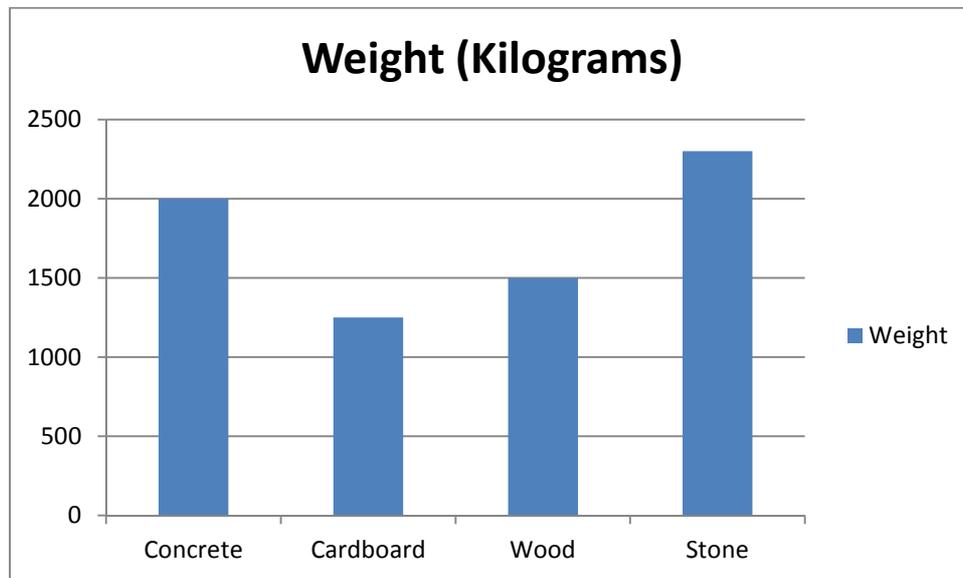
Chart 1: Weights of selected identical 4 meter tall statues at the Batchelor Campus

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Trends: Charts, graphs and tables are a good way to look at data and make a decision about what trend, if any, is apparent. Trends are general directions or patterns that are occurring in a situation. For example, we could see if there is a growth trend in population or an increase in revenue in our business over a five period. Without much explanation, you should be able to look at a chart and identify certain trends.

Activity 6: Look at the chart below: What trends can you identify?

1. *Rock Climbing numbers?*   *Growth / Steady / Decline*

2. *Abseiling numbers?*   *Growth / Steady / Decline*

3. *Hiking numbers?*   *Growth / Steady / Decline*

4. *Which activity has seen the biggest relative growth or decline? _____*

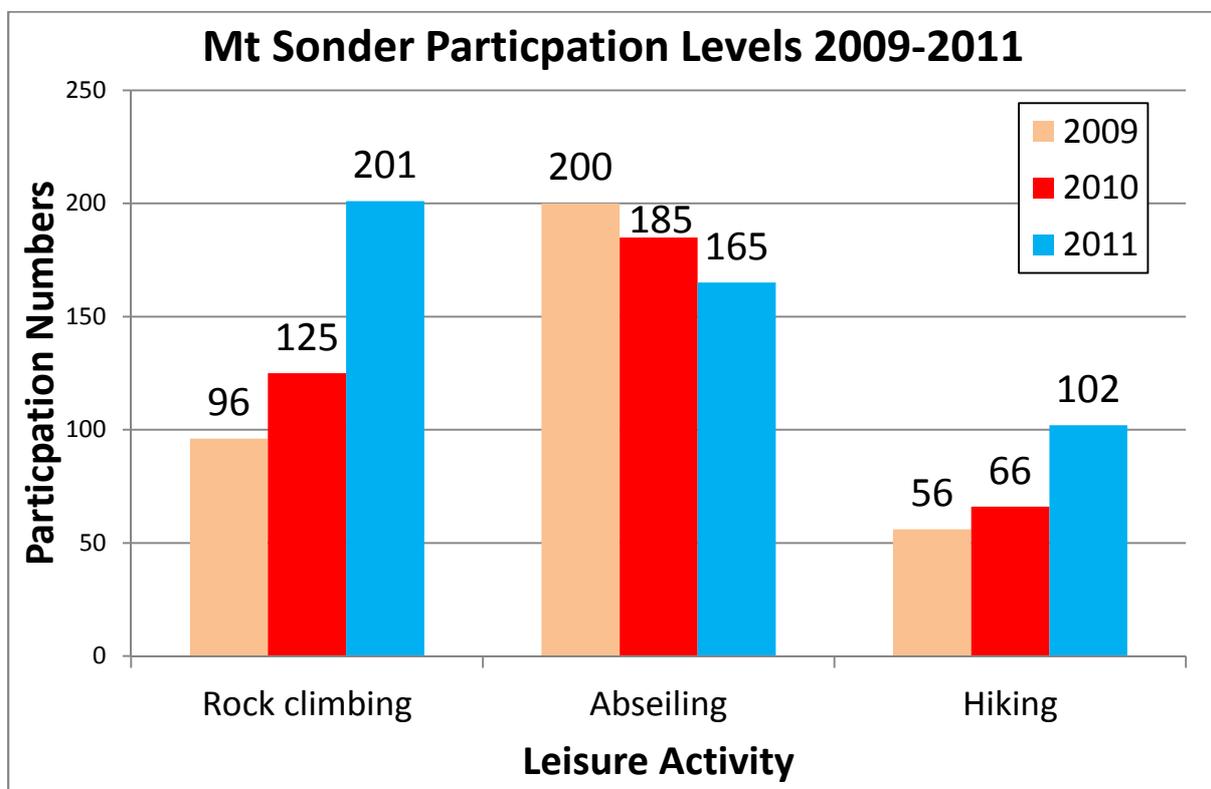5. *Looking at the chart, can you honestly say why these changes have occurred?   Yes /No*

Chart 2: Mt Sonder Participation Levels 2009 to 2011