Today's Learning Goal(s):

By the end of the class, I will be able to:

a) understand the meaning of: population, census and survey
b) distinguish the 6 types of sampling, and know which methods are better than others

MBF 3CI

UNIT 3: ONE-VARIABLE STATISTICS

Topic 3.1: Sampling Techniques

Date: Oct. 5/17

To select an item at **random** means to choose the item not following a pattern or rule.
Selecting the item must be "by chance".

Some ways to select items at **random** are....	Some ways to ***not*** select items at random are....
• drawing names from a hat	• selecting by - age - hair colour
• random number generator.	• choosing by gender height

A **population** includes **all** individuals or items that belong to a population being studied.

- all 1500 students at HHSS
- all people in Canada
- all people in Kitchener.

A **sample** is a group of individuals or items taken from the original population.

- ex. 200 students from HHSS

A **census** is a survey of the entire population.
It is usually performed to count the number of individuals or items in the entire population.

All individuals or items will now be referred to as **members.**

The most trustworthy sample is one where every member has been chosen at random!

Refer to the bottom of p.103 for more information on this chart.

Sampling Technique	Characteristics	Example(s)
Simple Random Sample	**Every member** of the population **has an equal chance** of being chosen for the sample. The selection is done ***randomly***.	Choosing names from a hat (using a computer to generate numbers randomly
Stratified Random Sample Strata = group	Groups in the population are identified; each group has one major unique characteristic that any other group will not possess. Each sample contains all of these groups, as they would **proportionally appear** in the entire population. **Every member** of each group in the sample **is selected at *random* from the groups** identified in the entire population.	Grouping by grade, then random sampling with in each grade by proportion. (if more Gr.9's in school then more gr.9's in sample
Cluster Sample	Groups in the entire population are identified; however **these groups are not the same type of groups identified in a stratified sample.** Each group shares common characteristics with all other groups. Each of these groups is known as a cluster. **Clusters are then selected at *random*.** **Everyone within the cluster is surveyed.**	MSLP w/ 9,10,11,&12s. Chose 10 MSLP randomly But survey every student in the chosen MSLPs.

Voluntary-Response Sample	Participation is the choice of those who have been asked to participate in a sample.	• Mail in survey Phone survey • Those who raise their hand
Convenience Sample	Member(s) are selected because they are easy to get.	• only your neighbourhood • school city • facebook
Systematic Sample	After every member of the population is listed in a specific order, then a member is selected at ***random* as a starting point**. From that point, member(s) are selected at **regular** (systematic) **intervals**.	• calculate the number needed in the sample ex of 200 people you want 10% = 20 people ∴ every 10th person. But RANDOMLY select the starting point