

CENTRAL LIMIT THEOREM

What if we want to know the average height of all Gr11 students in NS? How could we determine the height accurately?

1. We could measure the height of every Gr11 student in NS and find the mean. Costly & time consuming!!
2. We could get a random sample of NS Gr11 students and use this average to **estimate** the population average. This is called inferential statistics.....taking a random sample from a population and using it to make conclusions about the population.

Before doing this, we need to know how this mean compares to the population mean. If we took 10 samples, each of size 30, from a population of NS Gr11 students, we would get 10 different means. We need to know what the means look like for all possible samples of size 30. What if we took 100 samples?

Statisticians have taken many samples of many different sizes from many populations and studied the patterns. What they learned from doing this is called the **Central Limit Theorem**.