In this packet, you will review some of the statistical topics you have covered in previous math courses and develop a basic statistical understanding of data. This assignment will give you a good foundation that will prepare for your AP Statistics Course.

**What is Statistics?**

Statistics nothing but study of data. This is done in four basic steps described below:

➢ We obtain data from observations or by carrying out experiments. The first step will be to arrange the data in some form of tables. Then we look for pattern in the data by constructing graphs like histograms, scatter plots, stem plot, boxplots, etc. Then we draw up numerical summaries like mean, median, mode, standard deviation, etc. to further understand the trend.

➢ If the graphs and numerical summaries show that a pattern exists, we try make an algebraic model to further study the nature of the pattern and make predictions.

➢ From the numerical summaries of this data, we may want to make estimates or inferences about the whole population from which the data was drawn.

➢ Finally, we may want to test how accurate or reliable are our estimates and inferences.

**A Note on Khan Academy**

You will be doing this packet through Khan Academy. You will watch certain videos and do the practice problems/ quizzes associated with what you learn on the videos. Your effort and achievement will be recorded and can be seen by the teacher. Keep a record of your work and progress.

**How to Join your teacher’s Khan Academy Class**

➢ Go to Khanacademy.org/join

➢ Enter your class code **RP5J9YMM** and press “Add”.

➢ If you don’t already have an account press “Create a new account”. Enter your date of birth and sign up using Google, your school email, or by creating username.

➢ Enter your grade and course. Now you are ready to start learning.

➢ Details of topics you will cover is given in the next page

**Due Date:** All work is expected to be done by the first class in the next academic year.

**Contact:** if you have any questions, please email Mr. Grewal at **vsgrewal@fcps.edu**
Topic 1 – Data Basics and Analyzing Categorical Variables
➢ Identifying individuals, variables and categorical variables in a data set
➢ Creating a bar graph and Pie Charts

Topic 2 – Analyzing and Graphing Quantitative Variables
➢ Constructing Dot Plots, Histograms and Stem Plots
➢ Shapes of Distributions and their comparison

Topic 3 – Summarizing Quantitative Data
➢ Mean, Mode and Median
➢ Variation and Spread
➢ Box and Whiskers Plot

Topic 4 – Data Distributions and Density Curves
➢ Normal Distribution and Z Score
➢ Density Curves in General
➢ Normal Distributions and Standard Normal Calculations

Topic 5 – Exploring Relationship in Bivariate Data
➢ Scatter Plot and Data Correlation
➢ Line of Best Fit

Note:
➢ The above is just a list of the topic headings. These include a total of 54 assignments which will require you to either watch a video or practice what you learn in the video. Each assignment will take 5 to 10 minutes. So, please pace yourself and don’t wait till the last few days.
➢ Reminder. This packet is expected to be done by first day of the next academic year.