

# AP Statistics Summer Task

First things first: I know you are dreading the content of the following paragraphs, but do not despair. I know your pain and therefore will make this as easy to digest as possible.

This is not a project. It is not even required. Though if you are tempted to stop now and throw this paper away you will miss out on some valuable *life-changing* information.

“Did she just say ‘life-changing’? Oh brother.”

Yes. See, back when I first learned about statistics I did not expect to get so enthralled or drawn in to the never-ending spiral of mathematical and common sense logic that encompasses the study of *data*. I mean, it’s such a boring word. Data: the plural of *datum*, a single piece of information. But it was like a drug – hard to put down and increasingly addictive. With numbers and statistics quoted EVERYWHERE you cannot escape the powerful sway it has over almost everything we do on a daily basis. I was hooked. My primary goal is to get you hooked too. (Good thing it’s not a literal drug.)

**Here’s the rub:** you would be surprised at just how many statistics, even quoted by “experts” on a topic, are simply bad.

My secondary goal in this class is to open your eyes to what most people (and I mean anyone who cannot do math or think clearly about numbers) accept as facts without really considering where the numbers come from. In short, I’m going to teach you how to pinpoint the lies thrown at you from all directions.

My tertiary goal is to introduce you to a very lucrative career possibility. *Data Scientist* has been dubbed the sexiest job of the 21<sup>st</sup> century and it’s true. Statisticians are in VERY high demand in every sector of the economy. Not only that, but if you plan to go to graduate school you will be required to take at least a few stats courses in order to complete your thesis or doctoral research. You can’t escape the need to understand statistics nowadays.

Ok, you get it. So what’s the task?

**I want you to read a book.** That’s it. (Well, almost.) I know you probably have another book you have to read for English, but I’m hoping this one is better. If it’s not, maybe non-fiction just isn’t your passion. You don’t need to write a huge report or take extensive notes on it or anything. What I DO want you to do, however, is seriously consider the information presented in the pages. Don’t just mindlessly glaze over the words as sometimes happens when reading. Soak it in and let it stew so that when I see you in August you are ready to learn the ins and outs of statistics and maybe intelligently respond to issues we discuss in class as well as any conversation you have with anyone anywhere any time. Really. At the very least you’ll have the answers to some possible trivia questions if you’re ever on a game show.

Choose a book to read from the following list:

(If you would like to pick a different book not on this list that is somehow related to probability and statistics, let me know so I can look it up.)

***Damned Lies and Statistics: Untangling Numbers From the Media, Politicians, and Activists*** by Joel Best

***More Damned Lies and Statistics: How Number Confuse Public Issues*** by Joel Best

***How to Lie with Statistics*** by Darrell Huff

***Standard Deviations: Flawed Assumptions, Tortured Data, and Other Ways to Lie with Statistics*** by Gary Smith

***Freakonomics: A Rogue Economist Explores the Hidden Side of Everything*** by Steven D. Levitt and Stephen J. Dubner

***SuperFreakonomics: Global Cooling, Patriotic Prostitutes and Why Suicide Bombers Should Buy Life Insurance*** by Steven D. Levitt and Stephen J. Dubner

***The Drunkard’s Walk: How Randomness Rules Our Lives*** by Leonard Mlodinow

***Scorecasting: The Hidden Influences Behind How Sports are Played and How Games are Won*** by Tobias J. Moskowitz and L. Jon Wertheim

After you read your selected book, please email me the following:

- A brief introduction about yourself and why you have chosen to take AP Statistics,
- A list of which book(s) you read,
- A description of 4-5 things you felt were interesting or that you learned from the book (be specific – give examples where necessary), and
- Any questions you have regarding what you read or what you have heard about this class that you are concerned with.

If you intend to complete this summer task, **please have it completed by August 13<sup>th</sup> at 11:59pm**. Keep in mind again this is optional, but it is a very effective way to make a positive first impression. Be curious and take charge of your own learning.

I look forward to meeting you in August!