

# Statistical Reasoning in Sports - Chapter 1 Assessment

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## *Getting Started...*

- Find some real that that you would like to investigate for streakiness. Be sure to record all details: Team/athlete, opponent, date, each win/loss or make/miss in order, source for data, etc.
- To investigate an individual player's stats for an NBA game:
  - Go to [espn.com](http://espn.com)
  - Click on NBA
  - Click on Teams
  - Click on Team of choice
  - Under 'schedule' click on 'full schedule'
  - Click on the score
  - Decide on a player (game leader is a good choice to have plenty of data)
  - Then click on play-by-play
  - Now read carefully to record your selected players shots - makes and misses. You will have to go through all 4 quarters to have a game of data.
- To investigate a team's Win/Loss 'streakiness' for most major league sports
  - Go to [espn.com](http://espn.com)
  - Click on the sport
  - Click on Teams
  - Click on Team of choice
  - Click on schedule and you will have options to look at years, regular season, post-season, etc. You may have to look at 'half's of a season depending on the sport.
  - Now read carefully to record your selected teams wins and losses.
  - You do not have to use these examples or even sports, but they are probably a lot easier to use to complete the assessment. Anything different than these examples needs to be cleared in advance.
- Complete before the end of class on Wednesday 8/25/21.
- Work will be submitted through our Google Classroom with a Google Doc. It will include a originality report.
- You may use your textbook and past assignments for notes.

## The Report [Each of these sections is graded]

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- Header in upper-right corner: First and Last name, “5<sup>o</sup> Statistical Reasoning in Sports” and “Chapter 1 Assessment.” [10 pts]
  - Title is written in the form of a question: Something like, “Were the Yankees a Streaky Team in 1998 ?” [10 pts]
  - Explain your question of interest and why you choose this topic (expand on the title). In other words, why did you choose this data ? [15 pts]
  - Present all of your data, in order. Be sure to cite your source. [15 pts]
  - Use the applet to investigate the streakiness in your questions and complete 10,000 trials. Include a screenshot from the applet in your report. [15 pts]
    - For a Mac: ⌘ - Shift - 4 and then drag to include what you want. The image will be available briefly as a preview or later on your desktop.
    - For Chromebook: Ctrl - Shift - F5 and then drag to include what you want. The image will be available briefly as a preview or later in your files.
  - Use the results from the applet to discuss the streakiness of your player/game/team (was the number of streaks likely or unlikely to happen by random chance). Be sure to explain if there is convincing evidence that the player/game/team is streaky. [20 pts]
  - Conclusion – in your words. What do you think of your results? What would you investigate next? Other thoughts? [15 pts]
- **Ask me for help!** This project is to assess what you have learned this chapter, but I want you to be successful so please ask me for advice, to check your work – but it needs to be during class time.