

# Think

## *like a data scientist*

### What is data science?

Data science is looking for a story among all the data. Data science uses statistical skills, coding skills, and the increased ability of technology to work with big data (i.e. the most giant, massive, complicated spreadsheets you can think of). Data science can work with multiple variables at the same time. What patterns exist? What insights does this convey? What decisions can be made?

### How is data science relevant to K-12?

Data literacy is a skill needed by all citizens to be able to understand and utilize information provided in these days of “data-based decisions”. It gives students skills to interact with all the data they come across. Every area has data, any area your students might want to work in some day will have data that needs to be worked with.

### Do I have to work with “the most giant, massive, complicated spreadsheets you can think of”?

No! Data science skills apply to all amounts of data. Data scientists, those working in data science as their profession, are most likely to be working with “big data.”

When practicing data skills in K-12 we want to provide just enough data that at first it feels a little overwhelming, and the student must figure out how to proceed. While also keeping it small enough that they truly can find patterns, note interesting moments, and generally find some way to proceed with the information they’ve been given. For a high school class this might look like data that you have to scroll either way on a screen to see all of it. For middle school it might be looking at two variables at the same time, regardless of how big or small the dataset is. For elementary it might be making sense of a simple data visualization. Like all classroom skills, data skills build on top of each other.

### How can I use data science in my classroom?

There are lots of great ways to add more data skills into your classroom. Check out our resources section for a plethora of ideas sorted by subject area. <https://data.truman.edu/resources/>

Quick ways to add more data skills are:

- Regular data talks: showing students data visualizations and asking questions together to figure out what is going on. These can be done at all ages and stages of K-12, and in all subject areas. Check out these resources to find data visualizations relevant to your classroom.
  - ◊ NYT – What’s Going on in this Graph?
  - ◊ Turner’s Graph of the Week
  - ◊ Truman’s data visualization posters (hand washing and weather)
- Utilize Truman’s developed lesson plans for math for grades 5 - Algebra II, and Statistics & Government.
  - ◊ These lessons are ready to go, created with expert K-12 faculty to be engaging and interesting for you and your students.



MORE QUESTIONS? Visit [data.truman.edu](https://data.truman.edu)

