

**Script: Investigative Reporting and Data Visualization**  
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Investigative Reporting and Data Visualization at the high school level

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Investigative journalism can turn up compelling stories that have a lot of impact. Just as investigative stories in the “real world” can drive readership or viewership, so can investigative stories at the high school and middle school levels. These kinds of stories can also excite and engage young journalists.

But be careful: Some topics can be explosive if not handled responsibly.

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While accuracy is always critically important, it’s not enough to be accurate with an investigative story.

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Like your older counterparts, young journalists also have to put the story in perspective, and deliver the proper context to tell readers what it really means.

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That means making sure your story has relevance, impact and responsible reporting.

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And that you follow the same standards as the professionals.

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Discovering the history of investigative reporting in the real world can be fun and exciting. You can learn about the power and impact of investigative journalism by learning about some of its best practitioners.

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Ida Tarbell was one of the nation’s first investigative journalists. Her expose of Standard Oil exposed monopolistic practices and led to the breakup of the Standard Oil monopoly.

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In contrast to government officials’ rosy portrayals of the American military effort in Vietnam, David Halberstam, a New York Times reporter, delivered coverage that exposed the truth about the lack of success against North Vietnam. Halberstam won a Pulitzer prize in 1964 for his Vietnam coverage. He later wrote, “The job of the reporters in Vietnam was to report the news, whether or not the news was good for America.”

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These two young Washington Post reporters discovered that one of the burglars arrested for breaking into the Democrat National Committee's offices in the Watergate building was on the payroll of President Richard Nixon's reelection committee. Bob Woodward and Carl Bernstein's digging uncovered dirty tricks and crimes that led to the indictment of 40 administration officials and ultimately, the resignation of President Nixon.

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Investigative reporting can be approached in a number of ways, but one of the most dependable is to start with a hunch or a hypothesis, then to test that hypothesis using the scientific method.

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Often news organizations will get a tip about a possible story, but even without a tip about wrongdoing, there are interesting stories hiding in piles of data.

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Mining data is a great way to find stories.

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Because we live in a democracy founded on the principles of open government, most of the data gathered by government agencies is open, and citizens have a right to see it and obtain it.

Open records laws vary from state to state, but most data can be obtained simply by asking for it. Most states require a nominal fee for copying, but it's actually better to simply get electronic records that can be analyzed in Excel or other database programs and visualized. Look for the link to state-by-state records laws and procedures (RCFP).

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While data can provide the raw materials for investigation, you'll need real people in a position to understand the data to put it into context and perspective. It's very easy to be drawn in by an apparent anomaly in the data, only to learn that the spike is due to a change in the way the data were collected, or some other "innocent" reason.

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It's essential to talk to sources who are in a position to understand and explain the data. Don't rely on your own reading of the data. The way to ensure your story is responsibly reported and honestly presented is by getting input from real people — including those who may be opposed to your pursuit of the story.

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Here are some story ideas you might consider:

Attendance rates. Poor attendance rates can end up costing school districts millions of dollars.

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Graduation rates. How does your school stack up against similar schools? How does your school district measure up?

**Slide 19**

Drop-out rates. How has this changed over time at your school? Is it happening more frequently or less?

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Test scores. Be careful here. Students may fixate on the difference between racial or demographic groups, and the reasons for differences can be complicated and require much context to explain adequately.

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Food safety inspection reports. How does your school cafeteria do in terms of safely handling food? How does it compare over time, and/or with other schools?

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School budgets — how money is spent — on salaries and benefits, on buildings and transportation... although at the school board/district level you won't likely see a breakdown by schools.

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Data visualization is an important and effective means to present data to readers in a visual way. But it also is a valuable way for reporters to analyze their data before they write their stories.

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Often by visualizing the data, reporters can see the trends, identify commonly recurring issues and identify outliers.

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A good way to find a story is to actually “see” the story in the data. For example, you can open a data set up in Excel, clean it, then copy the relevant data and paste it into a JavaScript platform like Highcharts Cloud or Tableau Public to see where the trends are and to identify outliers.

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Let's do that. Say you were going to do a story on attendance rates for a particular school district in Missouri. The Missouri Department of Elementary and Secondary Education maintains these data and makes a summary available online. Going to that page, we can select any school district and look at the rates of attendance. We also would like to compare them to the Missouri state average.

We can see through a simple visualization (actually available on the website) that the Columbia Public Schools attendance rate — better than the state average from 2006-2010 — has worsened over the past five years and in that time has performed worse than the state average.

That immediately raises several questions that will require talking to people in the know to gain answers and context. First, why has the Columbia Public Schools attendance rate worsened? And how has the overall rate in the state improved?

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In addition, while the state's website provides the rate as a percentage, it doesn't offer the raw numbers from which the rate is calculated. We need those raw numbers to determine how many students and days of absenteeism there are. And we'll need to learn how much that absenteeism costs the district in state funding. Finally it would be worthwhile to examine how much absenteeism varies by school and by grade. And how is the district addressing this issue?

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These are just some of the questions that come to mind; others will arise during the reporting process. But this is a good example of how important it is to talk to real people in positions to know the answers to your questions. It's not just enough to use the data to pinpoint problems...we need to find out answers as to "why?"

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Finally, when presenting data, it's good to know about several possible online platforms that are free and easy to use and effective in visualizing data for readers.

For bar charts, line charts and pie charts, it's hard to beat Highcharts, which is available free and is easy to use. Download Highcharts Cloud, which is free and can be used by simply copying and pasting a spreadsheet's data set into a window. Charts can then be styled.

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Another powerful and effective visualization program is Tableau Public, another JavaScript based platform that is relatively easy to use. Data can either be pasted into a window or a csv file (comma separated value file) can be opened from within Tableau Public. Visualizations may then be manipulated. There are many online tutorials for both these programs.

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For setting pins on a map, Leaflet is an easy-to-use platform, For mapping data, Tableau Public or Google Fusion Tables are useful tools that are relatively easy to use. Again online tutorials abound.