EDUCATOR GUIDE KEY AND STUDENT PAGES FOR

News Goggles
What role does data play in journalism?

In this document you’ll find:

- Teacher directions for this lesson.
- Editable student pages.
- An answer key for the student pages.

Teacher directions:
1. Make sure each student has a copy of the featured story. (Please note: Article is paywall-free until May 11 but might require an email address to access. Consider printing it immediately.) Students will need it as they work through the viewing guide.
   Note: Your students should read or skim the entire article first to get a general sense of what it’s about before digging deeper into questions in the viewing guide.
2. Distribute student copies of the viewing guide in this document (pages 2-8).
3. Conclusion: Have students use their notes from this viewing guide to brainstorm a response to the essential lesson question. Then, discuss as a class. To extend this question further, have students develop their thoughts in several paragraphs or an essay.
News Goggles
What role does data play in journalism?


Featured Text: “Charts show UC admissions rates for every high school in California” (Nami Sumida, San Francisco Chronicle). (Please note: Article is paywall-free until May 11, but might require an email address to access.)

Directions:
1. Read the featured text.
2. Watch the featured video, using this viewing guide to take notes about how Nami Sumida uses data in her reporting.
3. Explain the role data plays in journalism.

Resource Connection Tip: Complete Making Sense of Data in Checkology® for relevant insights.

* data: numbers that measure or document something in the material world. Data is often presented as raw numbers, statistics or percentages.

PART A: Introduction to Nami Sumida and data

What is Sumida’s role at the San Francisco Chronicle?

What are some examples of data?
Where does a lot of data that Sumida uses in her work come from?

1. 
2. 
3. 

What is the role of data in Sumida’s journalism?

What advice does Sumida give for evaluating data? **Fill in the blanks.**

1. Consider the ______________________________:
   → ___________ was the data collected?
   → ___________ was included in the data?
   → Are any _________________________________ not included in the data?

2. Remember: All data is inevitably ___________, but it can still be useful.

Why are transparency and methodology important in data journalism? How does Sumida incorporate transparency in her work?
What is data visualization, and what purpose does it serve?

How does Sumida use data visualization in her UC admissions story?

Charts show UC admissions rates for every high school in California

Here are UC admissions rates for California public and private high schools to UCLA, Berkeley and other UC campuses in 2022.

Each circle is a high school, sized by the number of seniors in the 2021-22 school year and positioned by the school’s UC application and acceptance rates for the 2022 fall semester. Hover or tap on a circle for details.

Admitted students, as a share of applications

What is Sumida’s process for creating a data visualization or interactive graphic? Fill in the blanks.

1. First, Sumida thinks about the ___________ she wants to communicate. Is it a certain trend, the existence of outliers, or is it that one number is bigger than the other number?
2. These questions help Sumida determine ________________________________
3. She considers what is the simplest and most complex chart she can make, and then determines if it is worth making a very complex chart.

(To address the limitations to most data sets, Sumida is careful in describing the data. There are often a lot of notes in her charts to be transparent about what is or is not included.)
Conclusion: Explain the role data plays in journalism. Use evidence from all parts of this viewing guide to support your answer.

Challenge: Using the screenshots provided in the following pages, analyze the data visualizations from Sumida's recent story on San Francisco's public libraries. (Note: Full article is behind a paywall.) How is the data displayed? What main insights is each data set communicating?
Physical and digital circulation in each fiscal year

Circulation at the Main Library, branch libraries and other library services

The fiscal year starts in July and ends in June the following year. The 2020-21 and 2021-22 fiscal years were affected by closures during the pandemic. Physical materials include books, magazines, DVDs, CDs, vinyls and more. Digital materials include ebooks, streaming content, digital magazines and newspapers and more.

Source: San Francisco Public Library

Circulation from the Main Library, branch libraries and other library services

Physical materials include books, magazines, DVDs, CDs, vinyls and more. Digital materials include ebooks, streaming content, digital magazines and newspapers and more.

Source: San Francisco Public Library
Monthly visitors to the San Francisco Public Library

Data includes visits to the Main Library, branch libraries, bookmobiles, jail and reentry services and the Juvenile Justice Center.

Source: San Francisco Public Library

Active cardholders at the San Francisco Public Library

Number of active cardholders who borrowed physical materials only, digital items only or both physical and digital materials (omni users) in each time period

<table>
<thead>
<tr>
<th></th>
<th>Sep. 2018 to March 2020</th>
<th>June 2021 to Nov. 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical only</td>
<td>131K</td>
<td>69K</td>
</tr>
<tr>
<td>Digital only</td>
<td>59K</td>
<td>104K</td>
</tr>
<tr>
<td>Omni</td>
<td>54K</td>
<td>51K</td>
</tr>
<tr>
<td>Total</td>
<td>244K</td>
<td>224K</td>
</tr>
</tbody>
</table>

Active cardholders are defined as patrons who borrowed materials within each 1.5-year time frame. An additional 120,000 patrons have unexpired library cards who use the library for things other than borrowing materials.

Source: San Francisco Public Library
Number of programs at the San Francisco Public Library in each fiscal year

<table>
<thead>
<tr>
<th>Year</th>
<th>Youth programs</th>
<th>Adult programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-18</td>
<td>13.4K</td>
<td>5.6K</td>
</tr>
<tr>
<td>2018-19</td>
<td>13K</td>
<td>5.5K</td>
</tr>
<tr>
<td>2019-20</td>
<td>7.7K</td>
<td>4.3K</td>
</tr>
<tr>
<td>2020-21</td>
<td>798</td>
<td>706</td>
</tr>
<tr>
<td>2021-22</td>
<td>1.8K</td>
<td>1.3K</td>
</tr>
</tbody>
</table>

The fiscal year starts in July and ends in June the following year. Data includes in-person and virtual programs.

Source: San Francisco Public Library
News Goggles
What role does data play in journalism?


Featured Text: “Charts show UC admissions rates for every high school in California” (Nami Sumida, San Francisco Chronicle). (Please note: Article is temporarily paywall-free but might require an email address to access.)

Directions:
1. Read the featured text.
2. Watch the featured video, using this viewing guide to take notes about how Nami Sumida uses data in her reporting.
3. Explain the role data plays in journalism.

Resource Connection Tip: Complete Making Sense of Data in Checkology® for relevant insights.

What is Sumida’s role at the San Francisco Chronicle?
Sumida is a data visualization developer at the San Francisco Chronicle. She uses charts, maps and other graphics to visualize different data sets. She primarily works on stories related to local government, elections, education and demographics, but also addresses other topics. While her focus is on data visualizations, she also does the data analysis, reporting and writing for most of her stories.

What are some examples of data?
Data might be presented as raw numbers, statistics or percentages. Data can include spreadsheets like census population numbers, demographics, reviews and other survey-related information.
PART B: Data in journalism

Where does a lot of data that Sumida uses in her work come from?

1. Open data portals
2. Census data
3. Election data

What is the role of data in Sumida's journalism?
Data plays a central role. The story idea can come out of data; she might find a data set she thinks is interesting or worth sharing. Other times there might be something she's curious about and she uses data to see if a trend actually is true or quantifiable in some way. It works as one piece, or source, of reporting.

What advice does Sumida give for evaluating data? Fill in the blanks.

1. Consider the methodology:
   → How was the data collected?
   → Who was included in the data?
   → Are any categories or groups not included in the data?

2. Remember: All data is inevitably limited, but it can still be useful.

Why are transparency and methodology important in data journalism? How does Sumida incorporate transparency in her work?
Transparency and methodology are important in data journalism because the conclusions journalists can draw may differ if they're not clear about what data they're using and how they got a certain number.

Sumida tries to explain in simple terms how she did a complex statistical analysis. A lot of her stories have some sort of visualization that displays all the data. She does this for two reasons: She wants people to explore the data on their own and she wants to be transparent.
What is data visualization, and what purpose does it serve?
Data visualization shows data in a visual form. It can be a lot of things: charts, maps, graphics and infographics, for example. It is a good way to show a certain trend; sometimes it's easier to show a main insight through a chart rather than write about it.

How does Sumida use data visualization in her UC admissions story?
Sumida makes her data interactive. At the top is a scatter plot that shows, in general, private schools have higher application rates. But people can use the search bar to type in their high school and see the results.

What is Sumida's process for creating a data visualization or interactive graphic? Fill in the blanks.

1. First, Sumida thinks about the **main insight** she wants to communicate. Is it a certain trend, the existence of outliers, or is it that one number is bigger than the other number?
2. These questions help Sumida determine **what chart type she's going to use, such as a line chart or bar chart**.
3. She considers what is the simplest and most complex chart she can make, and then determines if it is worth making a very complex chart.

(To address the limitations to most data sets, Sumida is careful in describing the data. There are often a lot of notes in her charts to be transparent about what is or is not included.)
Conclusion: Explain the role data plays in journalism. Use evidence from all parts of this viewing guide to support your answer.

Answers will vary. Be sure students incorporate key ideas from various points in this viewing guide.

Challenge: Using the screenshots provided in the following pages, analyze the data visualizations from Sumida's recent story on San Francisco's public libraries. (Note: Full article is behind a paywall.) How is the data displayed? What main insights is each data set communicating?