

Data Detectives: Spotting Bias and Bad Graphs in Grade 6

Analyze how misleading visualizations and skewed sample groups can distort reality, building the critical eyes needed for modern citizen-journalism.

1. A researcher wants to find the average height of 6th graders globally but only collects data from a professional basketball youth camp. What is the primary issue with this data's reliability?

- A. Data security flaw
- B. Selection bias in the sample
- C. Transcription error
- D. Incompatible file formats

2. True or False: If two variables show a strong correlation on a scatter plot, it proves that one variable must be causing the other to change.

- A. True
- B. False

3. When a news report uses a bar chart where the y-axis starts at 50 instead of 0 to make a small difference look huge, they are using a _____ axis.

- A. Logarithmic
- B. Truncated
- C. Symmetrical
- D. Interpolated

4. You find a dataset about sugar's health benefits, but notice it was funded by a large candy corporation. Which evaluation criteria is most concerning here?

- A. Data volume
- B. Metadata tagging
- C. Conflict of interest
- D. File accessibility

5. True or False: Using 'Anonymization' means removing identifying details like names from a dataset to protect person-level privacy.

- A. True
- B. False

6. Before analyzing a spreadsheet of global temperatures, you notice some entries are in Celsius and some in Fahrenheit. The process of fixing this is called data _____.

- A. Scrubbing
- B. Hoarding
- C. Cleaning

Name: _____

Date: _____

D. Mining

7. Which of these is an example of 'Metadata' for a digital photograph used in a citizen-science project?

- A. The colors in the image
- B. The subject of the photo
- C. The GPS coordinates of where it was taken
- D. The person viewing the photo

8. A scientist publishes their full dataset online so other scientists can check their work. This practice is known as _____ Data.

- A. Closed
- B. Proprietary
- C. Open
- D. Private

9. If you are looking for specific, non-biased statistics on national unemployment, which source is generally considered the most authoritative?

- A. A social media poll
- B. A government labor bureau
- C. An anonymous blog
- D. A political party advertisement

10. True or False: An 'Outlier' is a data point that is significantly different from the rest of the dataset and should always be deleted immediately.

- A. True
- B. False