

Name: _____ **Date:** _____

Your Digital Compass: 8th Grade Data Literacy Quest

Sharpen your analytical instincts by identifying sampling bias, verifying digital footprints, and organizing complex datasets for clear communication.

1. A local urban planning committee wants to know how residents feel about a new bike lane. They only survey people currently at a high-end cycling shop. What is the primary issue with this data collection?

- A. Formatting error
- B. Sampling bias
- C. Data encryption failure
- D. Metadata corruption

2. When checking the reliability of a scientific dataset about deep-sea biodiversity, a researcher looks for _____, which is the process of other experts reviewing the work before publication.

- A. Cloud sourcing
- B. Data scraping
- C. Peer review
- D. File compression

3. If two variables in a dataset show a strong correlation, it proves that one variable definitely caused the other to change.

- A. True
- B. False

4. You are organizing a dataset of 5,000 global bird migrations. Which method best ensures the data remains searchable and 'clean' for future use?

- A. Using consistent naming conventions and metadata tags
- B. Saving all files as 'Migration1' to 'Migration5000'
- C. Deleting any data points that look unusual or like outliers
- D. Storing the physical paper notes in a locked cabinet

5. An environmentalist uses a _____ to display the relationship between industrial CO2 emissions and global temperature increases over 50 years.

- A. Pie chart
- B. Scatter plot
- C. Venn diagram
- D. Flowchart

6. Data cleaning is the process of removing or correcting inaccurate, incomplete, or improperly formatted data within a dataset.

- A. True

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B. False

7. Which of these is the most 'authoritative' source for a student researching the success rates of various renewable energy technologies across Europe?

- A. A viral social media post by a tech influencer
- B. An anonymous blog post from 2012
- C. The International Energy Agency (IEA) annual report
- D. The comment section of a popular news website

8. To protect sensitive medical research data from unauthorized access, a hospital would use _____, which scrambles the data into a code.

- A. Compression
- B. Encryption
- C. Pagination
- D. Duplication

9. A nutritionist finds a study that says 'Sugar improves focus.' Upon closer inspection, she sees the study was funded by a large soda company. This is an example of checking for:

- A. Conflict of interest
- B. Data storage limits
- C. File format compatibility
- D. Visual design

10. Qualitative data refers to information that can be measured and written down with numbers, such as height or price.

- A. True
- B. False