Step 1: Statistics 101

Find Statistics

1. Find Reputable Sources

Perform a subject search for statistics. List two articles:

Example 1: __________________________________________

Example 2: __________________________________________

Step 2: Analyze Statistics

Select one of your examples from step one to analyze.

1. Source

List the source of the article:

________________________________________


________________________________________

2. Author

List the author of the article:

________________________________________


________________________________________
Step 2: Analyze Statistics (Cont’d)

3. Organization

List the organization that conducted the study:
_________________________________

Is the organization credible? Is the organization biased? Explain.
__________________________________________________________________________

4. Date

What timeframe does the study cover?
_________________________________

Is the study still relevant? Explain.
__________________________________________________________________________

5. Context

Were there any relevant events at the time of the study?
__________________________________________________________________________

Explain how those events may have affected the study?
__________________________________________________________________________
Step 2: Analyze Statistics (Cont’d)

6. Representation

How are the statistics represented?

_____________________________________________________________________

Does this representation affect the study’s interpretation? Explain.

_____________________________________________________________________

7. Methodology

Does the study make assumptions or omit anything?

_____________________________________________________________________

How might these assumptions or omissions affect the outcome of the study?

_____________________________________________________________________

8. Compare and Contrast

Find an alternative source that cites a similar study.

_____________________________________________________________________

Compare and contrast the two studies and explain their similarities and/or differences.

_____________________________________________________________________

Common Core Standard

CCSS.Math.Content.HSS.IC.B.3 Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.

Need Help?

Representation

• Statistics are represented in a variety of forms, including raw numbers, averages (mean, median, and mode), and percentages.
• How statistics are represented can influence the way they are interpreted.

Sample

The prevalence of bullying varies widely among city schools of all levels, state data show. School officials reported 6,437 verified incidents to the state in the 2017-18 year, up from 4,105 the previous year. There also were more than 1,000 cyberbullying episodes each year.
**SIRS® Issues Researcher Curriculum Guide: Understanding Statistics**

### Step 3: Apply Knowledge

**Interpret Statistics**

1. **Evaluate Credibility**

List the credible and/or unreliable aspects of the study based on your research.

<table>
<thead>
<tr>
<th>Credible</th>
<th>Unreliable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
<td>4.</td>
</tr>
</tbody>
</table>

2. **Make Your Argument**

- □ Source
- □ Author
- □ Organization
- □ Date
- □ Context
- □ Representation
- □ Methodology
- □ Compare and Contrast

Draw conclusions about the statistics using your research. Include as many elements as you can from the checklist above to defend your argument.

________________________________________________________________________________

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________________________________________________________________________________

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**Common Core Standard**

*CCSS.ELA-Literacy.CCRA.W.9* Draw evidence from literary or informational texts to support analysis, reflection, and research.

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**English Language Arts Standards." Common Core State Standards Initiative, 2016. Web. 15 July 2016.**