**Infographics in the Classroom: Using Data Visualization to Engage in Scientific Practices**

**Activity 2: Same Data, Different Graphics**

This activity utilizes the “Pick a Side” method of oral debates. In this method, the instructor makes a statement and students move to one side of the room if they agree and the other side if they disagree. Students then justify why they moved to that side. We also used a similar method, but had four corners be 4 different answers to a question.

2. Pause to ask for any questions about the graphic. What do the numbers mean? What type of graph is it? You may need to explain the logarithmic scale that it is graphed with.
3. In pairs, have them work through part 1.B. They should be prepared to share their ideas at the end. Gather student ideas for part 1.B.
5. Use “Pick a Side” for the following statements:
   - Agree-disagree? The different graphics convey the exact same story.
   - Graphic A, B, C, or D is the most accurate way to represent the numbers.
   - Graphic A, B, C, or D is the most effective at telling the story.
6. Working in pairs, have students work on Part 2 of the worksheet – comparing carbon emissions.
7. Use “Pick a Side” for the following statements:
   - A, B, or C is the most accurate way to represent the numbers
   - A, B, or C is the most visually interesting way to look at the numbers.
   - A, B, or C is the most effective at telling a story.

**Infographics used:**

- Edward Tufte, Brain vs Body Mass, from Beautiful Evidence
- David MacCandless, Tons of Carbon, from Visual Miscelleneum
Activity 2
Same Data, Different Graphic

Name ____________________________
Date ____________________________

Part I. Big Brains

1. What ideas or pieces of information does the author present?

2. Identify the central idea(s) told in the graphic.

3. Pick one point on the image that represents a number. What is that number (you can approximate, if necessary) and what are the units?

4. Describe how the author represents data in the graphic? (Ex. Using color to differentiate two things.)

5. What questions do you have about the graphic? What confuses you?

6. What do you like/dislike about the graphic?
7. Does this graphic show a similar set of numbers?

8. Are there any differences in the main ideas?

9. Does the author use any different approaches to representing numbers in this graphic?

10. How does this graphic visually compare to the previous two? What are the similarities and differences?

11. What do you like/dislike about this graphic? How does it compare with the other two in terms of understanding the main idea?
12. Describe how the author represents data in the graphic? How does it compare to the previous graphics?

13. Which of these four graphics would you consider the most accurate? Which is most effective at telling a story? Why?

Part II. Carbon Emissions

1. Identify the central idea(s) told in the graphic. What story does it tell?

2. Does the graphic accurately represent numbers? Are all the images proportional?
3. Is the information shown in this graphic similar to the previous one?

4. How does it compare visually to the previous graphic?

5. How does this graphic differ from the previous one? Does it show the same numbers?

6. Which of these three graphics would you consider the most effective at displaying the data accurately? Why?

7. Which of the three graphics most convincingly conveys the author’s main message? Why?
Sources of Carbon in the Atmosphere

- If these bars were on the same scale as the others, they would have to be over a mile tall.