

Explaining Data in Writing

Outline for explaining the infographic

Introduction

1. Who are Seth & Kimberly?
2. What did they do?
3. Why? What were their aims?

Infographic

1. What is it a graph of?
2. What does it show? (overview)
3. What is on the X and Y axes?
4. How is CO₂ measured?
5. How are high, moderate and low actions defined, and how many of each are there?
6. Are there any notes?

Comparisons, implications, conclusion

7. What comparisons can you make? What are the implications? What conclusions can you draw?

Explaining Data in Writing

Outline

Introduction

1. Who are Seth & Kimberly?

Seth Wynes and Kimberly A Nicholas are scientists and researchers

2. What did they do?

They published a research paper entitled “The climate mitigation gap: education and government recommendations miss the most effective individual actions”

3. Why? What were their aims?

They had 2 aims:

1. to clarify misconceptions about which actions cause the most and the least Greenhouse Gas (GHG) emissions and
2. to highlight the missed opportunities to educate the young in which actions to take.

Infographic 1

1. What is it called?

Personal Choices to Reduce Your Contribution to Climate Change

2. What is it a graph of?

It's a graph of actions an individual can take to save the most CO₂ and to save the least.

3. What is on the X and Y axes?

The X axis shows the actions, divided into 3 categories of high, moderate and low impact.
The Y axis shows how much CO₂ an individual can save annually.

4. How is the CO₂ measured?

The CO₂ is measured in metric tonnes, which are smaller than imperial tons, and are described in terms of the equivalence of tonnes of CO₂: tCO₂e **tonnes (t) of carbon dioxide (CO₂) equivalent (e)**.

5. How are high, moderate and low actions defined, and how many of each are there?

High impact actions are defined as those which save more than 0.8 tonnes of tCO₂e per individual per year, moderate impact actions as ones that save between 0.2 and 0.8 tonnes of CO₂ and low impact actions as those that save less than 0.2 tonnes of CO₂.

The infographic shows 6 high impact actions, 4 moderate impact, and 1 low impact.

The high impact actions, in ascending order, are eat a plant-based diet (saving 0.8 tCO₂e per capita per annum); switch from an electric car to car free (saving approx. 1.2 but it is unclear because there are no data labels specifying the exact amount); buy green energy (saving 1.5 tCO₂e); avoid transatlantic air travel (saving 1.6 tCO₂e); live car free (saving 2.4 tCO₂e); and have one fewer child (saving 58.6 tCO₂e).

The 4 moderate impact actions are, in descending order: replace a typical car for a hybrid (saving approx. 0.4 tCO₂e); wash clothes in cold water (saving 0.247 tCO₂e); recycle (saving 0.2125 tCO₂e); and hang dry clothes (saving 0.21 tCO₂e)

Only one low impact action is shown on the graph: upgrade light bulbs to energy efficient LEDs (saving 0.10 tCO₂e). It is shown possibly because it is seen as an important way to reduce GHG emissions, and it really isn't.

6. Are there any notes?

It is important to note that these values are for developed countries, the implication being that underdeveloped or less industrialised countries create less GHGs.

Comparisons, implications, conclusion

7. What comparisons can you make? What are the implications? What conclusions can you draw?

The most striking things about the infographic are firstly what the high impact actions are (and are not) and the difference in impact between high impact actions and the other 2 categories.

Including transport in high impact actions (switching to electric cars, living car free, and avoiding flying), is not really surprising. "Have one fewer child" is surprising and noting that it has by far the biggest impact, 30 times more than the next biggest impact, living car free, is really surprising.

Equally seeing that recycling and using energy efficient light bulbs have so little impact is almost as surprising. This is one of the reasons that the infographic was produced, and that is, to highlight that what we think is helping a lot, isn't helping much at all. For example, compare a plant-based diet with recycling and using energy efficient light bulbs. Eating a plant based diet is 4 times more effective than comprehensive recycling, and 8 times more effective than LED light bulbs.

The issue is not simply that some actions save more and others less, it is how much they save. Another statistic from their supplementary materials: a US family who chooses to have one fewer child would provide the same level of emissions reductions as 684 teenagers who choose to adopt comprehensive recycling for the rest of their lives. Clearly we have to seriously consider choosing high impact actions because the principal message of their research and this infographic is that moderate and low impact will not mitigate climate change enough.