Asking Questions and Exploring Data Sentence Starters

Asking Questions to Explore Data

- I wonder if there's a relationship between. . .
- Based on the patterns I see, I predict that. . .
- I have a different question, what if we look at. . .?
- This question is important to me because. . .
- I'm curious about. . .

Forming Investigation Questions

- How are the values for _____ distributed?
- What is the typical or usual value for _____?
- Does <one group> tend to be <bigger / faster / happier> than another?
- Over time, how does _____ change?
- How does the attribute or group compare to the other attribute or group?

Identifying & Evaluating Data for Exploration

- To answer our question, we need data about. . .
- What questions can these data help me answer?
- I looked at these attributes because I wanted to know. . .
- The attribute(s) that connects to my question is/are. . .
- I can or cannot trust these data because. . .

General Starters

- I'm surprised by. . .
- I'm confused about. . .
- I wonder. . .
- I wish that I had more of. . .or different. . .

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Analyzing, Interpreting, Communicating
Data Sentence Starters

Analyzing One Attribute (univariate)

For the attribute _____,

- the average is. . .
- the highest or lowest value is. . .
- the most frequent value (ex. mode) is. . .
- the shape of the distribution looks like. . .
- the point that stands out is. . .

Analyzing Two Attributes (bivariate)

- Group A is similar to (or different from)
- Group B because. . .
- As the amount of _____ increases, the _____. . .
- Over time, _____ changes by. . .
- All of the data follow a pattern except for. . .
- There is a positive or negative relationship (slope) between ____ and ____.

Interpreting & Sensemaking

- A pattern I'm noticing is. . .
- This part of the graph tells me that. . .because. . .
- In the real world, these points on the plot mean. . .
- These data support the story that. . .

Discussing Agreement & Disagreement

- I have a different interpretation.
- I think this means. . .because. . .
- I agree with this idea because. . .
- We found a different answer.
- I think it's because. . .

Communicating with Data

- I chose this representation instead of this one because. . .
- My data provide strong evidence that. . .

Questions We Can Ask Each Other About Data

Understanding what was done or found

- Why did you choose this type of. . .?
- What do you think explains. . .?
- How does your plot or analysis compare to. . .?
- What surprised you about the. . .?

Asking about the analysis or interpretation

- Did you find a pattern or relationship between. . .?
- What claim might you make after looking at. . .?
- Should we be looking at rates or proportions instead of counts?
- Is there a different measure of center (ex: mean, mode, median) we should be using?
- What does this part of the plot mean to you?
- How can this attribute help us understand our driving question or phenomenon?
- Would this data change over time?

Interrogating our process

- Is there a different way we could interpret. . .?
- Why is it appropriate to use this data for our analysis?
- How do we know if this plot or summary is appropriate or useful?
- Is there a different plot that might help communicate our idea better?
- What do we know about where this data came from and whether it was collected fairly?
- Who or what might be impacted by this data?

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