

ROUTINE: READ, DRAW, COMPARE

When we read *Refugee*, we had different ideas about how Josef, Isabel, and Mahmoud were feeling over the course of the book. Let's discuss our interpretations of their emotions, and then let's compare our interpretations with a computer interpretation.

First, what kinds of emotions do you think Josef, Isabel, and Mahmoud were feeling? We will draw on details from the text as evidence. Then we'll make a visualization to represent those feelings.

That's a great idea! Let's **DRAW** bar charts for each character showing the different emotions

How should we organize our chart? Should it be by character?

**DRAW
DRAW
DRAW**

Emotion	Josef	Isabel	Mahmoud
Anger	~40	~30	~50
Disgust	~20	~20	~30
Fear	~80	~70	~100
Joy	~40	~30	~50

Yes, I noticed that too. I also noticed that the computer shows Josef as being fearful, and we had "scared" as the most common emotion- so that's similar

Now, let's **COMPARE**. Look at a graph created by the computer. What similarities do you notice between your graph and this one? The differences?

The computer made a visual that was organized by emotions and we created a bar graph organized by characters.

A routine for using textual evidence to **visually represent predictions, outcomes, or trends from text and compare predictions to actual data or to peers interpretations.**

PURPOSE

What is this routine for?

Sometimes it is helpful for students to make visual representations of complex ideas, plot points, character emotions, or other aspects of texts. For instance, let's say your students were curious about how an author created sympathy for a character, or how a particular character came of age. You might ask students to mark details in different chapters that they think contributed to sympathy, or coming of age.

In making visualizations, students use textual details to predict or make conclusions about outcomes or trends from a text they have read. Then, they can compare their ideas to another peer's interpretation, or to data produced by a computer or another source. Reading and drawing gives students an opportunity to understand complex information with an illustration or visualization. Comparing visualizations fosters critical thinking, inference making, and a deeper understanding of both textual information and statistical concepts.

QUESTIONS & PROMPTS

What can I ask students?

READ

- Ask students to read the text and
 - Make predictions about what a representation of text might look like based on the information provided (Teacher may already have a graph outline or other type of representation prepared).
 - i. A general question might be: “What do you predict the data would look like, based on what you are reading?”
 - ii. Specific questions might be:
 - “What do you predict a line graph of moments of sympathy might look like, based on what you are reading?”
 - “What do you think a bar graph of this character’s challenges might look like?”
 - Return to the text to find evidence to support their predictions or other claims
 - i. A general question might be: “What trends do you notice? Are there any patterns you think will appear?” [*encourage students to consider various factors, such as trends or patterns to inform their representations*]
 - ii. Specific questions might be:
 - “What patterns do you notice when it comes to how the author describes this character?”
 - “What trends do you see in terms of these character’s challenges over time?”
- Have students draw their charts in a structured format, such as a chart or table, to facilitate comparison later. They can do this with pencil and paper, or if it is easy for them, using their computers.

- Encourage students to justify their predictions and/or interpretations using evidence from the text and the data.
 - How accurate do you think your visualization is? What evidence from the text helps you make this claim?

COMPARE

- After students draw
 - Provide them with peers' or computer generated data visualizations for them to compare to their own
 - i. What do you notice about this data? What's similar to what you drew? What's different?
 - ii. What do you wonder?

OR

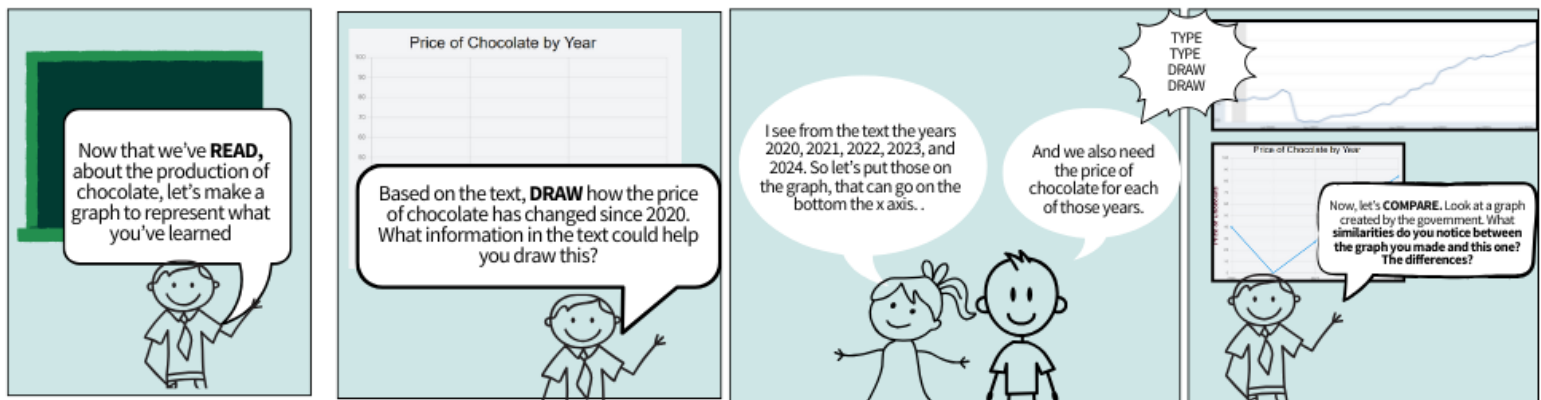
- Have students compare their representations with their peers.
 - i. What do you notice? What's similar to what you drew? What's different?
 - ii. What do you wonder?

APPLICATION

What types of data visualizations does this routine support?

This routine is applicable to bar charts and line graphs. Examples include:

LINE GRAPH



While we **READING** Boy, I want you to use evidence from the text to **DRAW** a line graph of the emotions of the main character through the book.

I've provided a chart for you with emotions on the Y axis, and the chapters on the X axis. At the end of each chapter, stop and record your opinions about how the character feels

We just finished the first chapter, and since his father died, I think I will record that he was more sad

When we read the chapter about summers in Norway, he was really happy

Now that we finished the book, I want you to find another group and **COMPARE** and **SHARE** your visualizations. What is the same, what is different? Explain your reasoning while citing the text