Reading the Heat

Choose displays that reveal different patterns in data.

SS24.HG.1 "Differentiate among types of charts, graphs, infographics, and maps, and explain how different types of these illustrate data and trends."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Circle the names of the four proposed visuals in the passage, then underline what each could show. Write a small number beside two limits the passage mentions.

Riverton After Sunset

1 On summer nights, pavement can hold heat after sunset. A student team in a fictional city called Riverton recorded average nighttime temperatures in three districts in 2010 and 2025. The table reports their measurements in degrees Celsius. Treat these figures as two snapshots, not a record of every summer between them.

AVERAGE SUMMER NIGHTTIME TEMPERATURE IN RIVERTON

District	2010 (°C)	2025 (°C)
North	20	23
Central	22	26
South	21	24

2 A grouped bar chart could put two bars beside each district's name, making district-to-district comparisons easy. A line graph could connect each district's two measurements, drawing attention to change over time. Yet those lines would not reveal what happened in the years between measurements. Neither display alone tells a viewer where the districts sit in Riverton.

3 A shaded map could show where 2025 readings are highest, if district boundaries were supplied. An infographic could pair one headline number with a brief explanation and icons, making the topic quick to scan. Its small space might hide differences among districts. Choosing a display means deciding what viewers can notice and what they might miss.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which district had the largest increase from 2010 to 2025? Which graph described in the passage would emphasize that change?

2. You want to compare all three districts' 2025 readings at a glance. Which graph described in the passage would you choose, and what would it make easy to see?

3. Which visual would best show whether districts with high 2025 readings are near one another? What information would it need beyond the table?

4. If an infographic featured Riverton's highest 2025 reading as its headline number, what might viewers miss? Which printed display could they use to check?

3 YOUR TURN

Your own words

Choose a community topic other than temperature. In four sentences, propose two different visual formats, state what data each would need and what each would show, and explain one limit of either format.

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PART 1 · READ AND MARK

Circle the names of the four proposed visuals in the passage, then underline what each could show. Write a small number beside two limits the passage mentions. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which district had the largest increase from 2010 to 2025? Which graph described in the passage would emphasize that change?	**Central increased the most, by 4°C. A line graph would emphasize the change.**
2	You want to compare all three districts' 2025 readings at a glance. Which graph described in the passage would you choose, and what would it make easy to see?	**A grouped bar chart would make it easy to compare the districts' 2025 temperatures.**
3	Which visual would best show whether districts with high 2025 readings are near one another? What information would it need beyond the table?	**A shaded map would show their locations. It would need district boundaries.**
4	If an infographic featured Riverton's highest 2025 reading as its headline number, what might viewers miss? Which printed display could they use to check?	**They might miss the differences among districts. They could check the table.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would track how students travel to school in September and May. A grouped bar chart would use survey counts to compare walking, biking, and bus riding in the two months. A shaded map would use survey percentages by home area to show where walking is most common in May. That map would not show whether walking increased since September.

Accept other formats when students correctly connect the format to the requested comparison or pattern. For Your Turn, look for two distinct formats, suitable data for each, and a plausible limitation.