UNIT 8 · STANDARD 6.SP.4

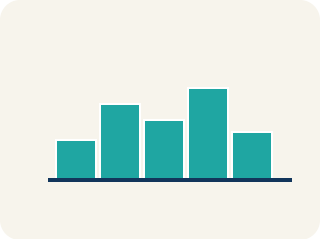
Display Data: Histograms

Lesson 8-6

Name: Type your name **Date:** Today's date **Class:** Class period

Key Vocabulary Level 2 Standard

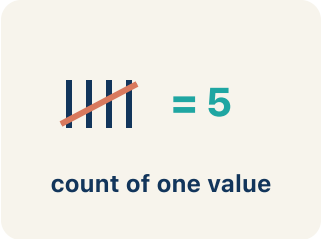
Picture first, then the word, then a plain-language meaning. Say each word out loud.



Bars side by side: 0-9 pts (3 players), 10-19 pts (8 players), 20-29 pts (4 players)

Histogram

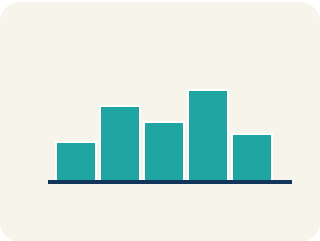
Write the definition:



If 5 players scored 10-19 points, the frequency for that interval is 5

Frequency

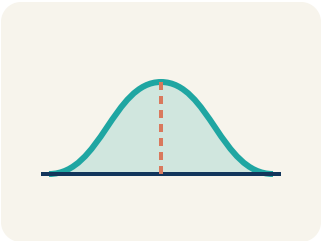
Write the definition:



0-9, 10-19, 20-29 are intervals of width 10 — each covers 10 values

Interval

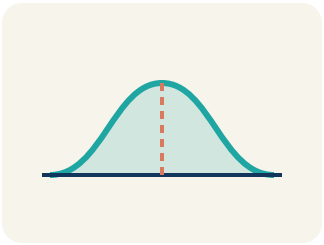
Write the definition:



Most data in the middle with fewer at the ends = bell-shaped; most on one side with a tail = skewed

Distribution

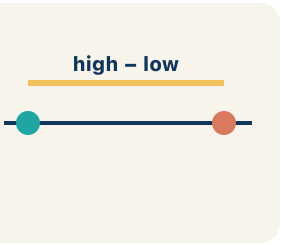
Write the definition:



A histogram that is tallest in the middle and shorter on both sides is symmetric

Data distribution

Write the definition:



Data in just 2 intervals = low variability. Data across 6 intervals = high variability

Variability

Write the definition:

Guided Notes Level 2 Standard

🎯 **WHAT WE'RE LEARNING TODAY**

I can make and read a histogram to display data in intervals.

✏️ **Fill in each blank as we go. Use the Word Bank to help you.**

📚 **WORD BANK — FILL EACH BLANK WITH THE BEST WORD**

Histogram | Frequency | Interval | Distribution | Data distribution | Variability

☝️ *Tap any word to see what it means and a picture.*

1. A bar graph that shows how often data falls into equal intervals is a _____.
2. How many data values fall in an interval is the _____.
3. An equal-sized range of values used to group data is an _____.
4. The overall pattern of how data is spread out is the _____.
5. The way data values are spread out is the _____.
6. How much the data values differ is the _____.

🧱 Watch & Try — Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

👀 **I do — watch**

Follow each step as your teacher solves it.

Problem: A histogram shows these frequencies: 0–4: 3 players, 5–9: 8 players, 10–14: 12 players, 15–19: 5 players. How many players are represented in total?

A. 28

B. 12

C. 20

D. 15

Step 1 Add all frequencies: 3 + 8 + 12 + 5 = 28 players.

✅ **Answer:** A. 28

🤝 **We do — together**

Solve this one with your class using the same steps.

Problem: In a histogram, what does the height of each bar represent?

A. The frequency (count) of data in that interval

B. The average of the data in that interval

C. The range of the interval

D. The median of the data

Step 1 _____

Step 2 _____

Answer: _____

✏️ **You do — your turn**

Now try one on your own. Show every step.

Problem: How is a histogram different from a regular bar graph?

A. Histogram bars touch (no gaps) because the intervals are continuous ranges

B. Histograms use colors and bar graphs don't

C. Bar graphs show numbers and histograms show words

D. There is no difference

Show your work:

Try It

Solve on your own. Check the answer key when you are done.

1. A histogram of steals per game has these frequencies — 0–9: 3 players, 10–19: 9 players, 20–29: 5 players, 30–39: 2 players. Which interval has the highest frequency (tallest bar)?

A. 10–19 with 9 players

B. 20–29 with 5 players

C. 0–9 with 3 players

D. 30–39 with 2 players

Show your work:

2. Read this histogram of assists per game — 0–4: 2 players, 5–9: 8 players, 10–14: 5 players, 15–19: 1 player. About how many players are on the team?

A. 16

B. 8

C. 4

D. 15

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A teacher collected test scores and made two different histograms — one with intervals of 5 (50–54, 55–59, etc.) and one with intervals of 20 (50–69, 70–89, 90–109). Both use the same data. How might the two histograms look different? Which interval size gives you more detail about the distribution? When might the larger interval be better?

Sentence starter: The histogram with intervals of 5 would have ___ bars and show ___. The histogram with intervals of 20 would have ___ bars and show ___. Smaller intervals are better when ___, and larger intervals are better when ___.

Show your work:

Reflect — Exit Ticket

A histogram of player heights shows: 60–63 in: 2, 64–67 in: 7, 68–71 in: 9, 72–75 in: 4. Which interval has the most players?

A. 68–71 inches

B. 64–67 inches

C. 72–75 inches

D. 60–63 inches

Your answer: