UNIT 8 · STANDARD 6.SP.1

Statistical Questions and Data Flagship

Lesson 8-1-flagship

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

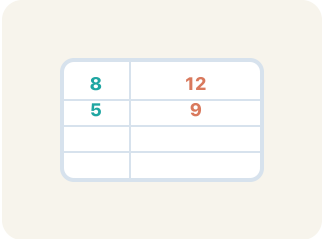
FRONT OFFICE MISSION

Scout the Hardwood

You are the new data analyst for the Riverside Hoops youth league. The head coach drops a stack of questions on your desk — some will yield rich data full of variety, others just one fixed fact. Master statistical questions and you decide what the front office actually investigates.

Key Vocabulary Level 2 Standard

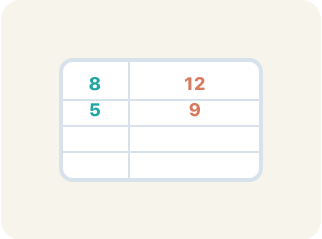
Picture first, then the word, then a plain-language meaning. Say each word out loud.



"How tall are the players on the team?" → answers vary: 60 in, 63 in, 58 in, 65 in

Statistical Question

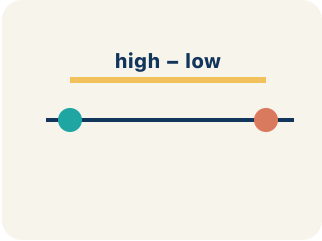
Write the definition:



Player heights: 60 in, 63 in, 58 in, 65 in — four different measurements

Data

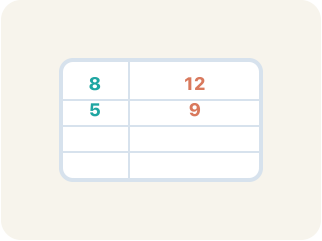
Write the definition:



Scores 10, 12, 11 are close together (low variability); scores 2, 15, 30 are far apart (high variability)

Variability

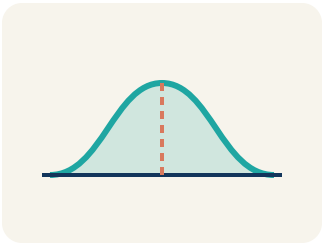
Write the definition:



Asking 50 students 'What is your favorite sport?' and recording the answers

Survey

Write the definition:



If most scores cluster in the middle with fewer at the edges, the distribution is symmetric

Data distribution

Write the definition:

Guided Notes Level 2 Standard

🎯 **WHAT WE'RE LEARNING TODAY**

I can tell the difference between a statistical question and a non-statistical question.

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

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

Statistical Question | Data | Variability | Survey | Data distribution

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

1. A question that expects a variety of answers and is answered by collecting data is a _____.

2. Facts or numbers collected to answer a question are _____.

3. How much the values in a data set differ from one another is the _____.

4. A way to collect data by asking many people the same question is a _____.

5. The way data values are spread out across a range 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: Which of the following is a statistical question?

A. How many points did each player score this season?

B. How many points are scored for a free throw?

C. What sport does this team play?

D. How many halves are in a soccer game?

Step 1 "How many points did each player score?" is statistical because different players will have different scores — there is variability in the data.

✅ **Answer:** A. How many points did each player score this season?

🤝 We do — together

Solve this one with your class using the same steps.

Problem: Which question is NOT a statistical question?

A. How many innings are in a baseball game?

B. How many home runs did each player hit this year?

C. How many miles does each runner train per week?

D. How tall is each player on the basketball team?

Step 1 _____

Step 2 _____

Answer: _____

✏️ **You do — your turn**

Now try one on your own. Show every step.

Problem: Why is 'How many hours of sleep did each student get last night?' a statistical question?

A. Because different students got different amounts of sleep

B. Because it asks about sleep

C. Because hours are numbers

D. Because the answer is always 8 hours

Show your work:

Try It

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

1. The front office wants ONE more question that will give varied data to analyze. Which question is statistical?

A. How many rebounds does each player grab per game?

B. How many players start the game on the court?

C. What is the name of the team's arena?

D. How long is one quarter of the game in minutes?

Show your work:

2. Why does "How many minutes does each player spend warming up?" anticipate variability?

A. Because different players warm up for different amounts of time

B. Because warming up happens before every game

C. Because minutes are always a number

D. Because every player warms up for exactly 10 minutes

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

Write one statistical question and one non-statistical question about your school's cafeteria. Explain why each question is or is not statistical, and describe what the data would look like for the statistical question.

Sentence starter: Statistical question: ____. This is statistical because ____. The data might look like: ____. Non-statistical question: ____. This is not statistical because ____.

Show your work:

Reflect — Exit Ticket

Which question is a statistical question? A) How many students are in the school? B) How many hours does each student in 6th grade exercise per week? C) What time does school start? D) How many days are in a week?

A. B) How many hours does each student exercise per week?

B. A) How many students are in the school?

C. C) What time does school start?

D. D) How many days are in a week?

Your answer: