Data Detective

Sort data by what the answers tell you.

8A.DSP.B "Data arise from a context and come in two types: quantitative (continuous or discrete) and categorical. Technology can be used to "clean" and organize data, including very large data sets..."

NAME _____ DATE _____

QUANTITATIVE DATA

Answers are counts or measurements. They tell how many or how much.

Distance a paper airplane flies, in meters

CATEGORICAL DATA

Answers name a group or describe a quality. They are not amounts you measure or count.

Brand of toothpaste in a bathroom

1 SORT

8 items

In Part 1, circle NUMBER or LABEL for each item; in Part 2, choose two items from different categories and explain how you knew where each belonged.

1.	Number of books borrowed from a library last week	NUMBER LABEL
2.	Height of a sunflower in centimeters	NUMBER LABEL
3.	Language spoken at home	NUMBER LABEL
4.	Temperature of soup in degrees Celsius	NUMBER LABEL
5.	Color of a backpack	NUMBER LABEL
6.	Mode of travel to school	NUMBER LABEL
7.	Number of goals scored in a game	NUMBER LABEL
8.	Amount of rain in millimeters yesterday	NUMBER LABEL

2 PROVE IT

Explain your thinking

Choose two items from different categories and explain how you knew where each belonged.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Write one new question that would give NUMBER data and one that would give LABEL data.

NUMBER _____

LABEL _____

CHALLENGE

For the same group of people, write a NUMBER question and a LABEL question, then give one possible answer to each.

ANSWER KEY # Data Detective

GRADE 8 · 8A.DSP.B

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Number of books borrowed from a library last week	**NUMBER**	The answer is a count of books.
2	Height of a sunflower in centimeters	**NUMBER**	The answer is a measurement of height.
3	Language spoken at home	**LABEL**	The answer names a language.
4	Temperature of soup in degrees Celsius	**NUMBER**	The answer is a measurement of temperature.
5	Color of a backpack	**LABEL**	The answer names a color.
6	Mode of travel to school	**LABEL**	The answer names a way of traveling.
7	Number of goals scored in a game	**NUMBER**	The answer is a count of goals.
8	Amount of rain in millimeters yesterday	**NUMBER**	The answer is a measurement of rainfall.

PART 2 · PROVE IT

Task: Choose two items from different categories and explain how you knew where each belonged. Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **NUMBER**: How many windows are in your classroom?
- **LABEL**: What is your favorite fruit?

Challenge: For swimmers on a team: How many laps did each swimmer finish? One answer is 12 laps. Which swim stroke does each swimmer prefer? One answer is backstroke.

Part 2 sample: Item 2 is NUMBER because height is measured; item 5 is LABEL because color names a group. Accept other pairs when each explanation matches the data.