Describe the Data

Name what was measured, who or what was observed, how data were collected, and the units

Name: _____ Date: _____

Part 1 - Measuring Quantities

Directions: Each data set is fictional classroom data. For each one, name the attribute under investigation, the observational unit, the measurement method, and the units. An observational unit is one person or object that gives one data value.

1. Apple masses

During a snack investigation, Ms. Chen placed each apple on a digital scale. The scale displayed mass in grams.

Apple	Mass
A	142 g
B	156 g
C	149 g
D	161 g

Attribute	
Observational unit	
Measurement method	
Units	

Describe the Data

Name what was measured, who or what was observed, how data were collected, and the units

Name: _____ Date: _____

Part 1 - Measuring Quantities (continued)

2. Garden-path times

Five students walked the same marked path in the school garden. A helper started and stopped a stopwatch for each student. Times were recorded in seconds.

Student	Time
Jada	38 s
Omar	41 s
Priya	36 s
Leo	44 s
Nia	39 s

Attribute	
Observational unit	
Measurement method	
Units	

Describe the Data

Name what was measured, who or what was observed, how data were collected, and the units

Name: _____ Date: _____

Part 2 - Recording a Category

3. Reading-format choices

At the start of reading time, six students each told the teacher which format they chose for one book. The teacher recorded each student's choice. This data set records categories, not numerical measurements.

Student	Chosen format
Amir	Print book
Rosa	Audio book
Ben	Print book
Keiko	Digital text
Tariq	Audio book
Mae	Print book

Attribute	
Observational unit	
Measurement method	
Units	

4. Explain: Why does Data Set 3 not need a numerical unit? Use the words *category* and *measurement*.

Describe the Data

Name what was measured, who or what was observed, how data were collected, and the units

Answer Key and Teaching Notes

Materials and setup: Print and supply all student pages, keeping teacher-key pages separate. Supply pencils and, if useful, highlighters. Students work independently for 12-15 minutes, then compare wording with a partner for 3 minutes. All data tables are supplied on the student pages; the data are fictional classroom data.

Teaching script: Say: “A data value describes one observational unit. First ask, ‘What is one value about?’ Next ask, ‘How was that value found?’ Finally, ask whether the value has a unit, such as grams or seconds. A category is recorded as a label, so it does not have a numerical unit.”

Observation method: While students work, use this checklist for each student: (1) circles or states the object/person that produced one value, (2) distinguishes the attribute from the unit, (3) names the stated collection tool or recording action, and (4) writes “no units” or an equivalent response for the categorical set. Ask a student who is stuck: “What does one row tell you about?” Do not supply the answer.

1. Attribute: mass of an apple. Observational unit: one apple. Measurement method: placing each apple on a digital scale. Units: grams (g). Accept “weight” only if the student also identifies grams and the scale; “mass” is the more precise attribute named by the data set.

2. Attribute: time to walk the garden path. Observational unit: one student walking the path, or one student's walk. Measurement method: timing with a stopwatch. Units: seconds (s).

3. Attribute: chosen reading format. Observational unit: one student. Measurement method: student tells a choice and teacher records it. Units: no units/not applicable. The entries are category labels, not measured amounts.

4. Sample response: “Data Set 3 gives a category for each student. It does not measure an amount, so there is no numerical unit.” Award credit when the response correctly connects categorical labels to the lack of a numerical measurement.

Quick rubric: For each of Items 1-3, award 1 point each for a correct attribute, observational unit, method, and units response (12 points). Award 2 points for Item 4: 1 for identifying categories and 1 for explaining that no amount was measured. Accept clear equivalent wording.