

Student's Name: _____

Date: / /2026

Topic:

Lesson 3: How do scientists collect and use data?

Grade:

Section:

NGSS:

3-5-ETS1

Cambridge Objectives

4TWSp.01, 4TWSp.02, 4TWSp.03 4TWSc.01, 4TWSc.02, 4TWSc.03, 4TWSc.04, 4TWSc.05, 4TWSc.06, 4TWSc.08

Lesson Objectives

State that scientists conduct research as part of an investigation
Identify different tools that scientists use.
Record data in appropriate tables and charts.

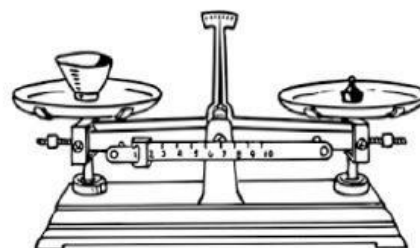
Question 1: Complete the following table by writing the name of each tool in the space provided.



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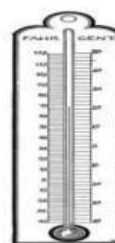
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Question 2: Write down the name of the tool you use to:

- a. Measure the mass of air in a balloon
- b. Measure the length of the teacher's table.
- c. Measure the temperature of your body
- d. Measure the force needed to pull your bag down
- e. see the cells of a plant's stem
- f. see the small words written on a coin

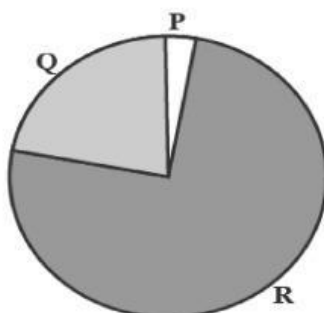
Question 3: Write the unit used to describe each measurement:

- a. The mass of an apple is 2.....
- b. The temperature of air outside is 28.....
- c. The length of my pencil is 15.....
- d. The force needed to pull my pencil case is 3.....

Question 4: Air is a mixture of gases; the following table shows the percentage of each gas in air.

Nitrogen	Oxygen	Other gases
78%	21%	1%

The following pie graph is used to represent the data in the table.



a. Write which gas does each letter show?

P

Q

R

Question 3: There are many resources scientists may use to do research in an investigation.

a. Write down three of these resources

1.

2.

3.

b. What is the best resources scientists may use to do a research about dinosaurs?

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Question 4: A farmer displayed the number of animals he has in his farm by using a bar chart.



a. Complete the table below by using the bar graph.

	Number of animals
chicken	20
horses	
Rabbits	
cows	40

b. Write down one conclusion you can understand about the data shown above.

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c. Complete the chart above by drawing a column to show the number of cows.

STUDENT SELF-REFLECTION & WORKSHEET FEEDBACK

Learning Objective & Focus Area	I feel confident! 	I need practice 	I found this hard 
Scientific Tools Identifying tools (microscopes, balances, spring scales) and matching them to measurement units.	[]	[]	[]
Scientific Research Naming resources scientists use to collect information and research scientific topics.	[]	[]	[]
Data Collection & Charts Reading, interpreting, and filling in tables, pie charts, and bar graphs.	[]	[]	[]

Student Feedback on the Worksheet

1. Which part of the worksheet did you enjoy the most?

- [] Q1 & Q2: Matching Tools & Uses
 [] Q3: Measurement Units
 [] Q4: Pie Chart (Air Composition)
 [] Q5: Research Resources
 [] Q6: Bar Chart (Farm Animals)

2. What was the easiest part for you?

3. What was the trickiest part, and what extra help do you need?

Supervisor's Signature	Teacher's Signature	Date