

Read the space. Find the story.

A reference and practice packet for line graphs, scatter plots, and pie graphs.

Name: _____ Class: _____ Date: _____

SCALE / Equal spaces, equal jumps

One square is not always one. Top value = number of spaces x value of each space. Fit every data value. Each axis can use a different scale.

LINE / Follow change in order

For these time graphs, put time on x and the measurement on y. Plot every pair, then join neighboring points in time order. A flat segment shows an unchanged reading.

SCATTER / One pair, one point

Keep paired measurements together. For these tasks, the first column goes on x. Leave dots unconnected. Describe the overall pattern and any exceptions; a pattern alone does not prove a cause.

PIE / Parts of one whole

Percent = count / total x 100. A 100-part circle has 1% per part. A 50-dot circle has 2% per SPACE between dots. The whole is always 100%, whatever the item count.

1. Eight spaces are worth 5 each. What is the top value? Show the calculation.

2. The largest value is 36. Does 4 per space fit on 8 spaces? Explain. Choose a scale that does fit.

3. Equally spaced tick labels read 0, 5, 10, 20. Rewrite them with equal jumps.

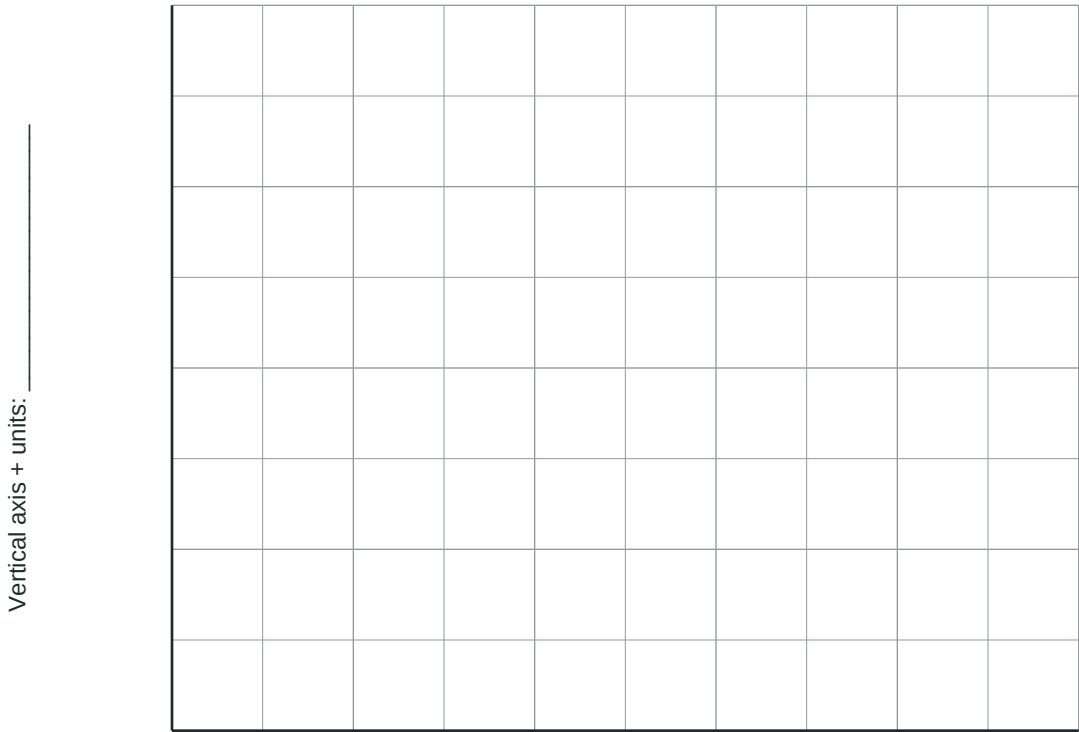
Line graph / cooling water

Build the graph. Include a title, both axis labels and units, even scales, and all six points.

Name: _____ Class: _____ Date: _____

Time (min)	0	2	4	6	8	10
Temperature (°C)	60	54	50	46	42	40

Title: _____



1. What is the total temperature drop? Show your work with units.
- _____
2. Which two-minute interval had the largest drop? Use two readings as evidence.
- _____
- _____

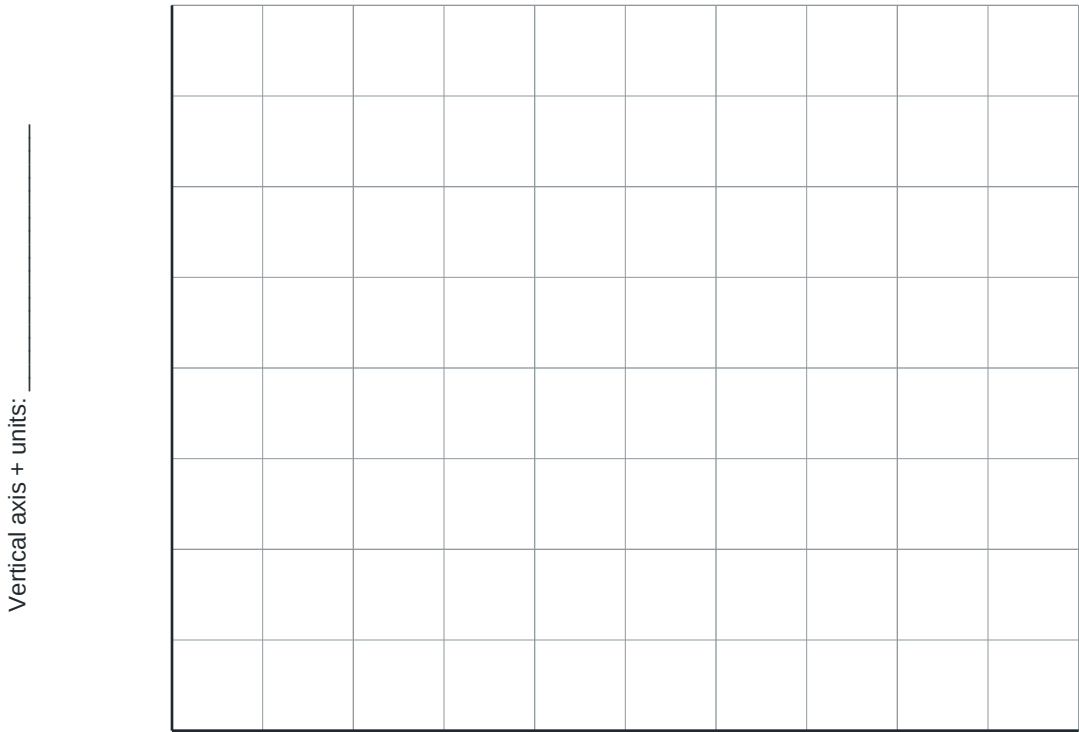
Scatter plot / ramp trials

Keep each ramp height paired with its rolling distance. Plot separate dots.

Name: _____ Class: _____ Date: _____

Ramp height (cm)	5	10	15	20	25	30
Distance (cm)	20	35	45	40	60	70

Title: _____



1. Describe the overall pattern AND the exception. Use the paired values.
-
2. How much shorter is the 20 cm ramp result than the 15 cm ramp result?
-

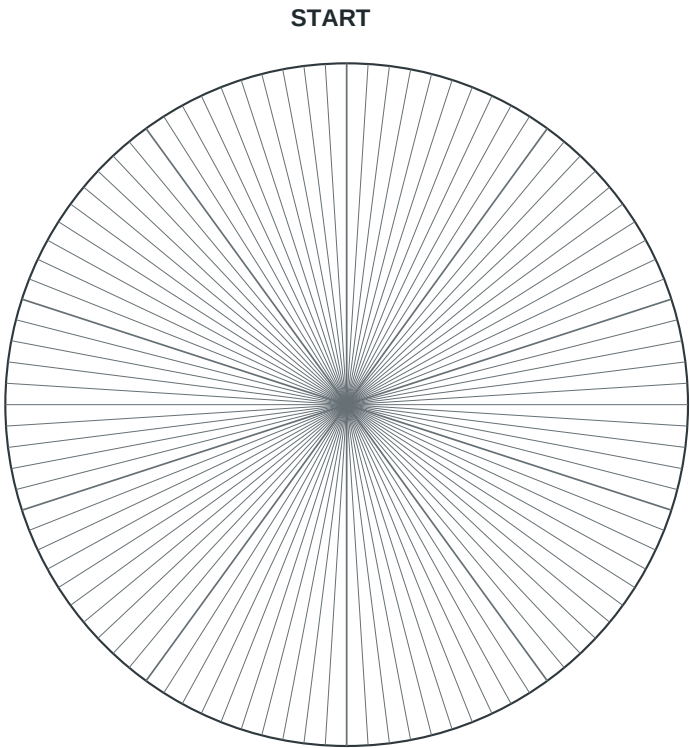
Pie graph / a collection of 50 rocks

Find percentages first. Build the slices on the 100-part circle; each little part is 1%.

Name: _____ Class: _____ Date: _____

Category	Count	Share (%)	Parts (1% each)
Basalt	20		
Granite	15		
Sandstone	10		
Marble	5		
Total	50		

Graph title: _____



KEY / LABELS

☐ _____
_____ %

☐ _____
_____ %

☐ _____
_____ %

☐ _____
_____ %

Whole = 100%

100 parts

1. What percentage is basalt and granite combined?

2. Why does a circle for 50 rocks still have 100 equal percent parts?

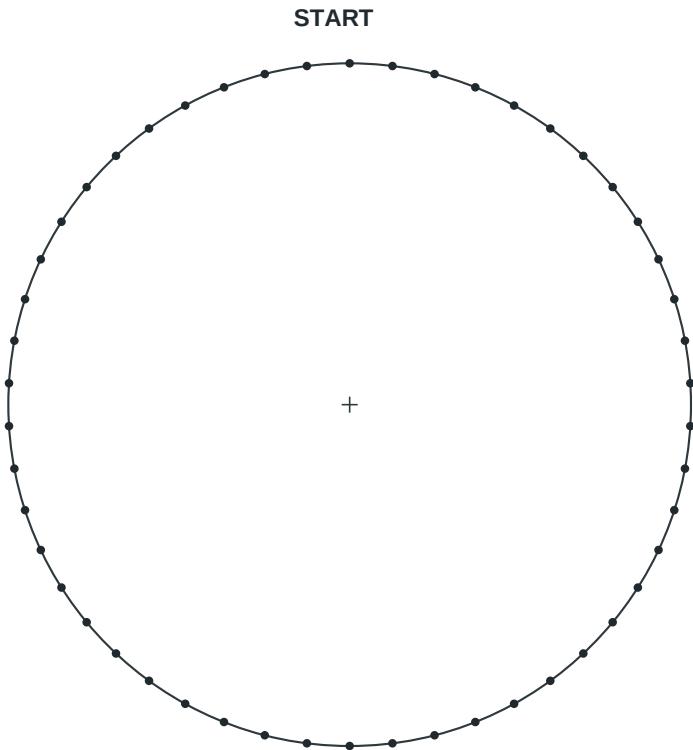
Pie graph / 200 recyclable items

Each space on this circle is 2%. Spaces = percent / 2. Count gaps, not dots.

Name: _____ Class: _____ Date: _____

Category	Count	Share (%)	Spaces (2% each)
Paper	72		
Plastic	56		
Metal	40		
Glass	32		
Total	200		

Graph title: _____



KEY / LABELS

☐ _____
_____ %

☐ _____
_____ %

☐ _____
_____ %

☐ _____
_____ %

Whole = 100%
50 spaces

1. How many percentage points larger is paper's share than glass's share?

2. Do these slice sizes show item counts, mass, or volume? Explain.

Mixed review / choose and explain

Use the graph type that answers the question. Give a reason, not just a name.

Name: _____ Class: _____ Date: _____

1. You compare counts of four seed types. Choose a graph type and explain why.

2. You measure the same cup's temperature every minute. Choose a graph type and explain why.

3. You measure the length and width of six different leaves. What does one scatter-plot dot represent?

4. A time graph is flat from minute 2 to minute 4. What does that mean? Must its value be zero?

5. Fifteen of 50 rocks are granite. Find its percentage and its spaces on a 50-dot circle.

6. Shadier garden spots tend to be cooler, but soil moisture also differs. Does the graph alone prove the cause? Explain.
