

Teacher Guide

Multiplication Posters

Equal Groups Schema • Grades 3–5

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Free Supplement

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PURPOSE OF THIS GUIDE

This guide supports teachers in facilitating schema-based instruction using the Multiplication Posters. Each poster is designed to build students' ability to recognize equal groups problem structures — not just compute answers. Use the prompts, graphic organizers, and key ideas below to guide discussion, questioning, and student reasoning.

THE EQUAL GROUPS SCHEMA

All 12 posters use the Equal Groups schema. The three quantities in every equal groups situation are:

Number of Groups	Amount in Each Group	Total
How many groups are there?	How many in every group?	How many altogether?
<i>Known → Multiply</i>	<i>Unknown → Total ÷ Groups</i>	<i>Unknown → Total ÷ Each</i>

CLASSROOM QUICK TIPS

- Have students fill in the graphic organizer before writing any equation.
- Ask students to name what is known and what is unknown before computing.
- Orange boxes in the organizer signal the unknown quantity — the question being asked.
- Posters 1–5 find the total (multiplication). Posters 6–12 find a missing factor (division).
- Post the Equal Groups graphic organizer on an anchor chart so students can reference it during discussion.

POSTER CARD REFERENCES

Each entry below shows the schema formula, what students should notice, a teacher move question, the completed graphic organizer (with the unknown highlighted in orange), and the key idea. Orange boxes indicate the unknown quantity for that poster.

1. How Many Cans?

Schema: *Equal Groups — Number of Groups × Amount in Each = Total*

What Students Should Notice

- 4 equal groups (shelves) with 6 cans on each
- The total is unknown — we multiply to find it
- All groups have the same amount

Teacher Move: Ask: "Can you count just one shelf? How does that help you find all the cans?"

Equal Groups Graphic Organizer

<i>Number of Groups</i>	×	<i>Amount in Each</i>	=	<i>Total</i>
4		6		?

Key Idea: This is a find-the-total problem. Students multiply 4×6 to find 24 cans. All shelves have equal amounts, which is the hallmark of equal groups.

2. How Many Total Scoops?

Schema: *Equal Groups — Number of Groups × Amount in Each = Total*

What Students Should Notice

- 9 ice cream cones (groups), each with 3 scoops
- The total number of scoops is unknown
- Each group is the same size

Teacher Move: Ask: "If every cone has the same number of scoops, what operation helps us find the total?"

Equal Groups Graphic Organizer

<i>Number of Groups</i>	×	<i>Amount in Each</i>	=	<i>Total</i>
9		3		?

Key Idea: Students multiply $9 \times 3 = 27$ total scoops. This poster reinforces that equal groups problems always have uniform group sizes.