



AlcumusForge

Meet the Cast

STANDARD EDITION

Spark & Anvil

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This book collects 6 chapter books from the *AlcumusForge* cast — each character embodies a different curricular primitive; together they teach the full subject.

Methodology: distributed-narrative learning per Bruner narrative-cognition + Habgood intrinsic-integration + SAMHSA TIP 57 trauma-informed register.

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This is Volume 2 of 2 of the *AlcumusForge* — *Meet the Cast* series; each volume is a complete standalone book you can read on its own.

For everyone who learns by hearing a story first.

Contents

- Copyright & License
- Contents
- Introduction
- Edge Goldi**
- Mistake Mabel**
- Mix Margo**
- Recall Remy**
- Hint Hertha and Stretch Sage**
- Model Milo and Fade Faye**
 - About Spark & Anvil
 - More chapter books from Spark & Anvil
 - Methodology
 - License

Introduction

The AlcumusForge cast was authored to embody the curriculum, not decorate around it. Each of the 6 characters you'll meet in this book teaches a specific primitive — a particular tactic, a particular technique, a particular way of seeing. Together they form an ensemble: the cast IS the curriculum.

Read in any order. Each chapter stands alone.
Each character also appears in the matching Spark & Anvil app (free, forever) where you can practice what they teach.

— *The editors at Spark & Anvil*

Edge Goldi

edge of competence — practicing at the just-right level, a little past easy but not into too-hard



A young mountain goat picked her way along the Library's back stairs as if they were a cliff.

Her name was Edge Goldi, and she had a peculiar talent: she could look at any climb and find the *just-right* next step — not the easy ledge you could already reach in your sleep, and not the impossible one that would send you tumbling, but the one a little above your hooves that you could *just* manage if you stretched.

Maya found her studying a shelf of practice problems, sorting them with quick taps of one hoof.

"Too easy," Goldi muttered, nudging one aside. "Too easy. Way too hard — you'd just get scared and learn nothing." She stopped at one and brightened. "*This* one. This is your ledge."

Maya looked. "It looks kind of hard."

"It's *supposed* to look kind of hard," Goldi said. "That's how you know it's right. If it looked easy, you'd already know it — no growing there. If it looked impossible, you'd freeze. But a little-bit-hard, the kind where you think 'hmm, maybe, if I really try'? That's the ledge where you actually climb. That's where all the growing happens."



Goldi balanced neatly on the shelf's edge.

"Here's what I know from a life on cliffs," she said. "There are three kinds of steps. Steps below you — too easy, boring, you just walk them, you don't get stronger. Steps way above you — too hard, terrifying, you can't reach and you give up. And then there's the step *just* above your hooves. A little stretch. A real reach, but a reach you can make." She tapped the just-right problem. "Stay on that step — the edge of what you can do — and you climb faster than you ever thought possible. Drift too low, you stall. Reach too high, you fall. The whole secret is staying on the edge."

"But the edge is uncomfortable," Maya said.

"A *little* uncomfortable," Goldi agreed. "Good-uncomfortable. The kind where your heart speeds up a bit and your mind leans in. Not the bad kind where your stomach drops and you want to quit. There's a big difference, and I spend my whole life feeling for it. Too-easy is boring. Too-hard is scary. Just-right is *alive*."



So Maya let Goldi pick her ledges for a while.

Each problem Goldi chose made Maya stretch — she'd think *I'm not sure I can do this* — and then, more often than not, she *could*, just barely, with real effort. When something started feeling easy, Goldi nudged her up a step. When Maya hit one that made her chest go tight with that bad, frozen feeling, Goldi quietly slid it away.

"Too high," Goldi would say. "Not yet. Let's find the step right below it." And she'd offer something a little gentler — still a stretch, but a reachable one.

After a week of climbing edge to edge, Maya looked back at where she'd started and was amazed. "The problems I'm doing now," she said, "I couldn't have touched these last week. They'd have been a too-high ledge."

"And now they're your easy steps," Goldi said. "That's how the climb works. Today's edge becomes tomorrow's easy ground. You just have to keep finding the next ledge."



Goldi nodded at the distance Maya had covered, sure-footed and proud.

"Feel that?" she said. "You didn't grow by doing easy things over and over — that's just walking in place. And you didn't grow by throwing yourself at impossible things — that's just falling. You grew by living right on your edge: the spot that was a little hard, every single day. A little hard, a little hard, a little hard — and look how high you've climbed."

Maya looked down at the gap between where she'd been and where she stood. "It wasn't even scary, mostly," she said. "It was kind of... exciting."

"That's the just-right feeling," Goldi said warmly. "People think a challenge has to feel like fear. But the right-sized challenge doesn't feel like fear. It feels like *leaning in*. Like being awake. The trick was never to avoid all struggle — it was to find the amount of struggle that feels good instead of bad. And that amount is real. I can find it. And soon, so will you."



Later, on the Library steps, Maya sat with Goldi as the sun went orange.

"Can I ask you something?" Maya said. "How do you tell the good-hard from the bad-hard? They both feel hard."

Goldi considered, hooves tucked under her.

"They feel different once you learn to listen," she said. "Bad-hard makes you want to disappear — your mind goes blank, your stomach knots, you'd do anything to stop. That's too-high. Good-hard makes you lean *toward* the problem. You're working, you're maybe a little frustrated, but some part of you is curious, alive, reaching." She smiled. "When I was little, I thought all hard things were the bad kind, so I avoided every challenge. Then I learned there's a kind of hard that *feels good* — and once you can find it, you stop being afraid of difficulty. You start looking for the right amount of it. On purpose. Because that's where you get to be the bravest, best version of yourself."

She gazed out at the steps, every one a ledge she'd happily climb.

And as Maya headed home, she carried the new feeling with her — not the old dread of things being hard, but a warm, leaning-in kind of eagerness to find her next just-right ledge, and the quiet pride of knowing that a little struggle, the right amount, was exactly where she became more herself.

Mistake Mabel

mistakes as information — treating each error as a clue that shows exactly what to practice next



A magpie swooped down on Maya's wrong answer like it was made of gold.

Her name was Mistake Mabel, and she was the only creature in the Library who got *excited* when you got something wrong. Where everyone else might wince, Mabel's eyes went bright. She'd hop right up to the error, tilt her glossy head, and study it like a jewel.

"Ooh," she said, peering at the X on Maya's page. "A *mistake*. A real, proper one. Lovely. Do you know what this is, Maya?"

Maya's face was hot. "It's... me getting it wrong."

"It's a *map*," Mabel said, delighted. "A little map that shows me exactly — exactly! — where the gap in your understanding is. You could do a hundred problems right and I'd learn almost nothing about what you need. But one mistake? One good mistake tells me precisely what to help you with next. A right answer says 'all fine here.' A wrong answer says 'dig *here*.' I love a wrong answer. It's the most useful thing you can give me."



Mabel hopped along the table's edge, turning the mistake this way and that.

"Here's the thing nobody tells you," she said. "Mistakes feel awful because everyone treats them like a verdict — like getting it wrong means something bad about *you*. But that's not what a mistake is. A mistake is just *information*. It's your work, honestly showing where it got tangled. And there is nothing in the whole world more useful for learning than knowing exactly where you got tangled."

She tapped the error gently. "Look — you didn't get this one wrong randomly. You got it wrong in a *particular way*. And that particular way tells me the particular thing to practice. If you'd just gotten it right, that thing would've stayed hidden, and it'd trip you again later when it mattered more. Your mistake brought it into the light, where we can actually fix it. That's not failing. That's the opposite of failing. That's finding the thing."

"So you're... glad I got it wrong?" Maya asked.

"I'm glad you got it wrong *here*, safely, where we can learn from it," Mabel said. "Much better than getting it wrong later, somewhere it counts."



So Maya started showing Mabel her mistakes instead of hiding them.

It felt strange — every instinct said to cover the wrong answer, crumple the page, pretend it hadn't happened. But Mabel met each one with that same bright curiosity, never a flicker of judgment, and slowly the hot-faced feeling started to fade.

"This one," Mabel said, studying an error, "you flipped a step. See? Not because you don't understand — because the step is sneaky. Lots of people flip it. Now that we *see* it, we practice exactly that step, three times, and it stops being sneaky."

And it worked. The mistakes Maya showed Mabel turned, one by one, into the exact things she got *good* at — because each wrong answer had pointed like an arrow at the thing she most needed.

"It's like the mistakes are doing the teaching," Maya said, surprised.

"They are," Mabel said. "They always were. Most people just never look at them long enough to hear what they're saying."



Mabel admired the page, now covered in fixed-up mistakes.

"See what we did?" she said. "We took the things you'd normally be ashamed of — the wrong answers, the X's — and we used every single one. Each mistake was a clue, and we followed every clue, and now you understand things you'd never have learned if you'd gotten everything right." She ruffled her wings. "A perfect page teaches you nothing. A page with good mistakes, looked at honestly, teaches you *everything you didn't know you needed*."

Maya looked at her once-dreaded mistakes, now circled and understood. "I used to hate getting things wrong so much I'd stop trying," she admitted. "So I wouldn't have to see the wrong answers."

"That's the real cost of being ashamed of mistakes," Mabel said gently. "It's not the mistakes that hurt you. It's *hiding* from them — never trying hard things, so you never get any wrong, so you never learn what they'd have taught you. The kids who let themselves make mistakes, and *look* at them, leave everyone else behind. Not despite the mistakes. *Because* of them."



Later, as the Library lamps came on, Maya sat with Mabel among the day's crossed-out work.

"Can I ask you something?" Maya said. "Why do *you* love mistakes so much? Doesn't anything about a wrong answer bother you?"

Mabel tucked a wing thoughtfully.

"Only one thing bothers me about a wrong answer," she said. "When somebody throws it away unlooked-at. That's the only waste. The mistake itself? It's a gift — it came all the way from inside your own thinking to show you something true about where you are. The least I can do is be glad to see it." She cocked her bright head. "When I was young, I was as ashamed of mistakes as anyone. I'd go red and want to vanish. Then I realized the shame was the only part that actually hurt — the mistake itself was just trying to *help* me. So I decided to be on the mistake's side. And the moment I stopped being ashamed, I started learning twice as fast."

She nudged a crossed-out problem fondly.

And as Maya gathered her papers — keeping the mistake-filled ones now, instead of crumpling them — she felt the hot shame she'd always carried about getting things wrong loosen and lift, replaced by something almost like gratitude: the surprising, freeing knowledge that her mistakes had never been her enemies, but quiet little maps, pointing her exactly where she most needed to go.

Mix Margo

interleaving — mixing different kinds of problems together instead of doing many of the same in a row



A clever otter kept shuffling Maya's practice cards just when Maya had gotten comfortable.

Her name was Mix Margo, and she had a mischievous streak. Whenever Maya settled into a nice cozy row of the same kind of problem — ten of them, all alike, one after another — Margo would slide up, scoop the cards, and shuffle in some *different* kinds.

"Hey!" Maya said. "I was on a roll. They were all the same kind and I was getting them all right."

"That's exactly why I mixed them," Margo said, grinning. "Doing ten of the same kind in a row *feels* great — you get into a groove, you get them all right, you feel like a genius. But here's the secret: you're not really practicing the *math* anymore. You're just repeating the same move on autopilot. The minute the problems are all alike, your brain stops working out *which* move to use — it already knows it's the same as the last one." She fanned the now-mixed cards. "So I mix them. Now you have to figure out, every single time, *what kind* of problem this even is. That's the part that actually matters."



Margo flipped through the shuffled deck, pleased with the chaos.

"Think about it," she said. "In real life, problems don't come labeled and sorted. Nobody hands you ten of the same kind in a tidy row. They come jumbled — this kind, then a totally different kind, then another. So if you only ever practice them sorted, you get good at the *easy* part — doing the move once you know which move it is — and terrible at the *hard* part: figuring out which move it even needs."

She tapped a mixed pair. "When they're all the same, you never practice choosing. When they're mixed, every problem starts with a real question: *what is this, and what does it need?* That choosing — that's the skill that actually counts when it's not practice anymore. And the only way to build it is to mix."

"But mixing makes it harder," Maya said. "I get more wrong."

"You do, at first," Margo admitted cheerfully. "Mixed practice feels worse in the moment. Sorted practice feels better. And yet mixed is the one that sticks. Funny how often the comfortable way and the useful way aren't the same way."



So Maya let Margo keep the deck shuffled, even though it felt harder.

And it *was* harder. With sorted problems, Maya had breezed along. With mixed ones, she had to stop at each card and actually think: *wait, what kind is this? which method?* She got more wrong at first. It felt less like a triumphant roll and more like real, effortful work.

But then came a test of the mixed kind — problems jumbled together, no labels — and Maya noticed something. While other kids froze, unsure which method each problem needed, Maya just... knew. She'd been practicing exactly that.

"I could tell them apart," she said afterward, a little amazed. "All mixed up, and I knew which was which. That was the hard part for everyone else. It was easy for me."

"Because you practiced the *choosing*," Margo said. "Everyone else practiced the doing-once-you-know. You practiced the part that's actually hard. That's why it felt harder all those weeks — you were building the thing that matters."



Margo did a little victory roll, deck of mixed cards in her paws.

"See the trade?" she said. "Sorted practice: feels great now, helps you a little. Mixed practice: feels worse now, helps you *a lot*, later. Most folks pick the one that feels good in the moment, and then wonder why it all falls apart when the problems come jumbled in real life." She grinned. "You picked the harder-feeling one. And it just paid off."

Maya looked back at all those weeks of effortful mixed practice. "I almost asked you to stop," she said. "It felt like I was doing worse."

"That's the trap of it," Margo said, gentler now. "The thing that builds you up the most often *feels* like it's going badly while you're in it — more mistakes, more effort, less of that smooth roll. And the thing that feels smoothest often builds you the least. Learning to trust the harder-feeling path, when you know it's the better one — that's a kind of growing up." She tucked the cards away. "You'll feel that trade everywhere, your whole life. The comfortable way and the way that actually makes you stronger. Now you know they're not always the same — and you know which one to pick when it counts."



Later, on the Library porch, Maya sat with Margo as the evening came in.

"Can I ask you something?" Maya said. "Doesn't it feel mean, mixing everything up when someone's finally comfortable?"

Margo laughed softly, then went thoughtful.

"It used to worry me," she admitted. "Snatching away the cozy roll just when someone's enjoying it — it can look unkind. But I figured out the difference between comfortable and *good for you*. Letting someone stay comfortable when the comfort isn't helping them — that's the unkind thing, really. It feels nice and leaves them weak." She shrugged, warm. "Mixing it up is harder in the moment, yes. But it's the kind of harder that *cares* about who you'll be later. I'm not making it harder to be mean. I'm making it harder because I believe in the version of you that's coming."

She gazed out at the dusk.

And as Maya walked home, she carried the new understanding lightly: that the easy, comfortable way wasn't always the way that made her stronger — and that choosing the harder-feeling path, when she trusted where it led, was something she could feel genuinely proud of, like a quiet promise to her future self.

Recall Remy

retrieval practice — closing the book and trying to remember beats reading it again



A quiet fox kept gently closing Maya's book right when she wanted to peek.

His name was Recall Remy, and he had one steady belief: that the moment you most want to look up the answer is the exact moment you should try hardest to remember it instead. Whenever Maya reached to flip back to the notes, Remy's paw would rest softly on the page.

"Wait," he said. "Before you look — *try*. Close the book and see what you can pull up on your own. Even if it's hard. *Especially* if it's hard."

Maya frowned. "But I don't remember it. That's why I want to look."

"You don't remember it *easily*," Remy said. "That's different from not remembering it at all. There's a piece of it in there, a little buried. And the work of digging it up — that struggle to *pull* it out — that's the thing that makes it stick. If you just look it up, you push it back into your eyes for a second and it leaks right out again. But if you *recall* it, drag it up yourself, you make the path to it stronger. Next time it'll come easier. The time after that, easier still."



Remy sat back, calm and certain.

"Here's the difference most people miss," he said. "Reading something again feels like learning. It's smooth, it's easy, the words are right there, and you think 'yes, I know this.' But that smooth feeling is a trick. Recognizing something on the page isn't the same as being able to *produce* it when the page is gone." He tapped the closed cover. "Real knowing is being able to pull it up from inside, with nothing to look at. And the only way to practice *that* is to practice *exactly that*: close the book, and reach for the answer in the dark."

"But it's uncomfortable," Maya said. "Sitting there trying to remember when I'm not sure."

"It is," Remy agreed. "That little struggle — the reaching, the not-being-sure, the slow dragging-up — feels worse than just reading the answer. But that struggle *is* the learning. The harder you have to reach for something, the stronger you make the reaching. Looking it up skips the struggle, so it skips the learning. The discomfort isn't in the way of remembering. It *is* the remembering."



So Maya started closing the book first, every time, before she let herself peek.

It was hard. She'd sit, eyes shut, *reaching* — sometimes coming up with nothing, sometimes dragging up a fragment, sometimes, slowly, pulling the whole thing into the light. When she truly couldn't, Remy let her look — "checking is fine, *after* you've tried" — but the trying always came first.

And the things she'd had to *reach* for, she found, were the things that stayed. A fact she'd struggled to recall on Monday came up easily by Thursday. A method she'd dragged up from almost-nothing was just *there* the next week, ready.

"The stuff I had to fight to remember," Maya said, "is the stuff I remember best now. That's backwards."

"It only looks backwards," Remy said. "The fight *was* the learning. The easy stuff — the stuff you just reread — that's what faded. The stuff you pulled up yourself is the stuff you own."



Remy nodded slowly at the closed book between them.

"See the trade?" he said. "Rereading: feels productive, teaches little, fades fast. Recalling: feels like a struggle, teaches deeply, lasts. Almost everybody rereads, because it's comfortable and it *feels* like studying. The ones who close the book and reach instead — they're the ones who actually keep what they learn." He nudged the cover. "You stopped pushing knowledge back into your eyes. You started pulling it out of your own head. That's the whole difference."

Maya looked at the book she'd kept closed all afternoon. "It felt like I was struggling more," she said. "Like I was doing worse than when I just read it over."

"That's the feeling that fools everyone," Remy said gently. "When you reread, you feel smooth and confident — and learn little. When you recall, you feel like you're straining and failing — and learn a lot. The feeling and the learning point opposite ways. Once you know that, you can stop trusting the smooth feeling, and start trusting the struggle. The struggle's the one telling the truth."



Later, on the Library steps, Maya sat with Remy in the cooling air.

"Can I ask you something?" she said. "Doesn't it feel discouraging — sitting there trying to remember and coming up empty sometimes?"

Remy was quiet a moment, tail curled around his paws.

"It used to discourage me terribly," he said. "I'd reach for something, find nothing, and feel like I'd failed — like the blank meant I was no good. So I'd give up and just reread, where everything felt easy." He shook his head slowly. "Then I understood what the blank actually was. The blank isn't failure. The blank is the *reaching* — and the reaching is exactly what builds the path. Every time you strain to remember, even when you come up short, you're laying down the road that'll get you there next time. The empty feeling isn't proof you can't. It's the muscle working."

He looked out at the darkening grounds.

"So now," he said, "when I close the book and reach into the dark and find nothing at first, I don't feel discouraged. I feel the muscle working. And I know that the harder this reach is, the stronger I'll be on the other side of it."

And as Maya headed home, she carried the steadier feeling with her: that the strain of trying to remember wasn't a sign she was failing, but the very feeling of getting stronger — and that everything she'd ever fought to pull up from inside herself was, for that exact reason, hers to keep.

Hint Hertha and Stretch Sage

smaller-then-wider — deep mastery happens when you SHRINK a hard problem to find the meaning AND widen a solved problem to find the structure. Two directions. One discipline.



Maya was stuck.

She had been stuck for twenty minutes. The problem on her worksheet was not, by Library standards, especially monstrous. It said:

A baker has a recipe that calls for $\frac{3}{4}$ cup of flour. She wants to make $\frac{2}{3}$ of a batch. How much flour does she use?

Maya stared at it. She tried *adding* the fractions. That felt wrong. She tried *subtracting* them. That felt wrong too. She thought maybe she had to *multiply* them, but multiplying two fractions less than one would make the answer *smaller* than either, and she didn't know if that was even legal. She had been chewing on her pencil for so long the eraser had teeth marks.

Eventually she pushed back from the table. She walked over to the wooden booth between the children's section and the back room. She rang the bell.

Ding.

The brass shutter clanked open. Hint Hertha looked out over her round glasses. She had three knitting needles balanced on her wrist and a small ball of yellow yarn in her lap.

"Tell me what the problem is asking," she said.

Maya read it out loud. The whole thing. Twice. Hertha nodded each time. She set down her knitting.

She said, "What does it mean to take *two-thirds of a batch*?"

Maya frowned. "It means... you make less than a whole batch. You make a smaller batch."

"How much smaller?"

"Two-thirds of the size."

"So if a whole batch needed *three cups of flour*, how much would two-thirds of a batch need?"

Maya thought. "Two cups."

"Why?"

"Because two-thirds of three is two."

Hertha smiled. "Excellent. Now. The recipe doesn't call for three cups. It calls for *three-quarters of a cup*. So what does *two-thirds of three-quarters* mean?"

Maya stared at the page.

"Oh," she whispered.



She walked back to her table. She wrote slowly:

I need $\frac{2}{3}$ of $\frac{3}{4}$ of a cup.

She turned that over in her head. *Two-thirds of three-quarters*. It wasn't an addition problem. It wasn't a subtraction problem. It was a *taking-part-of-a-part* problem.

She had done these before. With whole numbers. *Two-thirds of fifteen*. You divide by three, then multiply by two. *Fifteen divided by three is five. Five times two is ten*. So two-thirds of fifteen was ten.

The same recipe must work for fractions.

Three-quarters divided by three is one-quarter. One-quarter times two is two-quarters. Two-quarters is one-half.

The baker uses *half a cup of flour*.

Maya checked it. *Half a cup is two-thirds of three-quarters of a cup*. She drew a quick picture. A glass with three-quarters of a cup. Mark off two-thirds of that height. Yes. The mark landed exactly at one-half.

She laughed quietly. She wrote $\frac{1}{2}$ cup in the answer box. She put down the pencil.

The pencil felt much lighter than it had ten minutes ago.



Maya was packing up to go home when she heard a low rumble of a voice behind her.

"What's that on the worksheet?"

She turned around. Stretch Sage was standing in the aisle, holding his sketchbook under one arm. He had come over from the alcove. He must have been watching.

"It's a fraction problem," Maya said. "I figured it out."

"May I see?"

She handed him the worksheet.

Stretch read the problem. He read Maya's work. He nodded slowly. He turned his crooked smile on her.

"This is good," he said. "Hertha got you to see it as *taking a part of a part*. That's the real meaning. Most kids never get that meaning. They just memorize *multiply across the top, multiply across the bottom*. You actually saw it."

"Thank you."

"What would happen," Stretch said, tapping the page, "if the baker wanted to make *seven-eighths* of a batch instead of two-thirds?"

Maya thought.

"Then I'd need seven-eighths of three-quarters."

"And how would you do that?"

"Three-quarters divided by eight is *three-thirty-seconds*. Times seven is *twenty-one thirty-seconds*. I'd use twenty-one thirty-seconds of a cup."

"Whatever-thirty-seconds is small," Stretch said. "Is that right?"

"It's less than a cup. The original was three-quarters of a cup. Seven-eighths is *almost* a whole batch. So the flour should be *almost three-quarters of a cup*. Twenty-one thirty-seconds is..."

She did the math.

"Twenty-four thirty-seconds is three-quarters. Twenty-one is three less than twenty-four. So it's three thirty-seconds less than three-quarters. That's a little less than a teaspoon less than three-quarters. That sounds right."

"That sounds right to me too," Stretch said. He nodded approvingly.

He flipped the worksheet over.

"Now, what would happen," he said, "if the *recipe* called for $\frac{2}{3}$ cup of flour instead of three-quarters, and the baker wanted $\frac{3}{4}$ of a batch instead of two-thirds?"

Maya squinted. "That's... the same numbers. Just swapped."

"Is it the same answer?"

She paused. *Three-quarters of two-thirds. Two-thirds of three-quarters.* She had figured both of those.

Three-quarters of two-thirds. *Two-thirds divided by four is two-twelfths. Times three is six-twelfths. Which is one-half.*

The same answer.

Half a cup.

Maya's eyes went wide.

"It's the same?"

"It's the same."

"But that doesn't make sense. The recipe is different. The batch size is different."

"And yet," Stretch said.

Maya stared at her worksheet.



"The *order doesn't matter*," she said slowly. "Two-thirds of three-quarters is the same as three-quarters of two-thirds. The flour needed is the same."

"Why might that be?" Stretch asked.

Maya thought hard. The answer was hovering somewhere just out of reach.

"Because... we're taking the same total amount of stuff each time? Two-thirds and three-quarters multiplied together is the same as three-quarters and two-thirds multiplied together. *Multiplication doesn't care about order*. Two times three is the same as three times two. So when we *multiply* fractions to get a *part of a part*, it doesn't matter which is the part and which is the whole."

"That's a *deep* observation," Stretch said. "That's actually a *property of multiplication*. Mathematicians call it *commutativity*. It holds for whole numbers. It holds for fractions. It holds for almost every kind of number you'll meet. *Multiplication doesn't care about order*. Addition doesn't either. Subtraction *does*. Division *does*. You can tell a lot about an operation by asking whether it cares about order."

Maya looked at the worksheet again. The original problem felt very, very small now. It had grown into something much wider.

She had started the afternoon stuck on one fraction-baking problem.

She had ended it with a *property of multiplication*.



She was packing her bag for real this time. Hertha had come out of her booth to stretch her legs. Stretch was still leaning on the table.

"You two ganged up on me," Maya said, almost laughing.

"We didn't gang up," Hertha said. "I showed up first. Sage showed up second. He always does that."

"I show up after the problem has been *defeated*," Stretch said. "I cannot defeat problems. I can only widen them. Hertha defeats them by *making them smaller*. Then I take what is left and make it *bigger again*. In a different direction."

"It's the same problem," Hertha said.

"It is the same problem," Stretch said.

"It's just *gone smaller and then wider*," Hertha said.

"You make it sound easy," Maya said.

"I make it sound *like a discipline*," Hertha said. "Which is what it is. The problem on your page took twenty minutes. The lesson took *one afternoon*. The lesson is going to last a year. That is the trade."

Stretch nodded slowly.

"Smaller, then wider," he said. "That's the whole job."

"That's the whole job," Hertha agreed.

Maya walked home along the path through the gardens. She did not stop thinking about three-quarters and two-thirds the whole way. She did not stop thinking about *commutativity* either, even though she did not yet trust the word. She had never met a math word she trusted on first acquaintance.

But she had decided one thing.

She would ring the bell again tomorrow.

And then she would go find Stretch in his alcove.

She would do it in that order. But that wasn't the part that stayed with her on the walk home. What stayed with her was the feeling in her chest — light and warm and a little proud, the way you feel when something huge turns out to be friendly after all. She had walked into the afternoon tangled up and worried. She walked home glad, her shoulders easy, humming a little without noticing.

Model Milo and Fade Faye

worked-example-to-faded-practice — you learn a hard method fastest by first studying a complete worked example (every step shown), then practicing problems where the support is removed a little at a time (some steps filled in, then fewer, then none) until you can do the whole thing alone. The full model teaches the shape; the fading hands you independence.



Model Milo loved to show his work. All of it. Every single step.

"Here's a hard one," he said, chalk squeaking, filling the whole board. "Watch me do the *entire* thing. I won't skip a line. I won't say 'and obviously.' You'll see every move, start to finish."

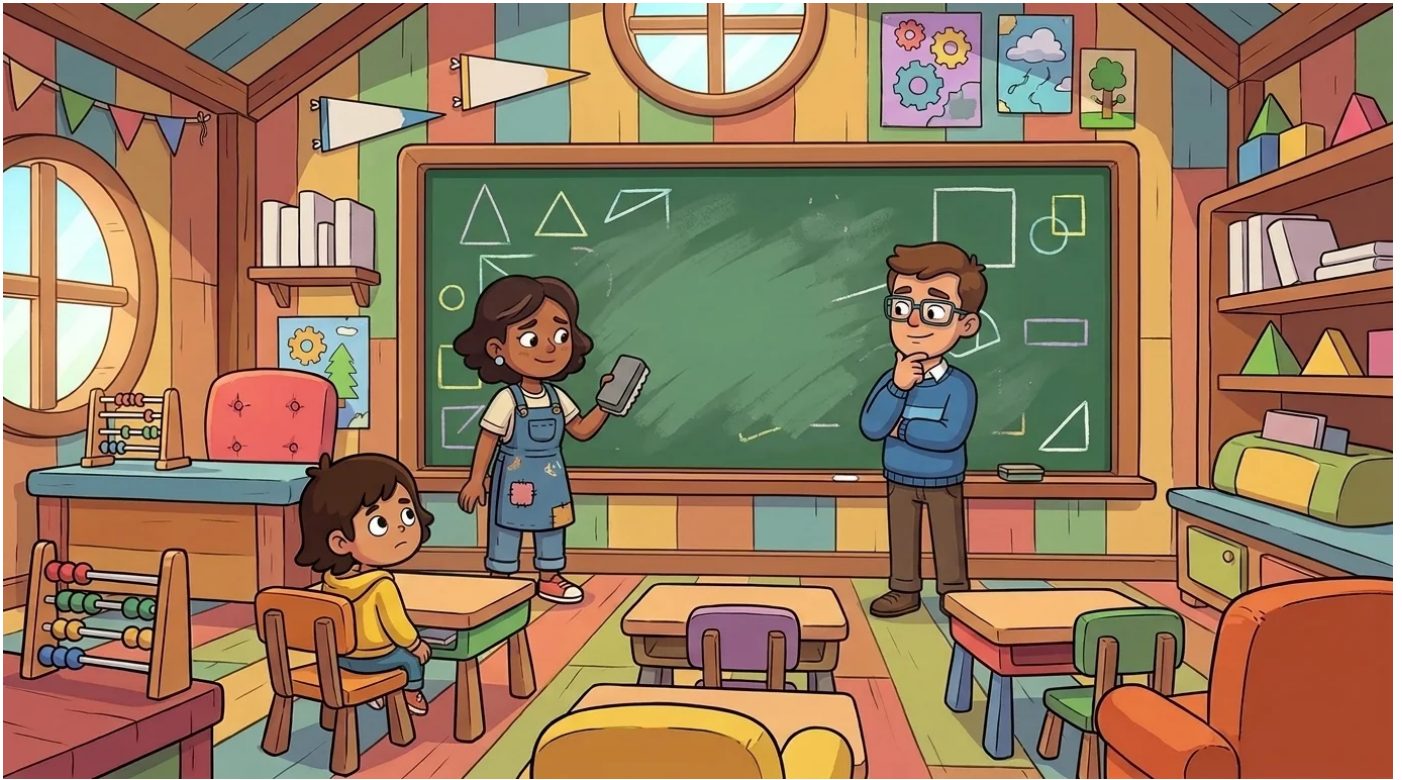
The apprentice watched Milo solve the whole problem, top to bottom, nothing hidden.

"There," said Milo, stepping back. "That's a *worked example*. Before you try a hard method yourself, it helps enormously to see it done once, completely, by somebody who isn't hiding the tricky parts."

Beside him, Faye was quietly erasing. Not the answer — the *support*. She rubbed out one of Milo's middle steps and left a blank. "And that's where I come in," she said. "Milo shows you everything. Then I start taking pieces away. One step, then a few more, then most of them — until there's nothing left on the board but *you*, doing it alone."

The apprentice looked at the half-erased board. "Wait — you *undo* his help?"

"On purpose," said Faye. "A little at a time."

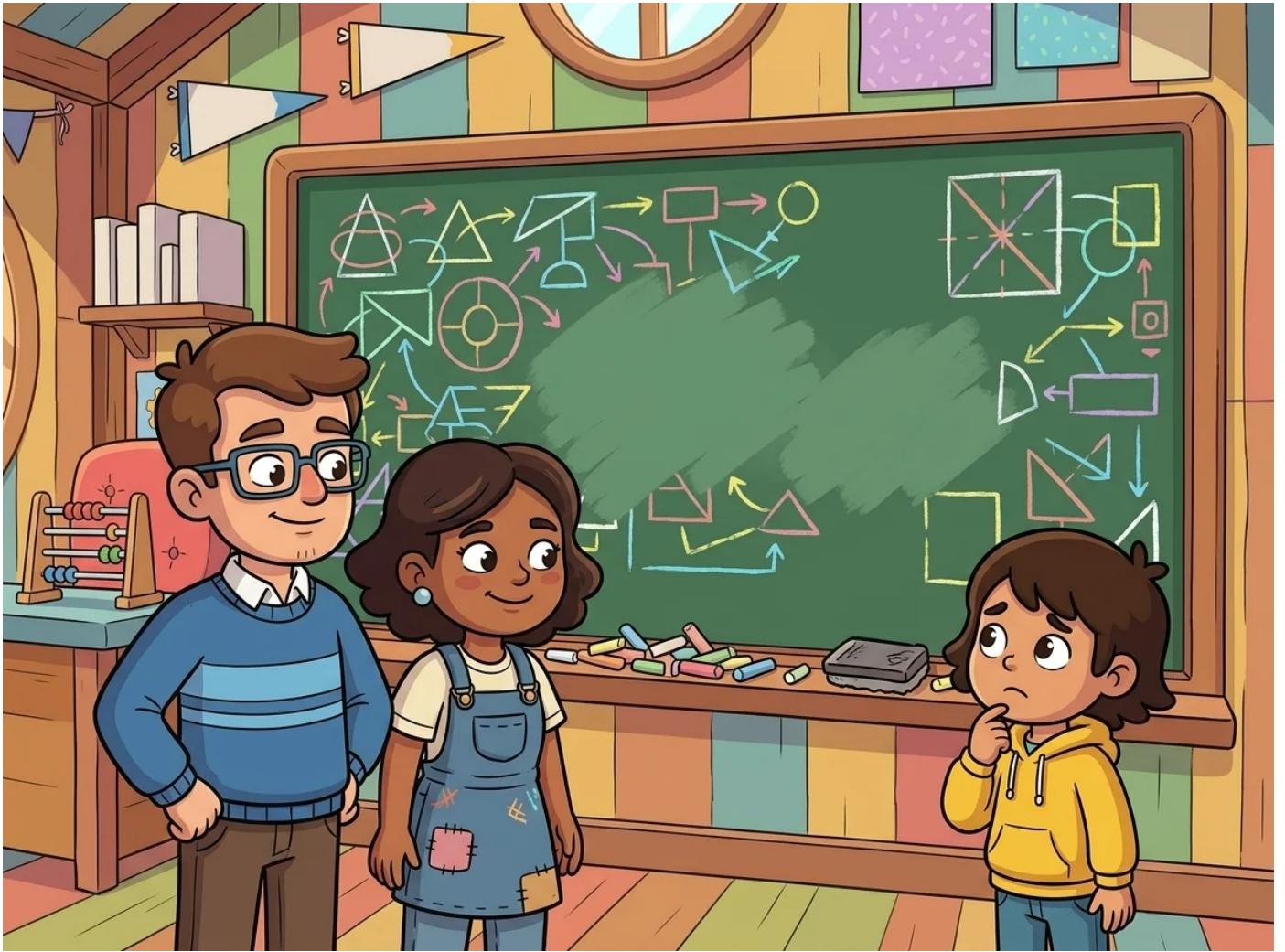


Faye didn't love telling this part, but she told the apprentice anyway.

"For a long time," Faye said, "I thought I was the mean one. Milo gives — he shows every step, he fills the whole board, everyone loves Milo. And me? I *take away*. I rub out the help. I leave people with blanks and gaps and problems they have to finish alone." She frowned at her eraser. "It felt cruel. Like walking someone halfway across a river and then stepping back onto the bank."

Milo set down his chalk, listening.

"And then," Faye went on, "I watched an apprentice who'd only ever had *Milo*. Every problem, fully worked, always shown. And when a brand-new problem came — with nobody to show it — she froze. She'd seen a hundred solutions and couldn't start a single one on her own." Faye's voice softened. "That's when I understood. Milo teaching forever isn't kindness. It's a river you never learn to cross. My blanks aren't me abandoning anyone. My blanks are me saying: *your turn, and I believe you can.*"



A worried apprentice came with exactly that problem. "I've studied so many worked examples. I understand every step when Milo shows me. But the second the board is blank, I panic. I can *follow*, but I can't *start*."

Milo and Faye looked at each other.

"That's because you skipped the middle," said Faye gently. "You went straight from *watching Milo do everything* to *doing everything yourself* — from all the help to none of it, in one jump. No wonder you froze."

"The fix isn't more of my worked examples," Milo admitted. "You've got plenty of those. The fix is *fading* — Faye's part. We take my full solution and we poke holes in it. First you fill in one missing step. Then three. Then you do the second half alone with the first half shown. Then the whole thing." He grinned. "Each time, a little less of me, a little more of you."

The apprentice blinked. "So the blanks get bigger on purpose. Until the whole thing is a blank — and by then I can fill it."

"By then it's not scary," said Faye, "because you climbed up to it one step at a time instead of jumping off the top."



They tried it. Milo worked a fresh problem completely — the full model. Then Faye handed the apprentice the *same kind* of problem with just the last step blanked. Easy. Then one with the last three blanked. Then one with only the first line given. Then a bare, empty board.

The apprentice solved the bare board.

They stared at their own work like it belonged to someone else. "I just... did that. Alone. But an hour ago I couldn't start."

"An hour ago you had all of Milo," said Faye. "Just now you had all of *you*. The stuff in between — the fading — is the bridge. It's the part that actually moves the doing from him to you."

"Milo shows you it *can* be done," said Milo, nodding at Faye. "Faye makes sure *you* can do it. You need us in that order. Model first. Fade second. Independent last."



When the apprentice had gone — solving on her own now, not looking back — Milo and Faye cleaned the board together.

"I used to feel like the mean half," Faye said quietly. "The taker. The one who rubs out the help right when it's working." She turned the eraser over. "Everybody's grateful to *you*, Milo. Nobody thanks the person who makes the help disappear."

"They should," said Milo. "Because everything I show is useless if it stays on *my* board forever. I can model a solution a thousand times and it never becomes *theirs* until you fade me out of it. You're not the taker. You're the one who actually hands it over." He nudged her. "I show them it's possible. You make it *theirs*."

Faye was quiet, looking at the clean board — Milo's chalk and her eraser resting side by side — and thinking of the apprentice out there solving problems on her own two feet, needing neither of them now. And the old worry that she was the unkind one, the one who left people stranded, finally loosened and warmed into something better: the quiet, steadying gladness of understanding that stepping back, at the right moment, is not abandonment at all — it is the most trusting gift there is.

"I take the help away," Faye said softly.

"Because you trust them to stand," said Milo. "That was always the kindest part."

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Methodology

Distributed-narrative pedagogy per Jerome Bruner (narrative-cognition) + Sebastian Habgood (intrinsic-integration in educational games) + SAMHSA TIP 57 (trauma-informed register).

Trauma-informed-design framework per Eggleston et al. (2025) and Stoltenburg et al. (2024).

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