

Supporting Arizona Students Who Have Mathematics Learning Gaps

Independent VALYXIS instructional resource | Jonathan Dallas | October 20, 2026. Free to print for classroom and family use. Not a state-issued assessment or state-endorsed publication.

Begin with strengths. A gap is a teachable need supported by evidence, not a description of a student's capacity. Ask which earlier idea blocks the current task and what representation makes that idea visible.

Three evidence streams: diagnostic work, current classroom work, and a short conference. Check attendance, task language, access to materials, and opportunities to learn before interpreting an error.

Keep the learner in grade-level thinking. Example: a student struggling with proportional equations can use a ratio table while receiving a short unit-rate lesson. Avoid replacing all meaningful problems with repetitive computation.

Official reference

- https://www.azed.gov/standards-practices/k-12standards/mathematics-standards. Arizona Grade 7 standards reviewed
- selected matches appear below. Prerequisite items are not relabeled as Grade 7 standards.

How to use the I / P / N ratings

Use these ratings to describe an observed skill, not a percentage score or a placement decision.

I - Independent

The learner demonstrates the skill accurately and explains their thinking without hints or prompts. Follow documented accommodations; accommodations alone do not change an I rating to P.

P - With prompting

The learner demonstrates the skill after a hint, guiding question, example, or visual model. Record the support that helped.

N - Not yet

The learner does not yet demonstrate the skill, even with support. Identify one focused next step and revisit the skill after instruction.

Not observed: Leave the rating blank if you have not observed the skill. Do not assign N solely because a question was skipped.

Record the date and concrete evidence, such as a work sample or student explanation. These letters describe current evidence and may change as the learner progresses.

A four-week instructional cycle

Week 1 | Identify

- administer selected diagnostic items
- conduct two brief conferences
- select one primary skill and a reachable two-week goal. Capture a baseline using three new items.

Week 2 | Teach: schedule three 15-20 minute sessions. Start with a visual model, connect it to symbols, and require one student explanation. Keep a link to the current class topic.

Week 3 | Apply: mix practiced skills with unfamiliar contexts. Ask students to compare two strategies and locate a plausible error. Reduce prompts gradually.

Week 4 | Review: use a new three-item probe of comparable difficulty and a transfer problem. Compare with the baseline, then continue, change the model, or fade support.

Suggested session

- 3 minutes retrieval
- 5 minutes modeling
- 5 minutes supported practice
- 5 minutes independent application
- 2 minutes reflection. Adjust to the learner rather than requiring this schedule.

Planning rule

- After two successful checks on different days with an explanation, try reducing support. With limited growth, check whether instruction was delivered and understood
- consult the school support team and revise the plan. Follow school procedures for referrals.

Access, confidence, and family partnership

Multilingual learners: preview terms with diagrams, encourage home-language reasoning, and offer "My unit rate is ___ because ___." Compare mathematical understanding with English-language demands.

Students with accommodation plans: provide required supports and accessible formats. Separate the recorded accommodation from any extra mathematical hints. Offer breaks, uncluttered tasks, and manipulatives as appropriate.

Families: practice for 10-15 calm minutes, several days a week. Ask the learner to explain a grocery price, recipe scale, or travel rate. Praise a checked strategy and a useful question. Stop a frustrating drill and return to a representation.

Sample family message: "Your learner can ____. We are working on ____. At home, ask ____. We will review new work on ____. Please share which explanations feel clear and which remain confusing."

Technology routine: predict the answer, solve, inspect feedback, explain the correction, then solve a fresh problem without copying. Treat an AI explanation as something to verify mathematically.

VALYXIS connection: use https://learnvalyxis.com/ for practice options and https://learnvalyxis.com/blog for public guides. Review actual available account features before assigning a specific tool.

Copy-ready learner action and monitoring sheet

Learner / preferred name: _____ Grade/course: _____

Strength supported by evidence: _____

Priority skill and evidence: _____

Goal: By _____, I will _____ on ____ new tasks, explaining _____.

Baseline date / items / support / result: _____

Instruction

- representation ____
- frequency ____
- responsible adult ____.

Check 1

- date ____
- independent correct ____/3
- explanation ____
- support ____.

Check 2

- date ____
- independent correct ____/3
- explanation ____
- support ____.

Transfer task and result: _____

Student reflection

I changed my strategy by _____.

Decision / next review

- continue, change, fade ____
- date ____.

State/district benchmark and source version: _____

Source and use note

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This pack is an original VALYXIS classroom resource. It is not a diagnostic instrument for a medical or learning-disability determination, nor a substitute for a district assessment system.