
Alaska 8 Mathematics

FREE PREVIEW

Full-Year Teacher Planner, Blank Editable Planner & School-Submission Binder

This preview shows the real structure and a genuine sample of the completed planner. The full product contains 9 units, 36 weekly plans and 180 daily plans, plus blank editable versions of every form.

State	Alaska
Grade	8 (Middle)
Subject	Mathematics
Course category	Core
Standards family	Mathematics
Framework	Alaska Mathematics Standards
Issuing agency	Alaska Department of Education and Early Development
Scope	36 instructional weeks · 180 instructional days · 9 units

This is a statewide standards index, not a local course catalog. Course names, grade placement, electives, and graduation sequences vary by district.

What you get

Folder	Contents
01 START HERE	Read-me, contents, printing and digital instructions, standards verification guide, this preview
02 FILLED FULL YEAR	Completed planner in colour and ink-friendly PDF, plus editable DOCX
03 BLANK EDITABLE	Blank planner in colour, ink-friendly and fillable PDF, plus editable DOCX
04 ASSESSMENTS AND DATA	Baseline observation, quarterly rubrics, anecdotal forms, portfolio checklist
05 SCHOOL SUBMISSION	Submission covers, alignment summary, evidence checklist, observation, reflection, signature page
06 LICENSE AND CREDITS	Terms of use, credits and licences, copyright notice

The pages that follow are reproduced **exactly** as they appear in the full completed planner.

Week 9 — Drawing a Proportional Relationship

Unit 3: Lines, and the Equation That Describes Them • Month 3 • Quarter 1 • Semester 1 • Instructional Days 41–45

Essential question	What does the steepness tell you?
Standards	Graphing Proportional Relationships -> 8.EE.3 Alaska Mathematics Standards / Expressions and Equations — Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9, and determine that the world population is more than 20 times larger. 8.EE.4 Alaska Mathematics Standards / Expressions and Equations — Perform operations with numbers expressed in scientific notation, including problems where both standard notation and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities. Interpret scientific notation that has been generated by technology. Understand the connections between proportional relationships, lines, and linear equations.
Learning target	"I can graph a proportional relationship and read its rate from the graph."
Local dates	_____ (enter your school dates)

Measurable objectives

- Students will graph proportional relationships.

Success criteria (student-friendly)

- "I choose and label a sensible scale."
- "I plot accurately."
- "I read the unit rate from the graph."

Academic vocabulary

axis, scale, plot, unit rate, steepness, origin

Materials and technology

- Graph paper
- Rulers
- Notebooks
- Chart paper

Differentiation and supports

Support area	This week's plan
Special education / IEP	Reduce group size; pair visual cue cards with all verbal directions; allow gesture or picture response in place of speech; pre-teach the week's target in a 1:1 warm-up.
Section 504	Provide the child's documented accommodations throughout; permit movement breaks and alternative seating at any point in the sequence.

Support area	This week's plan
Multilingual learners	Introduce each vocabulary word with an object or image; accept home-language responses; send the vocabulary list home where a translation is available; pair with a peer who shares the home language.
Advanced / extension	Ask the learner to teach the skill to a peer, extend the task, or record a demonstration for the class reference wall.
Intervention / reteach	Reteach the target in a short small group using the same materials; split the day's check for understanding into two smaller steps.
Enrichment	Extend into an open-ended centre or project connected to the essential question.

Assessment and evidence

A proportional relationship graphed and its rate read off.

Family communication

Ask your child what the steepness of their graph meant.

Day 41 — Choosing the Scale Before Plotting

Week 9, Day 1 • Unit 3 • Standards: 8.EE.3, 8.EE.4

Focus	The step that decides everything.
Learning target	"I can graph a proportional relationship and read its rate from the graph."
Vocabulary in use	axis, scale, plot, unit rate, steepness, origin
Local date	_____

Learning sequence

Connect: Week 8's tests. Teach: choosing axis scales from the data's range so the graph fills the space, and labelling both axes with quantity and unit - Week 7's precision applied. Try: shared scaling. Apply: pupils scale two axes for supplied data. Reflect: a badly scaled graph is unreadable however accurate the points.

Check for understanding

Student chooses and labels an appropriate scale.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Day 42 — Plotting and Joining

Week 9, Day 2 · Unit 3 · Standards: 8.EE.3, 8.EE.4

Focus	Accuracy.
Learning target	"I can graph a proportional relationship and read its rate from the graph."
Vocabulary in use	axis, scale, plot, unit rate, steepness, origin
Local date	_____

Learning sequence

Connect: scaling. Teach: plotting accurately, and when joining points is meaningful - continuous quantities yes, counts of objects no. Try: shared plotting. Apply: pupils plot two relationships. Reflect: joining points that cannot exist between is a claim you did not mean to make.

Check for understanding

Student plots accurately and judges whether to join points.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Day 43 — Reading the Rate From the Line

Week 9, Day 3 · Unit 3 · Standards: 8.EE.3, 8.EE.4

Focus	Interpretation.
Learning target	"I can graph a proportional relationship and read its rate from the graph."
Vocabulary in use	axis, scale, plot, unit rate, steepness, origin
Local date	_____

Learning sequence

Connect: plotting. Teach: reading the unit rate as the y -value at $x = 1$, and as the rise over any run - two routes to the same number. Try: shared reading. Apply: pupils read rates from three graphs. Reflect: the point at $x = 1$ is the fastest read, and it is why proportional graphs are useful.

Check for understanding

Student reads a unit rate from a graph.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Day 44 — Steeper Means What

Week 9, Day 4 • Unit 3 • Standards: 8.EE.3, 8.EE.4

Focus	Meaning.
Learning target	"I can graph a proportional relationship and read its rate from the graph."
Vocabulary in use	axis, scale, plot, unit rate, steepness, origin
Local date	_____

Learning sequence

Connect: reading. Teach: comparing two proportional graphs by steepness and saying what the difference means IN THE SITUATION rather than in the maths. Try: shared comparison. Apply: pupils compare and interpret two. Reflect: steepness is a fact about the world, not the paper.

Check for understanding

Student interprets comparative steepness in context.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

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Day 45 — Week 9 Check: Graphing Proportional Relationships

Week 9, Day 5 · Unit 3 · Standards: 8.EE.3, 8.EE.4

Focus	8.EE.3, 8.EE.4 assessed.
Learning target	"I can graph a proportional relationship and read its rate from the graph."
Vocabulary in use	axis, scale, plot, unit rate, steepness, origin
Local date	_____

Learning sequence

Connect: the week. Teach: the criteria - scaled, labelled, accurate, interpreted. Try: shared checking. Apply: pupils graph unseen data and interpret. Reflect: recorded against this week's standard.

Check for understanding

Student graphs and interprets an unseen proportional relationship.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Important before you buy

- This is a **digital download**. Nothing is shipped.
- The planner is **calendar-neutral**: Month 1–9, Week 1–36, Day 1–180, so it fits any school calendar. You add your own dates.
- Standards were transcribed from the official source.
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Source citation

Alaska Department of Education and Early Development. Alaska Mathematics Standards. Adopted June 2012. Printed three grades to a page, so every statement was taken from the Grade 8 column; the code prefix independently confirms the grade and a disagreement aborts the extraction. TWENTY-NINE CONTENT STANDARDS ARE REGISTERED, plus THE EIGHT STANDARDS FOR MATHEMATICAL PRACTICE. GRADE 8 IS WHERE FUNCTIONS APPEAR AS A DOMAIN OF THEIR OWN for the first and only time before high school, and where Ratios and Proportional Relationships disappears -- proportional reasoning is folded into Expressions and Equations and into Functions instead. If you are sequencing from a Grade 7 plan, that is the join to check. THE EXTRACTION PROVES ITS OWN COMPLETENESS: every Grade 8 code appearing anywhere in the document must be captured, and the run aborts if one is not. Retrieved 2026-07-27 from https://education.alaska.gov/akstandards/math/adopted_math.pdf