
Alaska 10 Geometry

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	10 (High)
Subject	Geometry
Course category	Mathematics
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 — Earning the Congruence Criteria

Unit 3: Verifying Congruence and Similarity · Month 3 · Quarter 1 · Semester 1 · Instructional Days 41–45

Essential question	Why is SAS enough, and why is SSA not?
Standards	Verifying Triangle Congruence Criteria -> G-CO.8 Alaska Mathematics Standards / Geometry (CO) — Explain how the criteria for triangle congruence (ASA, SAS, SSS, AAS, and HL) follow from the definition of congruence in terms of rigid motions.
Learning target	"I can verify the triangle congruence criteria using rigid motions."
Local dates	_____ (enter your school dates)

Measurable objectives

- Students will verify criteria for showing triangles are congruent using a sequence of rigid motions that map one triangle to another, including that two triangles are congruent if and only if corresponding pairs of sides and angles are congruent, and the ASA, SAS, SSS and AAS groups.

Success criteria (student-friendly)

- "I state the 'if and only if' criterion in full."
- "I verify ASA, SAS, SSS and AAS by rigid motions."
- "I explain why a non-criterion fails."

Academic vocabulary

corresponding parts, ASA, SAS, SSS, AAS, criterion, if and only if, counter-example

Materials and technology

- Tracing paper
- Rulers
- Protractors
- Compasses
- Graph 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.
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.

Support area	This week's plan
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

Criteria verified by rigid motions and a non-criterion refuted.

Family communication

Ask your child why three sides fix a triangle completely.

Day 41 — All Six Parts

Week 9, Day 1 · Unit 3 · Standards: G-CO.8

Focus	The full criterion.
Learning target	"I can verify the triangle congruence criteria using rigid motions."
Vocabulary in use	corresponding parts, ASA, SAS, SSS, AAS, criterion, if and only if, counter-example
Local date	_____

Learning sequence

Connect: congruence. Teach: the standard's 'if and only if' statement - two triangles are congruent exactly when all three pairs of sides and all three pairs of angles are congruent - and why both directions matter. Try: shared verification in both directions. Apply: students state and illustrate both directions. Reflect: 'if and only if' is two claims, and both need checking.

Check for understanding

Student states and illustrates both directions of the criterion.

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 — Why You Do Not Need All Six

Week 9, Day 2 · Unit 3 · Standards: G-CO.8

Focus	Toward the criteria.
Learning target	"I can verify the triangle congruence criteria using rigid motions."
Vocabulary in use	corresponding parts, ASA, SAS, SSS, AAS, criterion, if and only if, counter-example
Local date	_____

Learning sequence

Connect: six parts. Teach: the question the criteria answer - how few parts force the rest - explored by constructing triangles from partial information and seeing when the result is forced. Try: shared construction from two sides. Apply: students construct from three different partial sets and record which were forced. Reflect: you have just discovered which criteria can work.

Check for understanding

Student identifies which partial information forces a unique triangle.

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 — Verifying SAS and ASA

Week 9, Day 3 · Unit 3 · Standards: G-CO.8

Focus	Two criteria.
Learning target	"I can verify the triangle congruence criteria using rigid motions."
Vocabulary in use	corresponding parts, ASA, SAS, SSS, AAS, criterion, if and only if, counter-example
Local date	_____

Learning sequence

Connect: forcing. Teach: verifying SAS and ASA by constructing the sequence of rigid motions that maps one triangle onto the other, which is what the standard asks. Try: shared verification of SAS. Apply: students verify ASA by exhibiting a sequence. Reflect: the criterion is now a theorem you proved, not a rule you accepted.

Check for understanding

Student verifies a congruence criterion with a sequence of rigid motions.

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 — Verifying SSS and AAS

Week 9, Day 4 • Unit 3 • Standards: G-CO.8

Focus	Two more.
Learning target	"I can verify the triangle congruence criteria using rigid motions."
Vocabulary in use	corresponding parts, ASA, SAS, SSS, AAS, criterion, if and only if, counter-example
Local date	_____

Learning sequence

Connect: SAS and ASA. Teach: verifying SSS and AAS the same way, with AAS reduced to ASA by the angle sum. Try: shared verification of SSS. Apply: students verify AAS. Reflect: AAS is not a new fact; it is ASA wearing a hat.

Check for understanding

Student verifies SSS or AAS by rigid motions.

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 45 — The Ones That Fail

Week 9, Day 5 · Unit 3 · Standards: G-CO.8

Focus	Counter-examples.
Learning target	"I can verify the triangle congruence criteria using rigid motions."
Vocabulary in use	corresponding parts, ASA, SAS, SSS, AAS, criterion, if and only if, counter-example
Local date	_____

Learning sequence

Connect: four criteria. Teach: why AAA and SSA do not force congruence, shown by CONSTRUCTING two non-congruent triangles satisfying each - the standard's 'if but not only if' phrasing pointing straight at this. Try: shared construction of an SSA counter-example. Apply: students construct one counter-example and explain. Reflect: a counter-example settles the question completely and permanently.

Check for understanding

Student constructs a counter-example to a false criterion.

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. ALASKA PUBLISHES NO HIGH SCHOOL MATHEMATICS COURSES. Its 2012 standards drop grade levels entirely at high school and organise 148 standards into CONCEPTUAL CATEGORIES -- Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability. The document says so outright: "These standards do not mandate the sequence of high school courses... IT IS A DISTRICT DECISION HOW TO DESIGN COURSE OFFERINGS covering the mathematics standards. Districts can use the traditional approach of Algebra I, Geometry, and Algebra II or implement an integrated approach." SO THERE IS NO ALASKA GEOMETRY SET AND NO ALASKA ALGEBRA II SET. This row selects the conceptual categories the named course conventionally covers, and THAT SELECTION IS THIS PLAN'S EDITORIAL JUDGEMENT RATHER THAN THE STATE'S. Check it against your own district's course design before buying. THE STANDARD TEXT ITSELF IS TRANSCRIBED VERBATIM and nothing is invented. THIS ROW TAKES THE GEOMETRY CATEGORY. IT IS THE SAME SET AS THE GRADE 9 "GEOMETRY - ACCELERATED PATH" ROW IN THIS SERIES: Alaska publishes no sequence, so the only difference between the two rows is which grade the workbook places the course in. DO NOT BUY BOTH. Retrieved 2026-07-27 from https://education.alaska.gov/akstandards/math/adopted_math.pdf