
Montana 5 Technology / Computer Science

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	Montana
Grade	5 (Elementary)
Subject	Technology / Computer Science
Course category	Technology
Standards family	Science
Framework	Montana Content Standards for Computer Science (2021)
Issuing agency	Montana Office of Public Instruction
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 — A Working Program

Unit 3: Programming With Variables · Month 3 · Quarter 1 · Semester 1 · Instructional Days 41–45

Essential question	How do you get a machine to do what your algorithm says?
Standards	A Working Block-Based Program -> CS.AP.5.3 Montana Computer Science K-12 / algorithms and programming — create programs that include sequences, events, loops, and conditionals
Learning target	"I can build a working program using operators, conditionals and repetition."
Local dates	_____ (enter your school dates)

Measurable objectives

- Students will create a working program in a block-based visual programming environment.
- Students will use arithmetic operators, conditionals and repetition.

Success criteria (student-friendly)

- "My program runs."
- "It uses an arithmetic operator."
- "It uses a conditional and repetition."

Academic vocabulary

block, operator, conditional, repetition, run

Materials and technology

- Devices with any block-based environment the school has
- Paper block templates for the unplugged route
- Notebooks
- Planning sheets
- 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.
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

A working program using all three required features.

Family communication

Ask your child what their program does.

Day 41 — Planning on Paper First

Week 9, Day 1 • Unit 3 • Standards: CS.AP.5.3

Focus	The unplugged half.
Learning target	"I can build a working program using operators, conditionals and repetition."
Vocabulary in use	block, operator, conditional
Local date	_____

Learning sequence

TEACHER NOTE: THIS WEEK NEEDS DEVICES for the running half. The design half is done on paper with block templates, so a class sharing one trolley can plan while waiting and nobody is idle. NO ACCOUNTS ARE CREATED; use whatever block environment your school already has, offline if possible. Connect: pseudocode. Teach: planning the program on paper with cut-out blocks before touching a device. Try: shared planning. Apply: pupils plan. Reflect: planning first is what makes limited device time enough.

Check for understanding

Student plans a program using paper blocks.

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 — Arithmetic Operators

Week 9, Day 2 · Unit 3 · Standards: CS.AP.5.3

Focus	First required feature.
Learning target	"I can build a working program using operators, conditionals and repetition."
Vocabulary in use	block, operator, conditional
Local date	_____

Learning sequence

Connect: the plan. Teach: what the arithmetic operator blocks do and where a program actually needs one - counting, scoring, positioning. Try: shared building. Apply: pupils use an operator.

Check for understanding

Student uses an arithmetic operator purposefully.

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 — Conditionals

Week 9, Day 3 · Unit 3 · Standards: CS.AP.5.3

Focus	Second required feature.
Learning target	"I can build a working program using operators, conditionals and repetition."
Vocabulary in use	block, operator, conditional
Local date	_____

Learning sequence

Connect: operators. Teach: the IF block, and that a condition needs something to test - which is why operators come first. Try: shared building. Apply: pupils add a conditional. Reflect: the Week 6 idea, now executable.

Check for understanding

Student adds a working conditional to a program.

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 — Repetition

Week 9, Day 4 · Unit 3 · Standards: CS.AP.5.3

Focus	Third required feature.
Learning target	"I can build a working program using operators, conditionals and repetition."
Vocabulary in use	block, operator, conditional
Local date	_____

Learning sequence

Connect: conditionals. Teach: the repeat blocks and how each one stops. Try: shared building. Apply: pupils add repetition.

Check for understanding

Student adds working repetition to a program.

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 — Making It Actually Work

Week 9, Day 5 · Unit 3 · Standards: CS.AP.5.3

Focus	CS.AP.5.3 assessed.
Learning target	"I can build a working program using operators, conditionals and repetition."
Vocabulary in use	block, operator, conditional
Local date	_____

Learning sequence

Connect: the three features. Teach: getting the program to run correctly, tracing on paper when it does not. Try: shared debugging. Apply: pupils finish.

Check for understanding

Student produces a working program with all three features.

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

Montana Office of Public Instruction. Montana Content Standards for Computer Science (2021). Codes and statements are transcribed from the MONTANA CONTENT STANDARDS FOR COMPUTER SCIENCE FOR K-12, which records on every page "Document Created April 5, 2021 | Standards Effective date July 1, 2021". It was produced on the same day, in the same template and with the same coding scheme as the social studies standards: SUBJECT.STANDARD.GradeLevel SUBSTANDARD.sub-substandard, with CS computer science and the content areas AP algorithms and programming, CS computing systems, DA data and analysis, IC impacts of computing and NI networks and the internet. THE SAME SINGLE-STANDARD RULE APPLIES: an area with one standard at a grade states it on the area line and its code ends at the grade, with no final number. NOT EVERY CONTENT AREA APPEARS AT EVERY GRADE -- networks and the internet has no standards in the earliest grades -- and no standard is invented to fill the gap. A TYPOGRAPHICAL ERROR IN THE SOURCE IS RECORDED RATHER THAN CORRECTED IN SILENCE: the kindergarten data and analysis stem reads "standards TO kindergarten" where every other stem reads "for". It affects a stem line rather than a standard, so no registered statement is changed by it. THIS ENTRY IS THE GRADE 5 ROW of the 2021 Montana Content Standards for Computer Science, and it registers ALL EIGHTEEN GRADE 5 STANDARDS: five algorithms and programming, three computing systems, three data and analysis, five impacts of computing and two networks and the internet. A CONCEPT APPEARS AT THIS GRADE THAT DOES NOT EXIST AT THE GRADE BELOW: NETWORKS AND THE INTERNET is empty through grade 4 and opens at grade 5 with CS.NI.5.1 explaining cybersecurity problems and CS.NI.5.2 protecting personal information, so a row built by carrying grade 4's four concepts forward would silently omit an entire strand of this state's standards. MONTANA IS NAMED INSIDE A STANDARD: CS.IC.5.1 requires explaining how computing technologies have changed MONTANA and the world. Every statement is transcribed from the adopted document. Retrieved 2026-07-27 from <https://opifiles.mt.gov/Portals/182/Page%20Files/K-12%20Content%20Standards%20%26%20Revision/Computer%20Science/CS%20K12.pdf>