
Montana 4 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	4 (Elementary)
Subject	Science
Course category	Core
Standards family	Science
Framework	Montana Science Content Standards (2016), codified at ARM 10.53 subchapter 8
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 — What a Wave Looks Like

Unit 3: Waves, Information and Light · Month 3 · Quarter 1 · Semester 1 · Instructional Days 41–45

Essential question	How can I describe a wave?
Standards	Amplitude and Wavelength -> ARM 10.53.807(1)(e) Montana Science Content Standards / Physical Science — develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move
Learning target	"I can model a wave and describe its amplitude and wavelength."
Local dates	_____ (enter your school dates)

Measurable objectives

- Students will develop and use models to describe amplitude and wavelength patterns.
- Students will use the correct terms for the parts of a wave.

Success criteria (student-friendly)

- "I make a wave model."
- "I label amplitude and wavelength."
- "I describe the pattern."

Academic vocabulary

wave, amplitude, wavelength, crest, trough

Materials and technology

- Ropes or springs
- Water trays
- Grid paper
- Science notebooks
- Rulers

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

Wave model with amplitude and wavelength correctly labelled.

Family communication

Ask your child what amplitude means.

Day 41 — Making Waves We Can See

Week 9, Day 1 • Unit 3 • Standards: ARM 10.53.807(1)(e)

Focus	Producing waves.
Learning target	"I can model a wave and describe its amplitude and wavelength."
Vocabulary in use	wave, amplitude, wavelength
Local date	_____

Learning sequence

Connect: energy transfer. Teach: making waves in a rope and in water. Try: shared investigation. Apply: pupils make waves. Reflect: waves carry energy without carrying matter along.

Check for understanding

Student produces a wave and describes what they see.

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 — How Tall and How Long

Week 9, Day 2 · Unit 3 · Standards: ARM 10.53.807(1)(e)

Focus	Amplitude and wavelength.
Learning target	"I can model a wave and describe its amplitude and wavelength."
Vocabulary in use	wave, amplitude, wavelength
Local date	_____

Learning sequence

Connect: our waves. Teach: amplitude is height, wavelength is the distance between repeats. Try: shared measuring. Apply: pupils measure. Reflect: terms used precisely.

Check for understanding

Student identifies amplitude and wavelength in a wave.

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 — Drawing a Wave Accurately

Week 9, Day 3 · Unit 3 · Standards: ARM 10.53.807(1)(e)

Focus	Modelling on paper.
Learning target	"I can model a wave and describe its amplitude and wavelength."
Vocabulary in use	wave, amplitude, wavelength
Local date	_____

Learning sequence

Connect: measurement. Teach: a drawn model with labels. Try: shared drawing. Apply: pupils draw.

Check for understanding

Student draws and labels a wave model.

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 — Changing One and Not the Other

Week 9, Day 4 · Unit 3 · Standards: ARM 10.53.807(1)(e)

Focus	Independence of properties.
Learning target	"I can model a wave and describe its amplitude and wavelength."
Vocabulary in use	wave, amplitude, wavelength
Local date	_____

Learning sequence

Connect: our models. Teach: amplitude and wavelength can change independently. Try: shared investigation. Apply: pupils vary each. Reflect: PATTERNS crosscutting concept named.

Check for understanding

Student changes amplitude without changing wavelength.

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 — Waves Can Move Things

Week 9, Day 5 · Unit 3 · Standards: ARM 10.53.807(1)(e)

Focus	Waves cause motion.
Learning target	"I can model a wave and describe its amplitude and wavelength."
Vocabulary in use	wave, amplitude, wavelength
Local date	_____

Learning sequence

Connect: wave properties. Teach: the standard says HOW WAVES CAN CAUSE OBJECTS TO MOVE. Try: shared investigation with a floating object. Apply: pupils observe and explain. Reflect: back to energy transfer.

Check for understanding

Student explains how a wave makes an object move.

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

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Source citation

Montana Office of Public Instruction. Montana Science Content Standards (2016), codified at ARM 10.53 subchapter 8. Statements are transcribed from the MONTANA SCIENCE CONTENT STANDARDS, whose own cover reads "Adopted September 16, 2016 by the Montana Board of Public Education". THAT DOCUMENT PRINTS NO CODES. Each grade is a set of discipline headings -- physical science, life science, earth and space science -- followed by unnumbered bullets, so there is nothing in it that can be printed in a code column. The same standards are codified in the ADMINISTRATIVE RULES OF MONTANA, CHAPTER 10.53 SUBCHAPTER 8, one rule per grade, and the rule's structure is exactly the document's: a numbered subsection per discipline heading, a lettered item per bullet, same order and same count. THE ARM SUBSECTION IS REGISTERED AS THE CODE. This is an existing official citation rather than an invented identifier, and it is the citation a Montana reviewer can actually look up; the alternative would have been to ship science products with no codes at all. Bullets are separated in the PDF by a Symbol-font character in the Unicode Private Use Area rather than by a literal dot; splitting on the indent instead merges a whole discipline into one run, and splitting per line fragments every standard mid-sentence, so the glyph is what the transcription splits on and the item count is checked against the counts the document's headings imply. THIS ENTRY IS THE GRADE 4 ROW of the 2016 Montana Science Content Standards, codified at ARM 10.53.807, and it registers ALL FOURTEEN OF ITS STANDARDS: SEVEN PHYSICAL SCIENCE, TWO LIFE SCIENCE and five earth and space science. THE BALANCE INVERTS FROM THE GRADE BELOW. Grade 3 runs four physical, EIGHT life and three earth; grade 4 runs seven, TWO and five. The life science block collapses from eight standards to two while physical science nearly doubles, so a row built by carrying either grade's domain counts onto the other would be wrong in both directions and would do it silently. THE RULE NUMBER AND THE PER-DOMAIN COUNTS WERE BOTH READ OFF THE REGISTER and the extraction is asserted against them. THE ARM SUBSECTION IS REGISTERED AS THE CODE because the OPI document prints no codes of its own; it is an existing official citation a Montana reviewer can look up rather than an identifier invented here. Retrieved 2026-07-27 from <https://opifiles.mt.gov/Portals/182/P>

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