



FIELD GUIDE / VOLUME 1

Better Learning With the Tools You Already Have

Five practical recipes for resourceful educators who refuse to let a limited budget limit good learning.

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Resourcefulness is the real upgrade.

EdTech Alchemy is a way of thinking before it is a collection of tools.

I have not always worked in schools with deep budgets or the newest tools. That constraint taught me to look harder at what we already had, ask better questions, and combine simple technologies in ways that made learning more useful and humane.

That habit is **EdTech Alchemy**: begin with a learning need, inventory the ingredients already available, and create the smallest useful transformation.

USE IT AS A STARTING POINT

These recipes are meant to be tested, adapted, and improved in real settings. Start with one useful move, pay attention to what learners and educators experience, and revise for your local context.

Adapt every idea to your learners, your policies, and your local context.

Start with the learning. Then choose the technology.

A repeatable six-step method for making more of what you already have.

1 Name the learning move

What should learners understand, practice, create, or decide? Write the verb before naming any app.

2 Spot the constraint

Time, devices, bandwidth, confidence, privacy, and access are design conditions - not afterthoughts.

3 Inventory the ingredients

List the approved tools, routines, people, and physical materials already within reach.

4 Build the smallest useful version

Test one class period, one group, or one workflow before attempting a full rollout.

5 Check the human impact

Ask who gains access, who carries extra work, what data moves, and where choice is needed.

6 Refine from evidence

Keep what improves learning. Remove what merely looks impressive. Document the next remix.

A Form That Teaches

Turn a basic form into a low-lift branching pathway.

THE TRANSFORMATION

Instead of sending every learner through the same explanation, use responses to route people toward support, practice, or extension.

INGREDIENTS

- ☐ A school-approved form tool
- ☐ Three short resources
- ☐ One check-for-understanding

1

Choose one hinge question

Use a question that reveals the misconception or decision that matters most.

2

Create three useful routes

Support: explain another way. Practice: try a parallel example. Extend: apply the idea in a new context.

3

Rejoin the class

End every route with the same short synthesis prompt so the pathway supports, rather than fragments, the learning community.

4

Review patterns, not personalities

Look for which route was most used and where the instructions broke down. Avoid turning one response into a label.

TRY IT SMALL

One hinge question and one useful reroute are enough for a first attempt.

WATCH FOR

Links or permissions that strand learners outside the school account.

ALCHEMIST'S CHECK

Can a learner recover from a wrong answer without feeling trapped or publicly sorted?

Map the pathway before opening the form tool.

HINGE QUESTION

What single response would help you decide whether a learner needs support, practice, or extension?

SUPPORT

A different representation

Short explanation, worked example, audio option, then a confidence check.

PRACTICE

A parallel attempt

One comparable problem or scenario, immediate feedback, then explain the choice.

EXTEND

Transfer the idea

A new context, a comparison, or a create-and-justify prompt.

COMMON REJOIN

Finish this sentence: The most useful idea from my route was ____ because ____.

Shared Slides, Better Feedback

Turn a familiar slide deck into a structured gallery critique.

THE TRANSFORMATION

Use a tool learners already understand, but redesign the routine so feedback becomes specific, equitable, and actionable.

INGREDIENTS

- ☐ A shared presentation
- ☐ One slide per learner or team
- ☐ A two-part feedback stem

1

Assign the canvas

Give each learner or team one clearly labeled slide and a limited set of content expectations.

2

Model useful feedback

Replace 'looks good' with two stems: 'I can see...' and 'A next move could be...'

3

Control the traffic

Use a timed rotation or assigned slide numbers. Fewer, better comments beat an uncontrolled swarm.

4

Require a revision note

Creators choose one suggestion, make a change, and explain why they accepted or declined the feedback.

TRY IT SMALL

Start with one shared slide and one modeled comment before scaling up.

WATCH FOR

A fast rotation that rewards comment quantity instead of thoughtful revision.

ALCHEMIST'S CHECK

Does the routine reward thoughtful revision, or merely collect comments?

A 20-minute gallery critique that stays focused.

3 MIN

Orient

Review the success criteria and examine one modeled feedback example.

7 MIN

Notice

Visit two assigned slides. Leave one evidence-based observation on each.

5 MIN

Nudge

Return to one slide and suggest a next move connected to the goal.

5 MIN

Revise

Creators make one change and add a short revision note.

ACCESS OPTION

Offer typed, recorded, or teacher-scribed feedback. The goal is a useful response, not a single mode of expression.

Fewer Devices, Richer Roles

Turn limited devices into collaboration stations.

THE TRANSFORMATION

When a device shortage is treated as a grouping decision, learners can rotate through complementary modes instead of waiting for a turn.

INGREDIENTS

- ☐ One device per group
- ☐ A visible role card
- ☐ At least one offline station

1

Design distinct modes

Create, investigate, rehearse, and reflect. A station should change the kind of thinking, not just the location.

2

Give every learner a role

Navigator handles the device, skeptic checks the reasoning, recorder captures evidence, and connector prepares the share-out.

3

Rotate responsibility

Change roles before changing stations so the same learner does not control the screen all period.

4

Close with one shared artifact

Bring the station evidence together in a brief product, explanation, or decision.

TRY IT SMALL

Two stations and one role change can prove the routine before a full rotation.

WATCH FOR

The navigator becoming the permanent typist while others merely watch.

ALCHEMIST'S CHECK

Is the learner without the device still doing intellectually important work?

One device, four roles, three complementary stations.

1 STATION A / INVESTIGATE

Use the device to gather, compare, or verify information. Record only the evidence needed for the task.

YOUR VERSION

2 STATION B / MAKE

Use paper, manipulatives, a whiteboard, or rehearsal to build a model, draft, or explanation.

YOUR VERSION

3 STATION C / CHALLENGE

Test a claim, find an exception, solve a parallel case, or analyze a deliberately flawed example.

YOUR VERSION

4 SHARED CLOSE / CONNECT

Combine one piece of evidence from every station into a final claim, demonstration, or decision.

YOUR VERSION

ROLE ROTATION

Navigator -> Skeptic -> Recorder -> Connector

An LMS Feedback Loop

Turn the existing LMS into a cycle, not a filing cabinet.

THE TRANSFORMATION

Organize a simple loop - submit, receive one priority, revise, and reflect - so feedback has somewhere to go.

INGREDIENTS

- ☐ One assignment
- ☐ A short success checklist
- ☐ A resubmission pathway

1

Publish the target first

Translate the rubric into a short checklist learners can use before submitting.

2

Give one priority

Name the next most useful move. A page of comments often hides the action that matters.

3

Make revision visible

Use resubmission, version history, or a linked revision copy. Preserve evidence of the change.

4

Ask for a change note

Learners state what changed, what evidence guided the change, and what still feels uncertain.

TRY IT SMALL

Test the loop with one assignment, one priority comment, and one revision.

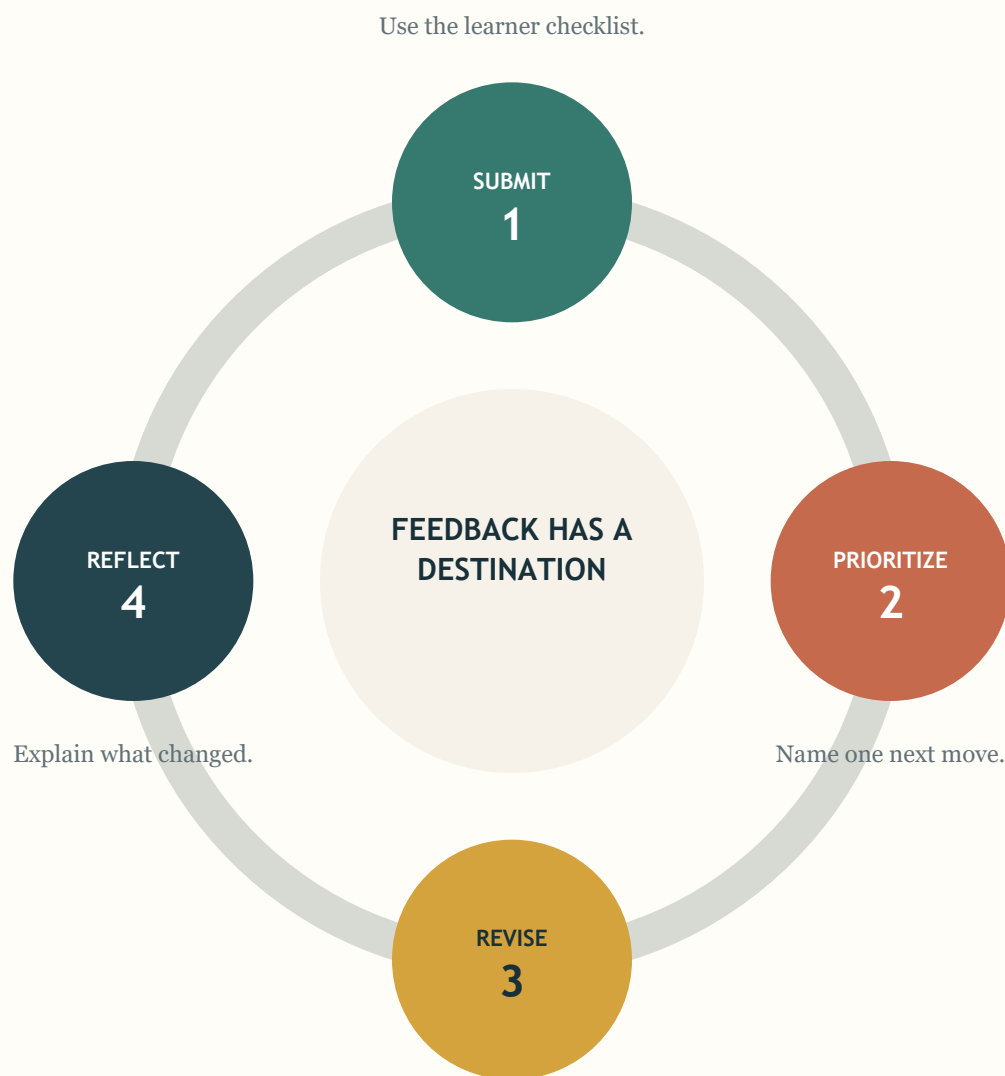
WATCH FOR

Detailed rubric language that still leaves the learner without a next action.

ALCHEMIST'S CHECK

Can the learner tell what to do next without decoding a grade?

Design the next action, not just the first submission.



TIME SAVER

Create a small bank of common next-move comments, then personalize the one sentence that matters.

AI as a Planning Partner

Use AI to widen options while keeping professional judgment in charge.

THE TRANSFORMATION

Ask AI for alternatives, stress tests, and draft structures - then verify, adapt, and own every decision.

INGREDIENTS

- ☐ An approved AI tool
- ☐ A de-identified planning problem
- ☐ A human review checklist

1

Remove student information

Do not paste names, records, IEP details, grades, or linkable context into an unapproved system.

2

Give useful constraints

Include the learning goal, time, age range, available tools, accessibility needs, and what must not change.

3

Request options, not authority

Ask for three approaches, tradeoffs, likely failure points, or questions you have overlooked.

4

Verify and humanize

Check facts and sources. Replace generic language. Make the final choice based on your learners and policy.

TRY IT SMALL

Ask for three options to one planning problem, then compare the tradeoffs.

WATCH FOR

Polished language that makes a weak or inaccurate idea feel trustworthy.

ALCHEMIST'S CHECK

Would I be comfortable explaining the data, reasoning, and final decision to a learner or family?

A planning prompt that keeps the human in the loop.

I am planning a **[lesson, meeting, intervention, or workflow]** for **[age range or audience]**. The learning or professional goal is **[goal]**. We have **[time, tools, people, and constraints]**. Propose three approaches that do not require new purchases. For each, identify the likely benefit, accessibility or equity concern, and one failure point. Ask me three clarifying questions before recommending a direction.

THE HUMAN REVIEW

- ☐ I removed identifiable or sensitive information.
- ☐ The tool is allowed by school or district policy.
- ☐ I verified factual claims and checked any cited sources.
- ☐ I considered accessibility, bias, cultural fit, and learner agency.
- ☐ The final language sounds like me and the decision remains mine.

FINAL QUESTION

Would I still stand behind this plan if the AI response disappeared?

Before adopting another tool, score the learning value.

Use 0 (not yet), 1 (partly), or 2 (yes). A low score is a prompt for questions, not an automatic rejection.

QUESTION	0	1	2
Does it improve a specific learning or professional move?	☐	☐	☐
Can it work with the devices, time, and bandwidth we have?	☐	☐	☐
Is it usable with keyboard, captions, readable contrast, and flexible formats?	☐	☐	☐
Is student data protected under policy and approved agreements?	☐	☐	☐
Can learners understand when and why it is being used?	☐	☐	☐
Does it reduce or justify the additional work it creates?	☐	☐	☐
Can we leave it without losing essential work or data?	☐	☐	☐

TOTAL / 14

Most important question: What would we stop doing if we adopted this?

Choose one constraint. Build one useful next step.

05

MIN

NAME

The learning move I want to improve is...

05

MIN

NOTICE

The constraint that keeps getting in the way is...

05

MIN

INVENTORY

The approved tools, routines, and people already available are...

10

MIN

PROTOTYPE

The smallest version I can test this week is...

05

MIN

CHECK

I will know it helped when I observe or collect...

A good first experiment is small enough to try, clear enough to observe, and safe enough to revise.

Your constraints are ingredients, not verdicts.

The next useful transformation may already be hiding in the tools, routines, and relationships around you.

JOIN THE FIELD NOTES

One practical idea at a time - field-tested thinking, honest tool trials, and no hype.

edtechalchemy.com/field-guide/

RESPONSIBLE USE NOTES

This guide offers practical design ideas, not legal advice. Follow your school or district policies, approved-tool requirements, accessibility processes, and applicable privacy law. Never place identifiable student information in an unapproved service.

FOUNDATIONS AND FURTHER READING

1. CAST, [Universal Design for Learning Guidelines 3.0](#) (2024).
2. U.S. Department of Education, [Privacy and Education Technology](#).
3. U.S. Department of Education, [Guidance on Artificial Intelligence Use in Schools](#) (2025).
4. Office of Educational Technology, [Empowering Education Leaders: A Toolkit for Safe, Ethical, and Equitable AI Integration](#) (2024).