Paper Engineering | Teacher Guide

Visual Arts Skills & Growth Lab • Lesson 040 • Grades 9–12 • paper engineering • 3–5 sessions

Essential inquiry

How can we explore fold tabs and structure through paper engineering and communicate an original idea?

Cultural or technical context

fold tabs and structure. Teach technical knowledge through practice and reflection without presenting mastery as identical results. Offer material and accessibility alternatives.

Learning targets

Students will demonstrate paper engineering; research the relevant context; create an original artifact or composition; justify at least one change after critique.

Materials and preparation

Sketchbook or paper, pencils, media needed for paper engineering, reference objects, process-log sheet, classroom-safe supplies.

Differentiation

Students define a specific inquiry, research competing interpretations, run technique trials, present an annotated process portfolio, and evaluate impact.

Extension beyond Grade 12

Adult and advanced learners may expand this lesson into a self-directed series, research comparative methods, document portfolio-quality process evidence, and develop a public-facing critical rationale.

Ten-step teaching sequence

01. Notice two contrasting examples or observations associated with fold tabs and structure; name one uncertainty.
02. Investigate who made or uses the source material and what context must be represented accurately.
03. Complete two low-stakes trials of paper engineering; label what changed between trials.
04. Sketch three independent approaches to the question: fold tabs and structure.
05. Select one approach; plan materials, ethical citation, composition and success criteria.
06. Construct a standing paper form that survives a stability test. Record one decision that differs from the first sketch.
07. Give peer feedback using one visible detail and one clarifying question.
08. Revise at least one element based on evidence; photograph or annotate the change.
09. Present artwork with an artist statement, source credit and medium information.
10. Explain how the technique and concept developed, plus one next studio goal.

Discussion prompts

01. What evidence tells you something important about fold tabs and structure?
02. How does paper engineering change the meaning of the result?
03. Which source is being credited, and whose voice is missing?
04. What feedback prompted a visible or audible revision?

Formative assessment

At entry: one baseline observation. During: two skill trials and a peer critique. Exit: final result, revision evidence and source credit.

Safety and accessibility

Provide accessible participation roles, sensory accommodations and clear consent for any recordings or images.

Reference and standards note

https://www.nationalartsstandards.org/
https://www.arteducators.org/
Align locally with current grade-level arts standards; do not treat this resource as a verified Louisiana standards crosswalk.

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