

Submit innovation proposal

Your goal: Submit a feasibility-checked innovation design proposal that ties problem, criteria, and concept together.

One product: Innovation design proposal: assembled problem statement, criteria and constraints, chosen concept, feasibility check, expected benefit, and one major risk.

Question: Does the proposed concept fit its stated constraints, and what evidence is still needed before a stronger claim?

Start the work

1. Assemble problem statement, criteria, constraints, and chosen concept.
2. Add a brief feasibility check: can it be built within constraints?
3. State the expected benefit and one major risk.
4. Self-assess against the proposal rubric.
5. Submit the innovation design proposal.

Save the same proposal locally if access is absent. List missing prep records, official rubric, submission route, credit policy and official activity separately.

Words you will use

problem statement

A concise description of who needs help, what they need and the gap the proposal addresses.

criterion / criteria

A goal used to judge a design; criteria is the plural.

constraint

A boundary a design must respect.

concept

The proposed approach and its main parts.

proposal

A documented plan and argument for a possible next step.

innovation

A new or changed approach intended to address a need.

feasibility

Whether the proposed stage can realistically be done within stated constraints.

expected benefit

An intended positive result that has not necessarily been observed.

risk

A possible harm, considering its likelihood and seriousness.

stakeholder

A person or group affected by a design.

tradeoff

A choice where improving one goal may make another harder to meet.

prototype

An early model used to explore a design, not proof of clinical performance.

mock-up

A simple representation of a proposed design.

usability

How users interact with a design in its intended context.

user interface

The parts and information through which a person interacts with a design.

validation

Testing whether a design supports its intended use; a plan alone is not validation.

rubric

A set of evaluation criteria and descriptions used to judge work.

self-assessment

Checking your own work against stated criteria and identifying gaps.

evidence

A source fact or labeled record that supports a limited claim.

observation

A directly inspectable record or feature; inspecting text is not observing a health outcome.

teaching model

An invented or simplified representation for learning.

decision

A chosen action or priority supported by reasons.

claim

The conclusion you defend within the available evidence.

limitation

A boundary on what the evidence can establish.

comparison control

A reference condition used to help isolate a difference.

failure mode

A way a design might fail to meet its intended function.

revision

A documented change with a reason.

reliability

How consistently a design performs its intended task under stated conditions.

feasibility rating

For this original check: high means known resources fit the proposed stage; medium means a specific resource is unresolved; low means a known constraint blocks it.

E1: connect goals, limits and the concept

NGSS HS-ETS1-3 calls for evaluating designs using evidence, ranked criteria and tradeoffs. Cost, safety and reliability are among the constraints to consider. These principles support a transparent design argument, not proof that an idea works.

In your proposal, connect each criterion to a feature and a way to check it. Then ask whether the proposed stage respects each constraint. If a needed resource is unknown, mark that part of feasibility unknown rather than inventing a cost or test result.

Give a high, medium or low feasibility rating using the original definitions above. Name the evidence behind it. This scale is a planning aid, not the missing official rubric.

E2: distinguish a plan from performance evidence

FDA describes human factors through the interaction of users and devices: perceiving information, interpreting it and acting. Labels and training materials are part of the interface.

The goal includes reducing use-related risk and checking safe and effective use. A clear sketch can support a design discussion, but does not show that intended users understand it or benefit.

Apply this boundary to the proposal: expected benefit is a prediction; validated benefit would need suitable evidence. A classroom model does not establish clinical safety, manufacturing quality or regulatory clearance.

S1: complete original recovery design brief

This continues the invented March 17 appointment-preparation idea without assuming that any earlier assignment was completed. Intended users are people who want to organize questions before a healthcare visit. The proposed aid gives no diagnosis or treatment advice.

Concept: a reusable large-print paper card with an optional audio version. A paper route would not require a phone; audio would require a compatible device. No user results, cost figures or clinical effects are supplied.

Three proposed criteria: the card separates questions from notes. Its purpose statement says it is for preparing questions, not medical advice. The core task can be completed without audio.

Three supplied classroom constraints: use only fictional questions; collect no personal health information; make no claim that the aid is ready for clinical use. For this original draft, the proposed stage is a paper layout, not a manufactured card or working audio tool.

A possible benefit is helping someone organize what they want to ask. A major risk is someone mistaking prompts for medical guidance. These are predictions to examine, not observed patient outcomes.

Tradeoff: adding audio may broaden ways to use the aid, but creates an additional device/access dependency. Paper avoids that dependency for the core task but may not meet every access need. Do not claim either format serves everyone.

D1: visible paper layout and feasibility input

Here is the supplied text layout, read from top to bottom. TITLE: Questions for my visit. PURPOSE: A place to prepare questions, not medical advice. LEFT AREA: Questions I want to ask. RIGHT AREA: Notes I choose to keep.

The example question is fictional: What does this term mean? The example note is fictional: Ask for an explanation. FOOTER: Audio version is a future option; this paper layout does not require it. No personal facts appear.

You can inspect this text to see that it has separate question/note areas and the stated purpose. That is evidence about the supplied representation only. It does not test large-print readability, reuse, audio function or user understanding.

For your own proposal, draw a labeled version of the chosen concept or provide an equally clear text layout. Link each of its features to the criteria. The original practice needs paper and a writing tool, or a local editable document.

A bounded feasibility judgment names the stage it covers, the tools you actually have and the requirements that remain unknown. Record actual tool access instead of claiming it was checked.

R1: original proposal checklist and gap record

This is an original completion checklist derived from today's product. It is not the missing official proposal rubric, and it awards no points. Use present, revise or missing for each item and identify where it appears.

Check one: a problem statement names intended users and the need. Check two: at least three criteria and two constraints are stated and distinguishable. Check three: the chosen concept and labeled layout connect to those criteria.

Check four: feasibility names the proposed stage, available tools, unknown resources and a reasoned judgment. Check five: expected benefit and one major risk name who is affected without claiming outcomes.

Check six: at least two evidence IDs support the argument, with a limitation. Check seven: explain one tradeoff and record one revision or a reason for retaining the current version. Check eight: mark missing official rubric, prep records or submission access.

After checking, repair a missing or weak section. If the official rubric arrives, compare your work with that actual rubric and make any additional changes. Original checklist completion does not certify official rubric completion.

C1: warmups, support and independent route

Warmup one: name one defensible rule from E1 or E2. Warmup two: name a result that would make you revise its application to this concept.

Sort these statements into observation, teaching model or decision. A: D1 contains a labeled questions area. B: S1 imagines a reusable appointment card. C: develop only the paper layout next.

Self-check: for each statement, ask whether it reports what a document shows, describes an invented design, or chooses a next step. None reports what happened to actual patients.

If prior work is absent, explicitly adopt S1 as a tentative original idea. Assemble your own proposal using S1/D1 and all R1 checks. This permits complete original practice without pretending your actual criteria log or design sprint exists.

Remediation frame: E1 shows _____. E2 helps explain _____. Therefore I can claim _____, but I cannot claim _____. Use it to draft the reasoning, then include every proposal section.

No partner response or personal health history is required. Describe your own planned revision and its reason, not a fabricated peer comment or completed test.

P1: both preparation inputs and authentic holds

Two separate homework tasks are due before this class. Design criteria and constraints belongs in Class Records and is assigned 25 minutes. Design sprint and tradeoffs belongs in Lab Notebooks and is also assigned 25 minutes.

Obtain the actual assigned material and recover both records. Their combined assigned time is 50 minutes outside this 80-minute block. S1/D1 are original recovery inputs; they do not certify those two preparation tasks as completed.

Check your own records for your problem definition, constraints log and design sprint. March 17's tentative idea can provide continuity; March 18's actual problem-definition work remains a separate input when available.

The proposal rubric itself is not supplied. Use R1 for original checking and request the official rubric before completing its self-assessment. No new functioning prototype or clinical trial is assigned by the dated product. Any separately assigned actual sketch, sprint model or course-shell brief still needs its own record.

Today's proposal goes to Lab Reports. Confirm the actual format, route and stopping point; do not invent an official activity.

The related course activity is Problem 3.1.3 Design Innovations. Its broader project includes a proposal, model/prototype/detailed schematic and marketing pitch. Your teacher will confirm the assigned portion; this proposal does not finish that project.

Confirm participation and any extra credit with the teacher. This original proposal grants no points.

Ask your teacher which other weekly work is still due.

This proposal does not complete any of it.

If access is missing, save the same proposal locally and list each unresolved input. Other weekly work remains separate.

X1: self-check, extension and final revision

Self-check case: a writer says one clear classroom layout proves the aid is safe for all users. Name the source and comparison, apply E1/E2 and state the method-specific limitation.

Decide what the layout itself can show and which missing comparison or clinical evidence blocks the stronger claim. The next step is a justified design revision or test plan, not clinical deployment.

Extension: propose one additional measurement, comparison control or stakeholder perspective. State what finding would change the design and what stronger claim would still remain unsupported. This does not authorize testing.

Exit reflection: with one more week, what would you change or investigate first, and why? Name the evidence ID that most limits your present proposal. Restart at the first unfinished R1 check rather than rewriting completed sections.

M1: different complete model, clinic supply organizer

Invented example: a clinic team wants a clearer way to sort unused supply packages. No observations of staff performance or infection outcomes are supplied. Problem: help intended staff locate the correct package type.

Concept: a paper diagram of three compartments, A, B and C. Final legend: A = Circle pack; B = Square pack; C = Triangle pack. All three package types are fictional. Criteria: labels are unique, the legend covers every compartment and each compartment has one type.

Constraints: no real clinical supplies and no clinical-use claim. For this fictional example, paper and a pencil are stipulated available. Feasibility rating: high for drafting this paper diagram with those tools. Actual fit, production materials and cleaning requirements remain unknown, so the rating does not cover a working organizer.

Expected benefit: easier location of a package type. Major risk: a confusing legend could lead to selecting the wrong type. Tradeoff: more categories could improve separation but make the legend harder to scan. These are predictions, not measured results.

Evidence and reasoning: E1 connects criteria to features; E2 directs attention to labels users would interpret. Proposed revision: replace A = Pack 1, B = Pack I, C = Pack C with the final Circle/Square/Triangle legend above. This removes the similar numeral 1 and letter I labels from the plan. No test demonstrates improved use.

Original checklist: problem, criteria, constraints, concept, feasibility, benefit, risk, tradeoff and evidence are present. Limitation: no user comparison or real-space measurements. Request the official rubric and teacher directions before actual testing. Transfer this structure to your chosen idea, not its supply-organizer details.

Try the decision

Which feasibility statement fits the supplied D1 layout?

- Rate feasibility only for the stage D1 represents, using tools you actually have, and list what stays untested.
- The clear layout proves the final reusable audio product is safe for patients.
- Because no clinical trial is supplied, even a labeled paper-layout proposal is impossible.

Explain your choice using the reading. Discuss it or say it to yourself. This practice does not add another submission.

Your 80-minute flow

0–10 minutes	Review terms and C1 warmups; read E1/E2 and R1.
10–25 minutes	Assemble problem, criteria, constraints and concept using S1/D1 or actual work.
25–45 minutes	Write feasibility, evidence and limitation; use M1 to distinguish planning from testing.
45–60 minutes	Write expected benefit, major risk and tradeoff.
60–75 minutes	Complete all R1 checks, revise and submit or save the same proposal.
75–80 minutes	Answer X1 and the one-more-week reflection.

Your response record

Use these labels on paper or in your document. The space below also works when this page is printed.

Prepare and sort

Answer both C1 warmups and sort all three statements. Identify which preparation records and rubric you actually have.

P1 names both 25-minute inputs. Record missing access honestly.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

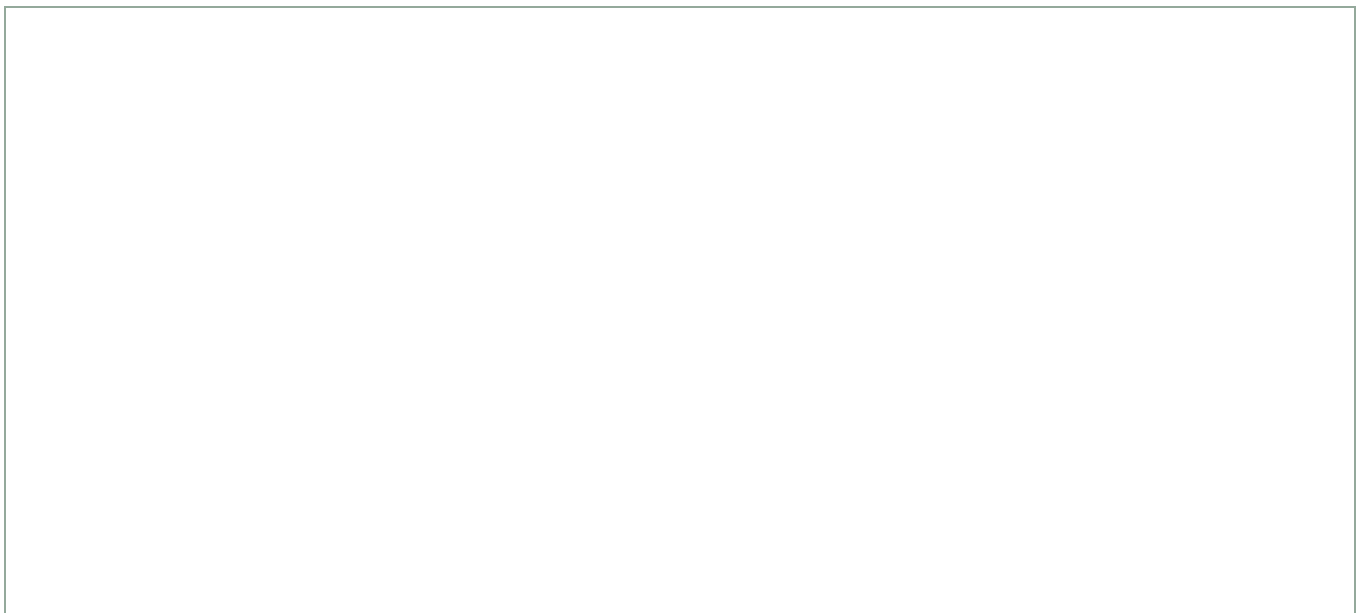


Assemble the proposal sections

Write the problem, at least three criteria, at least two constraints and chosen concept. Include a labeled sketch or clear text layout linking features to criteria.

Use actual prior work if available, or explicitly adopt S1/D1 for original recovery. M1 is a different complete model.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.



Check feasibility

Name the proposed stage, tools you actually have, constraints and unknown resources. Give a justified high, medium or low feasibility rating. Cite at least two evidence IDs and one limitation.

Separate drafting a layout from building and validating a product. D1 supplies only a text representation.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

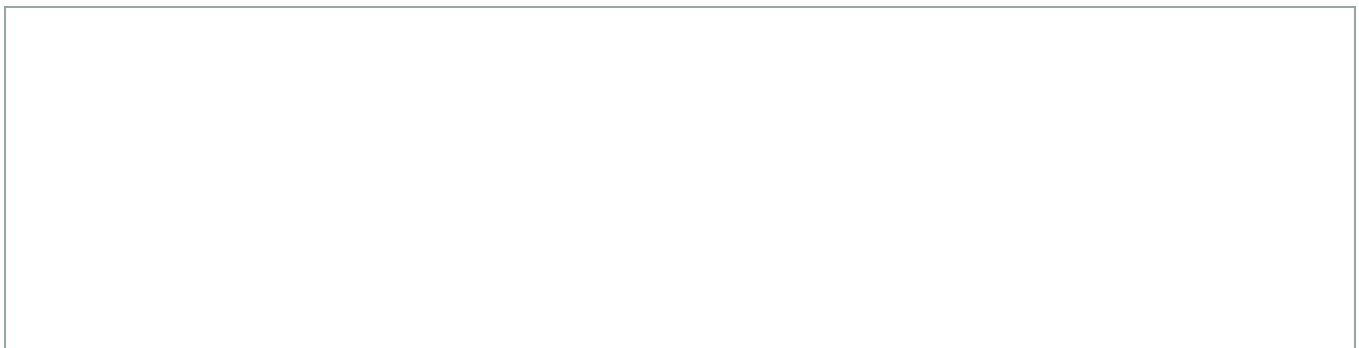


Expected benefit, risk and tradeoff

State the expected benefit and one major risk in plain language for an affected stakeholder. Explain one tradeoff.

Predictions do not become outcomes because the proposal looks polished.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.



Self-assess and revise

Mark every R1 item present, revise or missing and give its location. Improve one section or explain retaining it. Use the actual official rubric when supplied.

R1 gives original completion checks only. If the official rubric is unavailable, request it before assessing your work against it.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

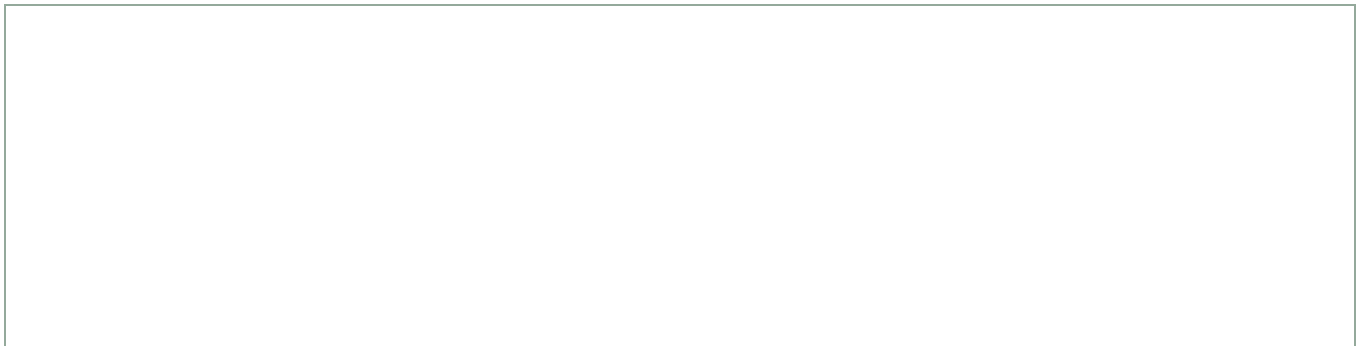


Submit and reflect

Submit the same assembled innovation design proposal. Answer X1's check and one-more-week exit; add the optional extension if ready. Record unresolved preparation, rubric or course requirements.

Use the confirmed Lab Reports route. Save locally if unavailable; do not mark official activity or credit complete.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.



Check your product

- My problem, criteria, constraints and concept connect clearly.
- My feasibility check separates available resources from unknowns.
- I explain predicted benefit, major risk and a tradeoff with at least two evidence IDs and a limitation.
- I self-check, revise and name the next action for missing authentic inputs.

Keep the limit: Original proposal practice uses invented features and source rules. No actual user result, manufacturing quality, clinical safety, effectiveness or regulatory clearance is established. It cannot support conclusions beyond these stated limits.

Turn in your work

Submit the assembled innovation design proposal through the linked BI assignment. Include problem, criteria, constraints, concept, feasibility, expected benefit and major risk, plus the supporting checks. After uploading, check that Schoology shows Submitted.

Save the same proposal locally if access is absent. List missing prep records, official rubric, submission route, credit policy and official activity separately.

[Open this assignment in Schoology.](#)

Carry forward

A feasible plan names what can be done, what remains untested, and what would change the next step.

Retain the proposal, checklist and unresolved inputs. A proposal does not authorize construction, testing or clinical use. What evidence would distinguish support for your proposal from enthusiasm for it?

Sources and resources

[Open today's page](#)

NGSS-ETS · HS-ETS1-3 Engineering Design

Next Generation Science Standards

<https://www.nextgenscience.org/pe/hs-ets1-3-engineering-design>

FDA-HF · Human Factors and Medical Devices

U.S. Food and Drug Administration

<https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/human-factors-and-medical-devices>