

Personal Reflection Questions

1. What do you think went well?

I think that coming together with a plan to come up with ideas is really useful. I struggle to sit down to brainstorm or think outside of the box a lot of the time. Seeing a problem from different people's perspective is really helpful and the structure of the workshop makes it feel much easier and more step by step which is helpful in my brain.

2. What do you think didn't work well?

As it was not a genuine interview it was hard to develop any revolutionary ideas. We are also all from the same major and didn't have too much diversity which led to nothing really that new discovered. If we were to actually develop this app it would really help to find multiple students that are currently going through basic algebra because at this point in college basic algebra seems to be not that difficult in comparison.

3. What would you do differently if you had to do it again?

If I were to redo the workshop or improve it, I would start by doing more interviews. Also, I think it would be interesting to have everyone split up and interview their own people that way when they come together, they all have different perspectives. If this was more than just a few hours we could also come up with a prototype which would help us further navigate what people learning algebra really need.

Kickoff Workshop Activity Documentation

Andrew Carlson, Callum Ward, Grant Peters, Justin Bartels

February 11, 2025

Objective

- Create a workshop to design an application for learning basic algebra.

Requirements

- Agenda
- Materials
- Icebreaker
- Activities
- Double Diamond Activities
- Prototypes

Materials

- Questions list for interview
- Paper
- Writing utensils
- Sticky Notes

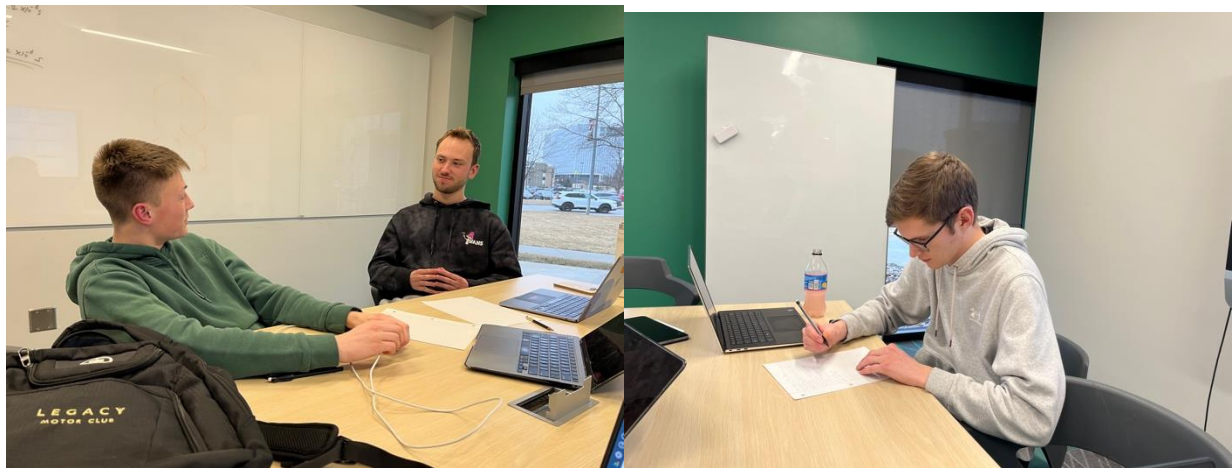
Agenda

Ice Breaker - What's a talent you have people wouldn't expect		- 10 Mins
Discovery Activity –	User Interviews	- 15 Mins
Define Activity –	Affinity Diagram	- 15 Mins
Develop Activity –	Sketch and Critique	- 40 Mins
	– Prep	- 5 Mins
	– Sketch	- 10 Mins
	– Critique	- 15 Mins
	– Group Sketch	- 20 Mins
Deliver (Test) Activity –	User Testing/Observations	- 15 Mins
	Feedback Capture Matrix	- 15 Mins

Interview Questions

1. What were some of the most memorable aspects of how you learned algebra the first time?
2. What were some of the most difficult aspects of the class to grasp?
3. What emotions do you associate with the subject of algebra?
4. How do you typically prefer to learn new concepts (i.e., visuals, reading, etc.)?
5. How comfortable are you with using computers and technology in general?
6. Do you prefer learning alone or in a group setting?

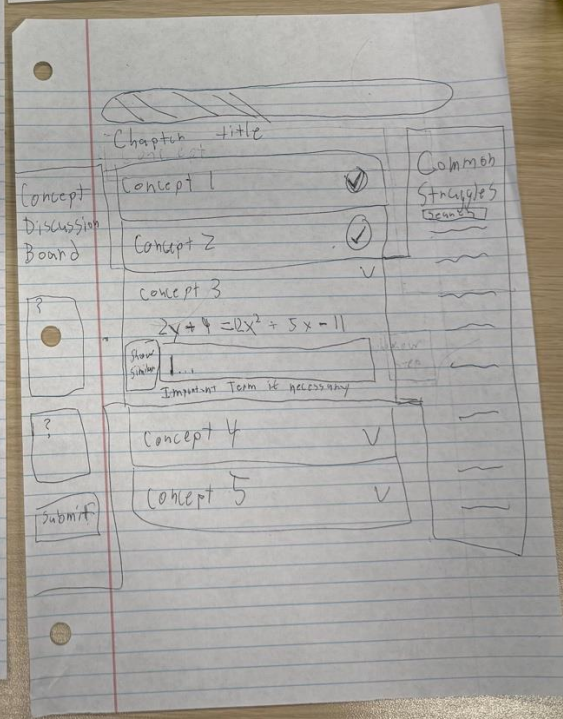
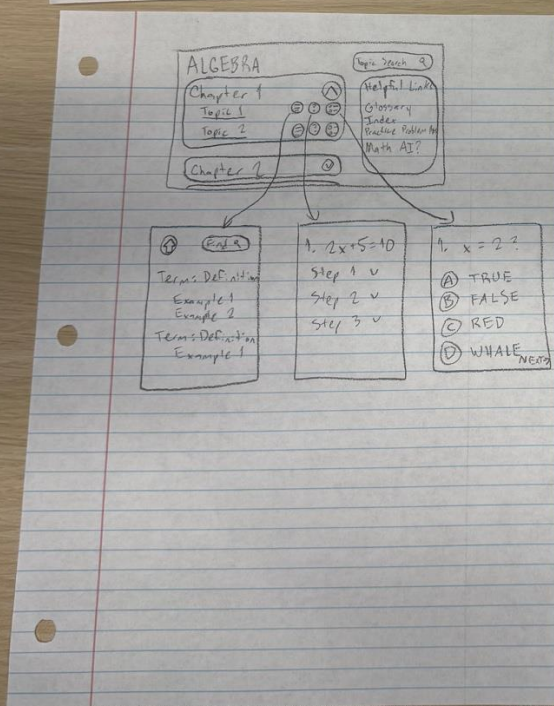
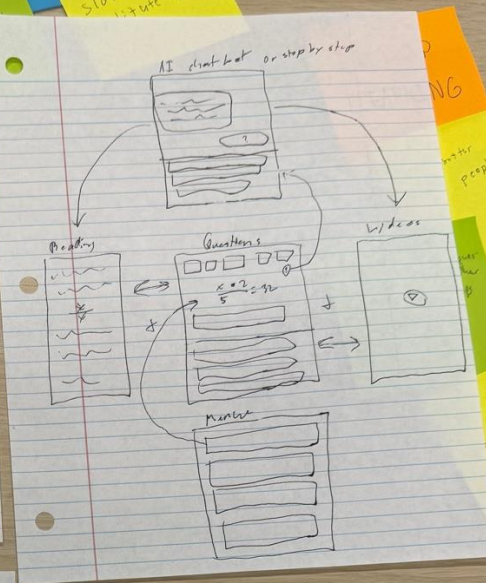
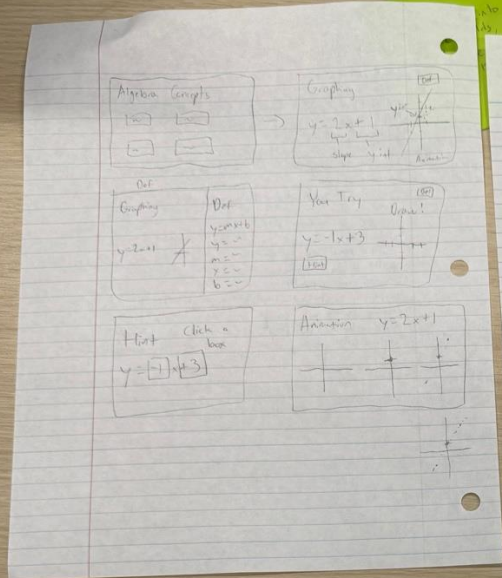
Process Photos



Grant Peters - User Interview

- Most memorable
 - one statement: "what you do to one side, do to another"
 - bunch of video lectures - lots of definitions - bad
- Difficult aspects
 - lin alg portion
 - some teachers can't 'dumb it down'
 - ↳ hard, and too fast, and didn't show every step
- Prominent emotions
 - satisfying - everything falls into place
 - monotonous
 - too slow or too fast felt
- Preference to learn
 - doesn't read books - slow
 - prefer to do something
- Ability to use computers
 - extremely comfortable (and for our generation)
- Preference working with groups or alone
 - learning better w/ people - work off of each other
 - working with groups problems: group grade, one person does work





Definition is not
rather than teach

Read - too
slow to
iterate learning

NG

other
people

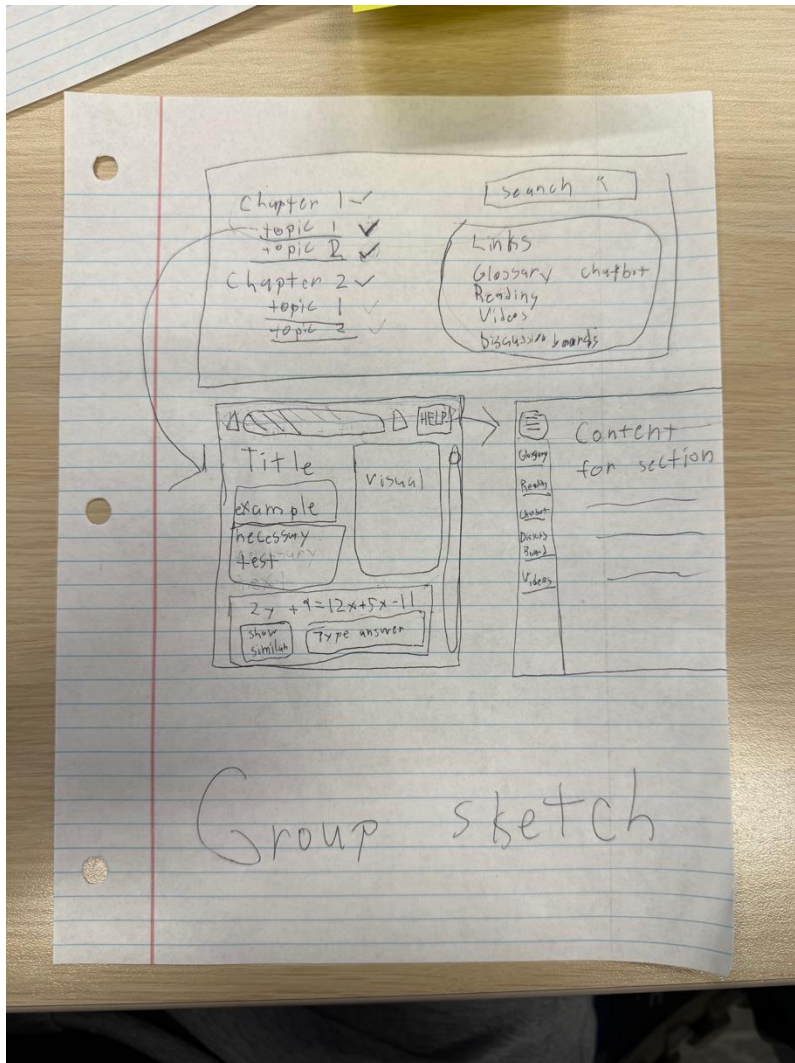
group learning

Learning in
groups helps
in things
other

perish
all
the work
in group work

work
at

Prototype



Prototype Description:

The prototype includes a landing page and examples of a chapter. Users will navigate by either clicking a chapter or clicking a Link in the Link Section. Users that click a chapter will be routed to the chapter page. The chapter page contains lots of useful information such as examples, teaching, visuals, and practice problems. Any students who need additional help can click on the HELP button which will display a page with glossary, book readings, AI chatbot, discussion board, and videos.

Test Feedback Matrix

