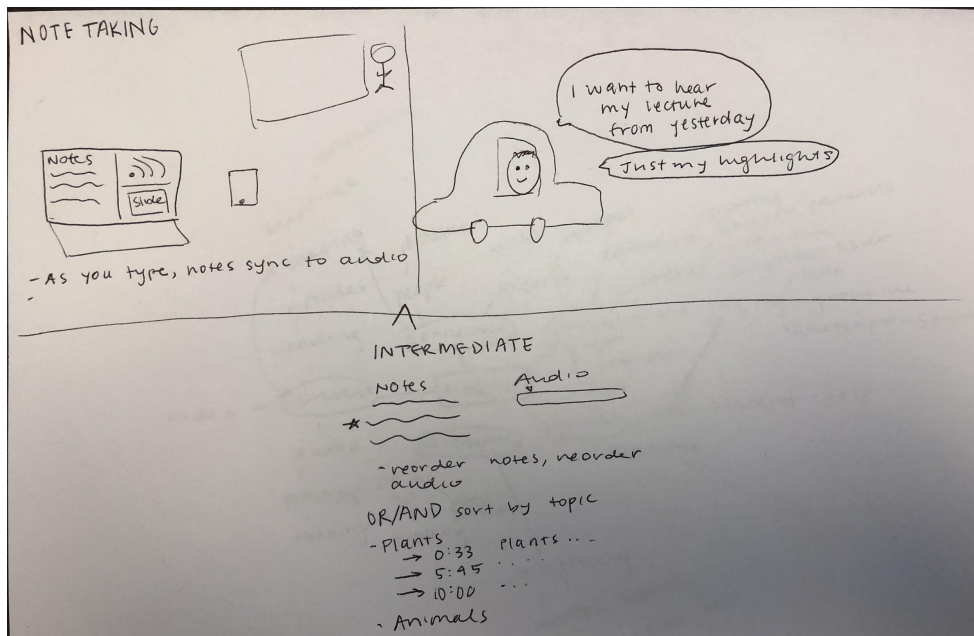
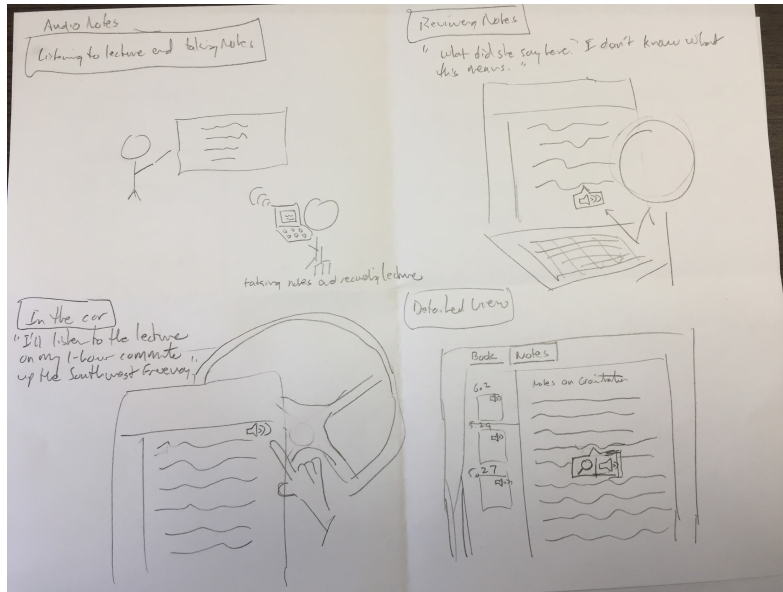


# Storyboards for Voting

Design Sprint One: student mobile experience  
June 21

Robert

Notetaking synced with audio



:-) but technically challenging, possibly privacy concerns (profs/students/univs may not like being recorded)

JP is issuing signing statements

RVN : Seems like a good application in class

"I wish I knew what this meant"

SR: I don't want random audio files on phone. Would use if they have a place to go

Spend!

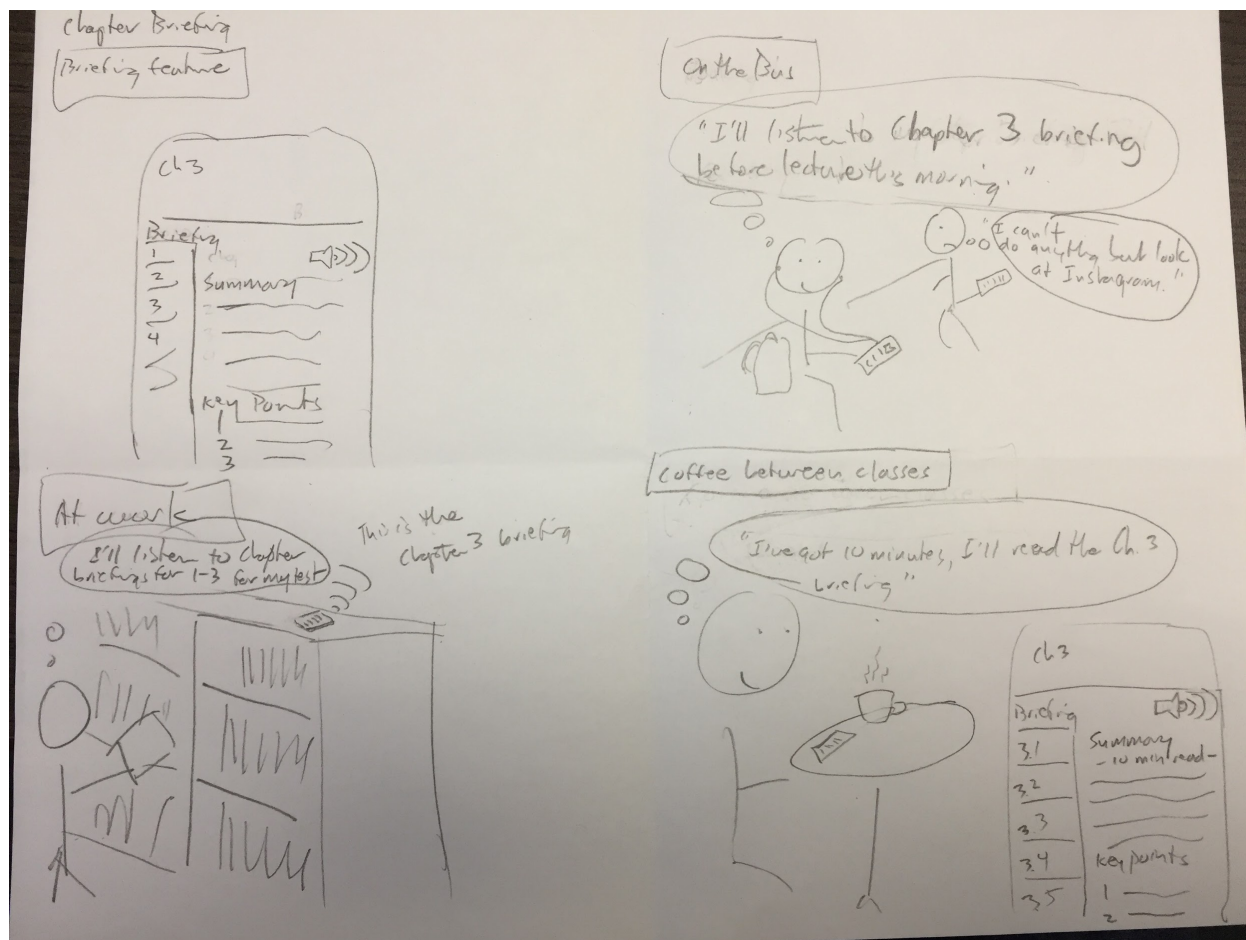
### Risk!

JFL: This could take a while to make and get right

RVN: I think it meets some big needs but -\$50 on risk

JP: External people would probably see this as not our core business; this could be a separate startup;

## Chapter briefings



YO: Very concise info. Quick to read, but you get everything

SR: It has multiple channels.

JP: Audio podcasty nature; we could let teachers prioritize topics in a course; briefings could be tagged to topic so we can deliver targeted briefings +1 KJD

AVP: We don't offer a lot of ancillaries, so this would be good

JFL: I like the pyramid content model, multi-modes. This could BE the mobile offering.

RVN: I like how it seems to directly meet needs of students we interviewed -- quick way to get content in this 15-45 minute gap. Narrow down to the important stuff, do it for me. And students described something like this. A quick opportunity to do something, but where do I start? +1 KJD

KJD: Could see this being of value to instructors too -- how do I get students to prepare for class? But we give them a starting point so it's easier to adopt

In Phase 2 of Unicorn, this becomes an Alexa skill

Spend!

RVN: \$50 -- I say this as a high level concept, though, and actually could be an umbrella for other ideas that have been drawn up

JP: \$25 - low risk, high reward, Anthony what is the content dev cost?

KJD: \$30 -- I see this translating across most, if not all titles, without too much content dev (though I defer to Anthony). I see this as a nice value add for teachers who want to get students to prepare for class without little effort expended at the outset (unless they choose to). I see this as a good value-add for students, if we can convince them they need it. Risk, or maybe just question to be answered: will students see the value, enough that they download an app? I don't know yet. I also see some nice ways for us to build in learning science using the summaries, e.g., retrieval practice. Finally, this doesn't compete super directly head on with partners (the way I conceive it in my head) and perhaps could offer some interesting ways to partner by embedding their content.

AP: \$30 -- Beyond what's been said, I also think that the content build to serve this can live in a variety of places and formats. (E.g. if we need to make it accessible, share with a close partner, give to a prof to put into her LMS, etc.). And it can also be layered on: we can expand it within a title or to more titles as we go. Good one to pilot.

*Content effort/cost/risk:* Under \$10k per title. We have to be careful not to underestimate, because it needs to be good in order to be useful and valued. But this is the sort of thing many good profs and even good students/tutors may have already thought about; some prof who has excellent lecture notes/study guides could provide this to us, etc.

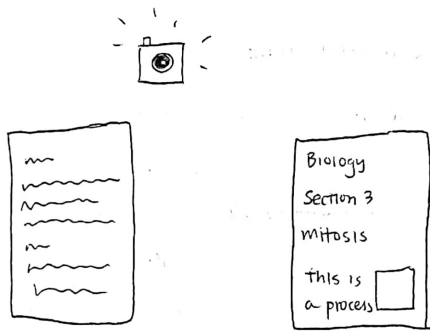
MD: \$20

SR: \$30

YO: \$20

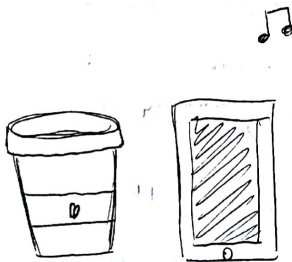
Yoona





Makes handwritten notes neater

1. Take a picture of handwritten notes
2. App reads notes and puts it in font
3. Can format however you want
4. Also reads + determines pictures + diagrams
5. Can also add in images from online
6. Good for ~~messy~~ messy writing/drawing + for classes ~~to~~ that don't allow electronics



wakes you up, gives you morning review of material

some people like having music playing in the morning - maybe can link to spotify?

energize morning routine

maybe something that reassures/calms you down in the morning - esp if you feel rushed

1

JP: but parts technically challenging, see MS OneNote, like adding pics of their own notes instead of OCR, just add upload illustrations

AP: Is this a place for our research/tech group to dig? Other companies are far ahead of us on NLP or EGS, and maybe we shouldn't play catch-up...this might be better for them to work on for evaluation of the written word.

Spend!

JFL: \$5 - I like the inclusion of scanned notes and drawings

AP: \$10

**Risk!**

JFL: I would punt on OCR for now

2

JFL: I like the "Here is what you have to do today" thing.

RVN: do you want to do problems now? 30 min between classes. The idea of pushing notifications to nudge them to study/practice when they have free time, as positive

reinforcement of good study techniques, esp if we knew when people had tests -- RVN: to me this seems new and innovative -- knowing the right time to push suggestions to students to study more and better

KJD: I like the notion of trying to get at the emotional needs of students who are stressed. This addresses a pain point we saw

JFL: survey data bore this out, students want time management help. I think this makes a good welcome screen.

Spend!

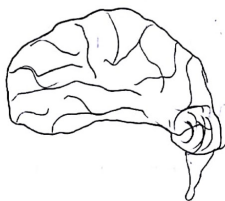
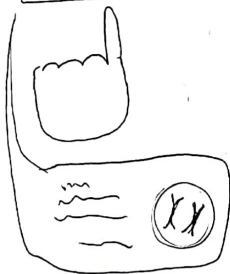
JFL: \$20 I really like this

Risk:

JP: time management / scheduling has a big unexposed amount of work for how we figure that info out, maybe it'll be something we all want the teacher to be entering into the system anyway (in which case this may be a small lift), but if not, it is a lot of work for less bang.

## Biology

1.3 Mitosis makes somatic cells.



## Information hierarchy

presents a very condensed version of material

(Mitochondria is the powerhouse of the cell)

if you give you big idea, but if you need more detail / have time for it, click on term, then it will give you a more in-depth presentation of material

→ take from summary page?

## Exercise app (but for your brain)

- gives a sample studying regimen  
(based on how much time you have,  
~~priority of upcoming assessment~~)

- daily ; tracks progress + mastery

- provides study tips + maybe lifestyle/  
healthy living tips that help w/ studying

JP: It's like a super def right?

YO: I saw this as a way to go a section that details it a lot more

JFL: This could be a way to go from chapter brief to full book

MD: I can see this being helpful in math when a student wants to see a proof of a theorem.

RVN: Both a student and instructor described this interaction as a nonlinear way they would like to access concepts

Spend!

JP: \$10

JFL: \$5 with a slight mod (see risk)

MD: \$10

### **Risk!**

JFL: The MVP of this may be a search page. This will be easier to implement than curating content as a super def.

4:

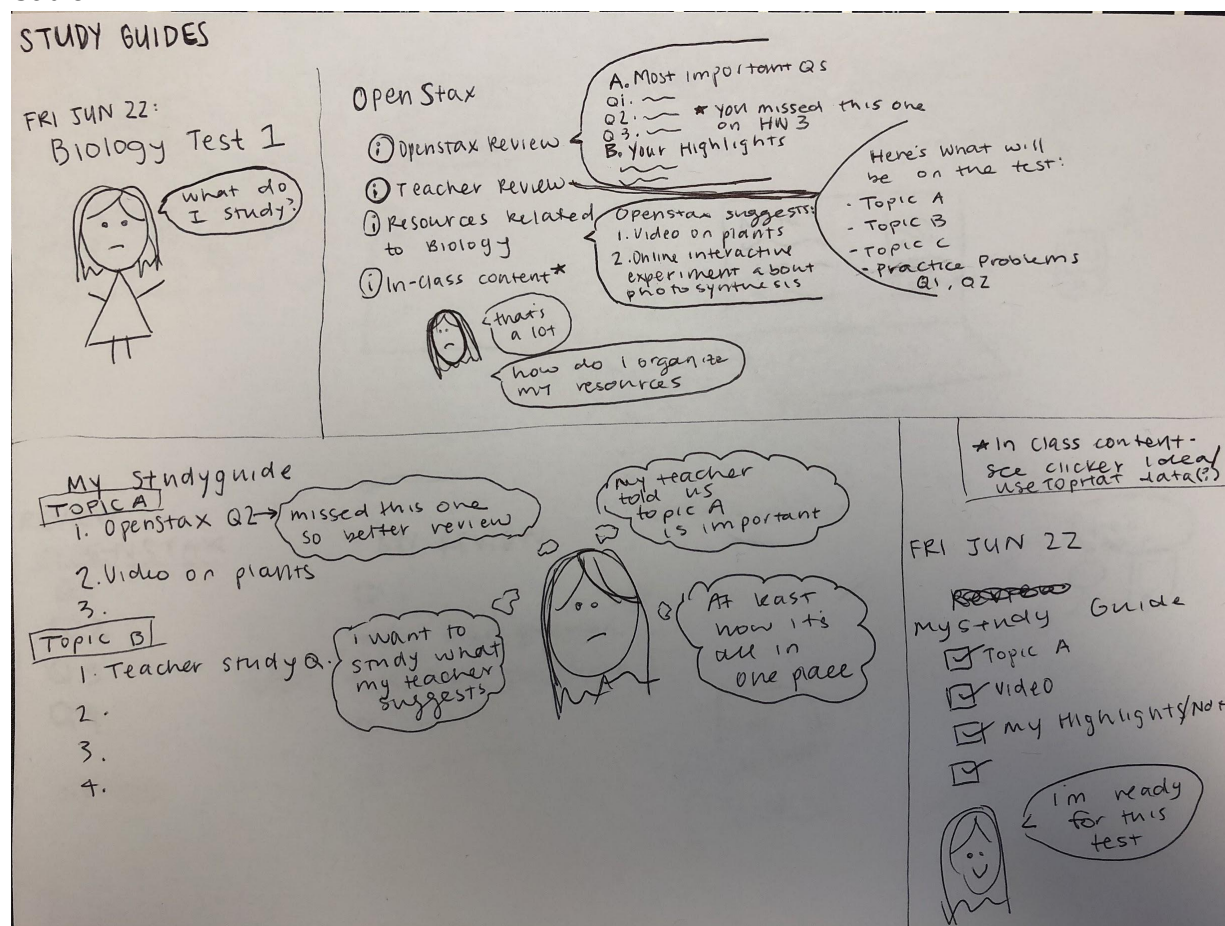
JFL: This could integrate with the welcome screen and BigLearn

KJD: Could be a powerful way to train good habits and improve meaningful-ness (lol my brain is fried)

AVP: Not just valuable for one class, but for learning in general. Could integrate superdef feature.

Spend!

Sadie



RVN: I like the consolidation -- I need to study, what all do I have to look at and what should I start with? How do I get to it all?

SR: It suggests a study guide and is customizable

YO: Puts everything in one place, gives structure to studying

MD: I like the checklist at the end, allows student to see the progress they have made and can also reassure the student the day of the test that they have studied a lot

KJD: I see this as being easily customizable, which would let students put their own creative stamp on it, and also shareable which creates opportunities for engagement with peers and to help others, which might make them feel good about it and return

Spend!

JFL: \$10

JP: \$20 this and other study guides

KJD: \$10

### Risk!

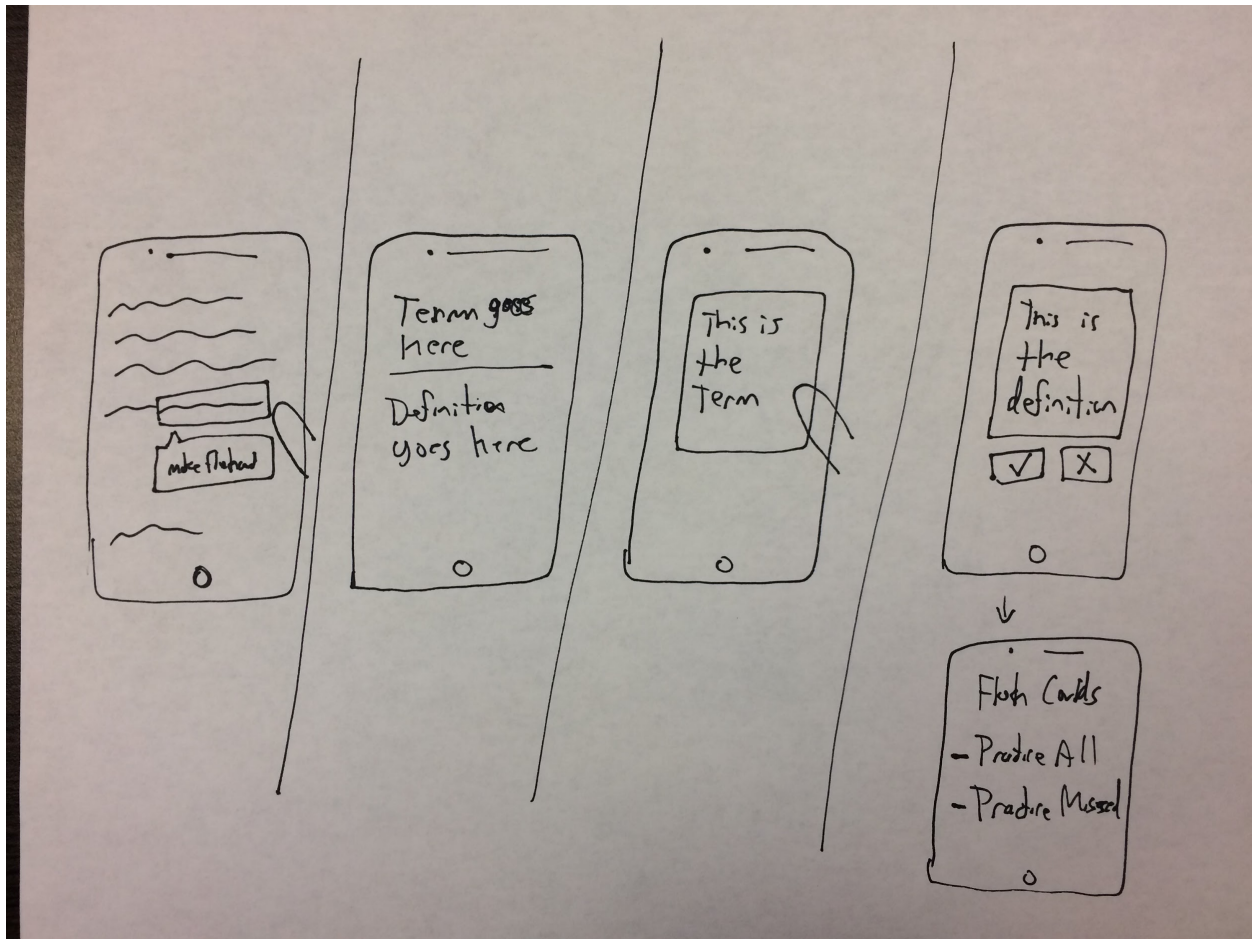
KJD: I want us to think more about whether students who are taking a lot of classes would find this useful, would they actually do this just for their openstax course, esp if it's an intro course

that they just need to pass? I like that study guides provide us interesting opportunities for student engagement, though, just idk.

RVN: I have a UX risk, and that is that, even though this meets a need (consolidate all student work) how feasible is this to make this their homebase over their LMS where they keep everything? Is this “replacing their LMS”? -- unless it's limited to content/notes/lecture notes for class managed in OpenStax tool/book - sort of related to Kim's comment above

- JP: I see this as the things not in their LMS - OpenStax book/tool + the occasional external link

Fred



JFL: Flash cards can exist. Interviews and survey data indicated this is a highly used feature.

Needs to be better/ more convenient than Quizlet

MD: (right wrong) That's what Quizlet does

Spend!

JFL: \$10

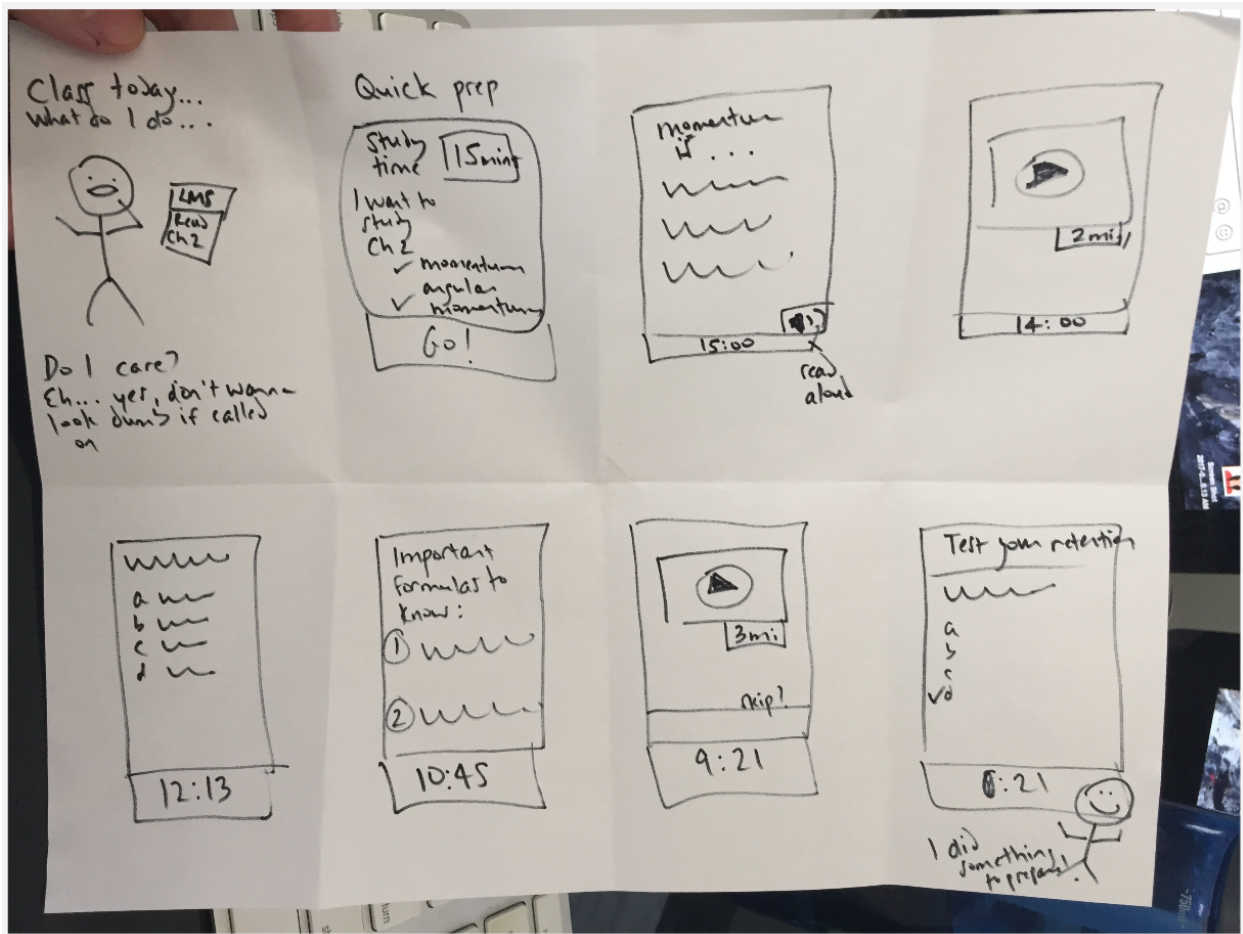
RVN: \$5 - I think a flashcard feature in any concept meets a frequently and clearly expressed need; Low risk UX-wise, because students are familiar with and use these tools.

Risk:

JP: Low risk if can incorporate with other practice/drill capability



Kim



KJD: Give students agency, way to serve stuff in that timeframe

AVP: How to surface things back to instructor. Can be student or teacher defined. WE know that teachers have be that prescriptive.

JP: Can be mixed with BigLearn to propose probs in weak areas.

Spend!

YO: \$20

AP: \$25 -- I also see how this could be integrated into other ideas.

JFL: \$10

MD: \$10



SR: \$20

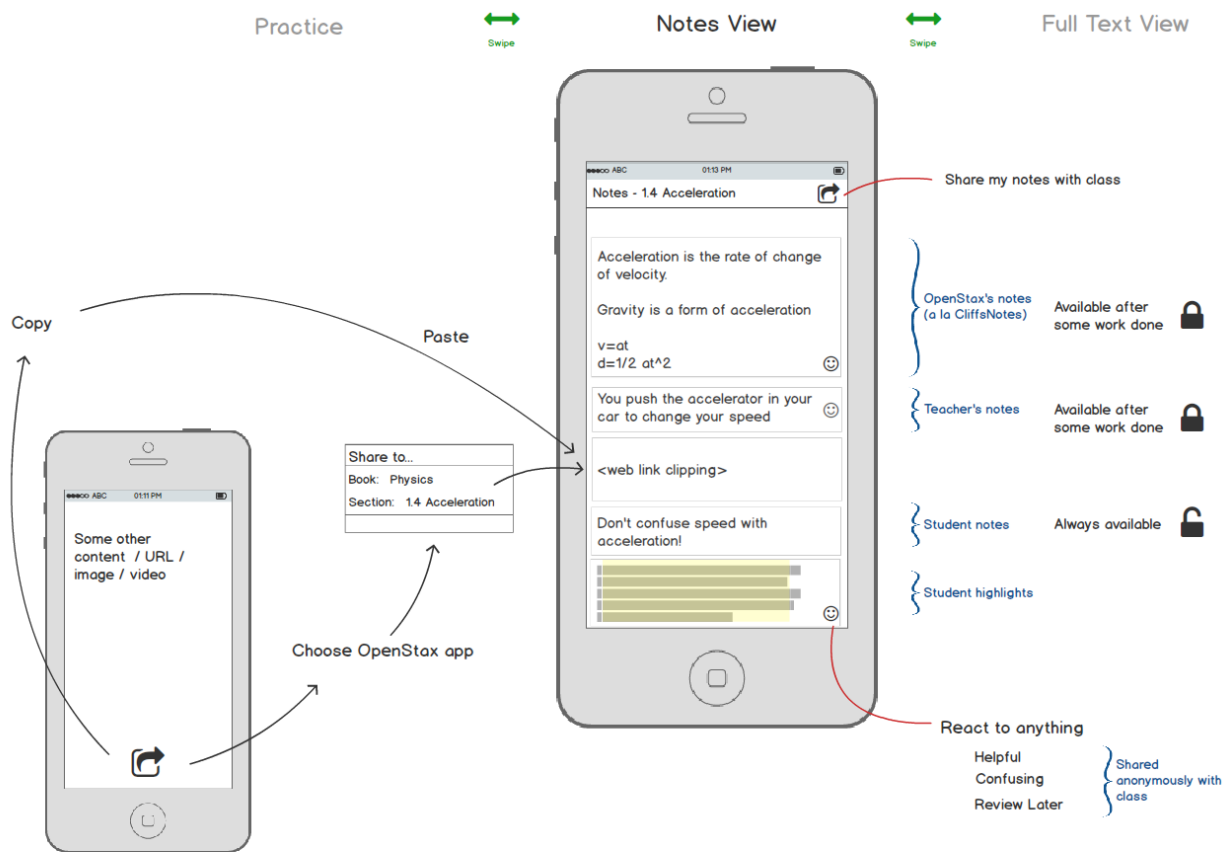
JP: \$20 - explicit student-provided time for activities

KJD: \$20

Risk:

KJD: It will be critically important for the content we serve up to be really good for these, especially if we are compiling some combination of content + videos + questions + other BL-powered recommendations. I know that's obvious, but if students do it and find it's a waste of time, or that the 15 minute study time questions are buggy, they won't come back.

JP



Clipping from outside the app

JFL: I like the swipe part and the add external link part +RVN

KJD: I like the reactions idea and want to explore that more and how it can be done easily/quickly/non-intrusively +1 JFL

KJD: I like the notion of having some stuff available after xyz is done, to keep them coming back

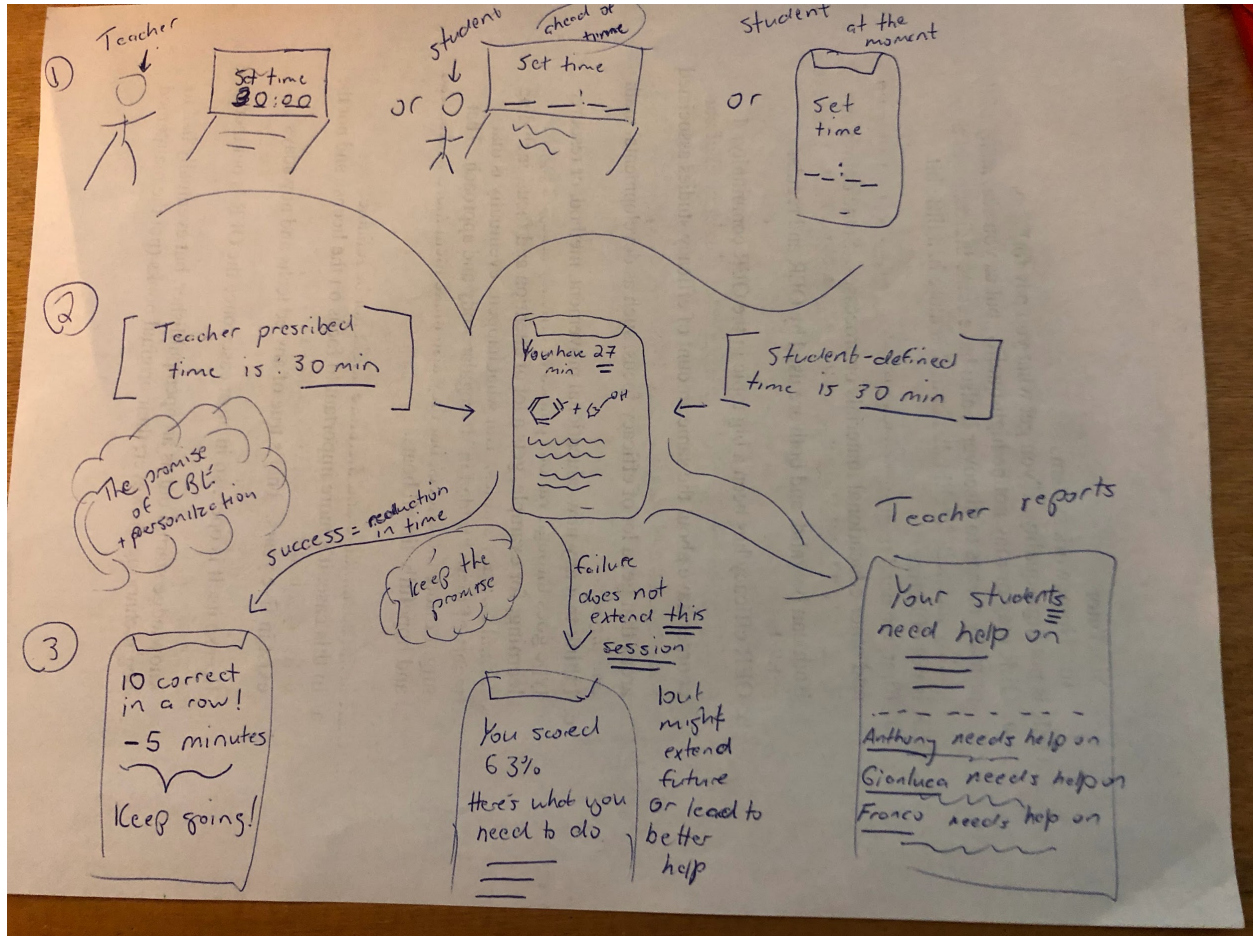
JP: Has chapter briefing and bringing in outside work. Interest in getting feedback on more parts of the experience. Reactions can be anonymous, shared with OX and other students - What is useful?

Spend!

\$10 - unlocking content based on effort spent



Anthony



esp the idea about giving teachers a view into what students did, how much time they spent, where they struggled

JP: making time explicit is neat, feel there's lots of room to do cool things

JFL: I like giving the score with an action after completion.

Spend!

land - no way to "select"  
only see problems may have already worked

tag for  
consumer

\* still  
Reading  
&  
Searching

next  
item

JP: like offline capability emphasis +1 KJD

JFL: I think this merits a deep dive. Tech issues. Addresses PDF clinging.

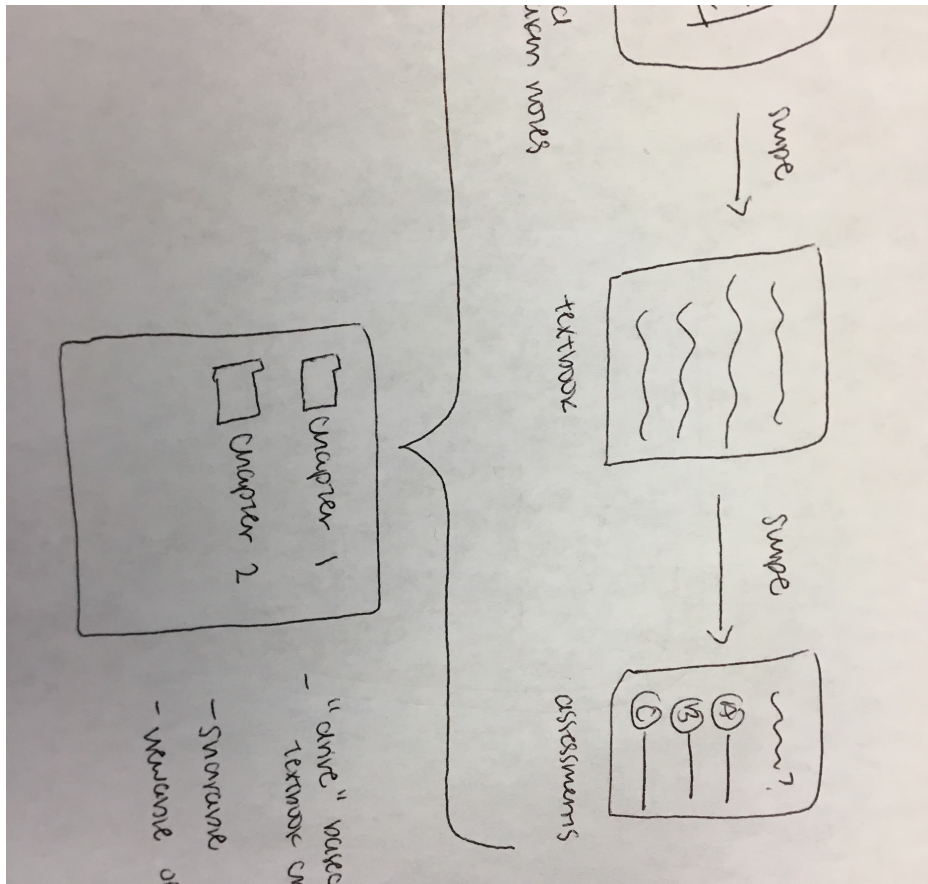
YO: this could also work for students who use “airplane mode” to avoid distractions

Spend!

JFL: \$5

## Risk!

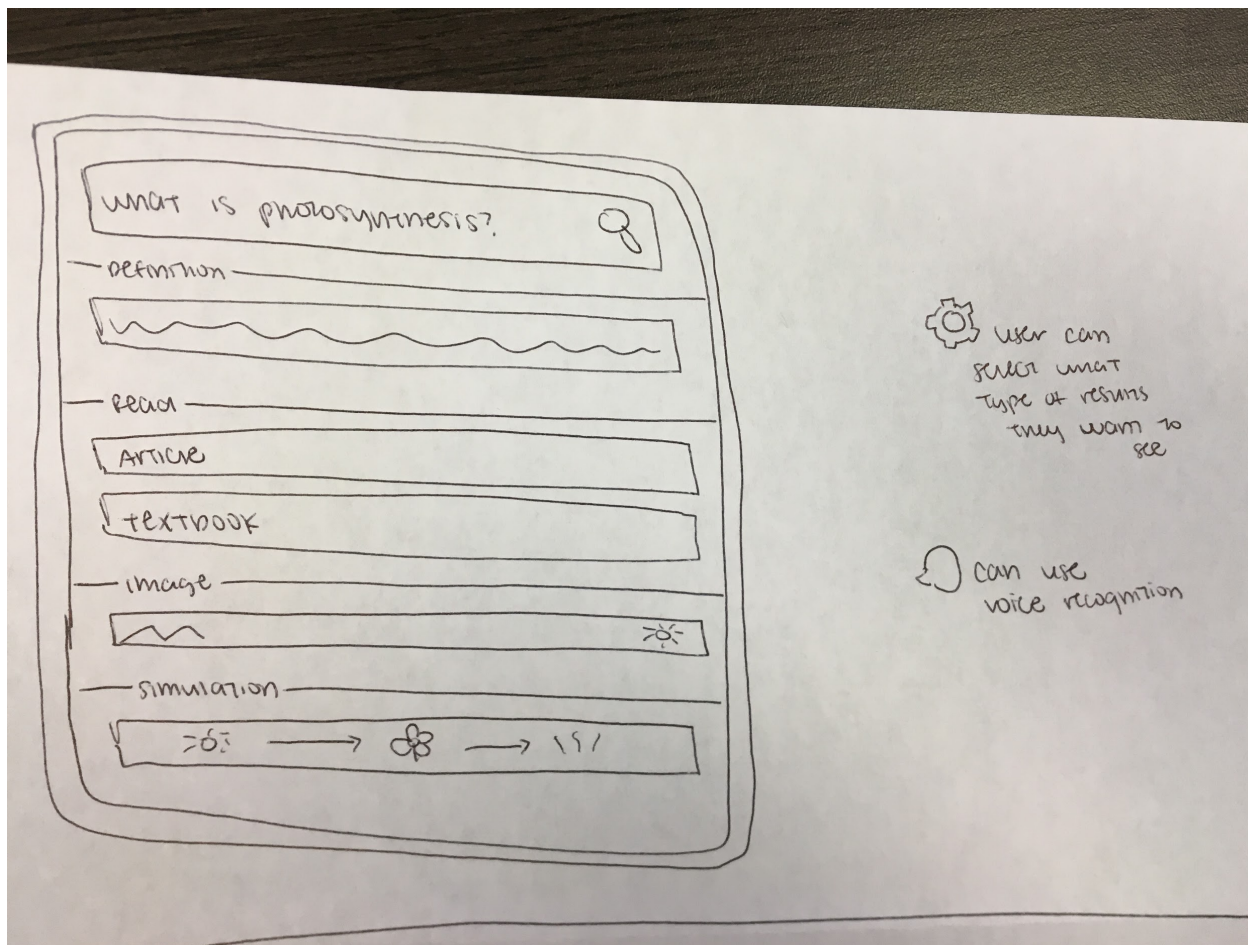
Getting this right could be difficult from a UX and tech perspective



MD: Way to organize files, images, notes, all in one place for review. Can download to view offline.

Spend!





KJD: I like the idea of voice recognition to search for stuff and get info back

JFL: This would be a primary use case for mobile IMO

Spend!

SR: \$20 -- seems useful and not too hard, good way to find content from other channels (videos, simulations) easily

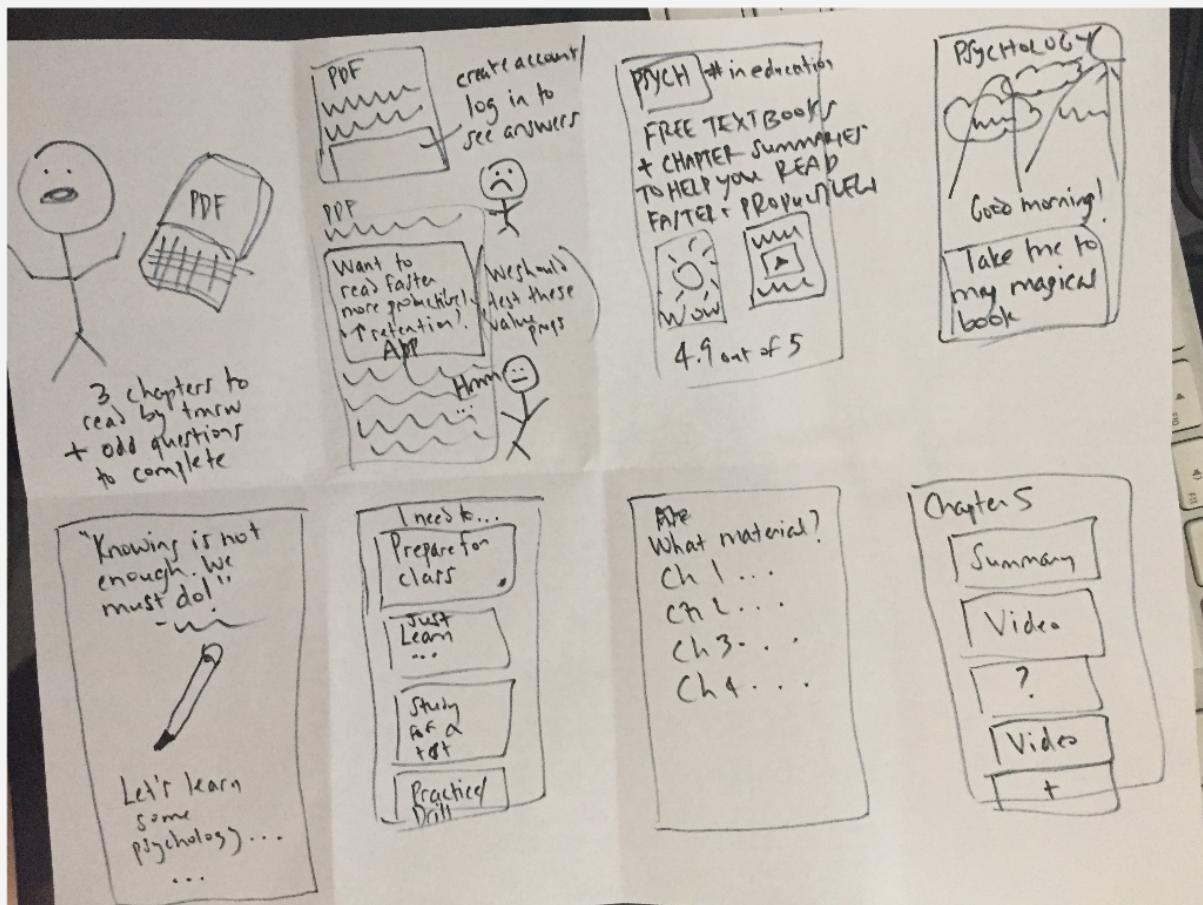
RVN: \$20 -- I think this is a good focused direction for a reading experience enhancement that can be in addition to other concepts. I'm thinking touchpoint to this is terms in the text (we have some other storyboards detailing a flow like this) -- maybe this is a feature to work out for a reading experience design sprint

JFL: \$10

JP: \$10 - Rockin' search except for voice recog

MD: \$15

Kim



JP: Like the buttons that get at the student's need at the moment

YO: I like the "I need to" part to fit different learning needs or situations, and the "what material" helps make it very individualized. (+1 MD +1 SR +JFL)

RVN: Like the actions by need; also, wondering if it could be "I need to" or "I have 15 min" selection options/toggle, if time is more important in the moment than need type

JP: we could use BL to help drive recommendations for just learn, study, practice parts

Spend!

YO: \$20

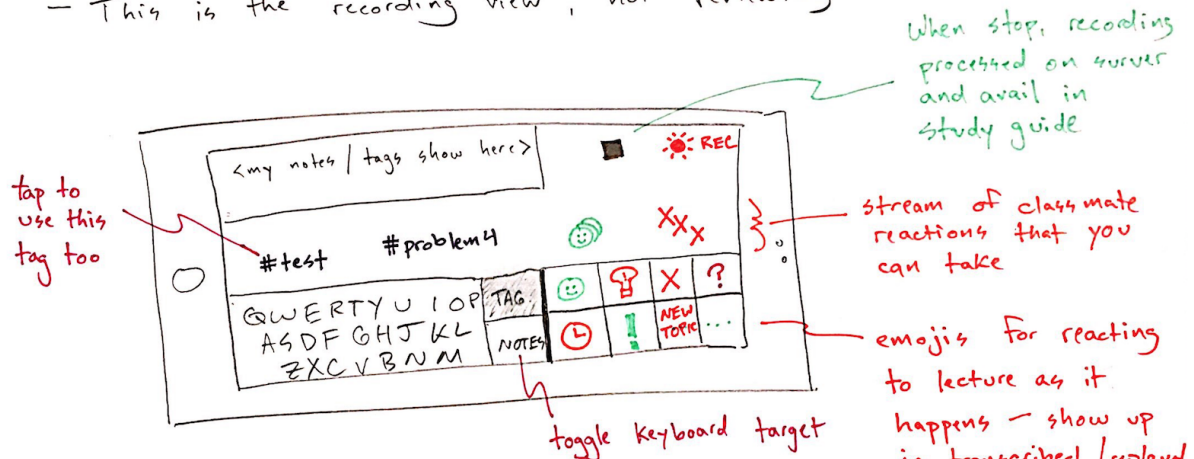
MD: \$20 - seems like a more customizable version of previous "quick prep based off time" idea suited to the student's need (review/learn/test)

RVN: \$10 I think this can work with the briefing idea



## LECTURE NOTES MODE ON PHONE

- students not typing much (because it is a phone)
- Facebook Live - like interface
- This is the recording view, not reviewing



- audio recordings from all recordings combined into high quality single recording (background noise removed)
- on the fly audio processing may be hard
- this could be a standalone app

JFL: I like the SoundCloud like note feature

RVN: I really like how it's taking the emotional temperature of the group; I think that can keep people from feeling isolated in their reactions to the content ("Is this just me?") +1 KJD

YO: Would this be shareable with other students in the class?

AP: I think having user control settings will help with issues around distraction or focus. E.g. a user can set whether or not she wants to see/share with classmates.

Spend!

### Risk

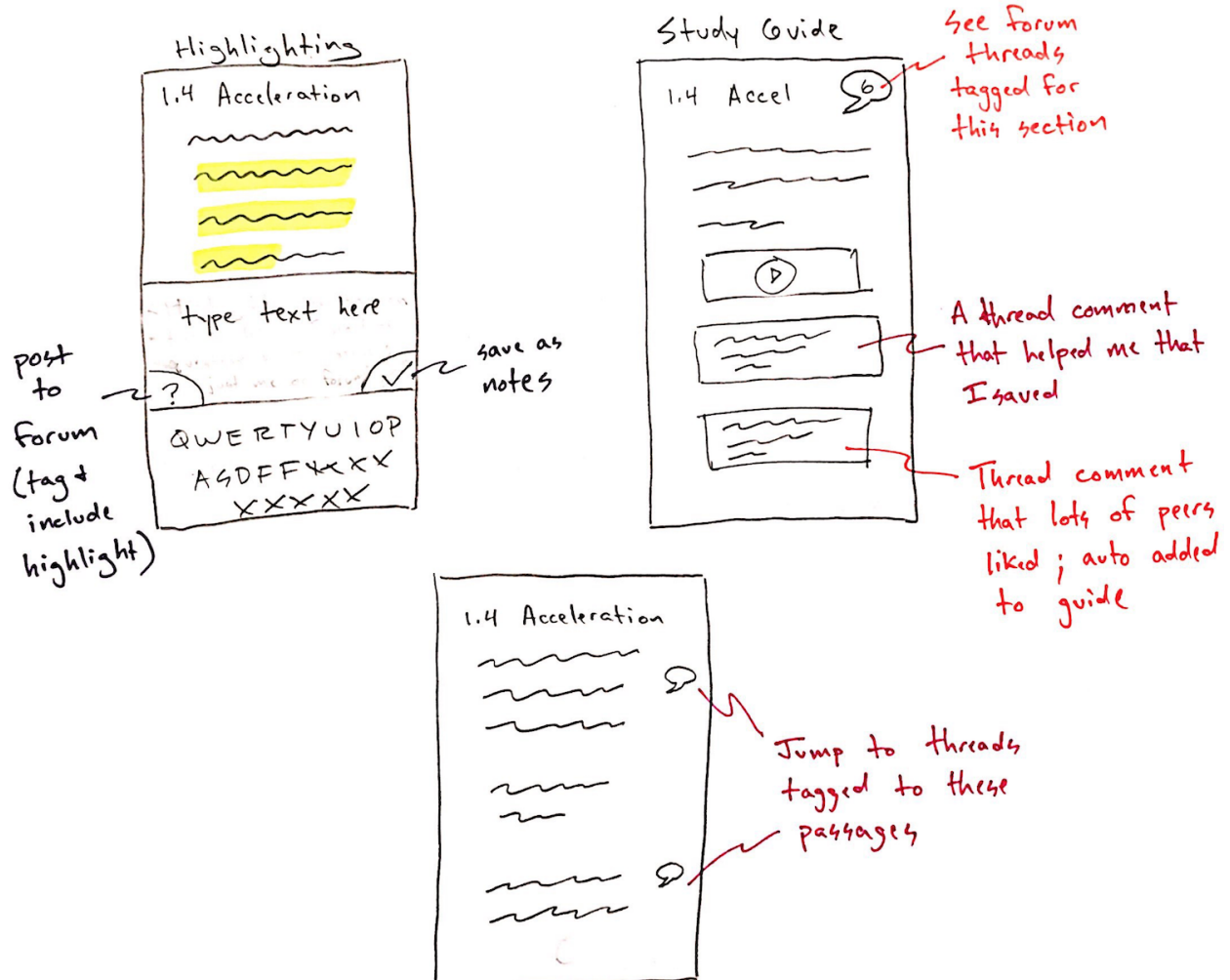
YO: there might be privacy concerns or some teachers might not allow electronics to be used in class

MD: The stream of classmate reactions can also be distracting. I can see some students just spamming or having a side conversation.

JP: this is a separate app

RVN: I think risk is scope and tech requirements. Seems if we'd want to do it, this would be all we could deliver for first phase. Meets some needs well, but not a lot of others. Would be better as a separate app after other concepts are implemented.

# FORUM TOUCHPOINTS



KJD: Encourages interactions with the content that are interesting and different from what we do now

SR: I like the ability to see frequently highlighted/liked topics

Spend!

MD \$5 - I like the ability to ask questions based on a certain sentence/equation or ask related questions. Teachers could also post messages to students about importance of a definition.

JP \$5 - Forum

RVN: \$5

KJD: \$5 I like frequently highlighted stuff, maybe not a forum but way to see things people reacted to

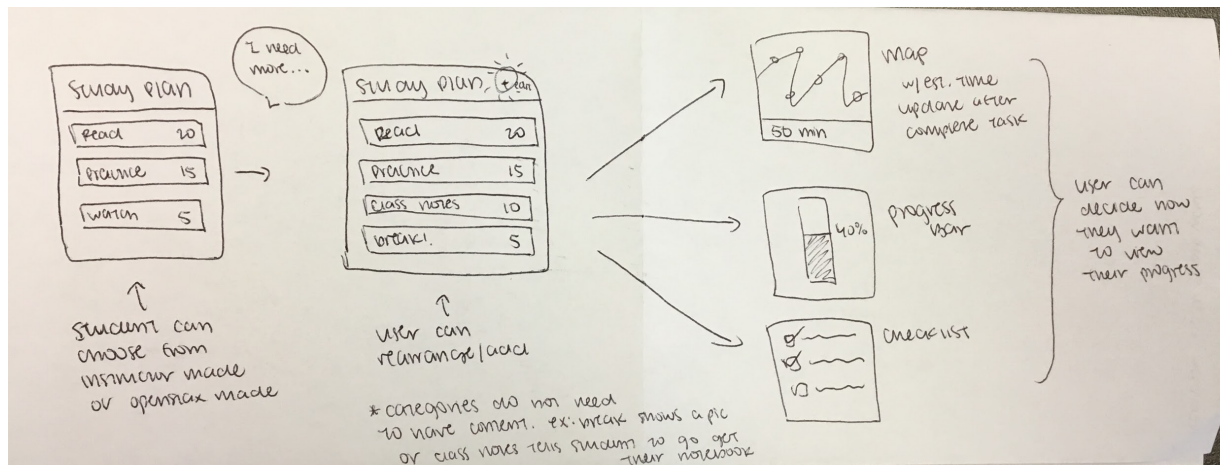
### Risk!

JFL: Would we have to moderate the forums?

- We couldn't. Would have to make them self-moderable / teacher or TA-moderable. Is moderable a word? :-D

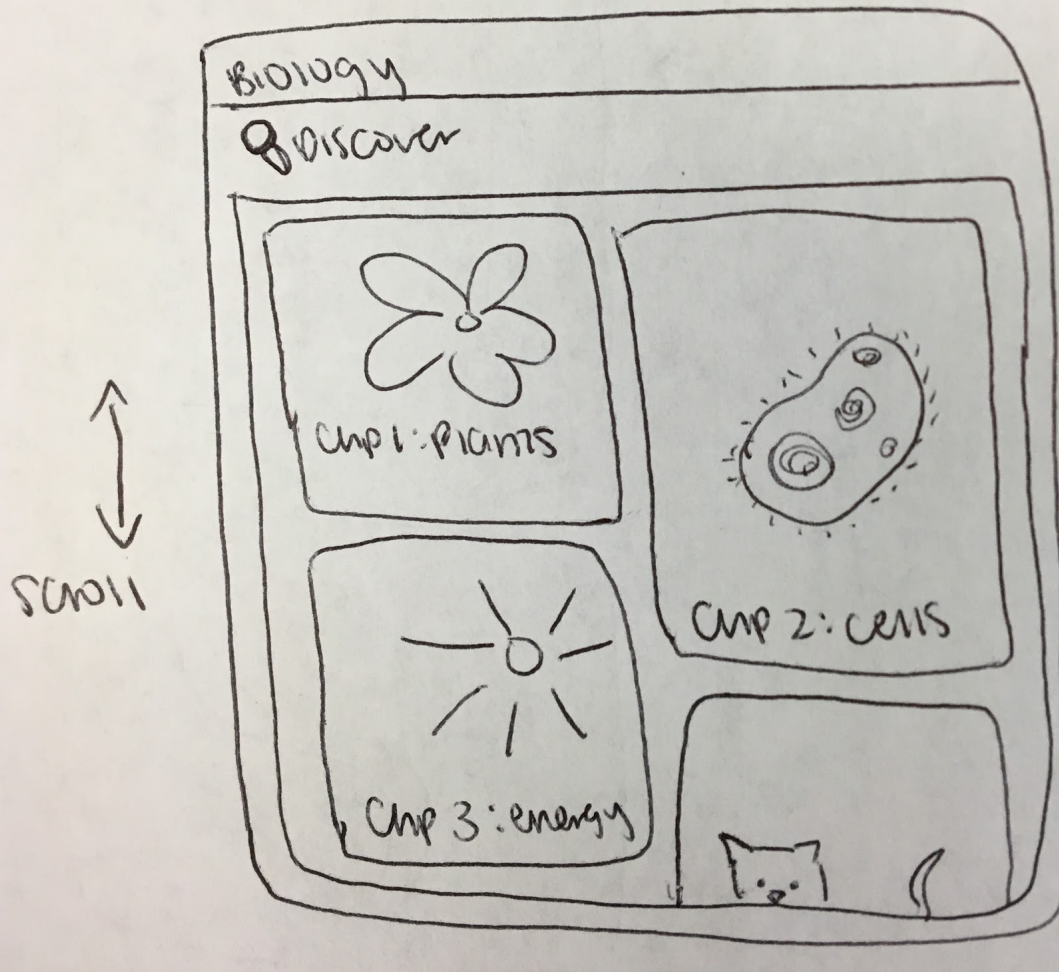
KJD: Blah risk blah. It has strengths in encouraging interactions and social stuff but I wonder if this is the best/most effective way to encourage that. How could we do this less expensively?

Melinda



Spend!

TEXTBOOK IS A SCROLL VIEW  
(SIMILAR TO SNAPCHAT)



JFL: This view is similar to Yoona study collage idea. I like the idea of a different view of the content.

SR: I like that these are very approachable, and could be cool to have them grey-out/change size after they've been read to show progress (like snapchat discover page)

Spend!

YO: \$10

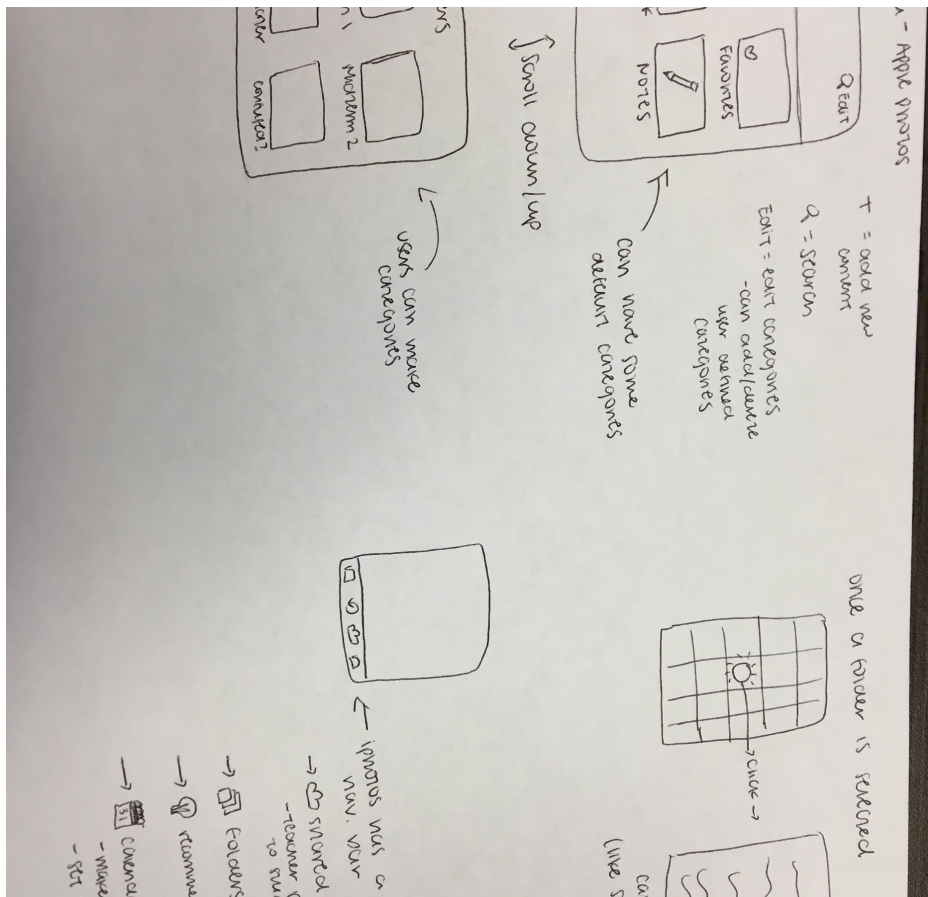
MD: \$10

AP: \$10 -- I think we should think about doing something more visual.

SR: \$10

JFL: \$10

KJD: \$10

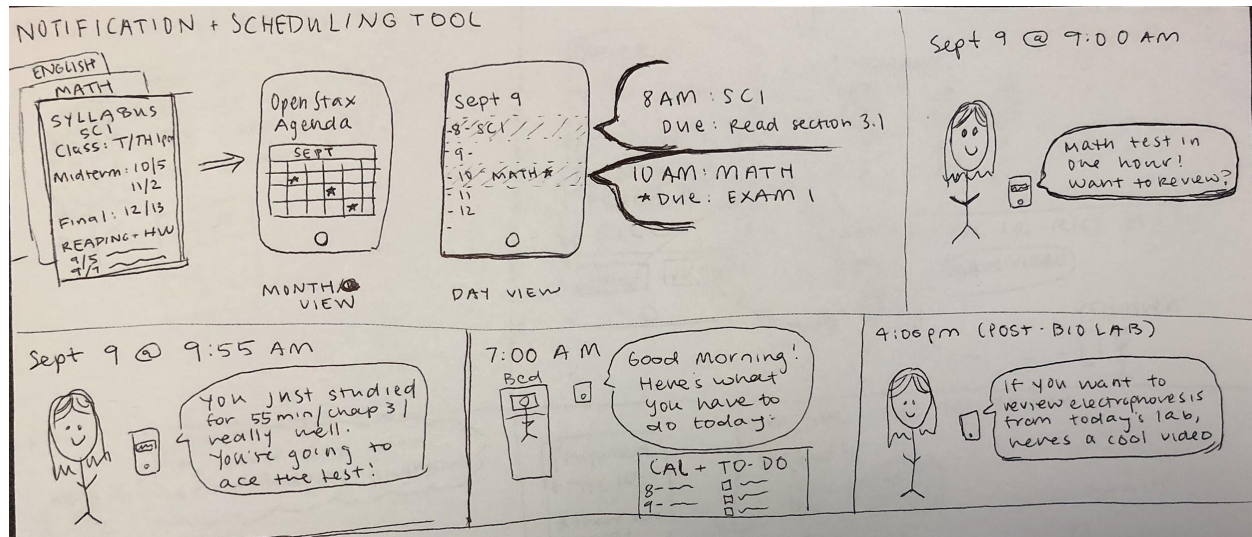


KJD: I like the idea to borrow the "discover" page from instagram/snapchat bc that would help us surface "useful" content (recommended by other teachers, other students, people near you etc)



Spend!

Sadie



JFL: I like the syllabus / agenda

MD: I like how the app syncs with the subjects and schedule on the syllabus

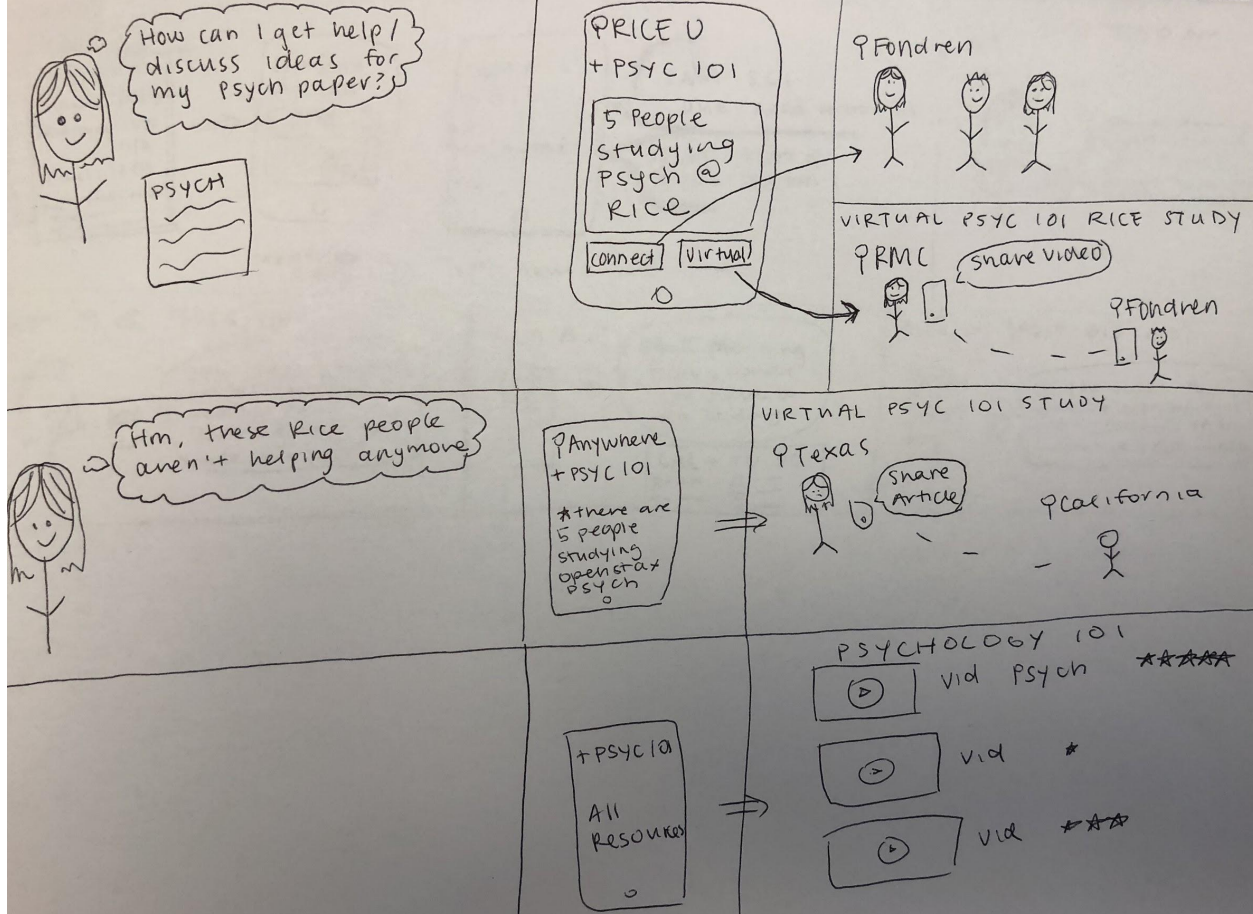
AP: The bottom left panel seems also to tie into mini-badges. They can be motivational when the students have done what they need, and a little stern if they have not.

RVN: I like how this is trying to address all the things a student is trying to manage inside our agenda/calendar view. A calendar that only manages our book/assignments may not work as a good homepage.

JP: Instead of scraping syllabi might be better to have teacher input it / attach it to the book content (because we might have trouble dealing with raw syllabus). If the teacher has an ability to do light customization of the book with scheduling, maybe they can drop other events on the dashboard (getting toward Tutor interface now)

Spend!

# COLLABORATIVE STUDY TOOL



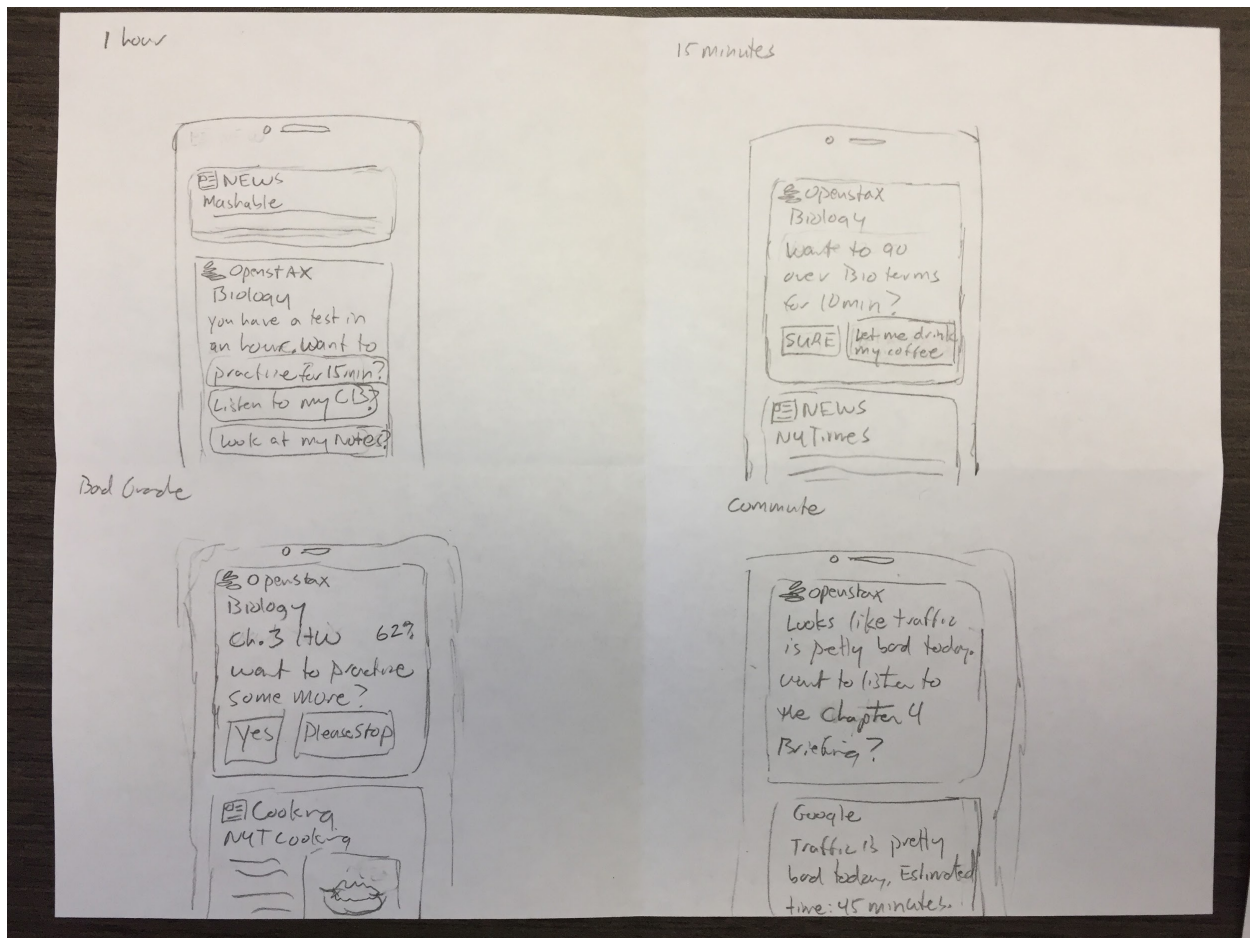
JFL: I like how this leverages dating app func.(+1 YO)

RVN: I really like how it shows who's studying right now +1JP

Spend!



Robert



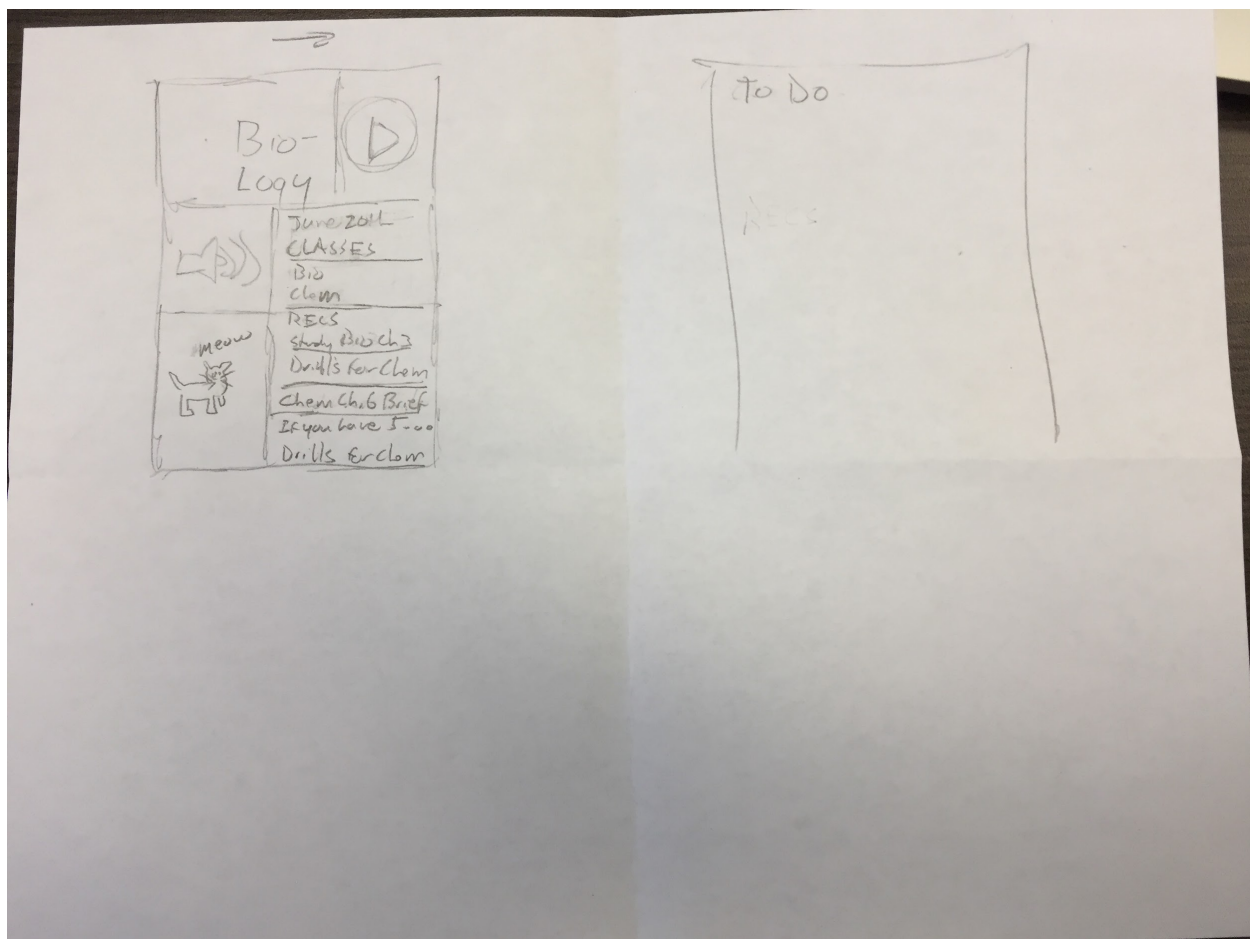
JP: timing to prompt for practice could also be lower tech - guess a time, if they don't respond choose a different time. Have the first time we use be the most successful time for other students

AP: Also could correlate to whether students who take the reminders and do the work get better grades (or some other measure of success).

Spend!

MD: \$5

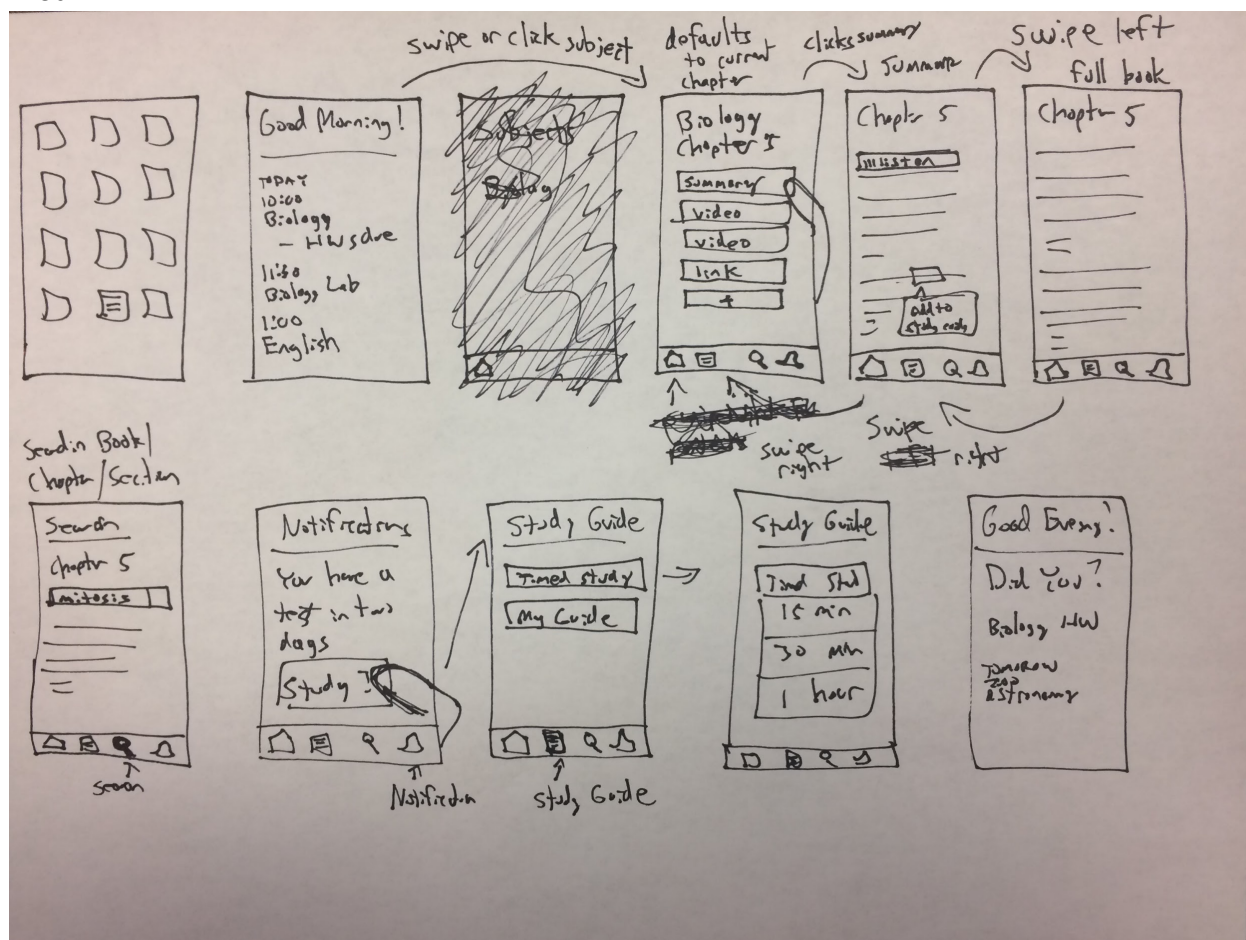
RVN: \$10 -- I think it works as an add-on to other concepts



JFL: cats FTW!

Spend!

Fred



AP: I like that this could be very student focused, but if a teacher wanted to see the output (stack), it could be something they drive as well. (Or a TA/tutor could reference it, etc.) I think that does go for several of the others' stuff too, but the stack made me think of it.

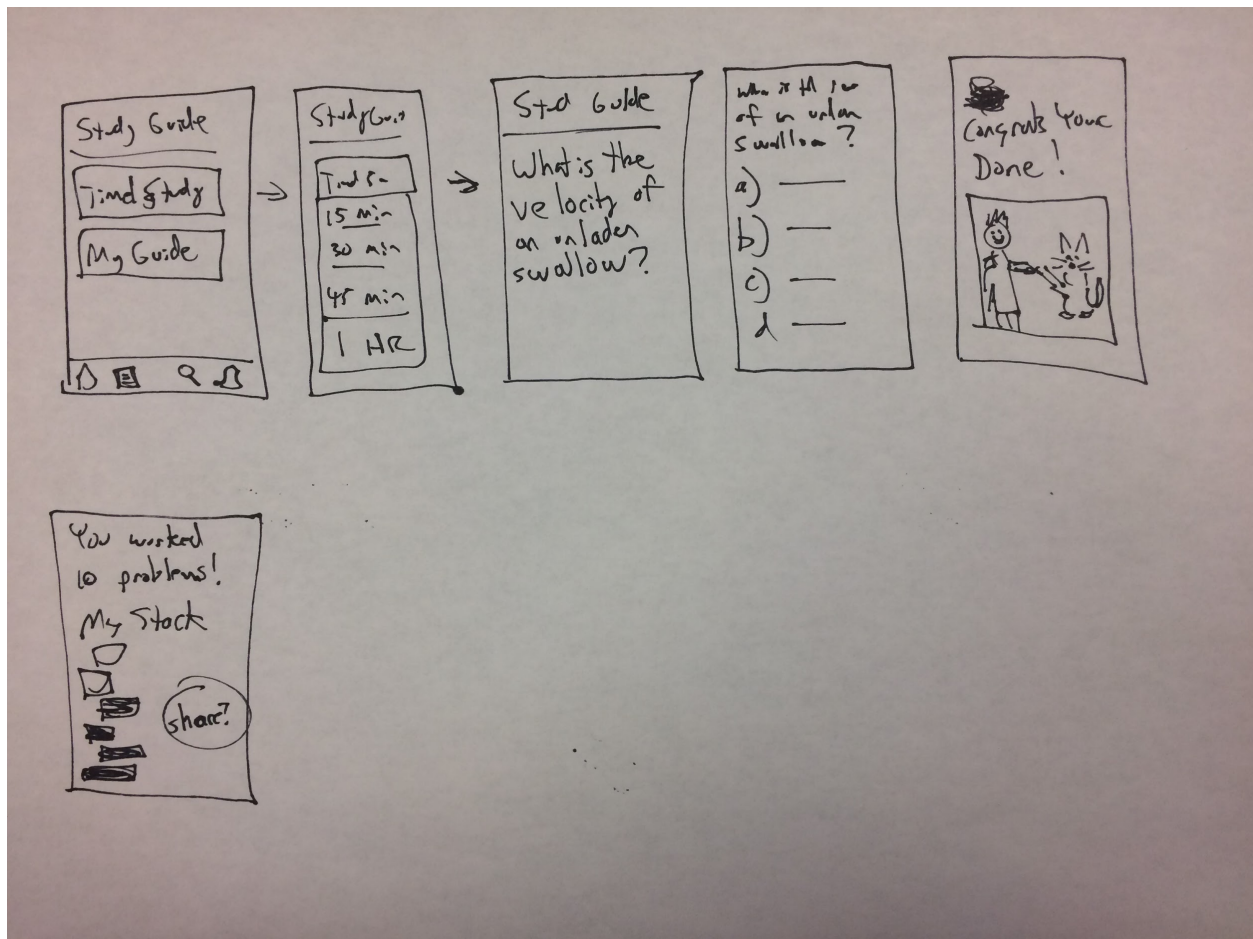
MD: I like the ability to share progress. Some people are really into tweeting/facebook posting stuff like this, and could get attention from classmates on social media.

YO: I like the swipe for different modes of the text (summary/full version)+ 1 RVN

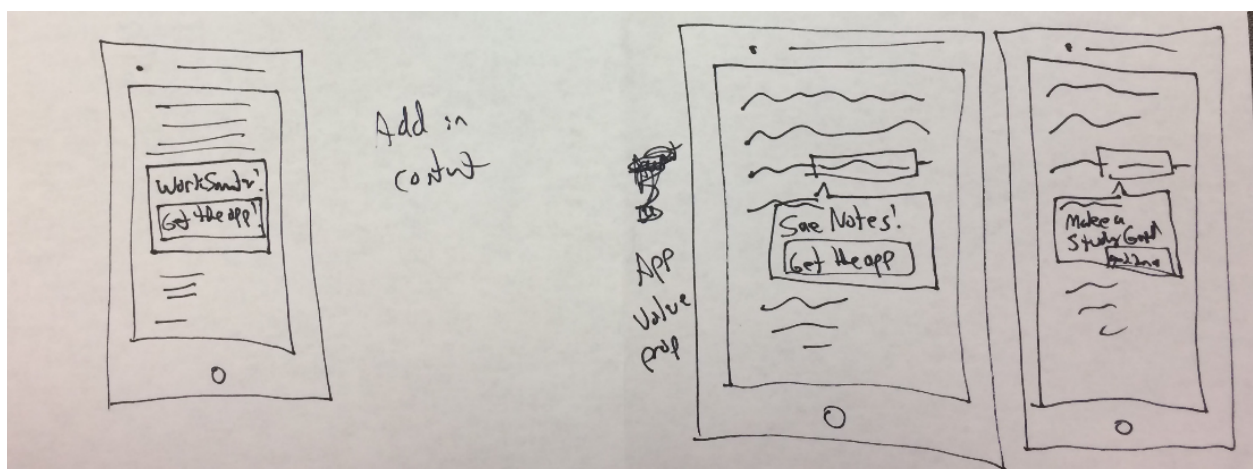
I like that this is packing a lot of our ideas into the start of a cohesive experience +1JP

Spend!

KJD: \$20



Spend!

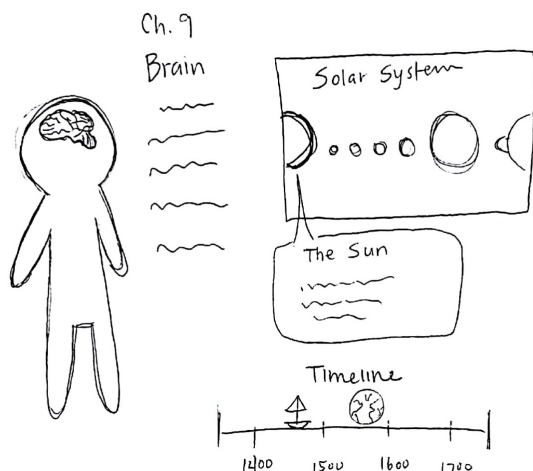


Spend!  
MD: \$5  
JFL: \$10



KJD: \$5

Yoona



Interactive Web Diagram

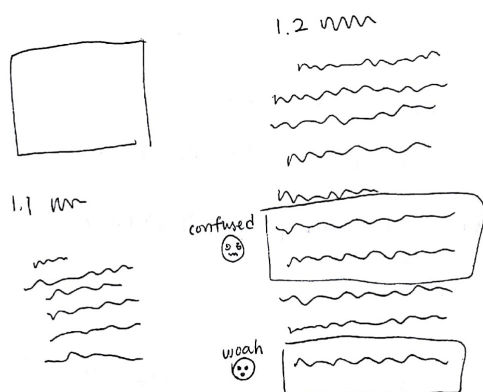
Show broad scope of course (A+P, The Solar System)

~~Highlight~~

Each individual component shows how it relates to big picture or whole

Highlights area/topic of focus

Visual catalog of information



Slack Parrots

Helps <sup>w/</sup> interacting w/ text, making comments, showing emotional responses

maybe tying emotional stimuli to facts make learning easier?

JP: a "I got this" emoji could help hide something you don't want to review later (or could grade it out a bit) because you got it. (+1 YO)

JFL: Could be useful for instructors, "20 students found this confusing."

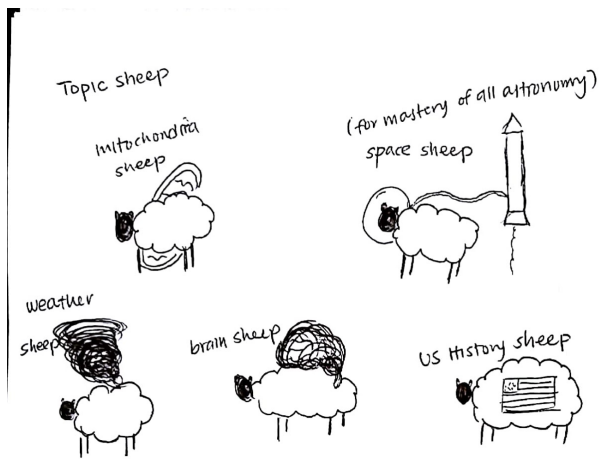
Spend!

YO: \$10 for the interactive web diagram

YO: \$20 for the reactions

JFL: \$5 for reaction emojis

KJD \$5: for reactions



## Subject sheep

For every topic you master, you get a special sheep (or any other animal).

For example, when you master the Krebs cycle, you get a mitochondria sheep!

Collect them all!

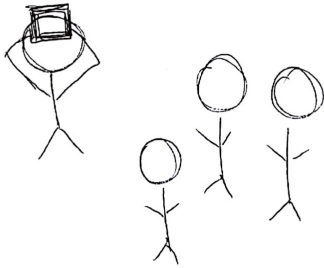
You can see your sheep playing on the farm.

## Heads up flashcards

Term appears on screen

Friends try to explain what it is

Person holding the phone tries to guess the term



\*skipping, incorrect answers, correct answers mechanics ???

JFL: I like the idea of collaborative flash cards

JFL: I like the blank slate of the sheep

MD: I like the idea of getting sheep/prizes/trophies for concepts mastered.

RVN: A group exercise tool I think does resonate with how we've heard students talking about study groups/sessions they organize. Also, could get them away from Chegg/Quizlet

Spend!

MD: \$5 for the sheeps - can incorporate other ideas such as ability to share progress or share sheeps to social media

### Risk

YO: Heads Up already exists (we could always change the mechanics a little though), and if for some reason your friends gave you the wrong definition and you matched it to the wrong term, then you've set yourselves up for failure.