



executive summary

Problem

Current online classrooms lack a **focus** on education **all-in-one place**, and as a result are arduous to use and lead to a **confusing** experience.

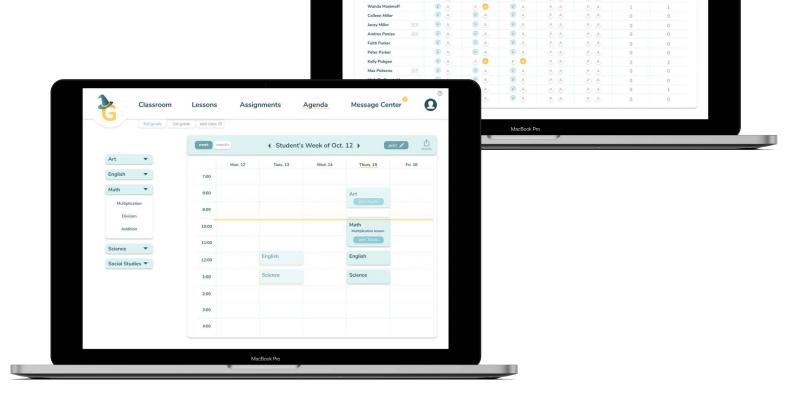
Online learning has deprived students of the valuable social interactions and collaborative learning opportunities of in person schooling.

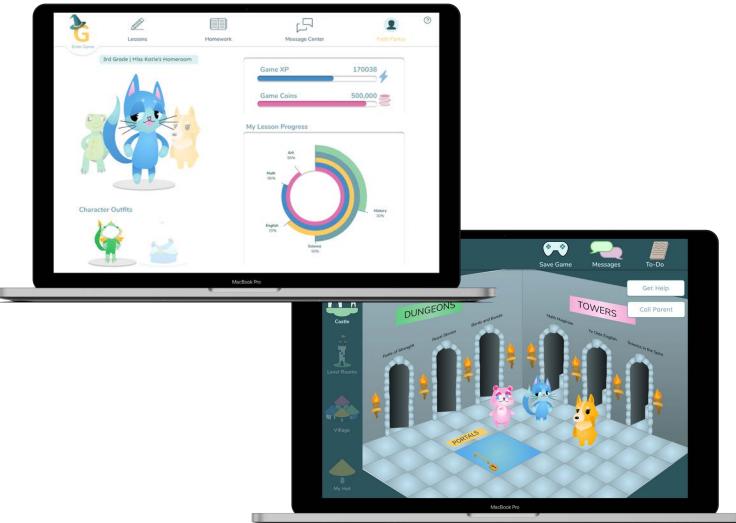
Due to the pandemic, parents have unexpectedly had to take on a teacher role at home and struggle to balance this new role with their busy lifestyle.

Solution

GamePlan is an online learning envronment that places the entire classroom experience in one place, and streamlines communication through contextual messaging between parents, teachers, and students.

It engages students through **gamified lessons**, and **collaborative learning** which encourages **social interaction** and fun.





Features

Universal platform

A universal online classroom creates a smooth and easy learning platfrom for teachers, students, and parents alike.

Gamified learning experience

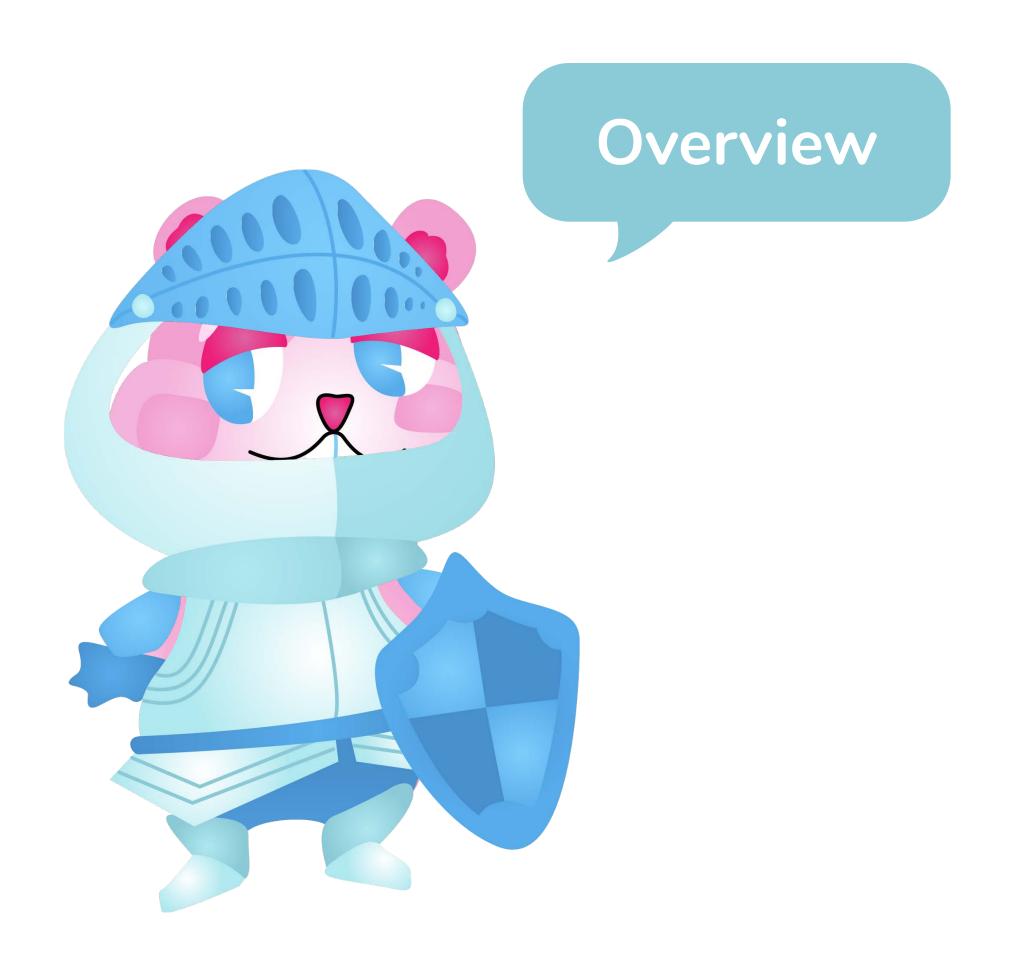
The student game world offers fun lessons and collaborative educational games for students. They are rewarded for their work on assignments with visual customization options to show their progression.

Contextual messaging

Contextual messaging offers a **direct way** for all parties to **communicate** during lessons and throughout assignments.



IACT 370 | Fall 2020 | Team-19



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02	Topic of interest and UX problem
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Team Lead Information

Visual Lead Architecure Lead



Research &
Prototyping Lead



Interaction Lead



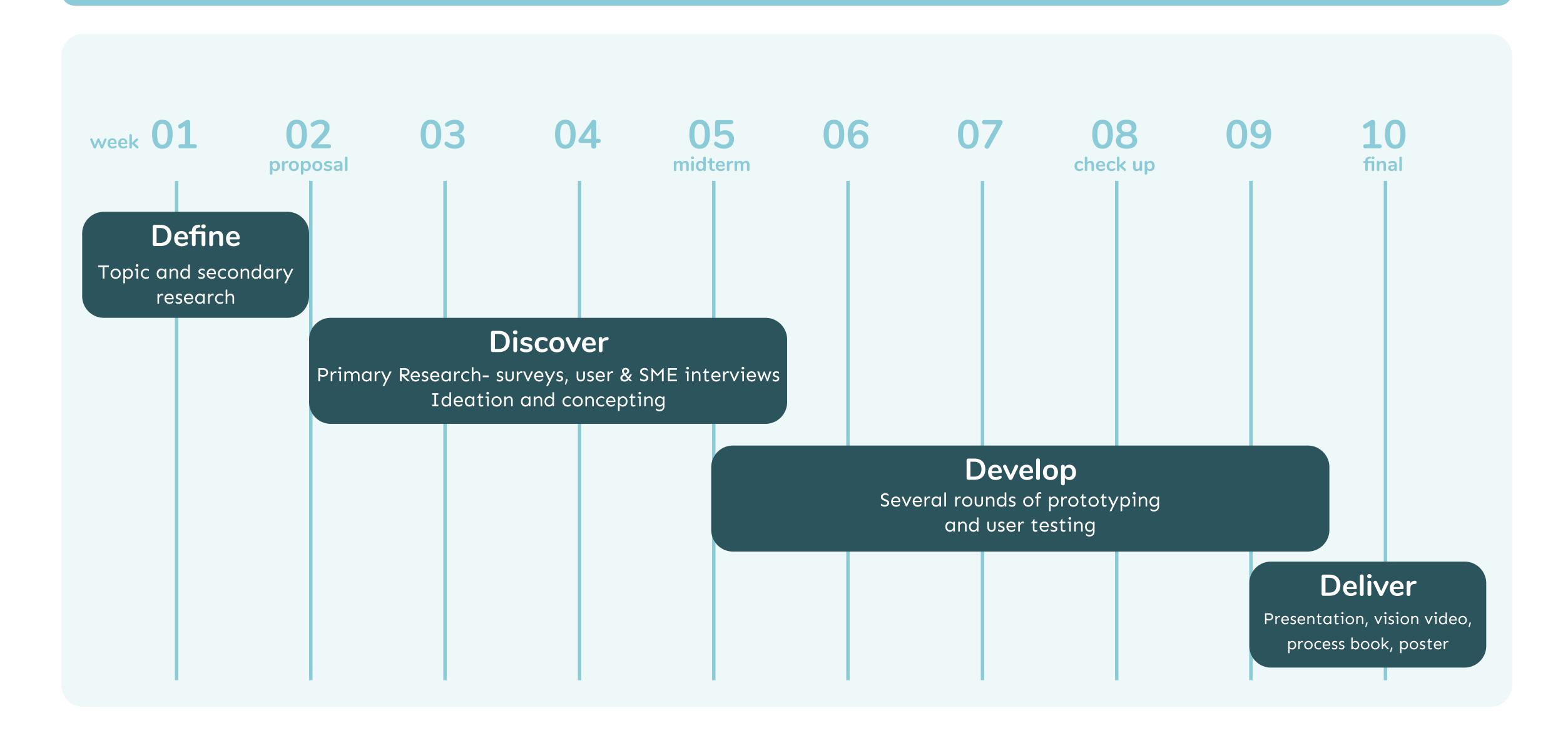
Copywriting &
Product Design
Lead



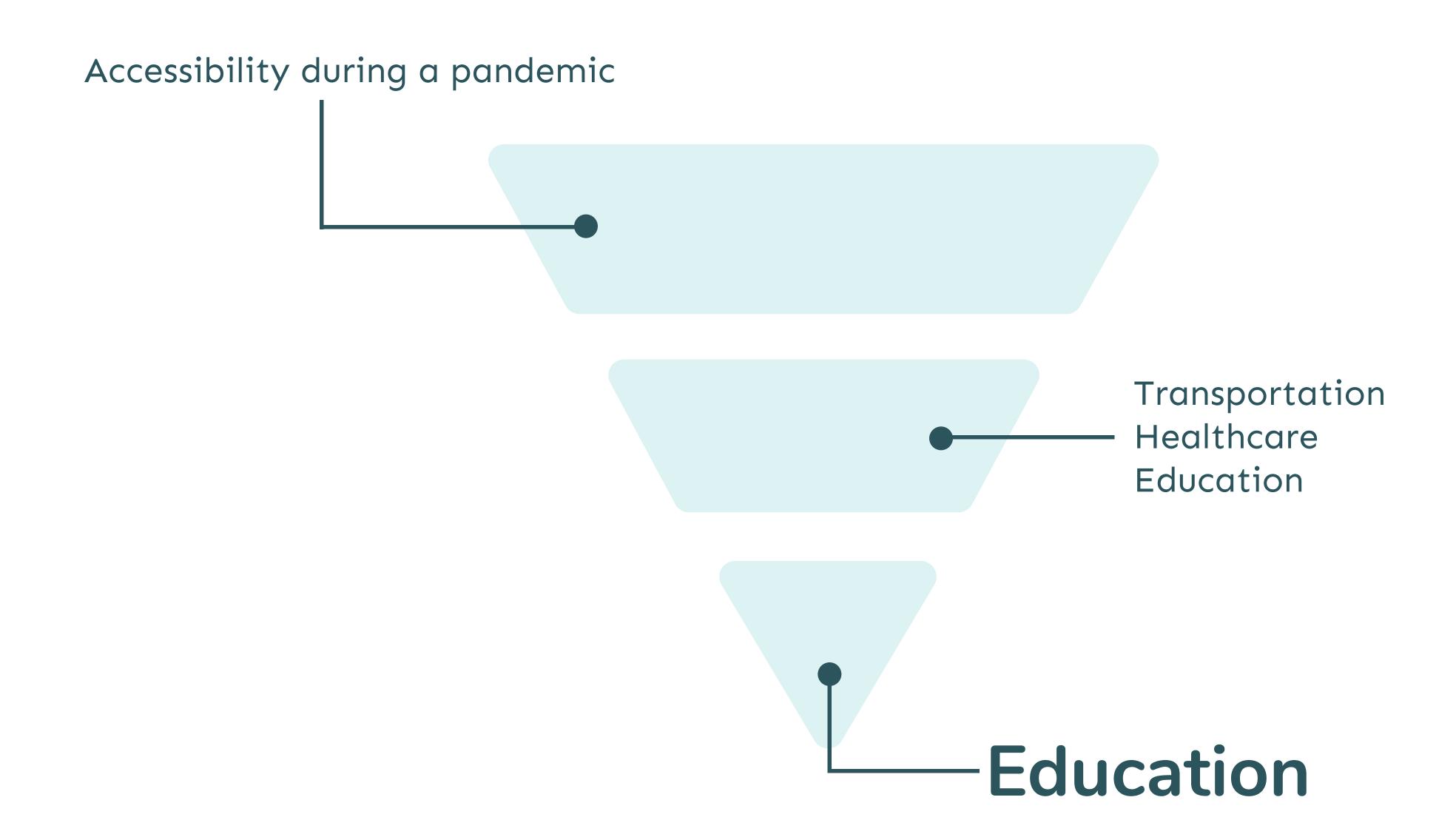
Ideation Lead &
Concepting

Max

01 Timeline and methods



02 Initital topic of interest





Parents' roles in online education

Due to the pandemic, parents have unexpectedly had to take on a teacher role at home and struggle to balance this new role with their busy lifestyle.

1.1 billion children

are out of school worldwide due to COVID-19 closures

27 million children

grades PreK–5th will be missing out on essential educational, social, and developmental benefits

With parents more involved, online education will be a more supportive and efficient home environment for students to thrive in.

06 Case study

1

Phase 1
Asynchronous Sessions

Process: Videos and PPTs

Timeframe: Daily

Deliverables: Videos, article links, PDF's, projects, etc. 2

Phase 2
Asynchronous and
Synchronous Sessions

Teacher Support

Process:

Moodle and Screen-Free /
Inbox Free

Timeframe: 1–2 times per week

Deliverables:
Building community, review
content and teacher PD

3

Phase 3
Asynchronous and
Synchronous Sessions

Student Support

Process: Virtual re-teach Sessions, Langauge & Office Hours

Timeframe: Weekly

Deliverables: Individualizing student support 4

Phase 4
Asynchronous and
Synchronous Sessions

Assessment & Grading

Process:
Evidence of work &
Redesign Report Card

Timeframe: Ongoing

Deliverables:
Assignments meet the standards

5

Phase 5
Asynchronous and
Synchronous Sessions

Reflections

Process: Feedback & Take-Aways

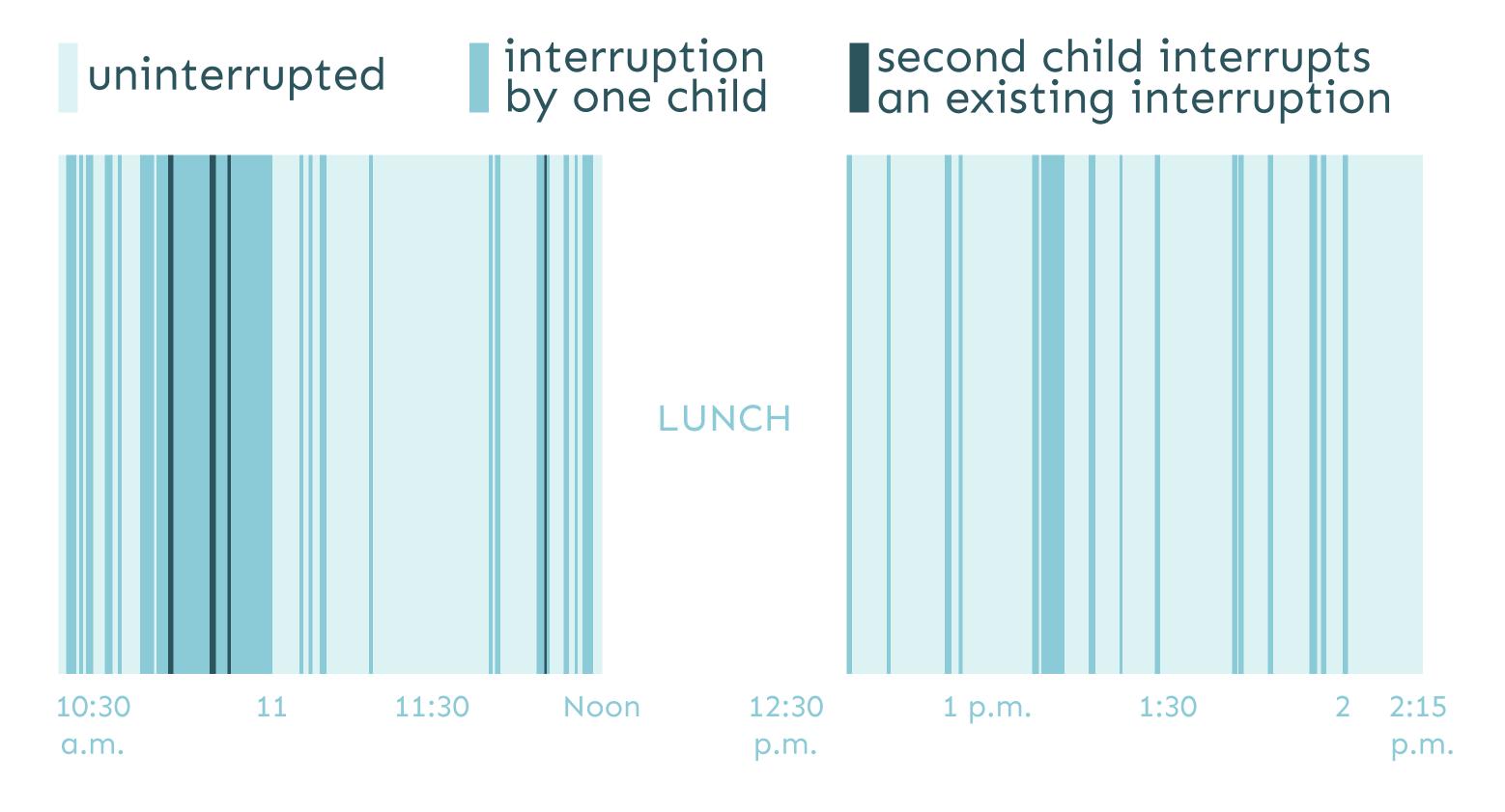
Timeframe: Weekly/Biweekly Surveys

Deliverables:
Data to support projections
for future

"In terms of the ease in adjusting to each phase, thus far teacher and parents seemed to have found Phase 3 more challenging — mainly due to the introduction of the synchronous sessions, and the supporting technology tools."

Balancing work and parenting in the pandemic

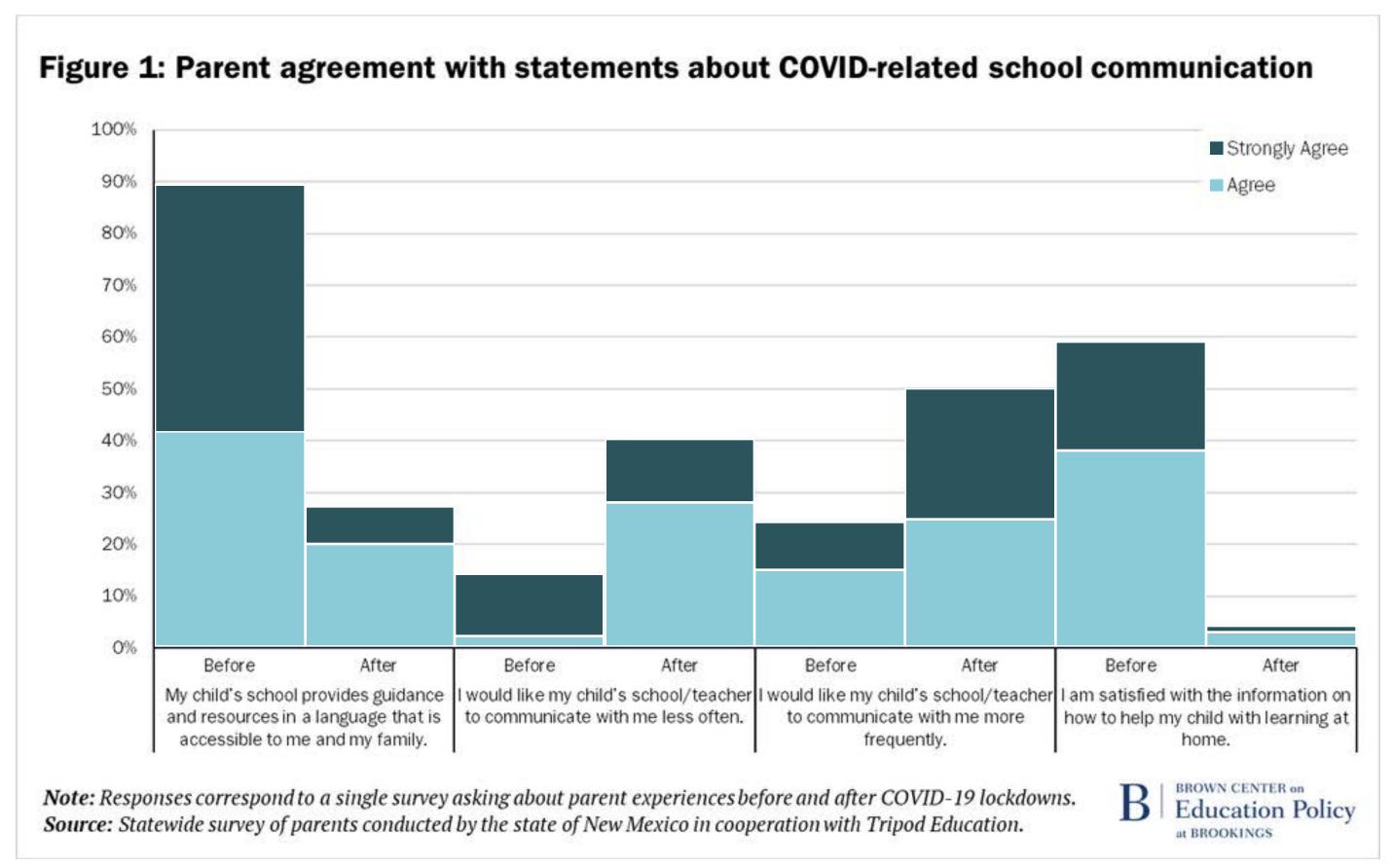
One day, two parents documented how often their two children iterrupted a portion of the workday.



- Parents are interrupted an average of **15 times** per hour
- Parents' productivity is decreasing due to the high amount of interruptions

Parent and teacher communication

08



Families without a computer desire more communication

Families that have access to a computer desire a more targeted communication

21,000+ parents in study

Effective two-way communications, such as parent-teacher conferences, are essential factors in building and maintaining the partnership.

Parents and teachers both feel like they are not being heard in an online environment

In a survey, the statement "Digital communication supports the feeling that I'm being heard" was only somewhat agreed on by both parents and teachers.

10 Pain points and unmet needs

- Accessibility to educational tools and materials
- Parents struggle to keep their children focused
- Struggle adapting to required technology
- Continued **unpreparedness** for quasi-homeschool
- Lack active involvement in children's online education

11 Expected outcomes

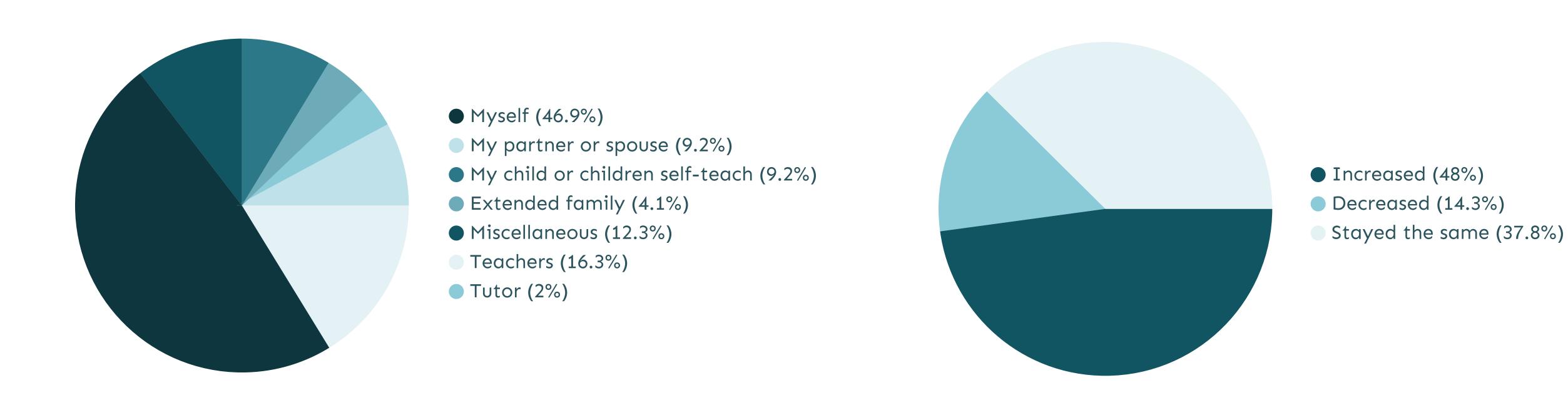
- Supportive educational community
- More effective learning for students
- Increase in parent involvement and confidence in supporting children's education
- Increase in **understanding** of required technologies

- Find main pain-points of parents
- Discover what is keeping parents from effectively helping their children with education
- Why are parents struggling to keep their children focused?
- —— Why do parents have such a difficult time adopting new technologies?
- What methods have parents used that have worked?
- What are parents doing for work? What are the main things keeping parents from getting or staying involved with their children?



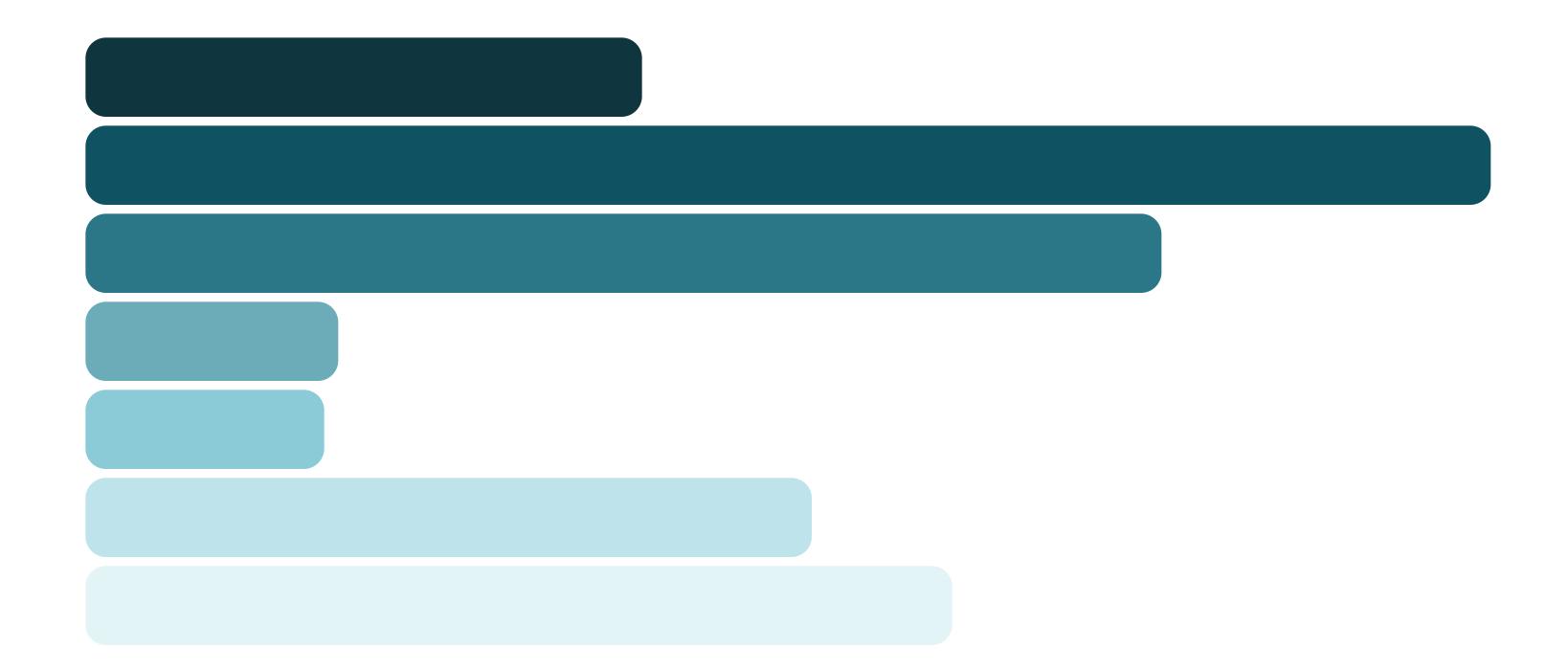
21 Questions

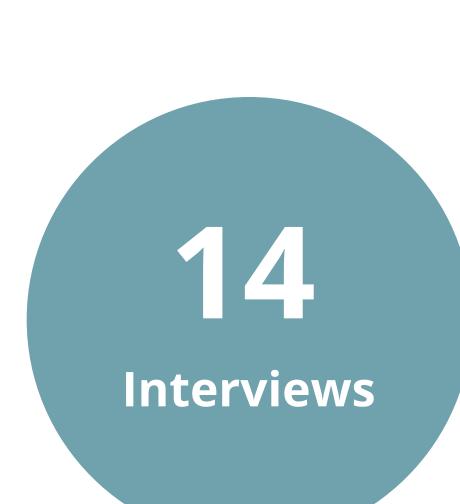




Parents are the main teachers at home and have relied on increaed communication with teachers.

How are you aiding your child's education? (select all that apply)





111
Demographic Interviews

Daily Routine

Technology

Adjustments

Parent/Teacher Communication

3 Expert Interviews

COVID-19 Questions

Parent/Teacher Communication

Online Learning

Parent & Teacher Communication

- Strengthened or weakened during the pandemic
- Dependent on personal relationships
- Pandemic fostered empathy
- Recurring theme: balancing work and childcare
- Primarily used digital means of education
 - Some supplementary physical methods of learning

18

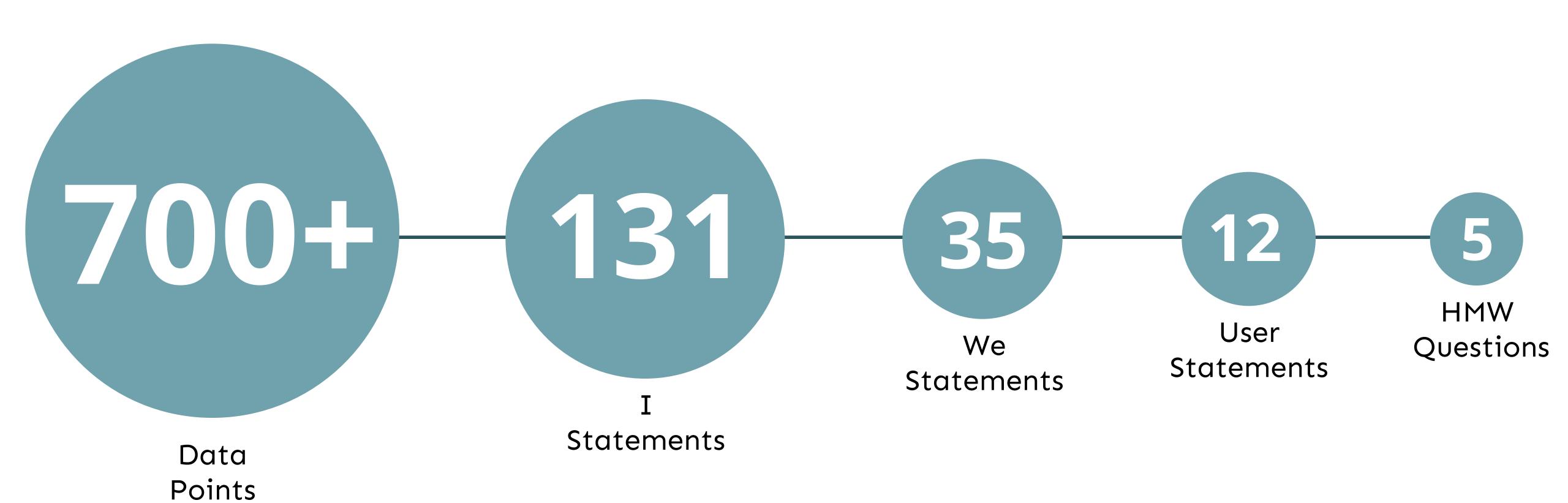
Some teachers missed 1 on 1 time with students

Teachers notice students without supervision missed meetings more often

Takes longer for teachers to develop online lessons

Replicated social and interactive factors are important part of online learning for some teachers

Tracking progress requires more teacher involvement in online environment



- Unfamiliar with way child's online school is conducted
- Feel online education is less safe and lacks focus and individualized experience compared to in-person education
- Parents use outside resources to keep an active role in their child's education
- Struggle to balance communication with teachers
- —— Use multiple platforms for child's online learning
- Feel in-person education is more conducive to their child's social development
- Struggle to balance their work with their child's educational needs

...improve upon the social development and structure of the in person education experience through online learning?

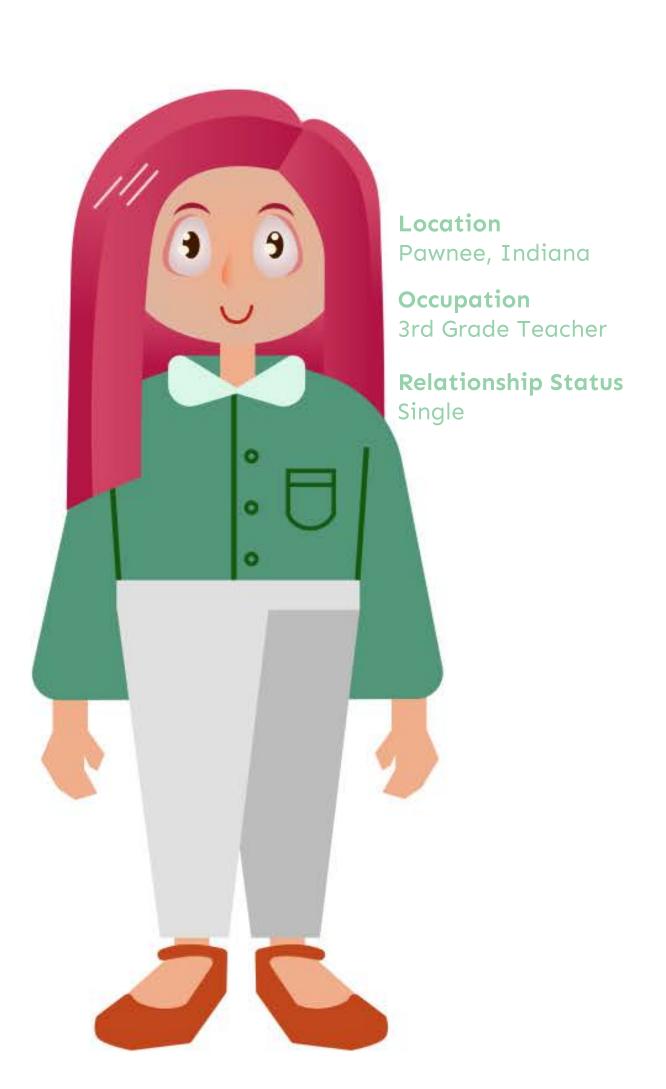
...create a system to balance the busy lifestyle of parents and the educational needs of their children?

...better facilitate connection between parents and teachers?

...maintain a flexible and open educational environment that is easily adaptable?

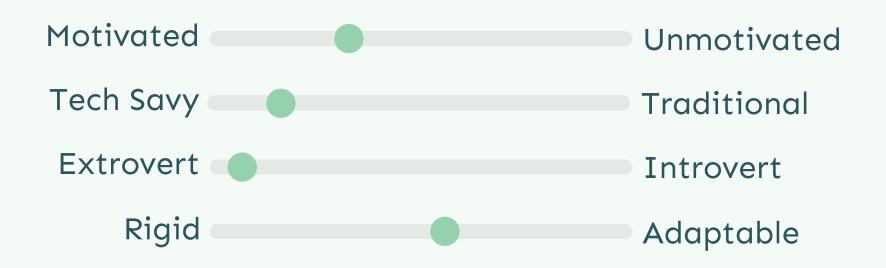
...create a single, streamlined communication platform?

Miss Katie, 32 Teacher



Bio:

Katie is a third grade language teacher from Indiana. Since quarentine started she has struggled to manage her classroom and keep her students engaged. With the move to online, Katie found it difficult to continue the fun collaborative activities that she had her class enjoy in person, and she misses the individual attention she was able to give each of her students. She wants to foster better communication with the parents of her students, and hopes that she can get them more engaged in their childrens' classroom.



Goals:

- To better communicate with her students' parents
- To give each student more individual attention
- To make her online classroom more engaging

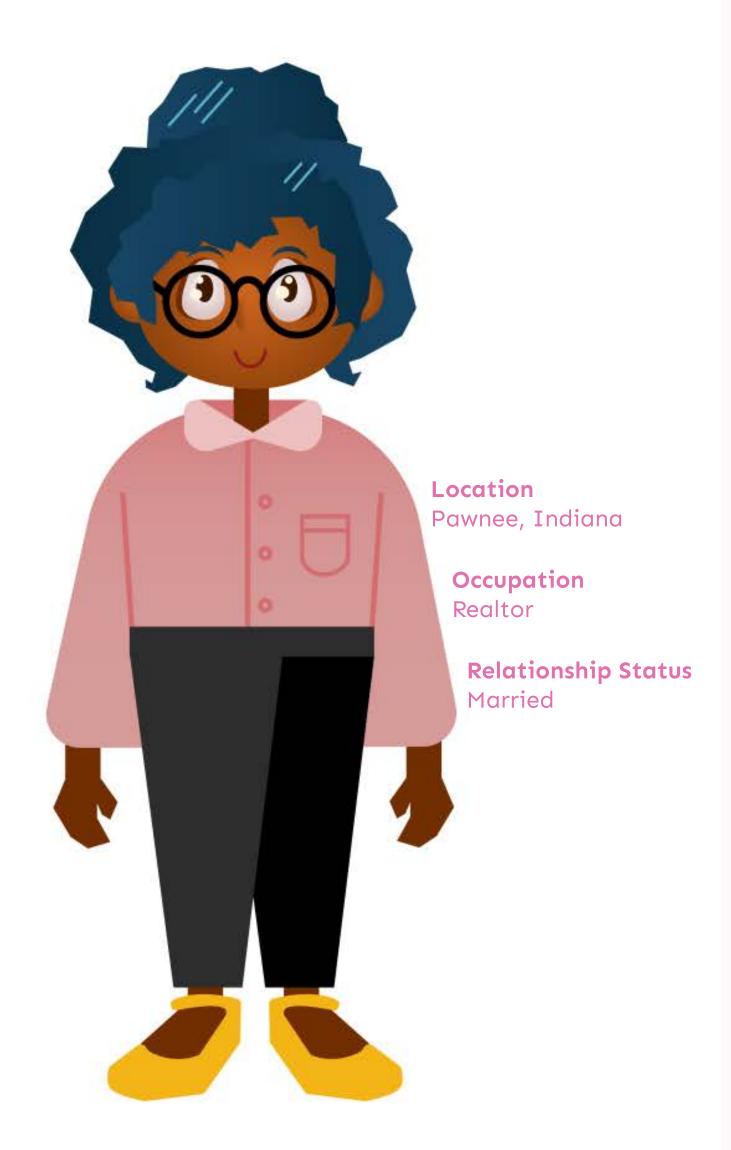
Likes:

- Reading
- Travelling
- Marvel Comics

Dislikes:

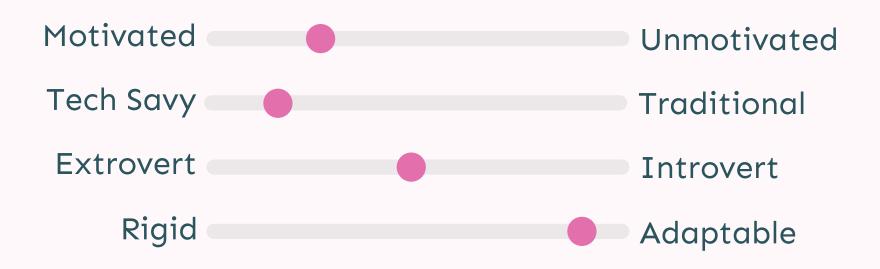
- Google Suite
- Interruptions
- TikTok

Jodi Lynn Parker, 34 Parent



Bio:

Jodi lives with her husband and two children, but rarely has time to spend with them during the day due to her busy schedule as a realtor. Since quarantine began she has struggled to find a schedule that allows her to manage her son's education and stay productive in her job. She tries to stay involved by checking in with teachers and monitoring her childs learning through notifications from the school, but Jodi finds the constant notifications and lack of direct communication from teachers to be burdensome. She hopes that a balanced schedule and better communication can help her play a more prominent role in her son's education.



Goals:

- Balance work and child's education
- Streamline communication with son's teacher
- Use less screen time with her daughter & son

Likes:

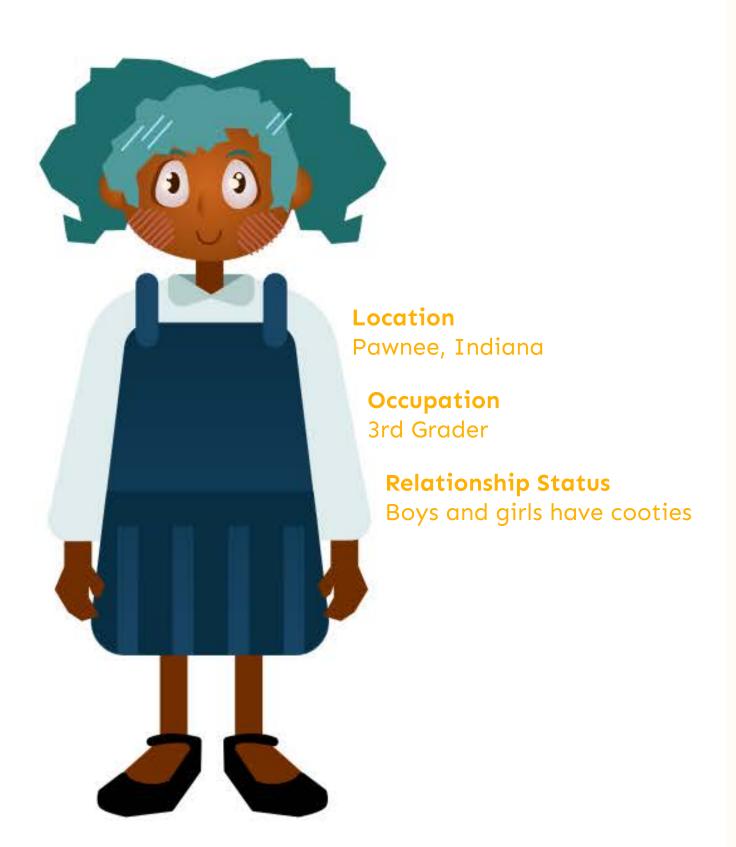
- Moscato
- Home projects
- Board games with kids

Dislikes:

- Being sedentary
- Talking over the T.V.
- Her colleagues

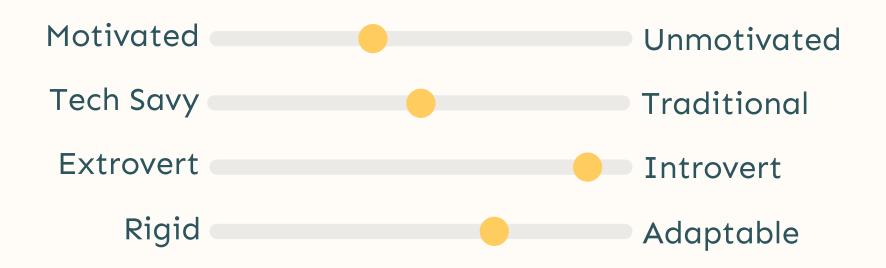
Faith Parker, 8

Student



Bio:

Faith lives with her parents and sibling in Indiana. She dislikes online learning because she doesn't get to see her friends as often and it doesn't have as many fun activities as when school was in session. She already disliked homework before quarantine, and being in online class has made her hate it even more. Faith wants to be able to socialize with her friends more, and she wants school and learning to be fun again.



Goals:

- Have more fun learning
- Make more friends
- Learn Spanish

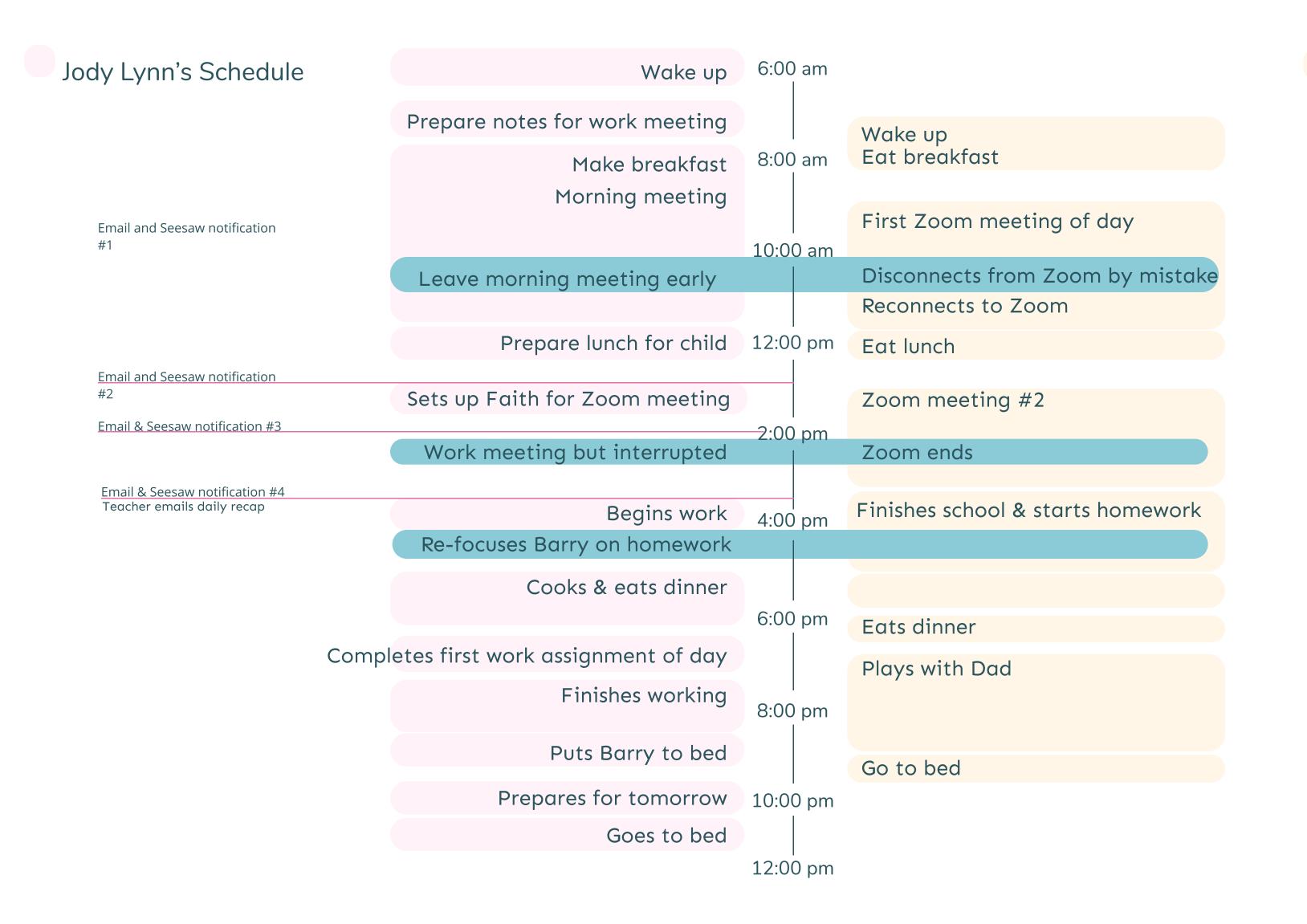
Likes:

- Strawberry Milk
- Reading
- Board games with parents

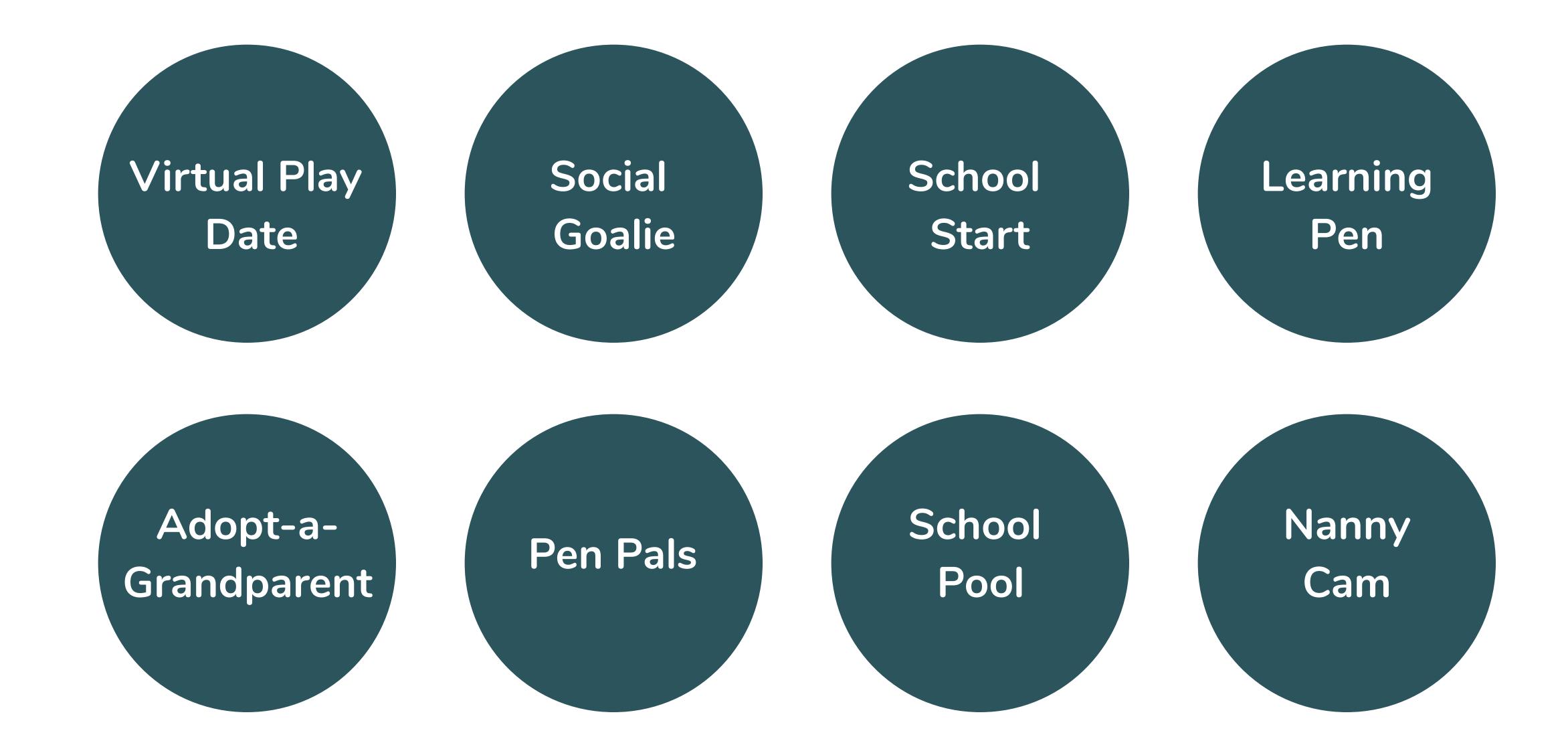
Dislikes:

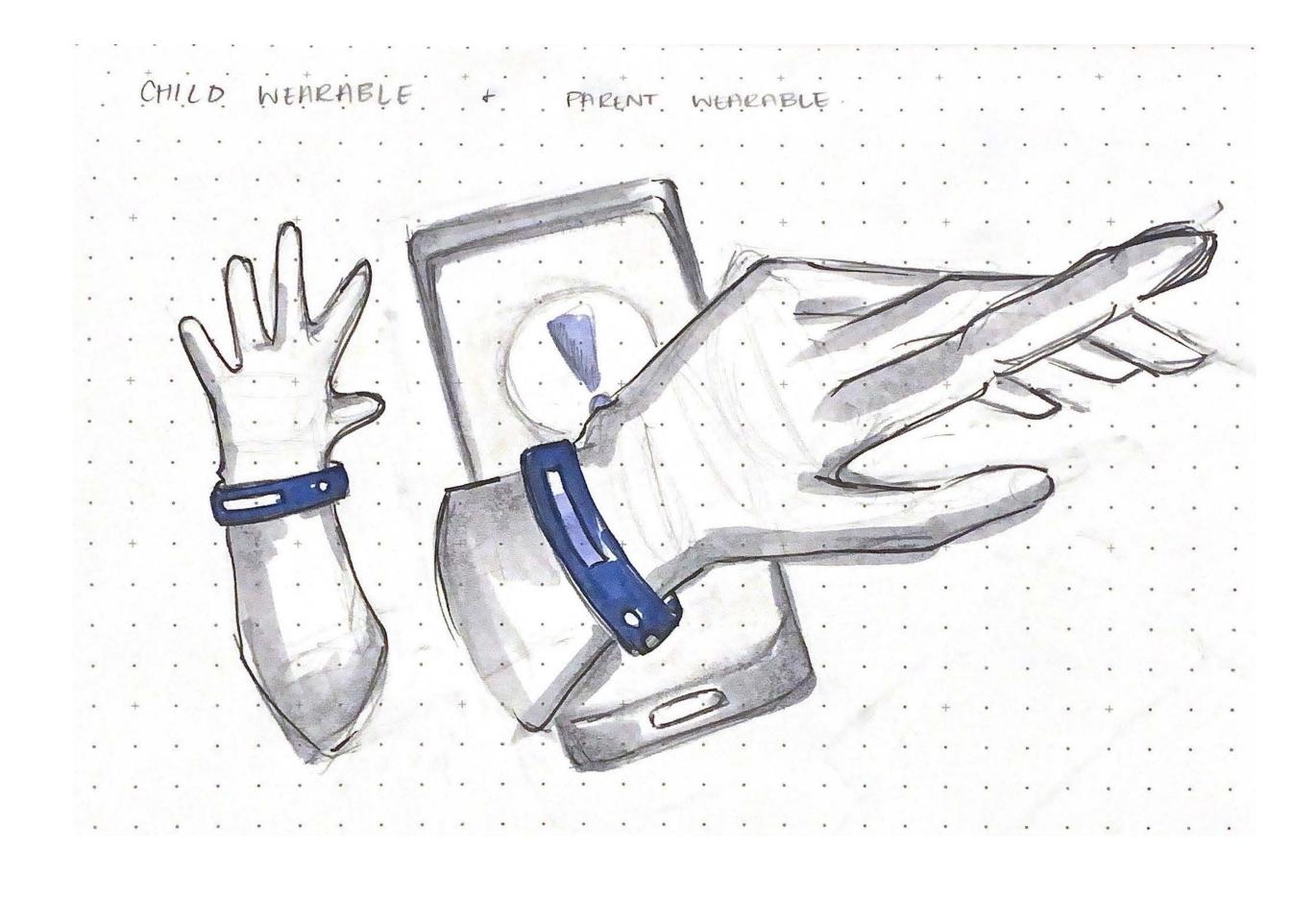
- Homework
- Going to bed early
- Math

25 Current parent and student journey



Faith's Schedule





Remote Refocus

Using haptic feedback and simple LED notifications, teachers are able to quickly alert parents of their child's behavior during online learning sessions.

Parents are then able to send alerts to their child in order to promote better focus.

Remote Refocus- task, function, feature

Task

- Teacher can notify parent when child is being disruptive or getting off task
- Parent receives quick notification from teacher or student and will respond with fast and simple button or voice prompts to the child to get back on track
- Child can request a non-notifying voice chat that parents can either accept or decline

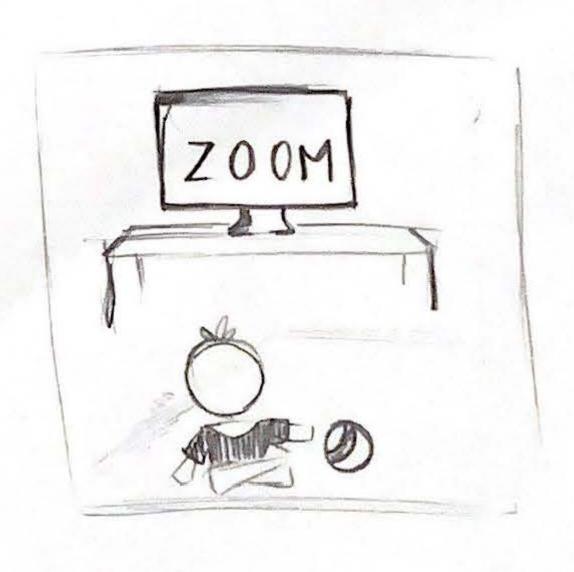
Function

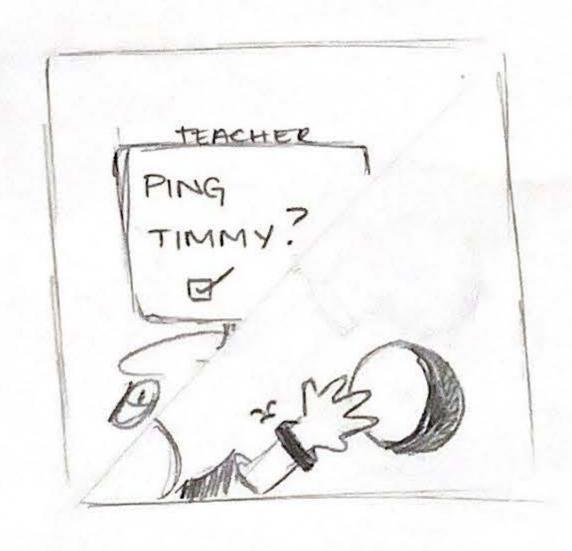
- Teachers to communicate both with student and parent
- Allows parents to quickly and seemlessly communicate with child
- Helps child stay engaged in online learning
- Parent can monitor child during live sessions
- Reduce number of interruptions for working parents

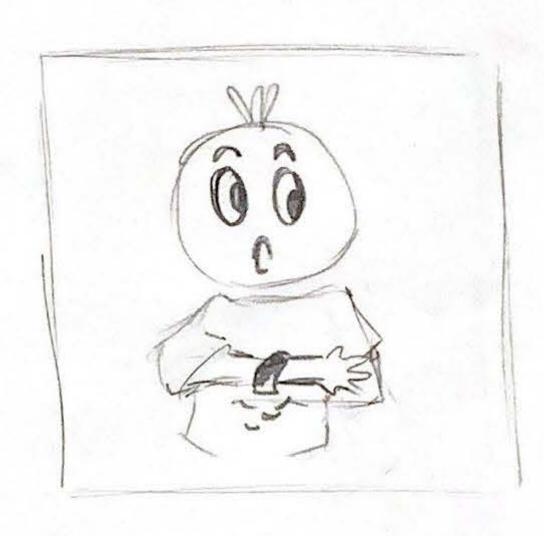
Feature

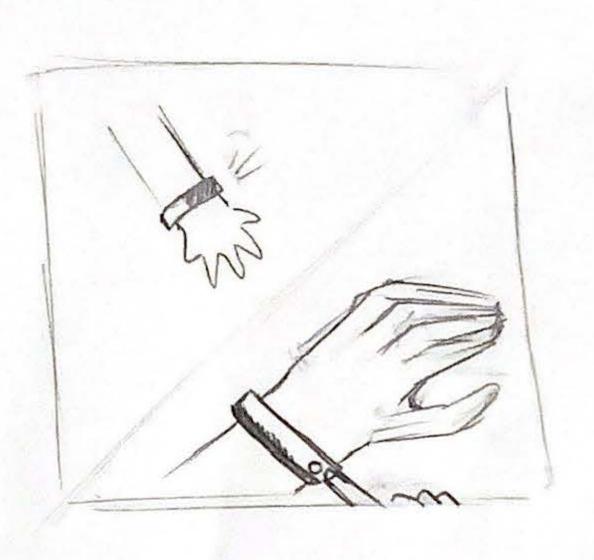
- LED lights signals a disruption
- Haptic feedback makes a nondistracting notification
- Microphone on both wearables
- Button on parent wearable to accept the child's voice chat
- Button on child's wearable to request to talk to parent

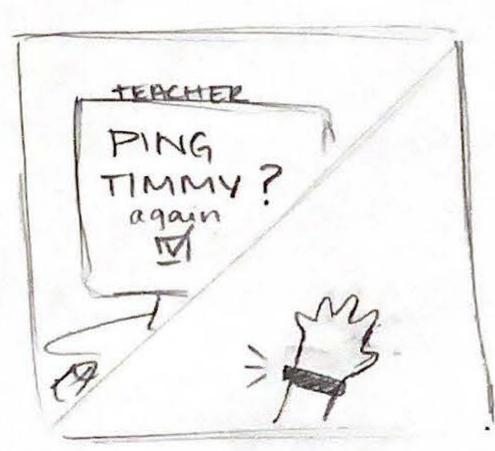
Remote Refocus- storyboard

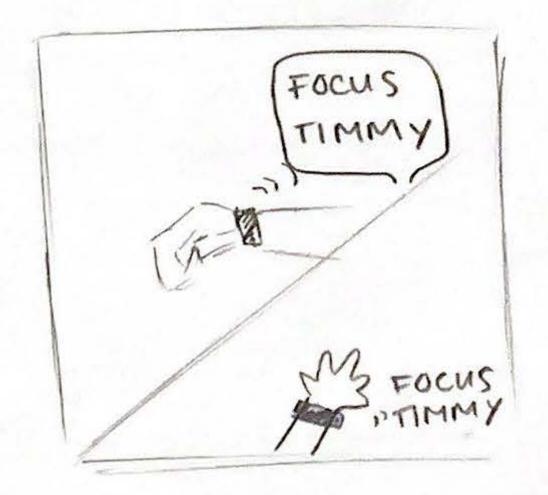


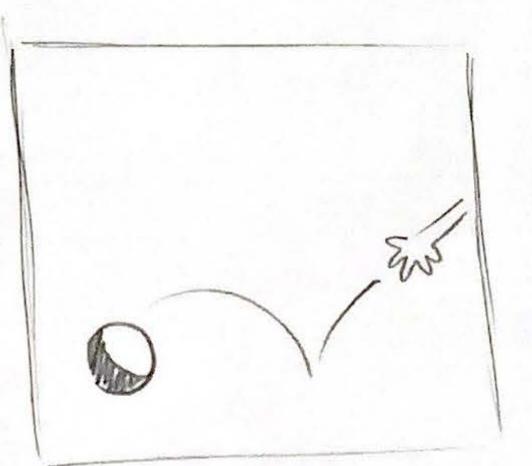












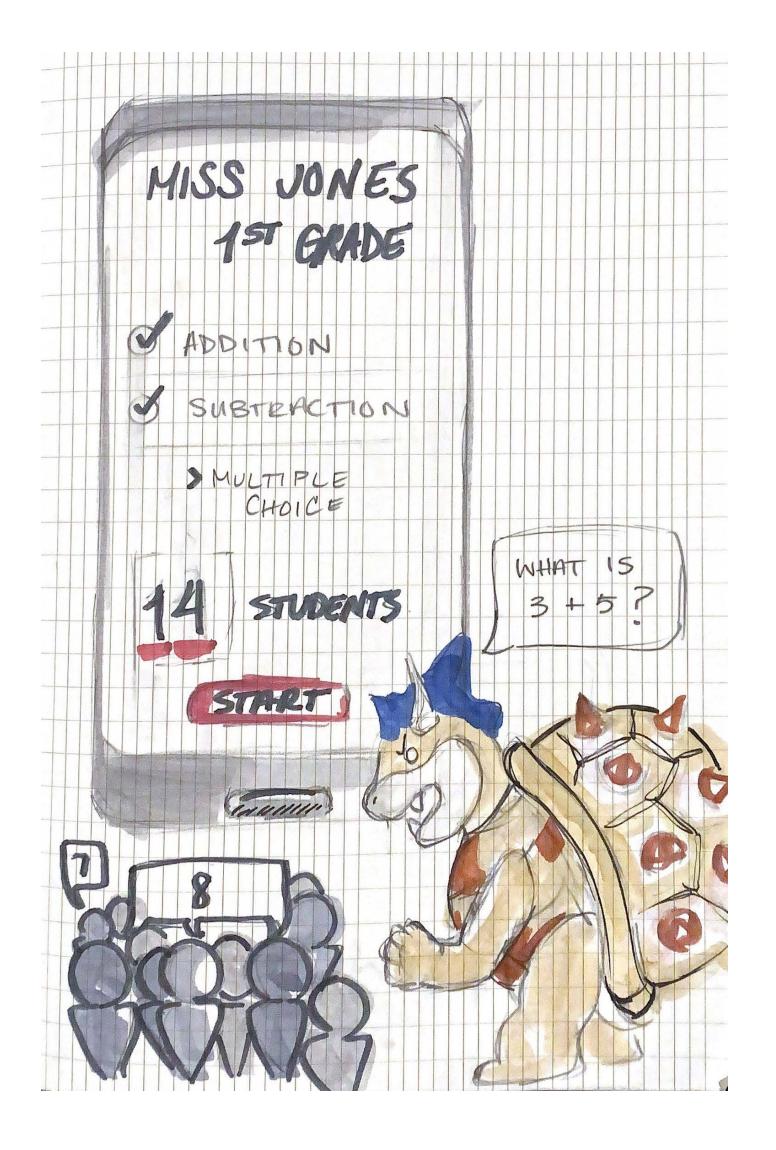




Result is that children and parents both are able to stay more focused on their work, with remote monitoring methods that eliminate the need for being in close proximity.

GAMEPLAN

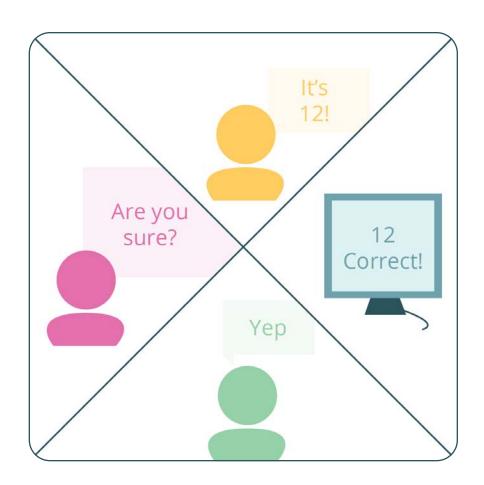
A platform that gamifies learning and adds a social element to homework for communal learning. As parents are involved in setting goals, they are now more hands on in their child's education.



GamePlan storyboard



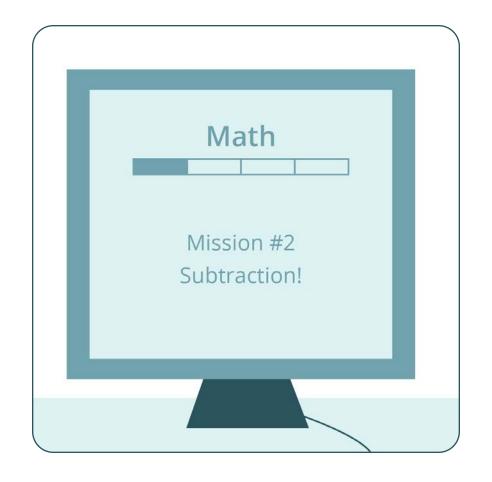
Faith's school has started using GamePlan so her mom, Jodi Lynn is helping her get set up



Faith and her classmates work together on the learning game



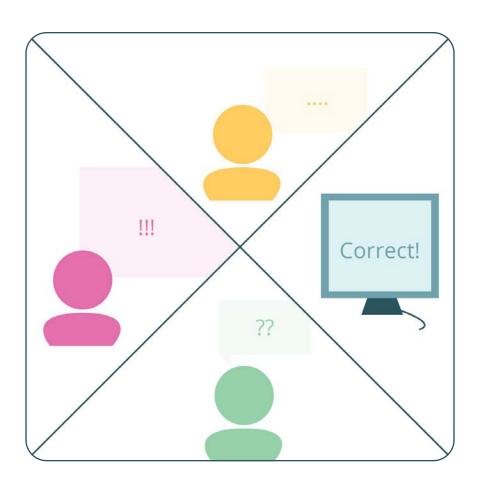
Faith's teacher, Miss Katie, has a new assigment for her



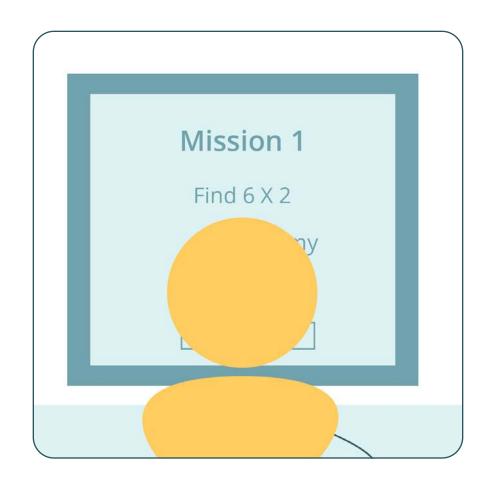
Faith and her classmates complete the game



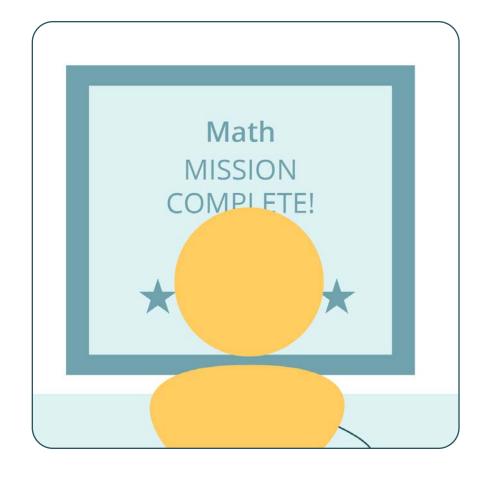
Faith is placed in a team with two other students



They begin the next level



Faith begins the game



With the help of her classmates Faith completes the assignment

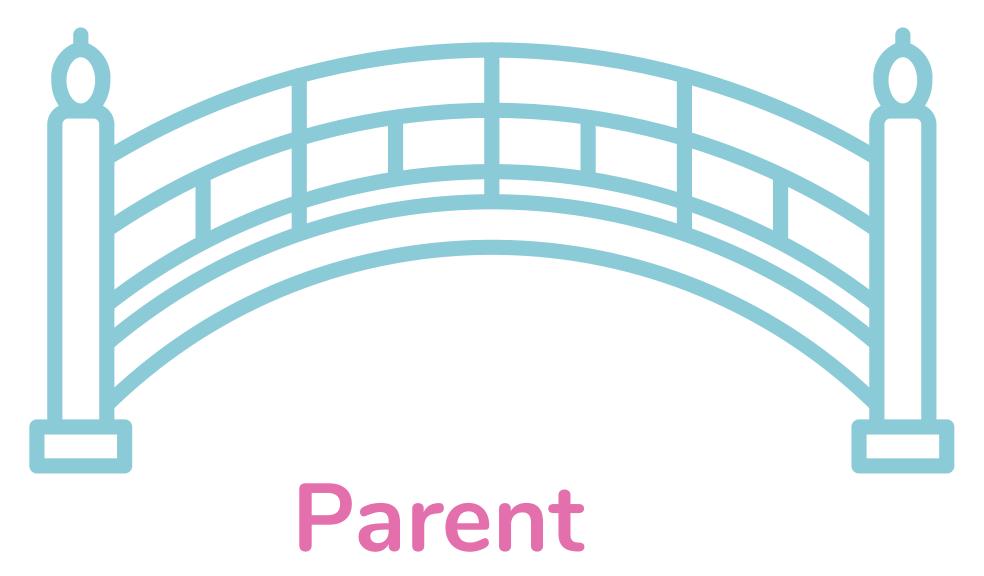
Roles of parents, students, teachers

"[Parents] Must be able to bridge what the teacher wants and what the student is doing."

— Teacher during card sorting

Teacher

- Grade
- Take attendance
- Communicate
- Instruct



- Track student progress
- See lessons
- Motivate students
- Assist with technology and lessons

Student

- Learn concepts
- Communicate

Current tools for teachers

How Teachers Accomplish Core Tasks

Grade

- Skyward
- Similar apps

Instruct

- Seesaw
- Google Classroom
- Similar apps

Take Attendance

- Skyward
- Similar apps

Communicate

- Skyward
- Email
- Seesaw
- Google Classroom

4+ Applications and countless extensions

including Skyward, Seesaw, Google Classroom, Zoom, email, and more!

(our goal is to access everything from one platform)

Primary Demographic

PreK – 5th grade teachers and students

Secondary Demographic

PreK – 5th grade parents

Rationale for demographic

"I respect teachers for what they do and want to support them, but I can't do their job."

— Parent during user interview

GamePlan- tasks, functions, features

Tasks

Teacher

- Grade
- Take attendance
- Communicate
- Instruct

Parent

- Track student progress
- See lessons
- Motivate students
- Assist with technology and lessons

Student

- Learn concepts
- Communicate

Functions

Teacher

- Improve communication with parent
- Streamline the creation of

Parent

- Improve communication with teacher

Student

- -Gives feeling of responsibility
- -Chance to interact, socialize and collaborate to learn

Features

Teacher

- Classroom
- Lessons

- Profile

- Assignments

- Message Center

- Agenda

- Parent
 - Lessons

- Student Progress
- Assignments
- Message Center

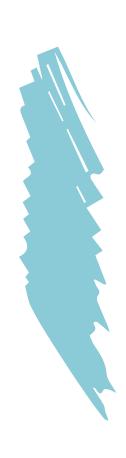
- Agenda

- Profile

Student

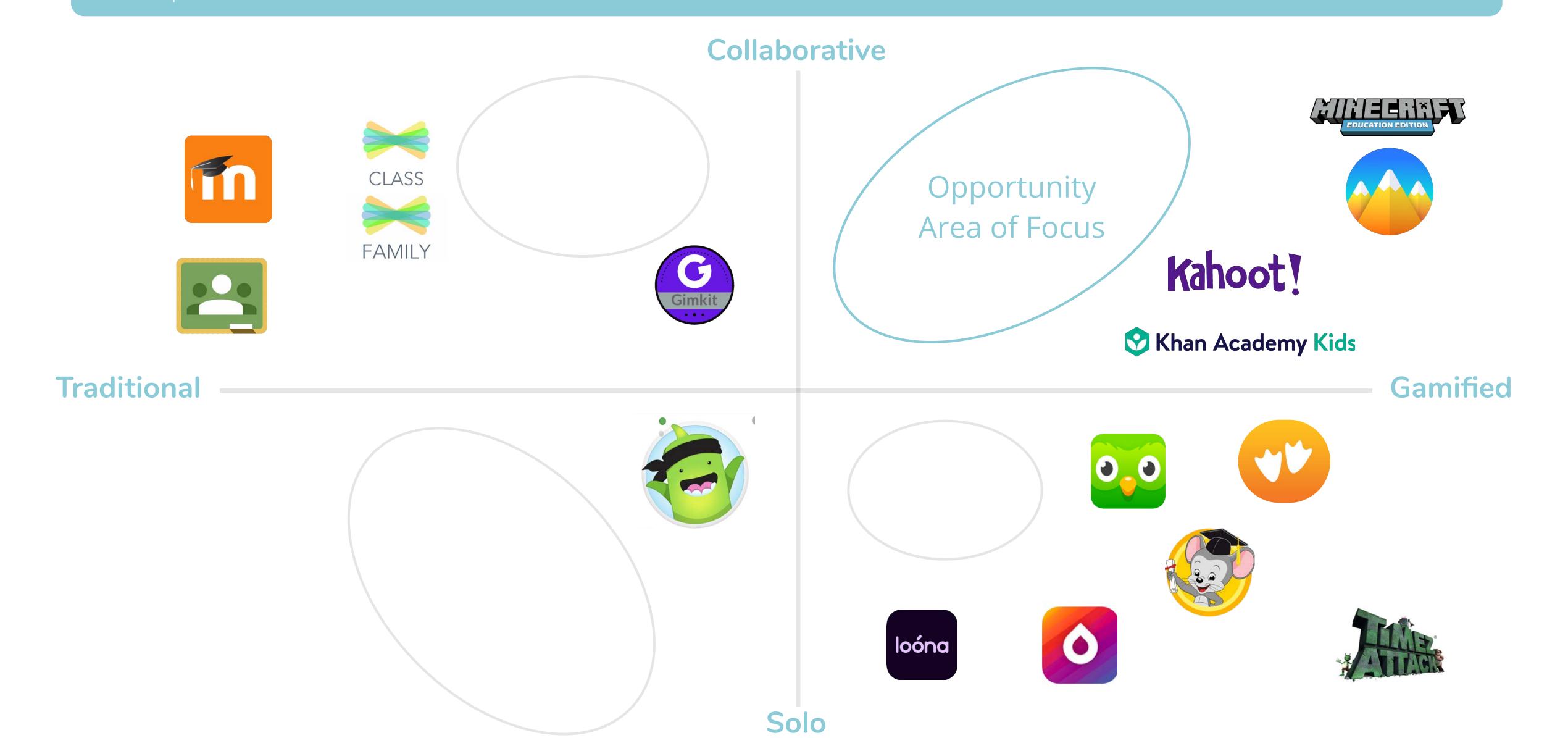
- Lessons

- Character
- Homework
- Game World
- Message Center



GamePlan is an online learning envronment that streamlines teacher tasks and engages children through gamified learning, thus making a parent's role in their child's education simpler.

38 Opportunity map



39 Competitor analysis

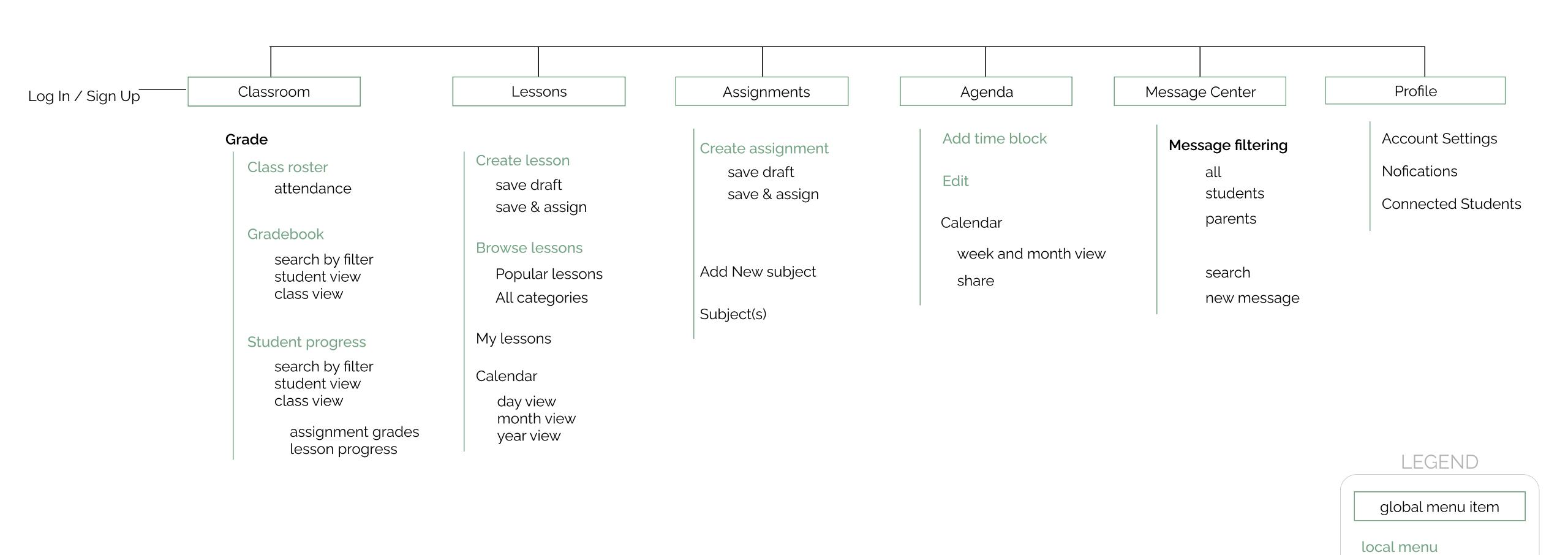
Yes Somewhat	Moodle	Seesaw	Khan Academy Kids	Kahoot!	Classcraft	EDUCATION EDITION	A LINE	Duolingo	Google Classroom
Student to Student Collaboration									
Parental Involvement									
Student to Teacher Interaction									
Gamification									

1. Universal Platform

2. Gamification

3. Contextual Messaging

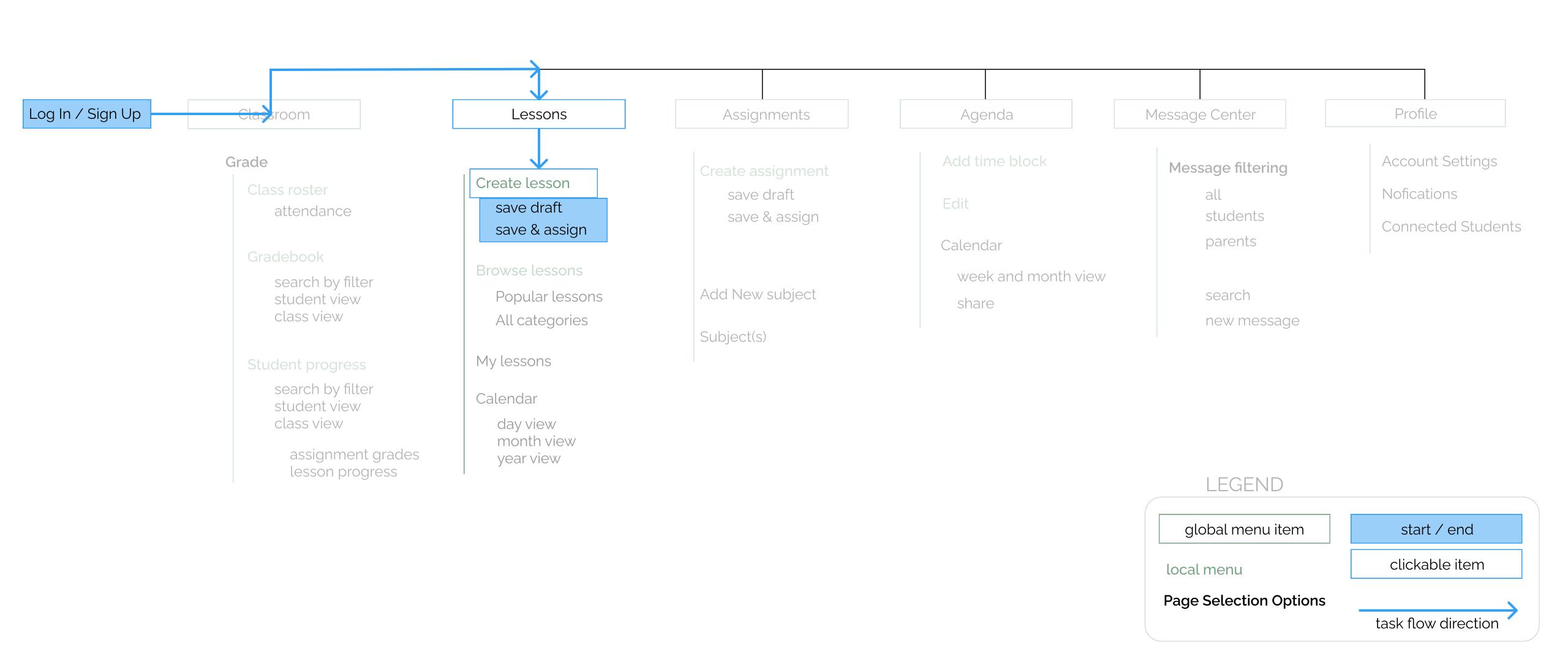
41 Teacher prototype blueprint



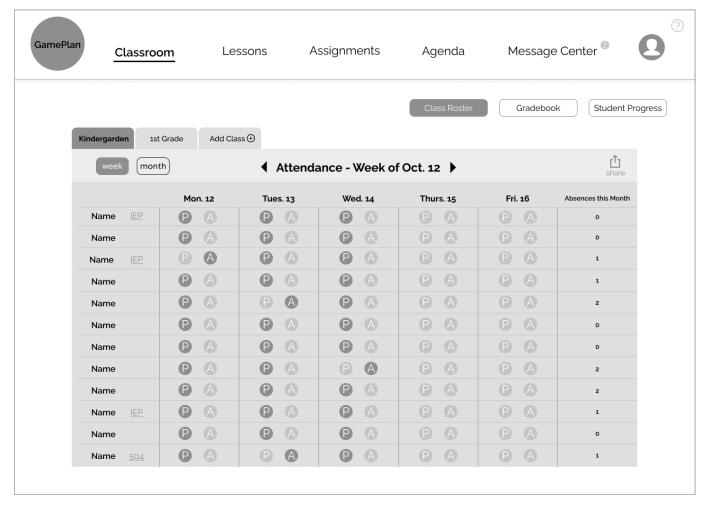
Page Selection Options

42 Teacher prototype - task flow

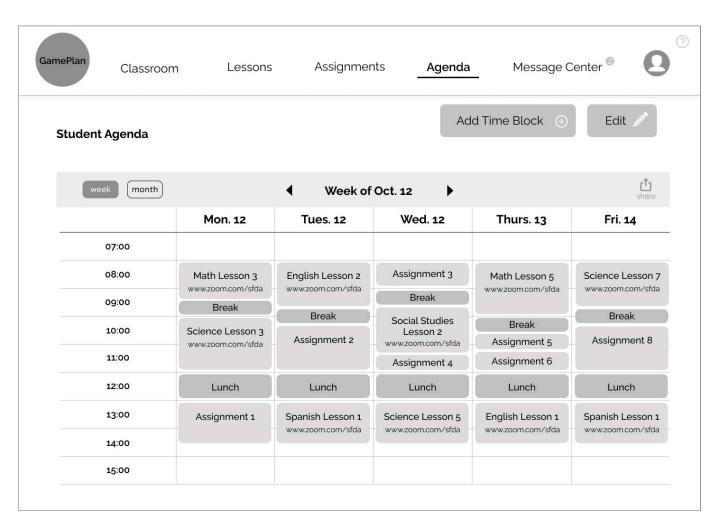
Representative Task = Create a lesson



43 Teacher prototype



Classroom



GamePlan Classroom Lessons Assignments Agenda Message Center

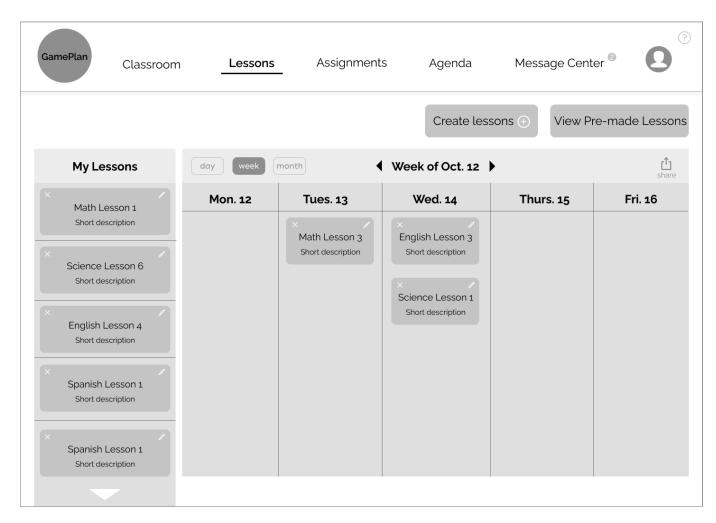
Create assignment → New subject ⊕

Subject Name ▼

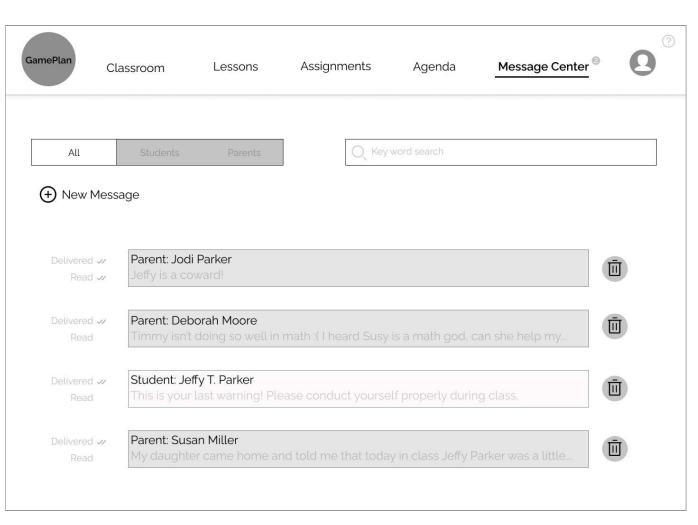
Subject Name ▼

Upcoming Assignment
Lesson Name Summary

Assignments



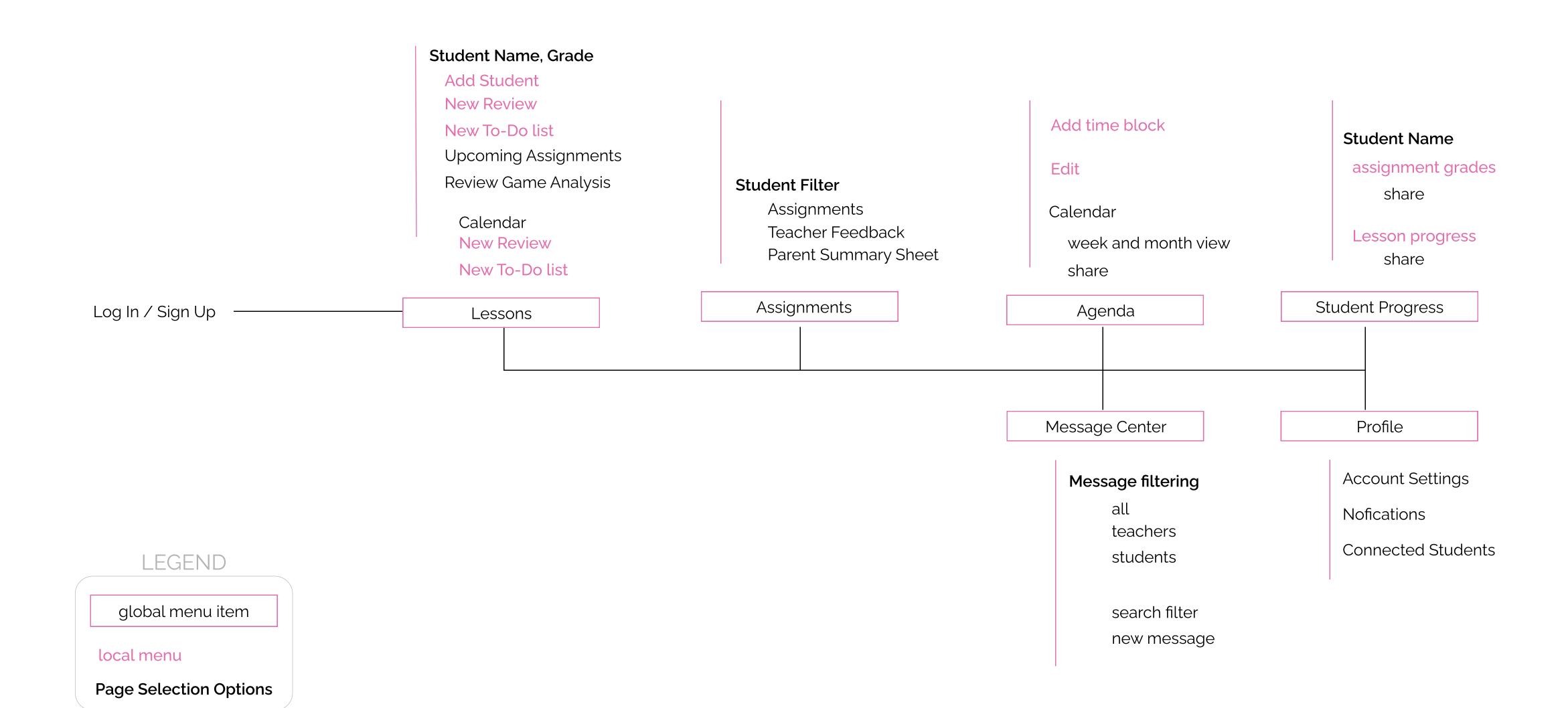
Lessons



Message Center

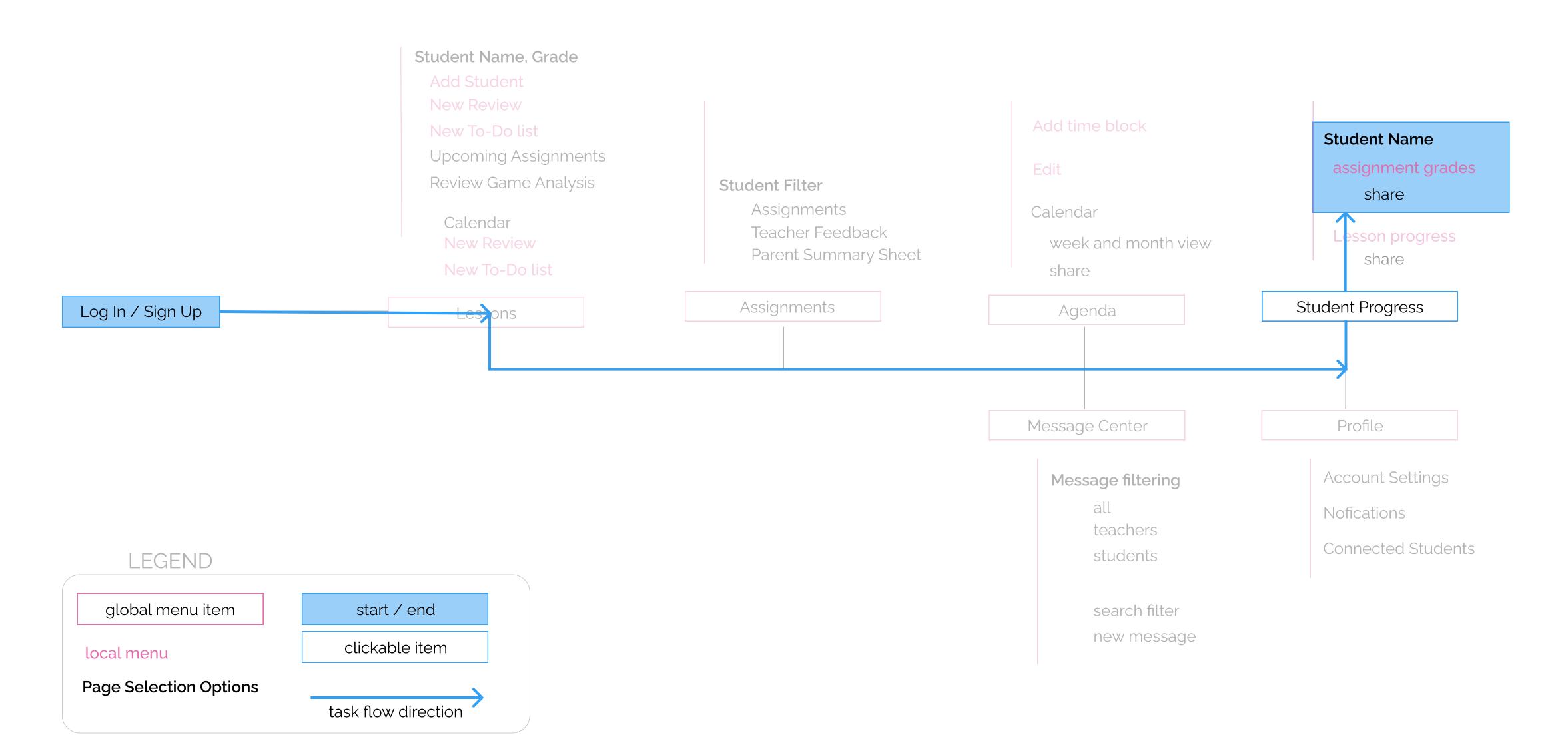
Agenda

44 Parent prototype - blueprint

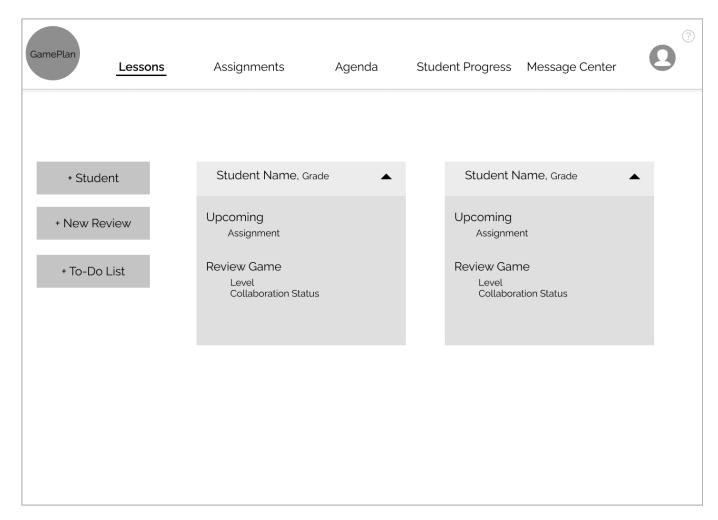


45 Parent prototype - task flow

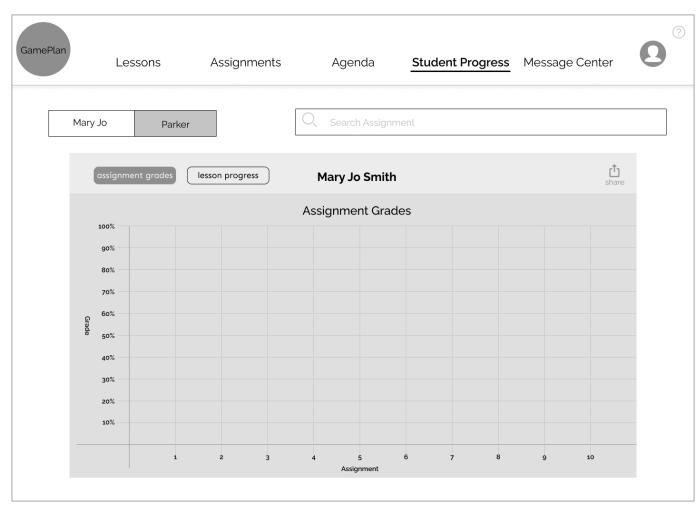
Representative Task = Check on student progress



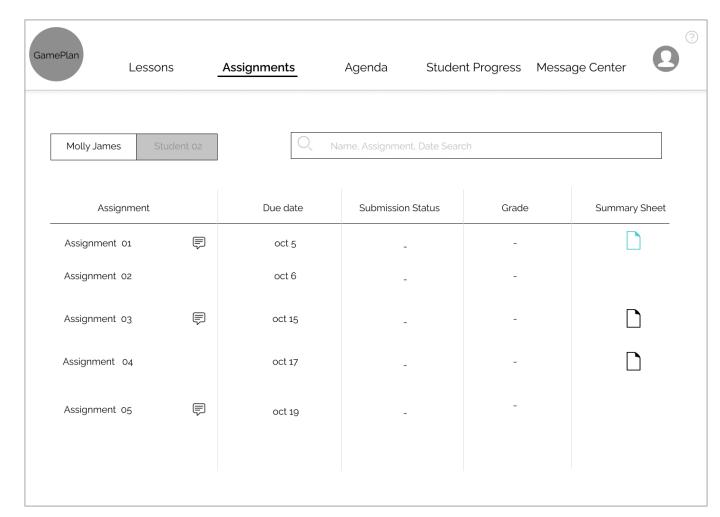
46 Parent prototype



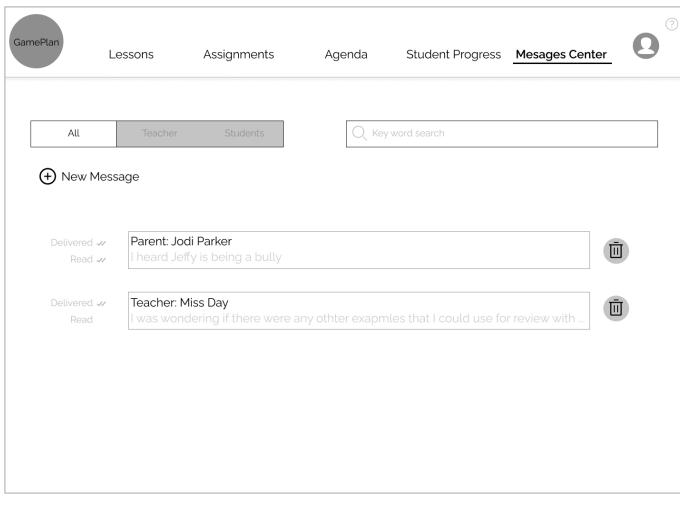
Lessons



Agenda

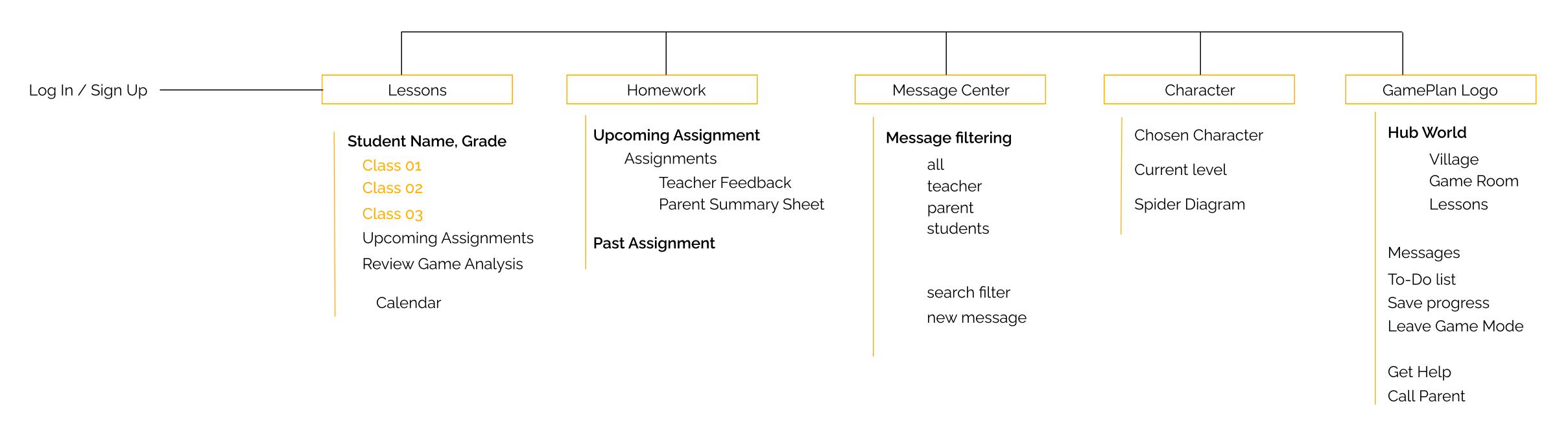


Assignments



Student Progress Message Center

47 Student prototype - blueprint



LEGEND

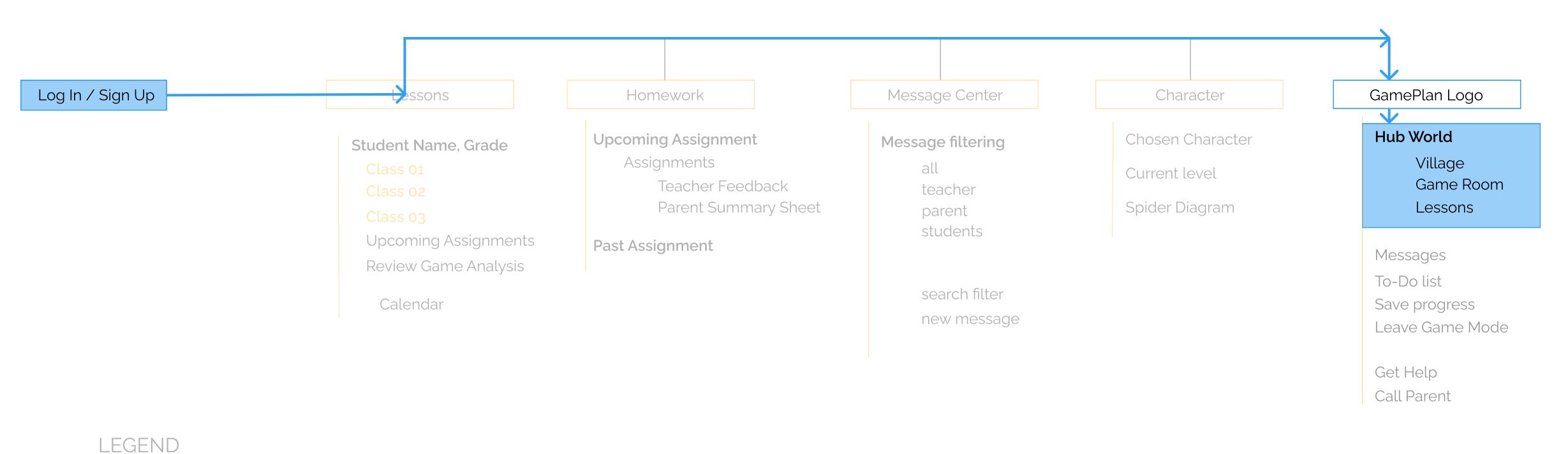
global menu item

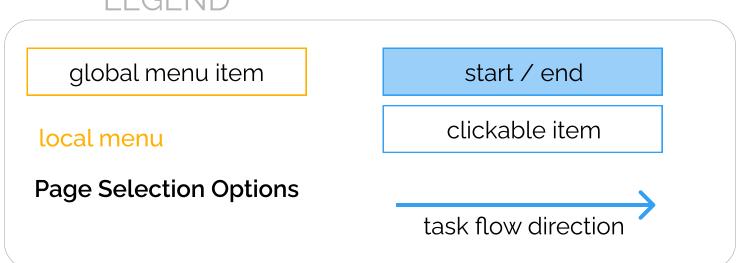
local menu

Page Selection Options

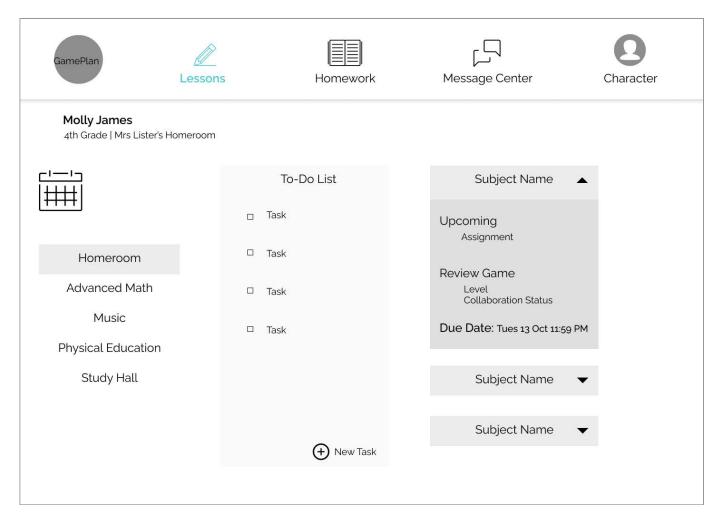
48 Student prototype - task flow

Representative Task = Complete assignment

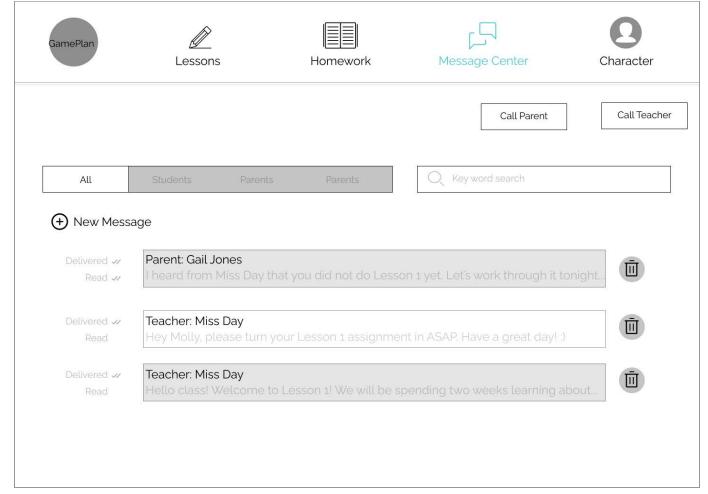




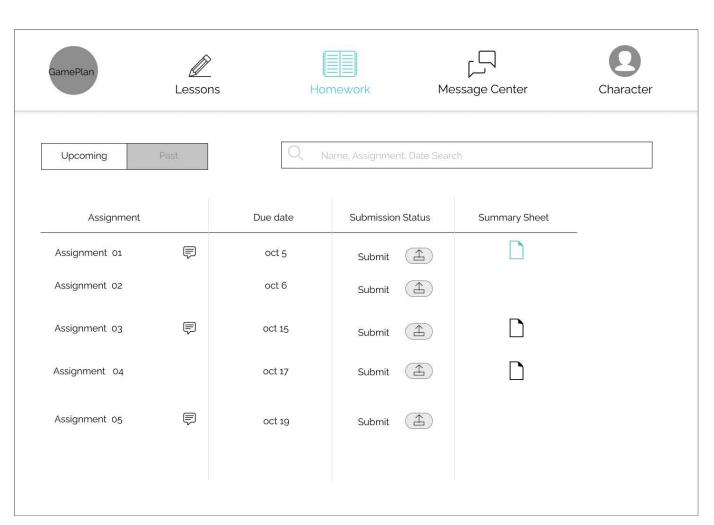
49 Student porototype



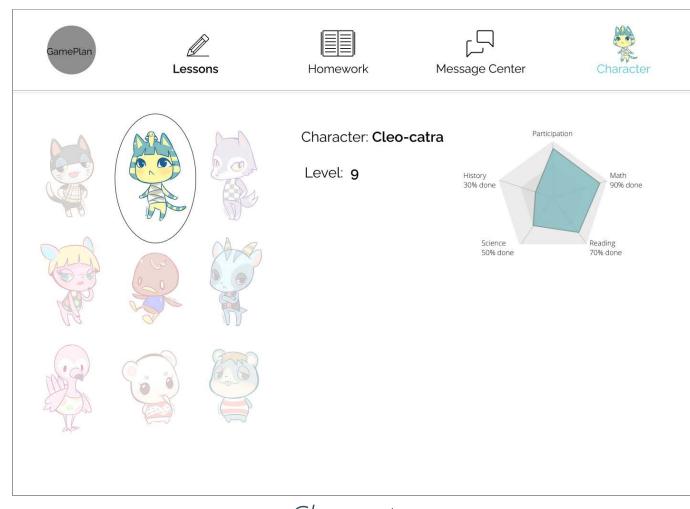
Lessons



Message Center

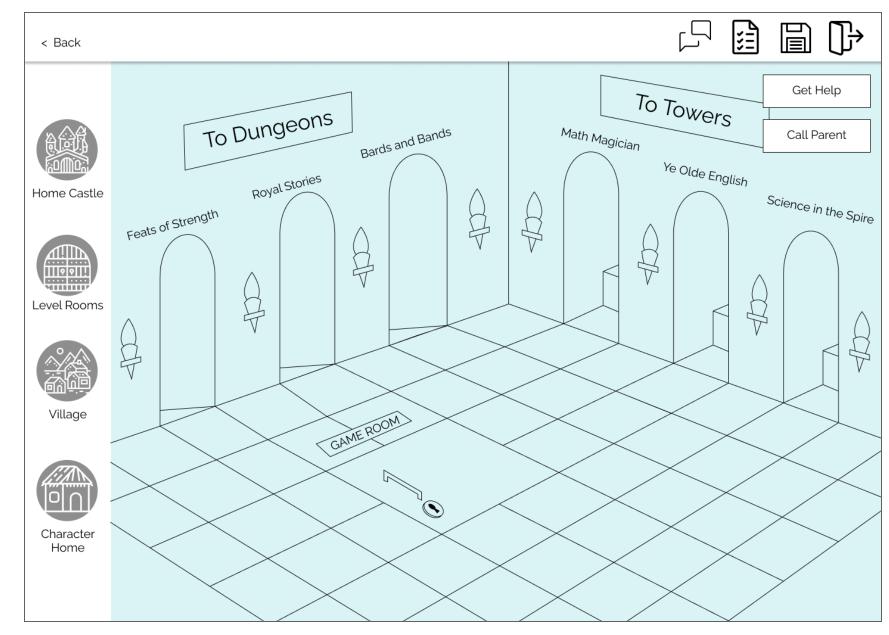


Homework

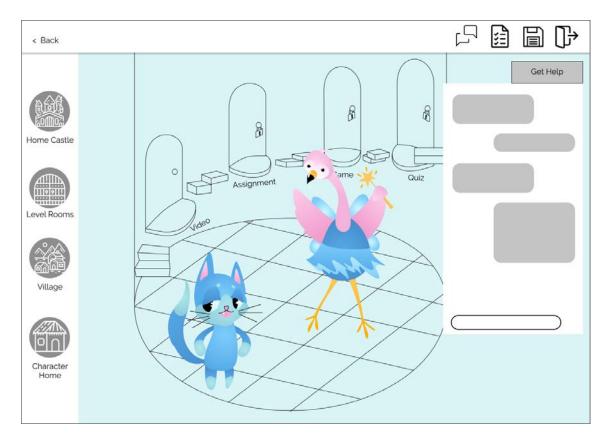


Character

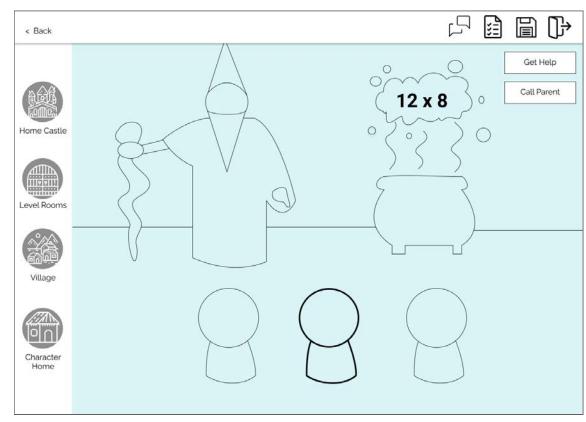
50 Student prototype



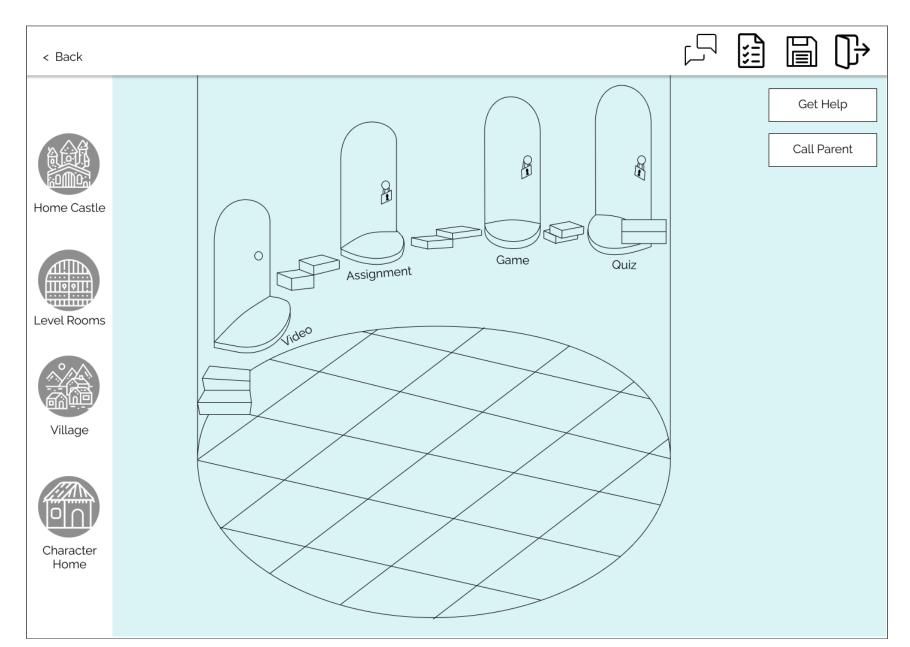
Hub World



Calling for Help

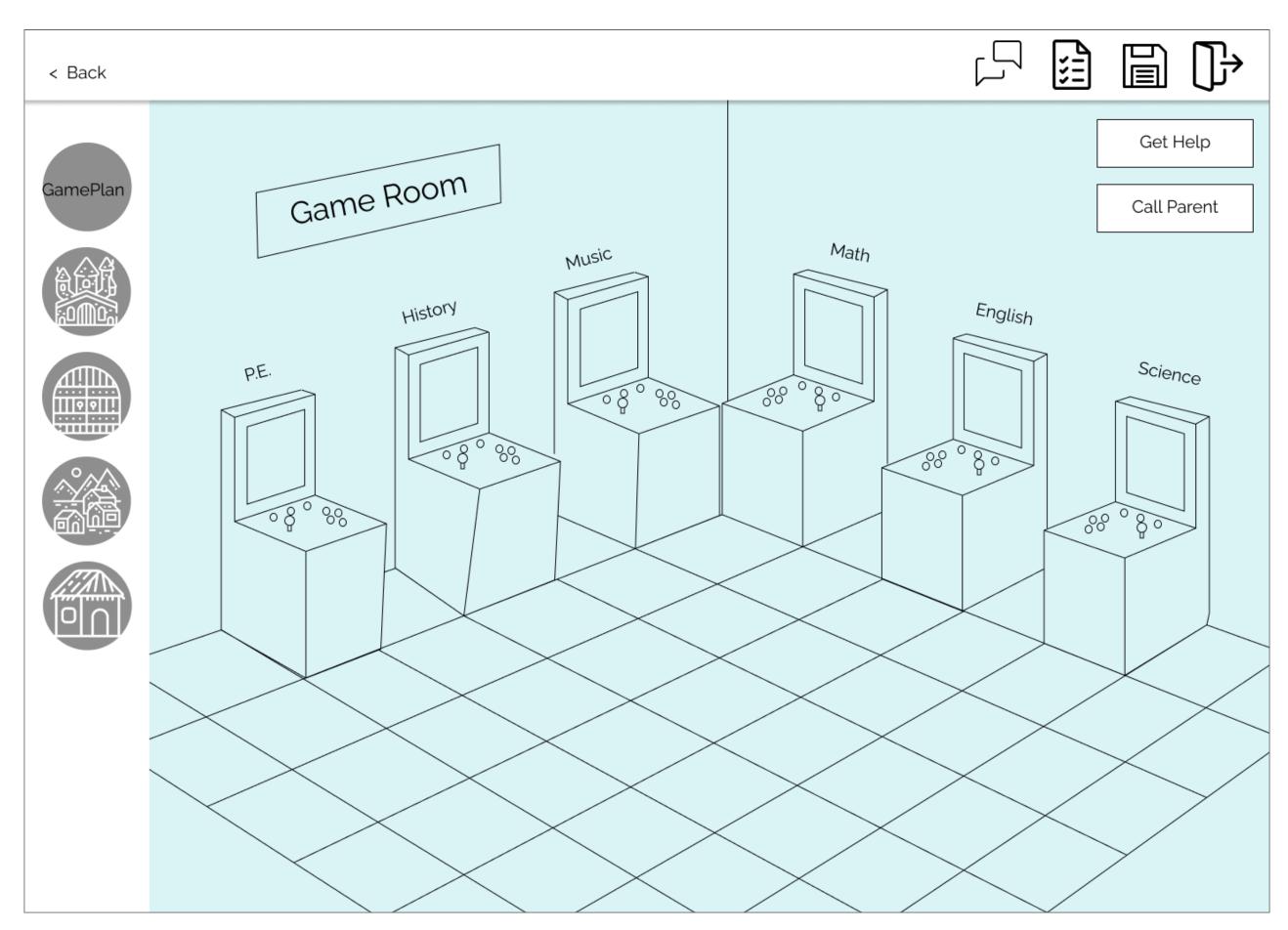


Game Play

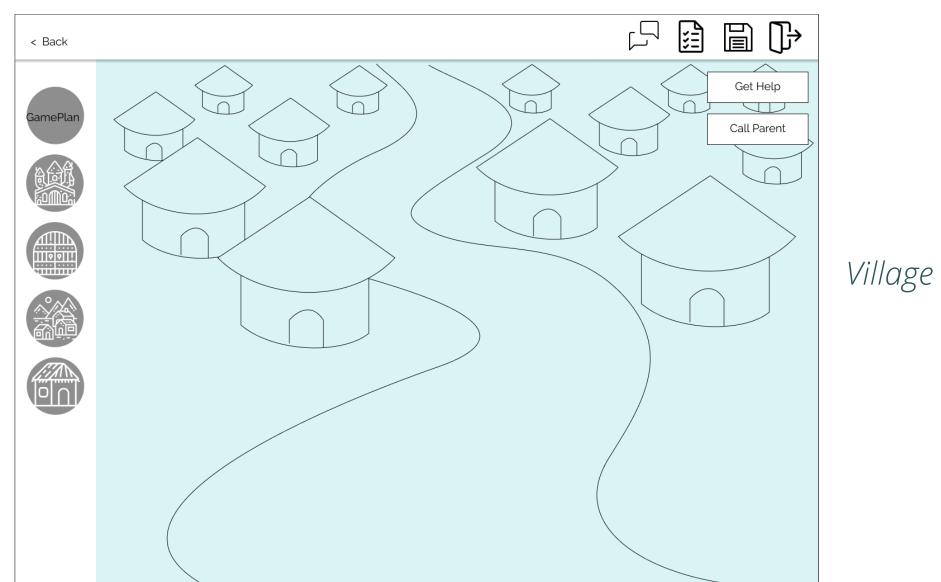


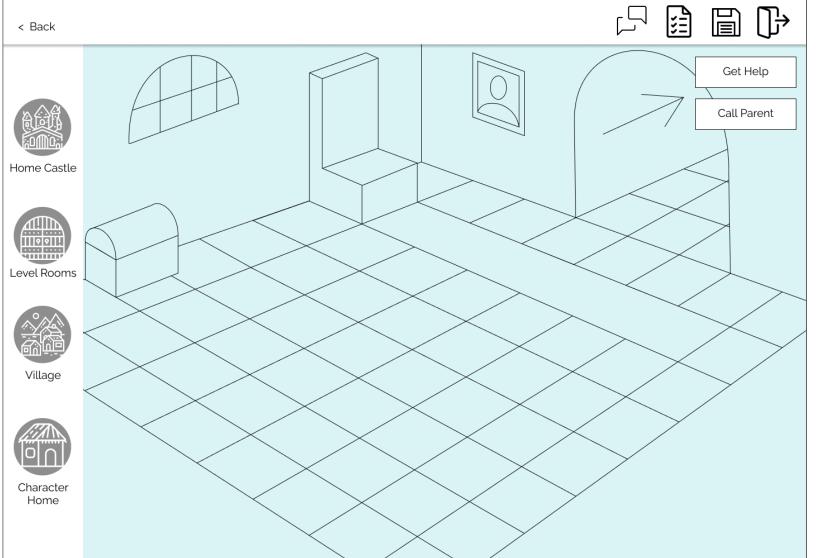
Level Rooms

51 Student prototype



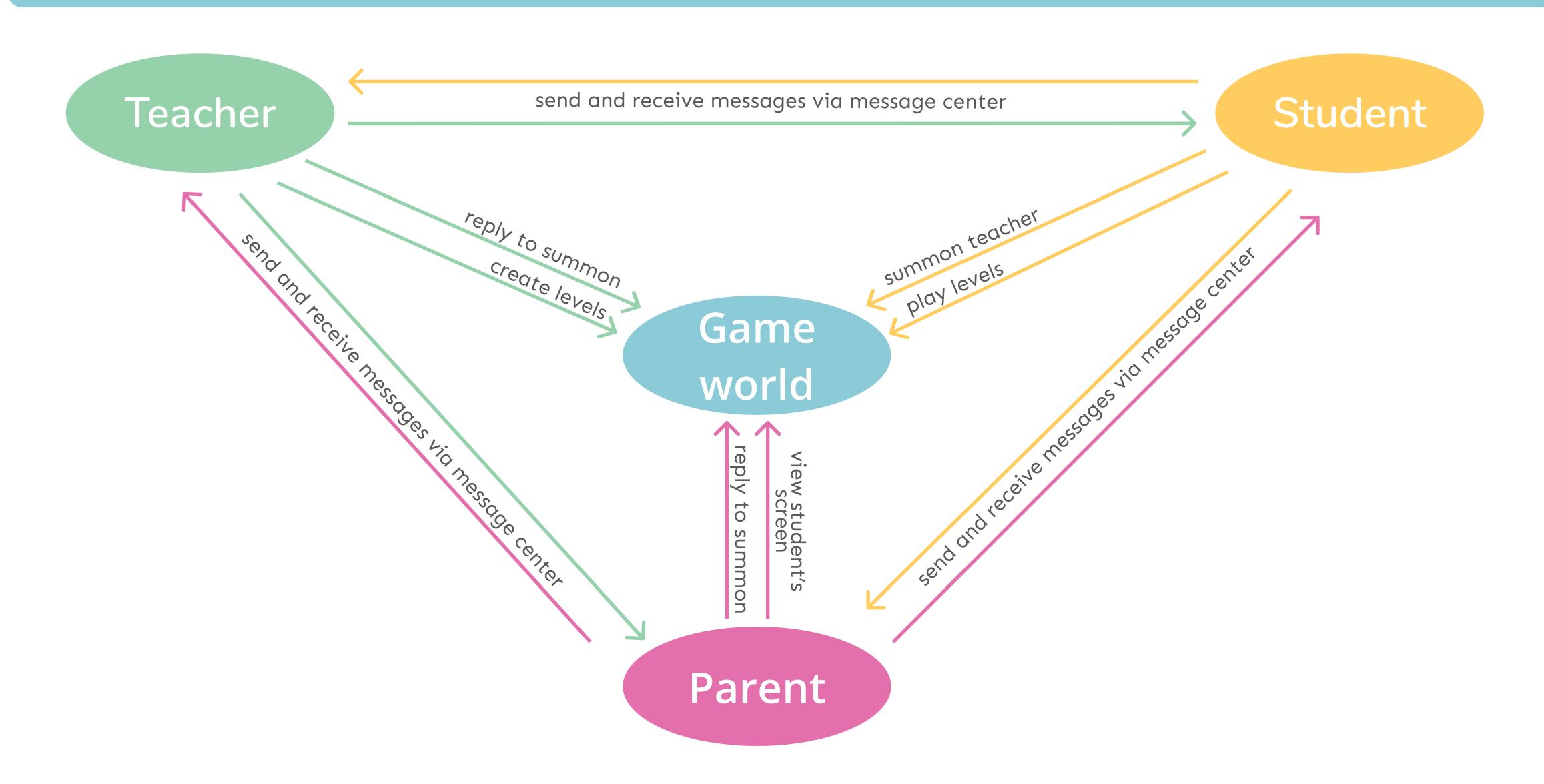
Game Room





Player House

52 Interaction model- game



with teachers and parents



Expert test with UX designer, Angela Martin

Concept Based

- To determine if a universal platform is viable and preferred
- Improve communication bridge between parents, teachers, and students
- The system builds understanding of roles parents and teachers play in a child's education

Design Based

- Discover if all features of the platform are well integrated and easy to navigate
- Narrow down color and typeface choice
- Confirm labels align with users' mental models
- gauge user confidence when using our platform

"I wouldn't use the [hourly] agenda. It's not helpful for how I plan my classes."

"If our school district had this, I would use it frequently."

"This [interface] is laid out a nicer and neater [than what I was using], and functions like an actual page taken out of a planner."



Redundant Calendars / Agendas



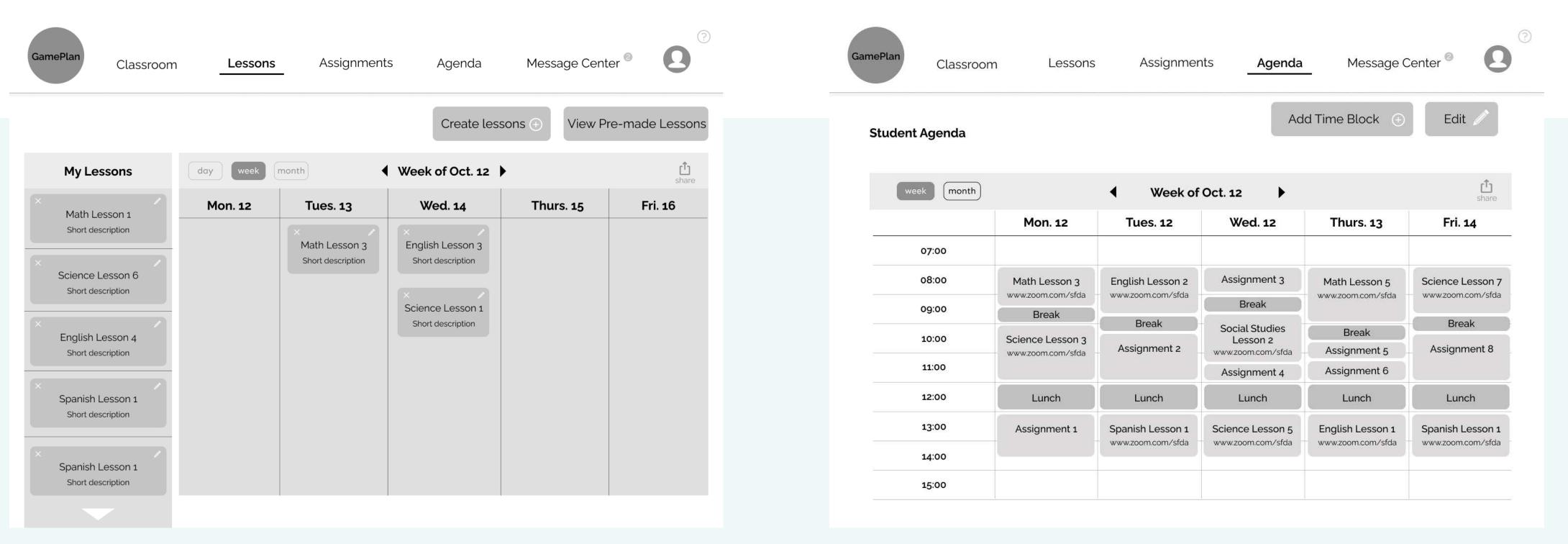
Poor Connection Between Parent and Teacher Agendas



Redundant calendars / agenda

Confusion: Calendar found under 'Lessons' and 'Agenda'

'Lessons' will be used for the creation of lessons while the calendar will exist only in 'Agenda' to schedule



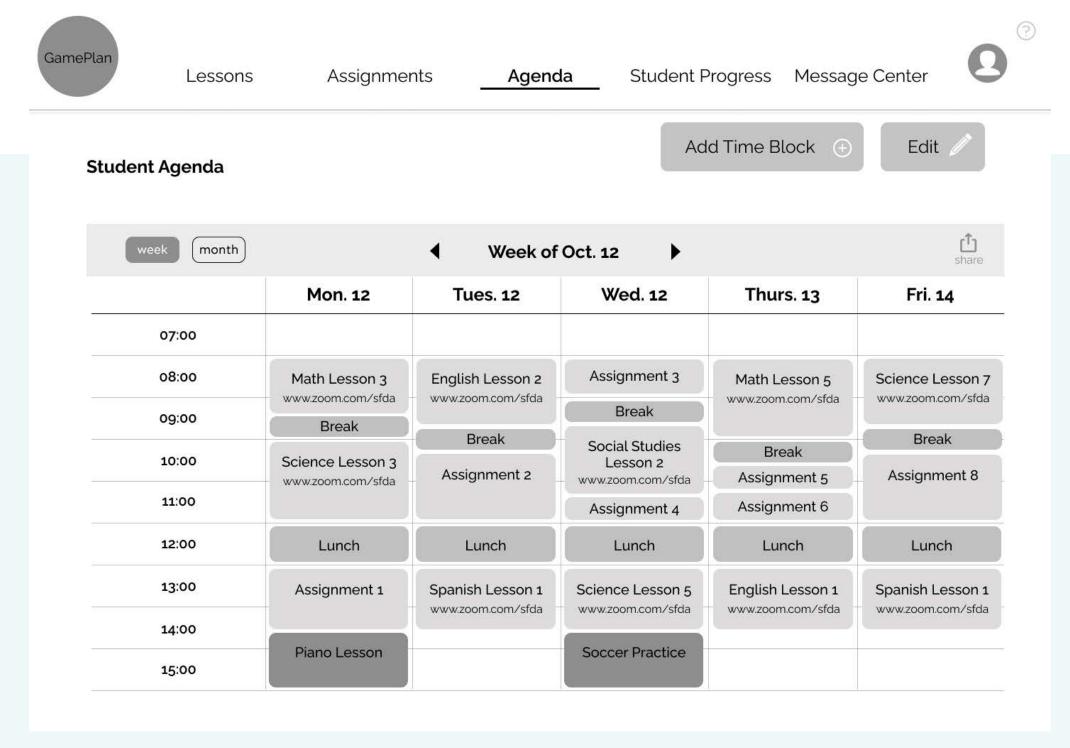
Teacher Interface - Calendar to add lessons

Teacher Interface - Calendar to schedule day

Poor connection between parent and teacher agendas

Question: Will teachers see additions to agenda made by parent?

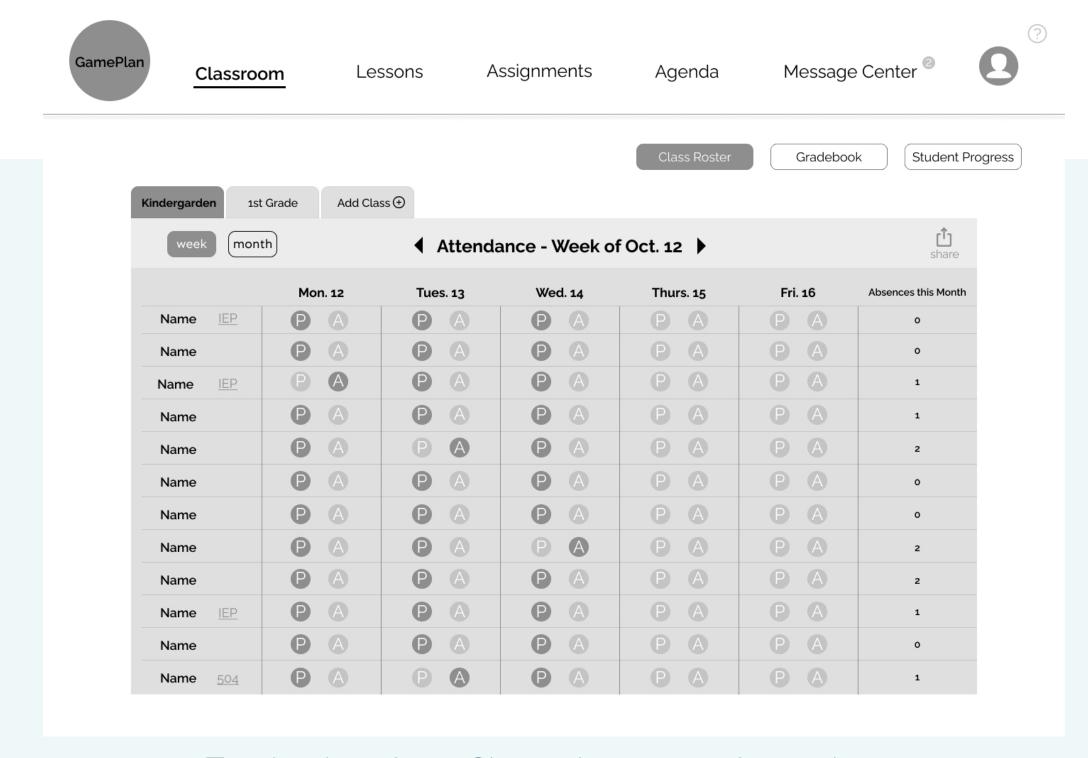
The ability to alert a teacher to time blocks added by parents is not clearly shown in the interfaces



Parent Interface- Added time blocks for extra-cirriculars

Tabs for classes are not accessible as part of the global navigation

Add tabs for classes in the global menu, or make the classes easier to find



Teacher Interface- Class tabs on top of attendance

60 System usability scale questionnaire

I think that I would like to use this system frequently.

I found the system unnecessarily complex.

I thought the system was easy to use.

I think that I would need the support of a technical person to be able to use this system.

I found the various functions in this system were well integrated.

I thought there was too much inconsistency in this system.

I would imagine that most people would learn to use this system very quickly.

I found the system very cumbersome to use.

I felt very confident using the system.

I needed to learn a lot of things before I could get going with this system.



System Usability Scale

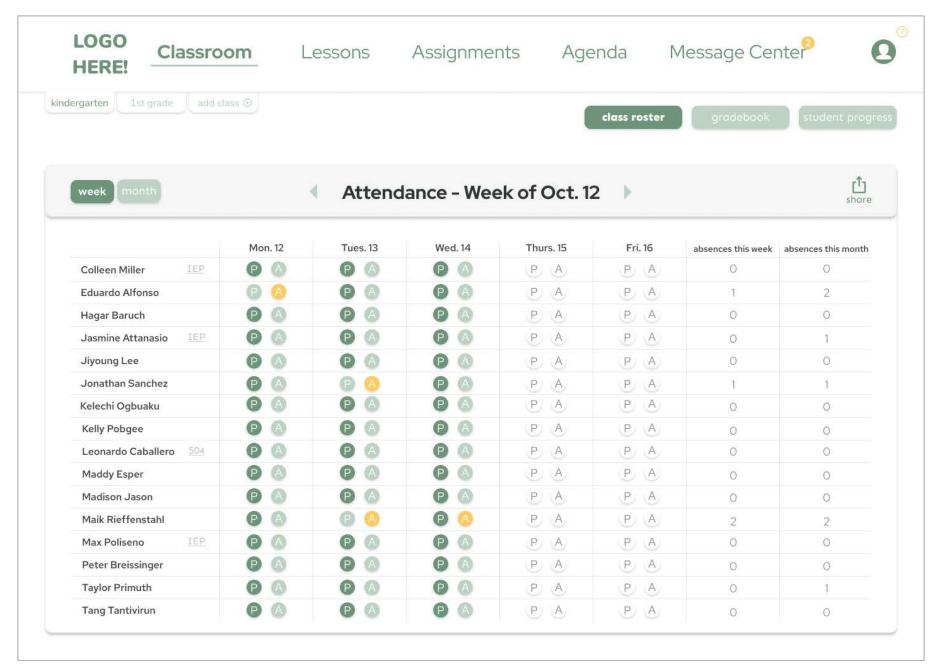
Average Score, n=5

62 UX expert testing- Angela Martin

GOAL: Analyze UI and IA for maximum usability

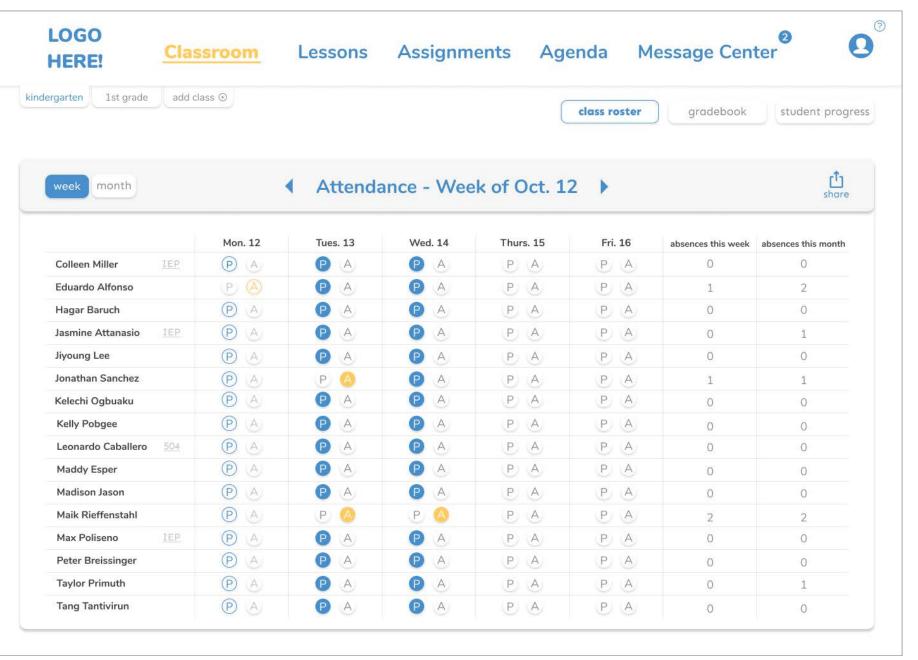
Successes:

- Labels are consistent across three user platforms
- Platform is streamlined



Areas for Improvement:

- Text size can be reduced to free up design space
- Agenda in both "Lessons" and "Agenda" is redundant



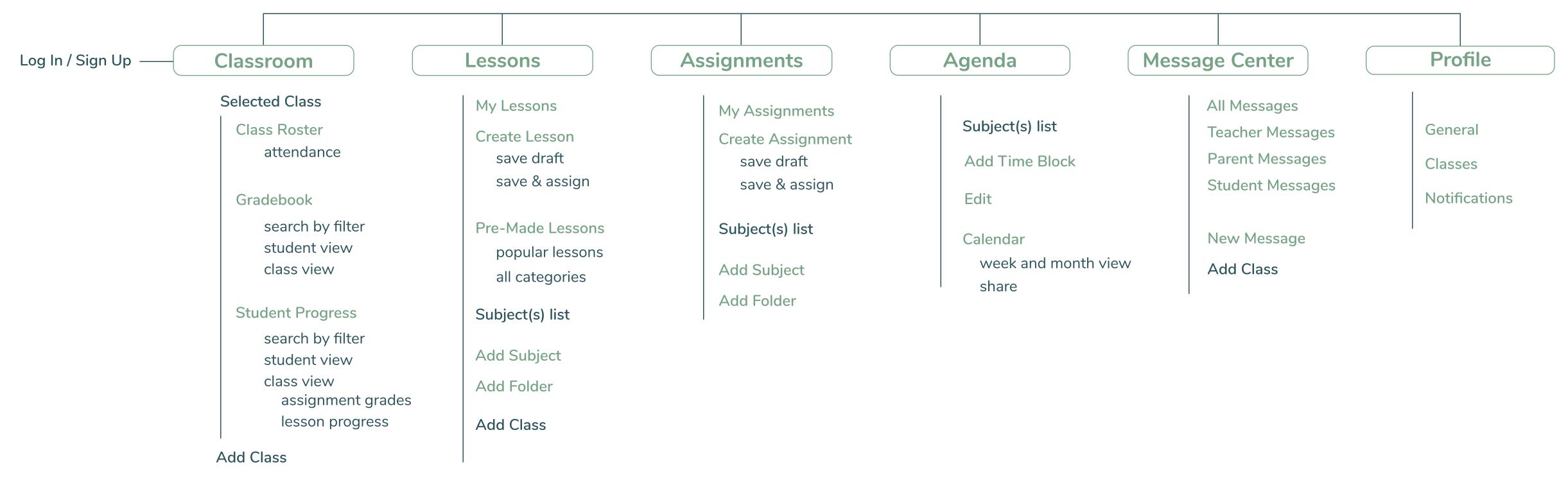
Blue + Yellow combination is preferred because it is a limited palette with strong contrast

Green + Yellow interface presents usabilty problems for people with color blindness



GamePlan Finalized Concept

65 Teacher blueprint



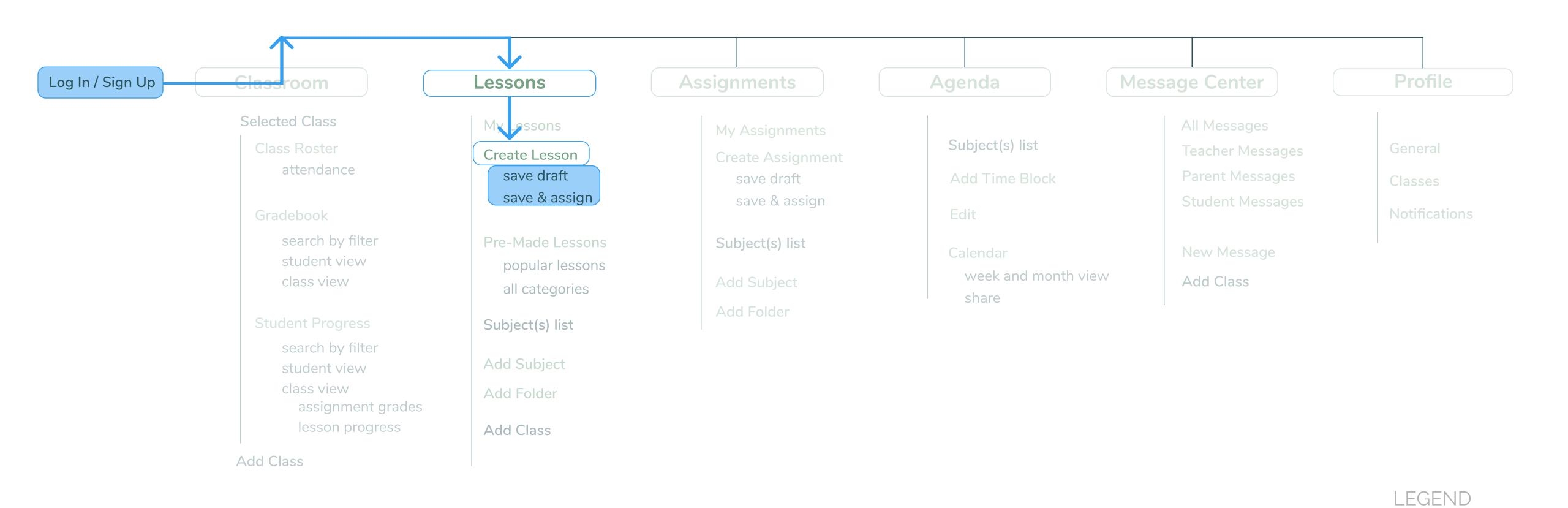
LEGEND

Global Menu Item

Local Menu

page selection options

66 Teacher taskflow- create a lesson



Start / End

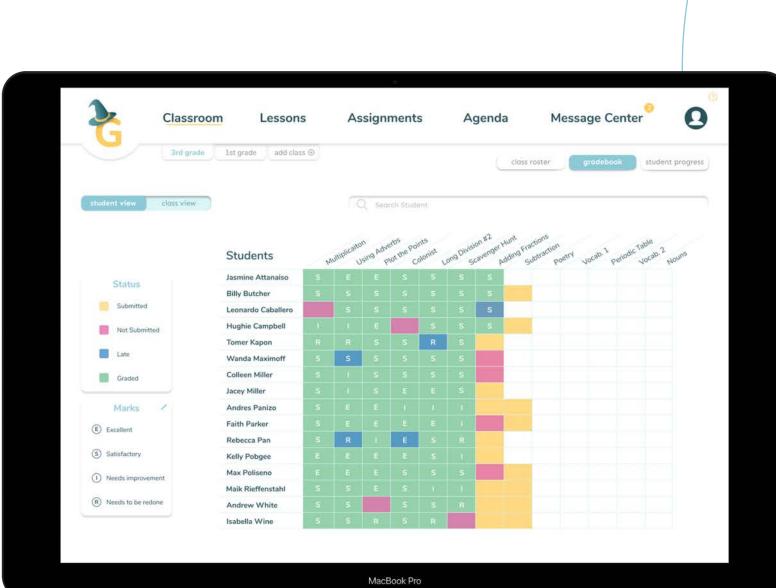
Clickable menu item

Task flow direction

Global Menu Item

page selection options

Local Menu



Classroom Lessons

3rd grade 1st grade add class ⊙

English •

Multiplication

Addition

Science •

Social Studies ▼

week month

7:00

8:00

9:00

10:00

11:00

12:00

1:00

2:00

3:00

4:00

Assignments

Science

MacBook Pro

Agenda

◆ Student's Week of Oct. 12 ▶

Message Center

Multiplication lesson

join Zoom

English

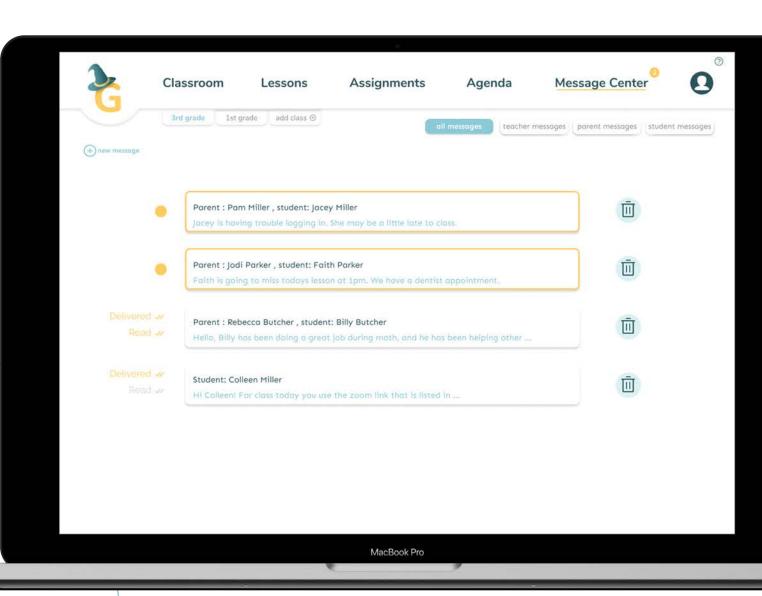
Science

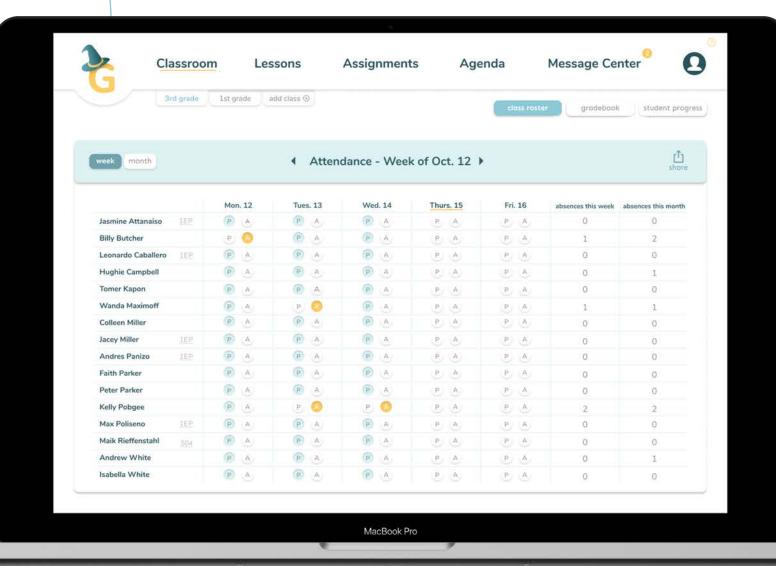
communicate

W

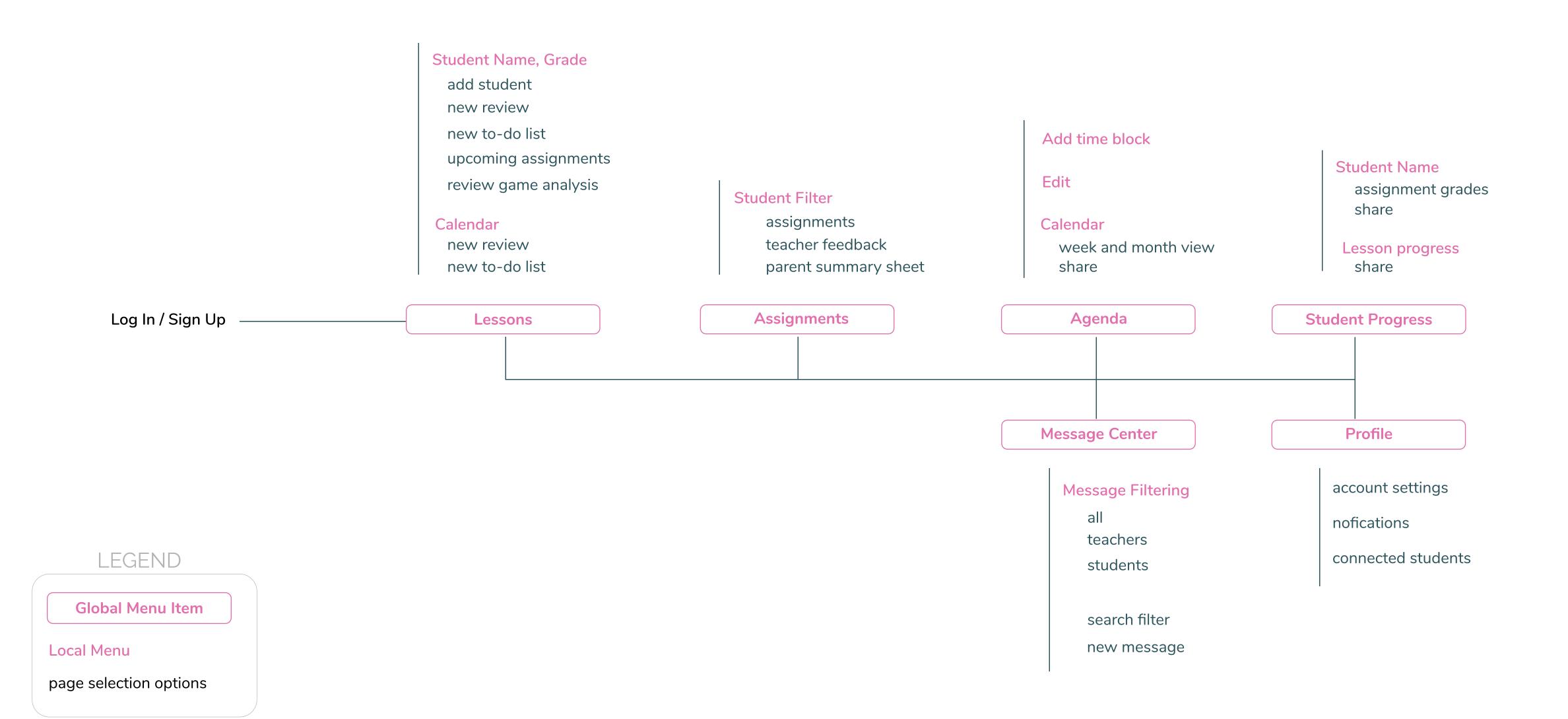
O

tte

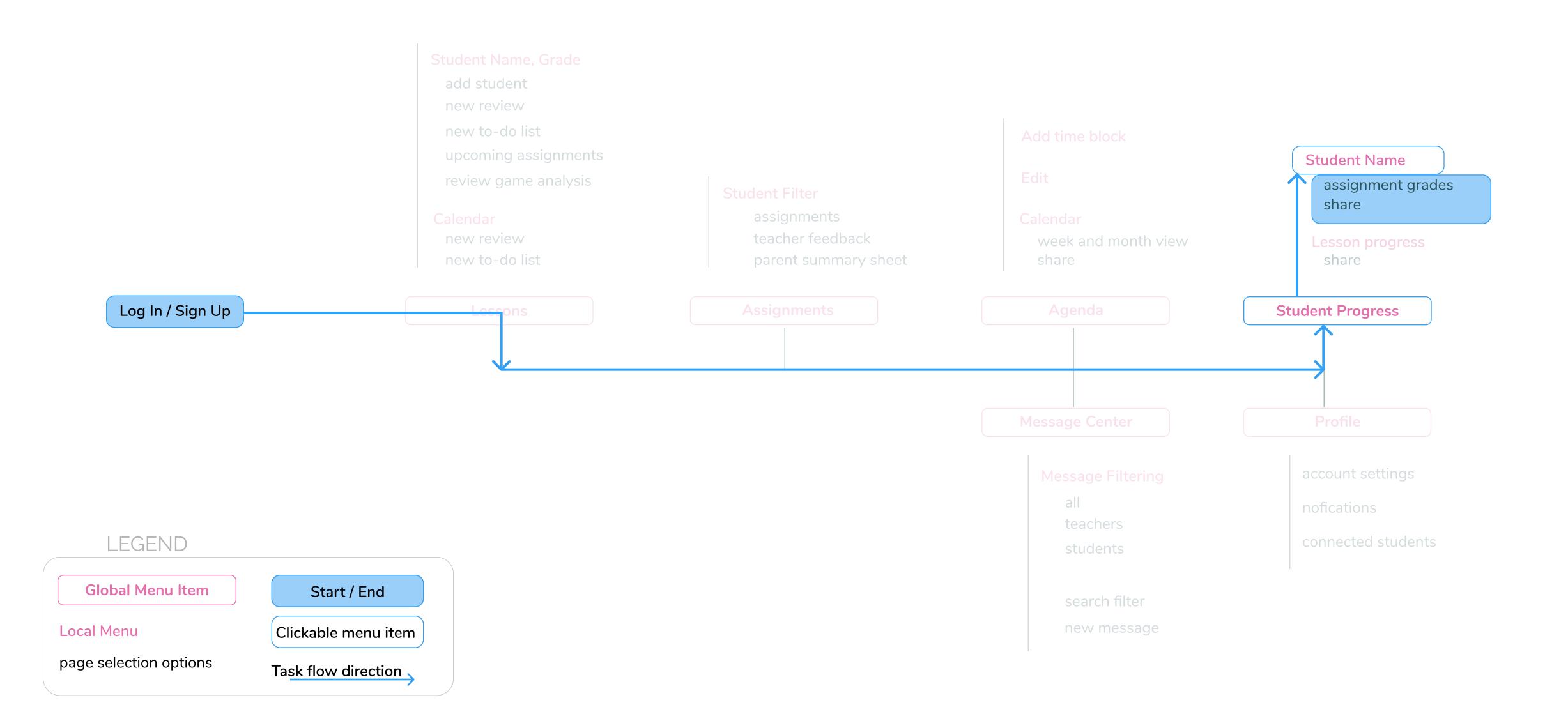




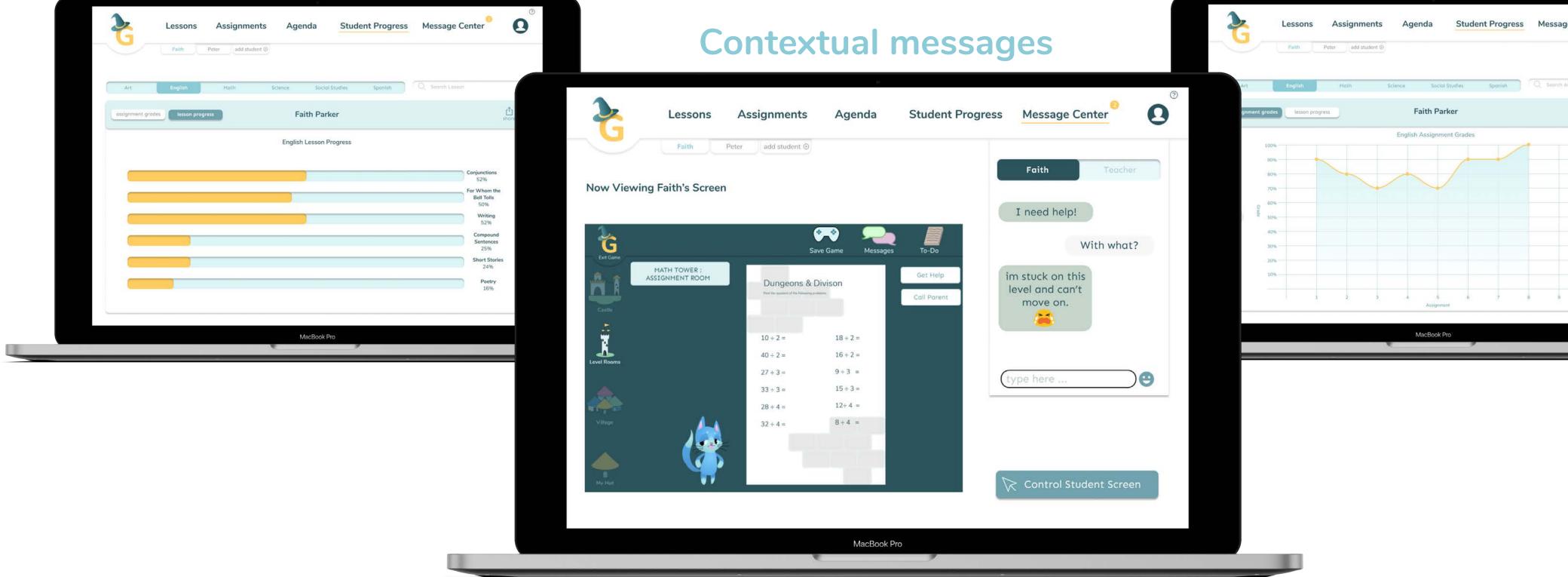
68 Parent blueprint



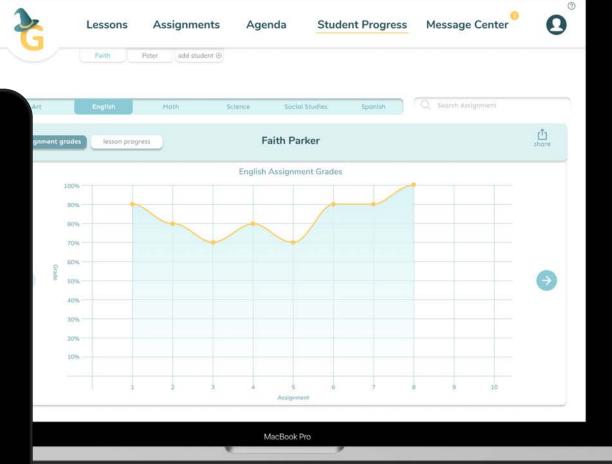
69 Parent taskflow- monitor student progress



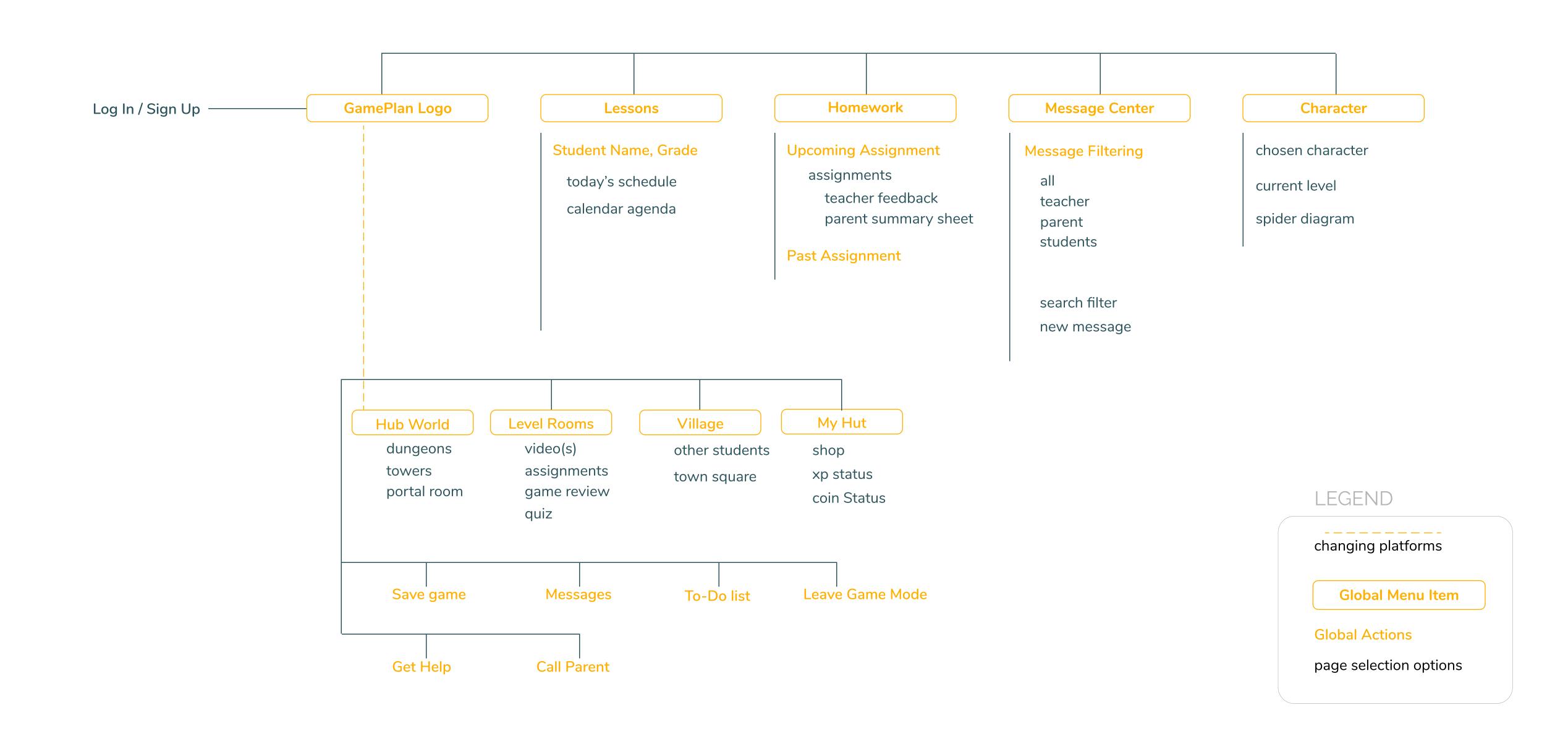
Track lesson progress



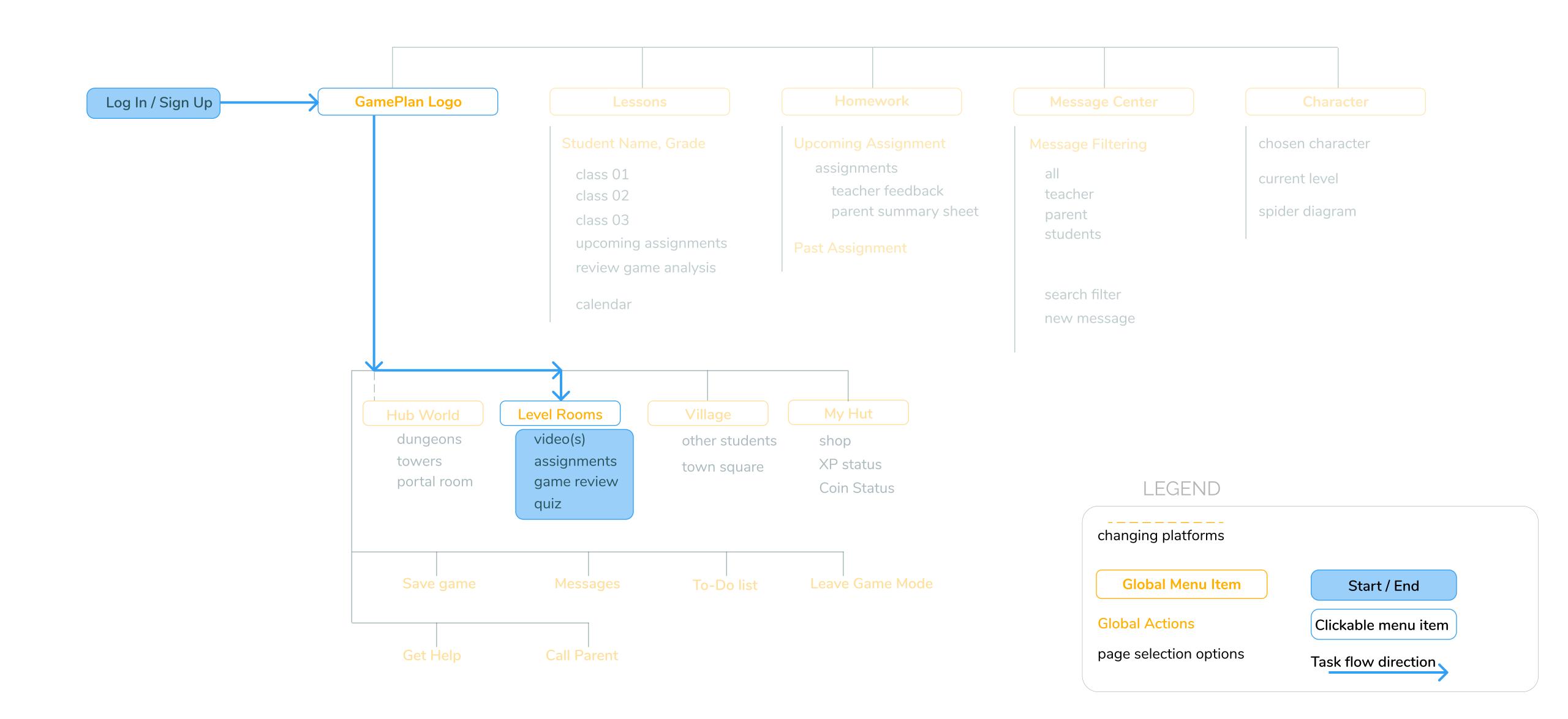
View grades



71 Student blueprint

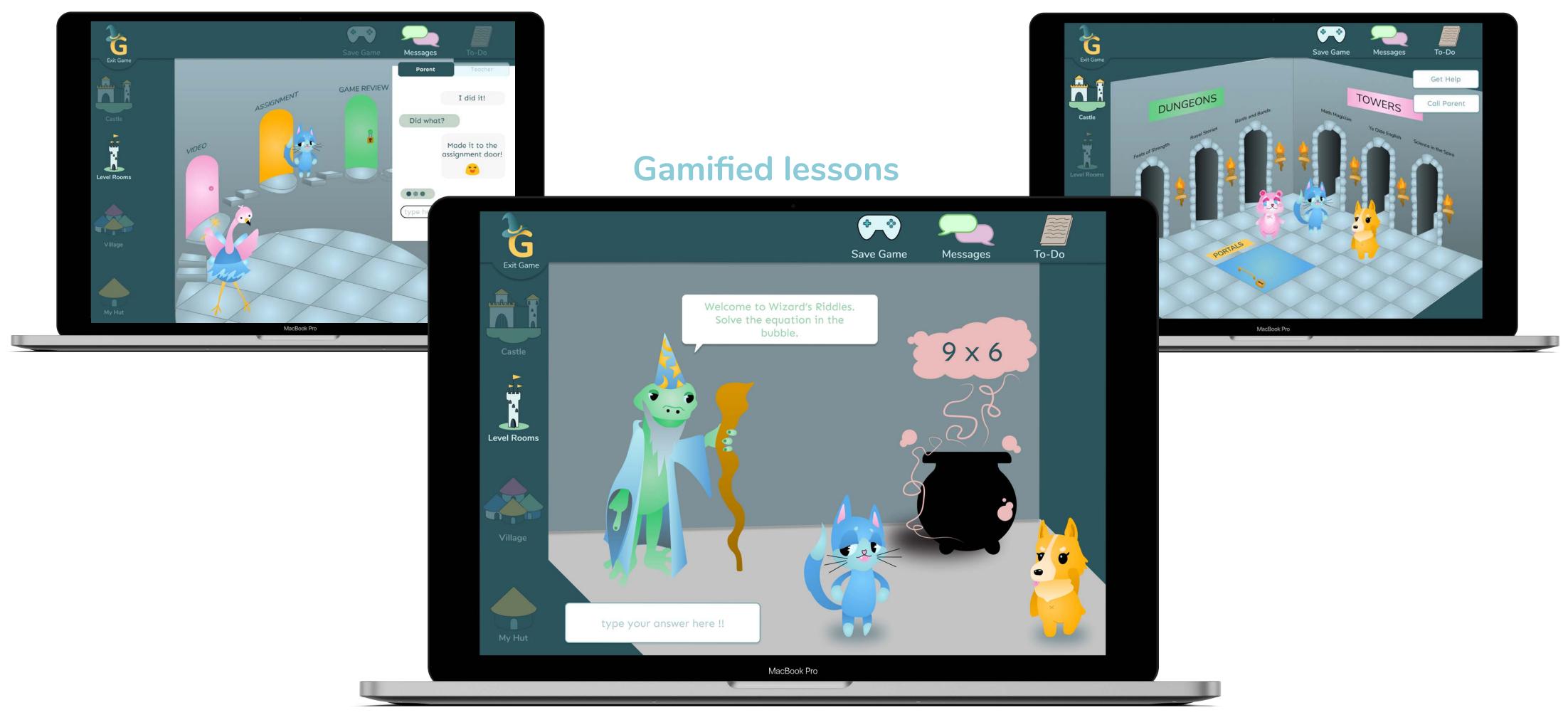


72 Student taskflow- complete an assignment



Level rooms

Hub world



Educational games



How might we improve upon the social development and structure of the in person education experience through online learning?

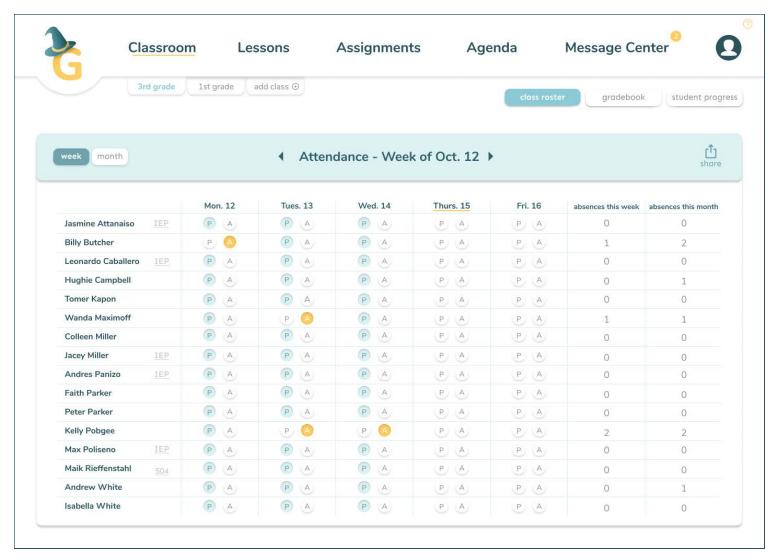
- Built to balance a busy lifestyle
- Fosters connnection between students, teachers, and parents
- Adaptable learning platform
- Univeriversal platform

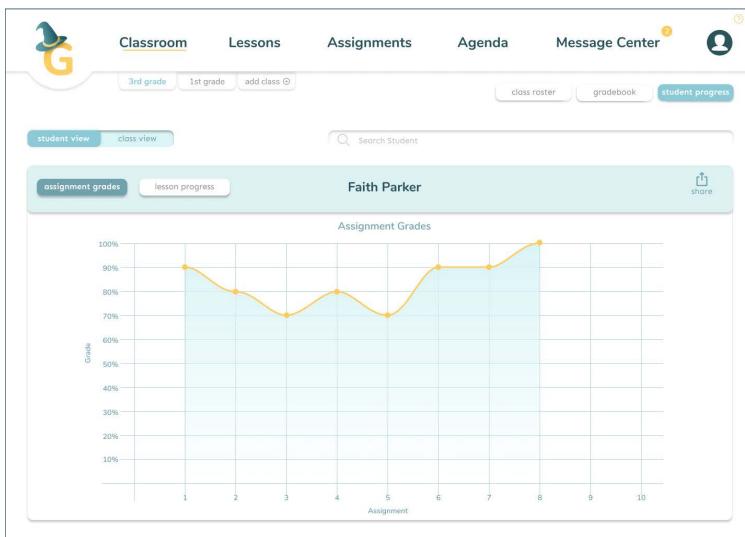
Applications for the future

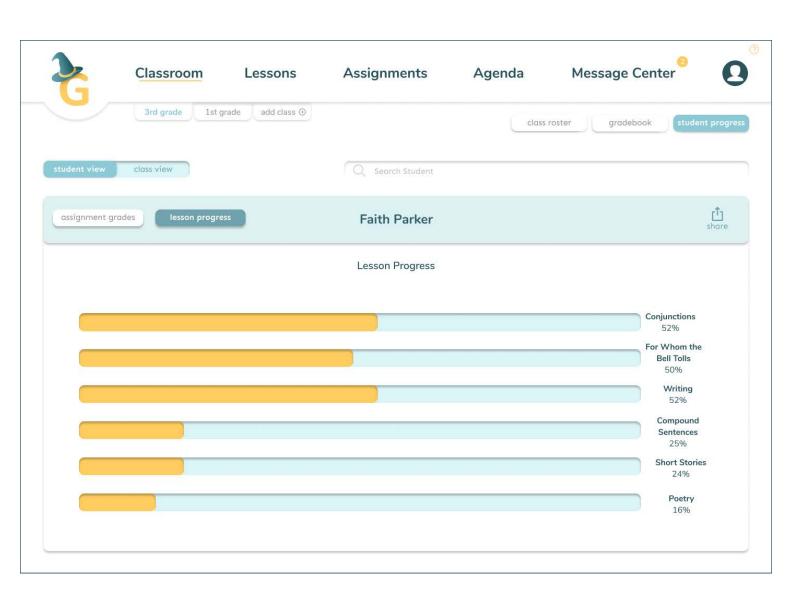
- Personlized learning
- Communication with parent and teacher
- Parents more involved
- Makes learning fun

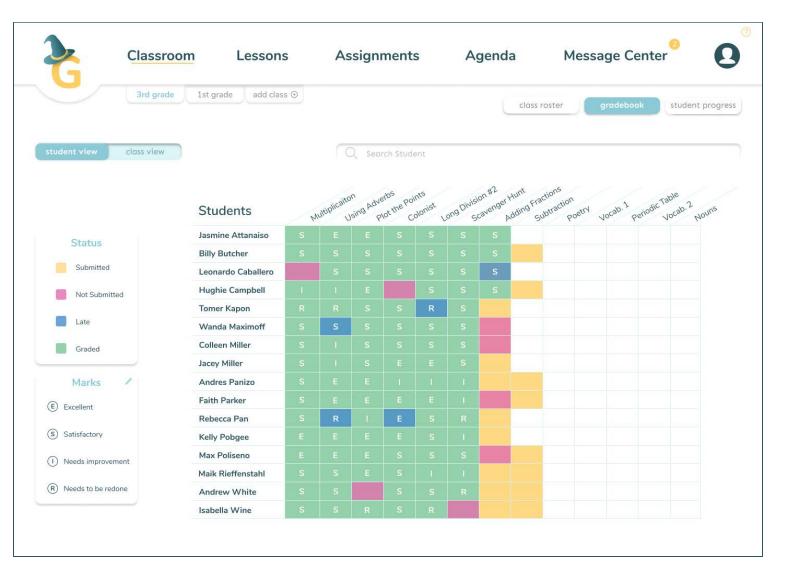
Appendix of Screens

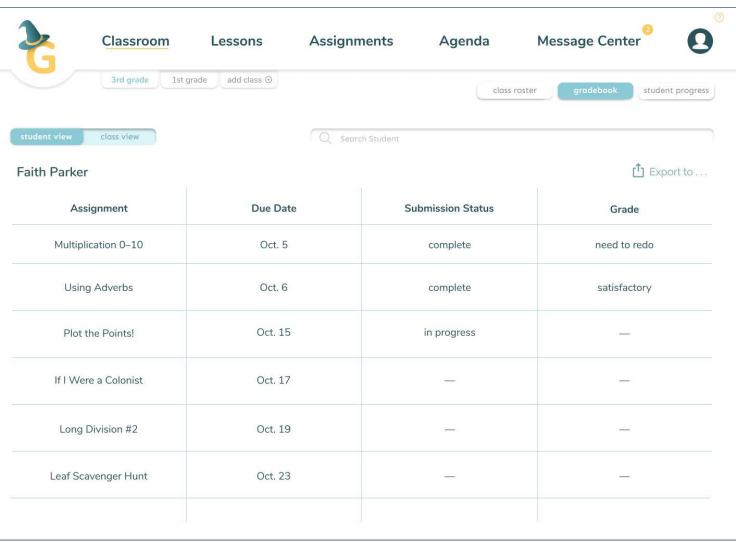
GamePlan screens- teacher



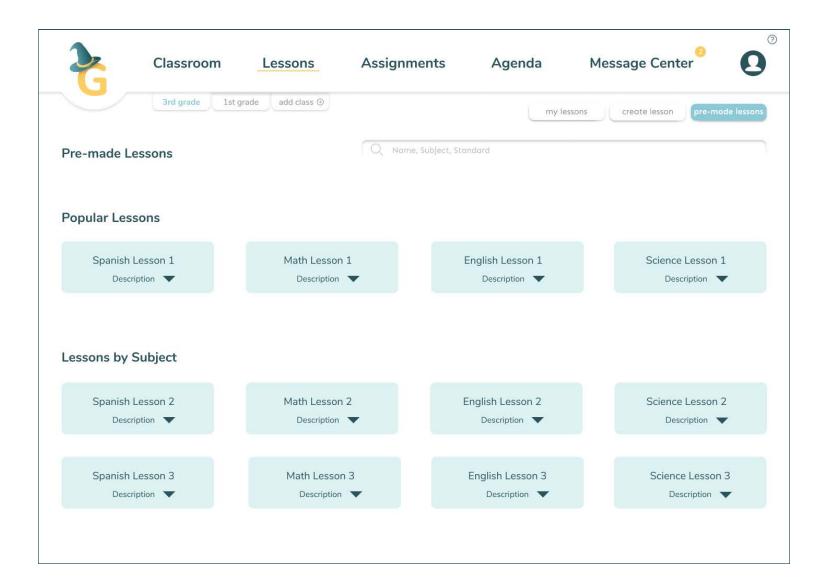


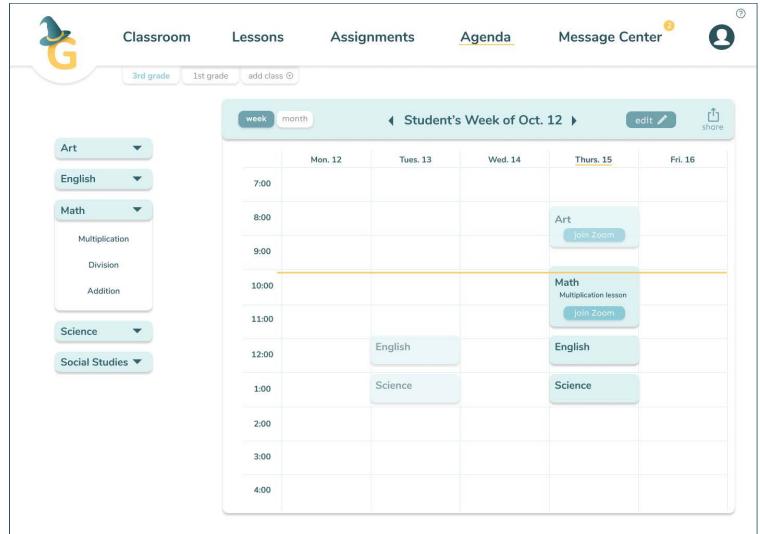


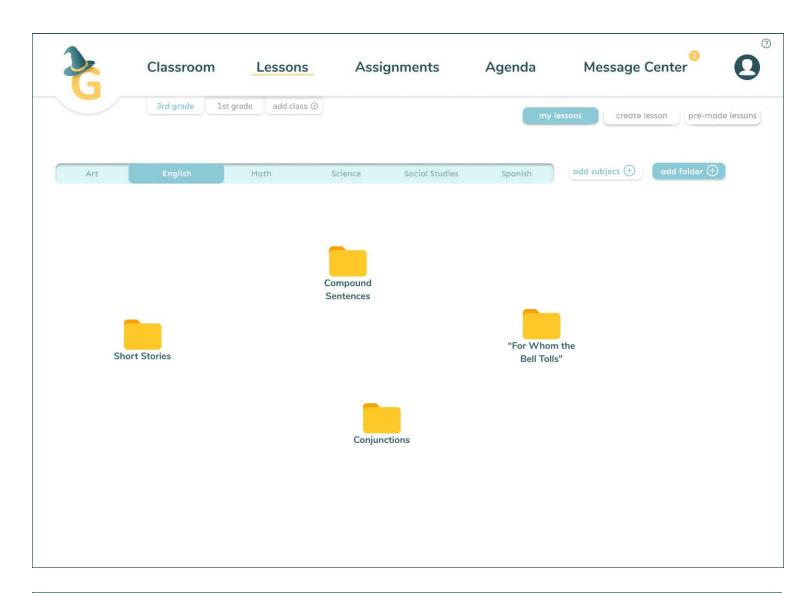




ii GamePlan screens- teacher

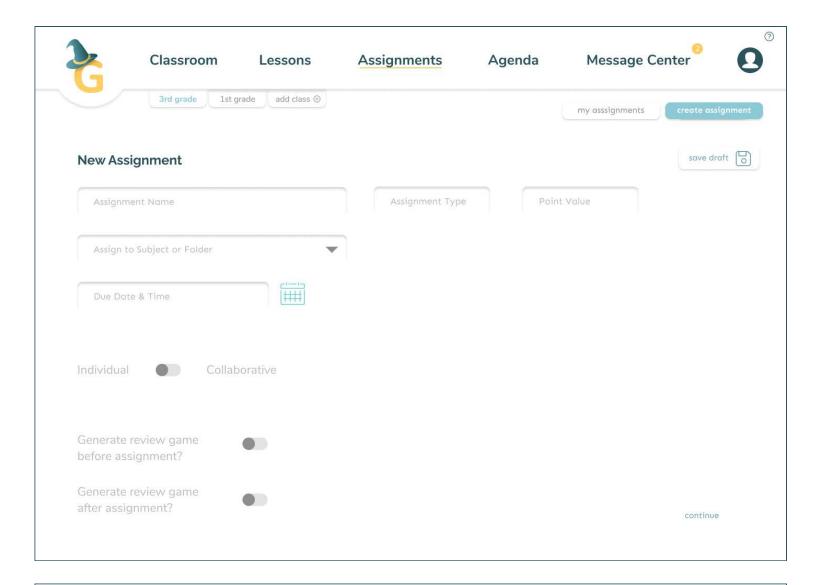


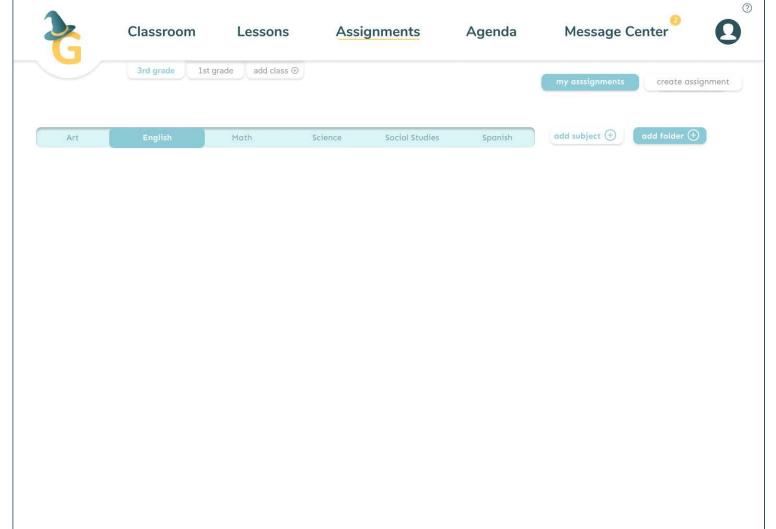


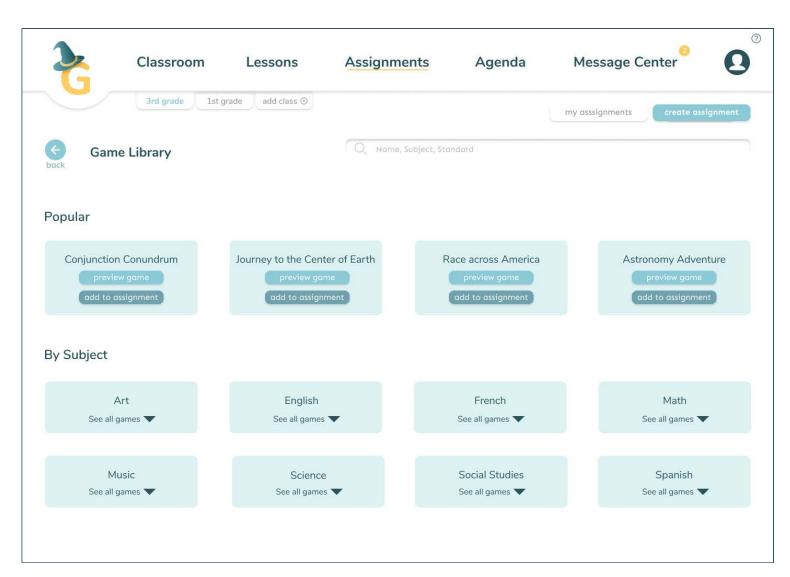


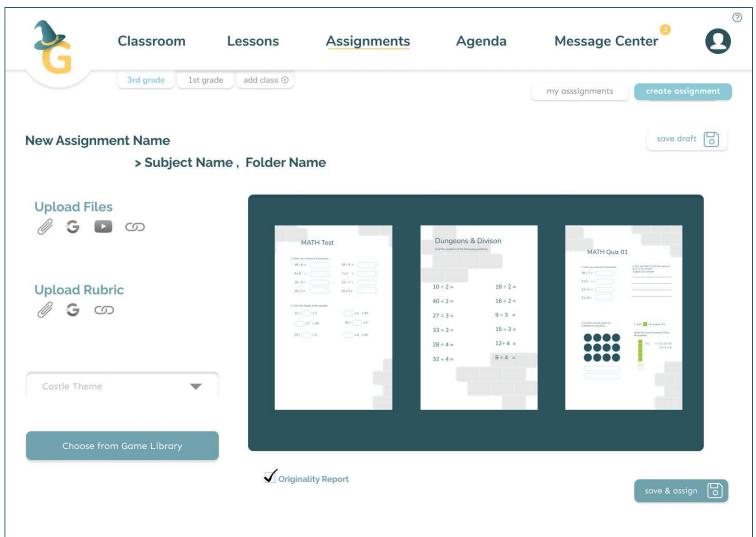
			my lessons	create lesson	pre-made lesso
Create New Lesso	on				
Lesson Name		Assign to Subjec	t or Folder	•	
Lesson Goals or Stan	dards				
Upload Files					
Upload Files	Uploaded File List				

iii GamePlan screens- teacher

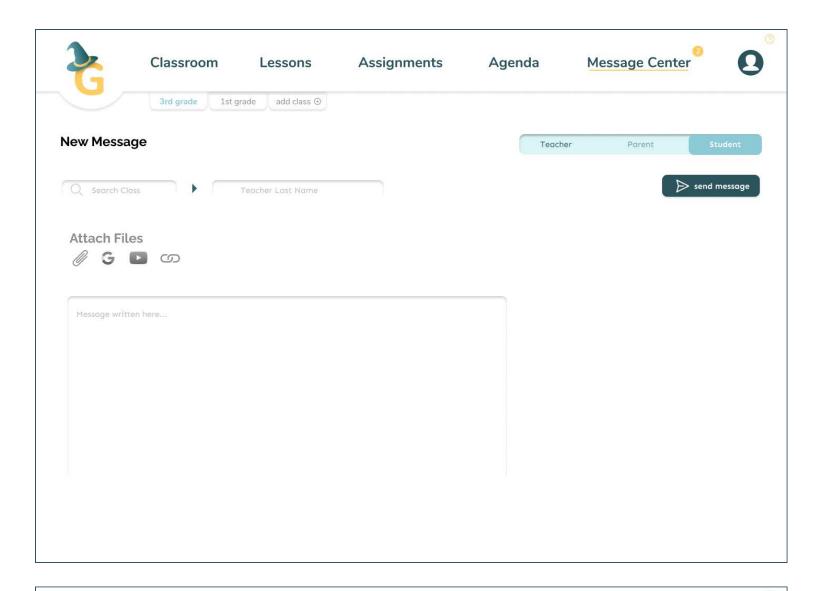


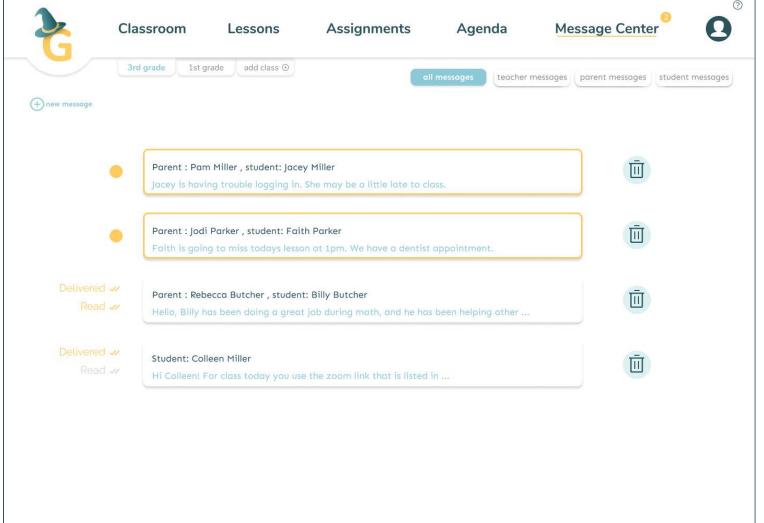




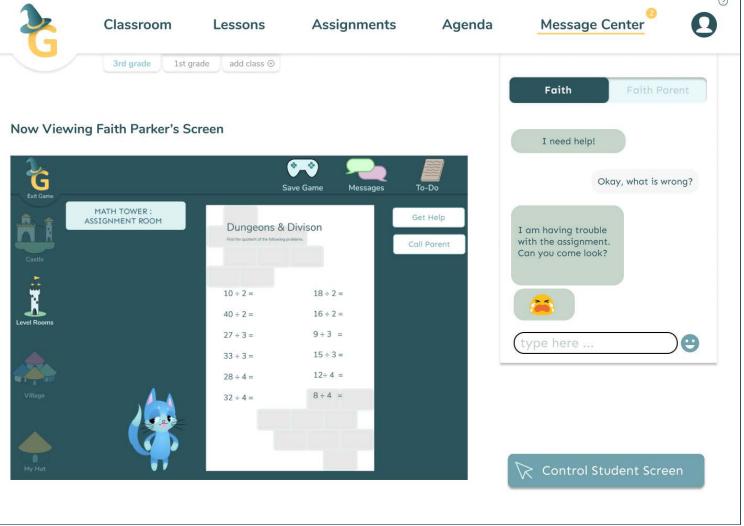


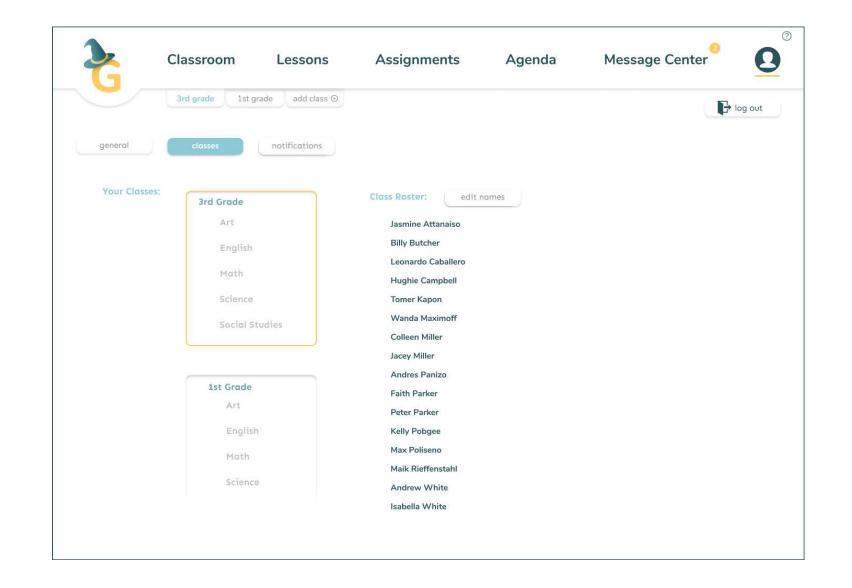
iv GamePlan screens- teacher

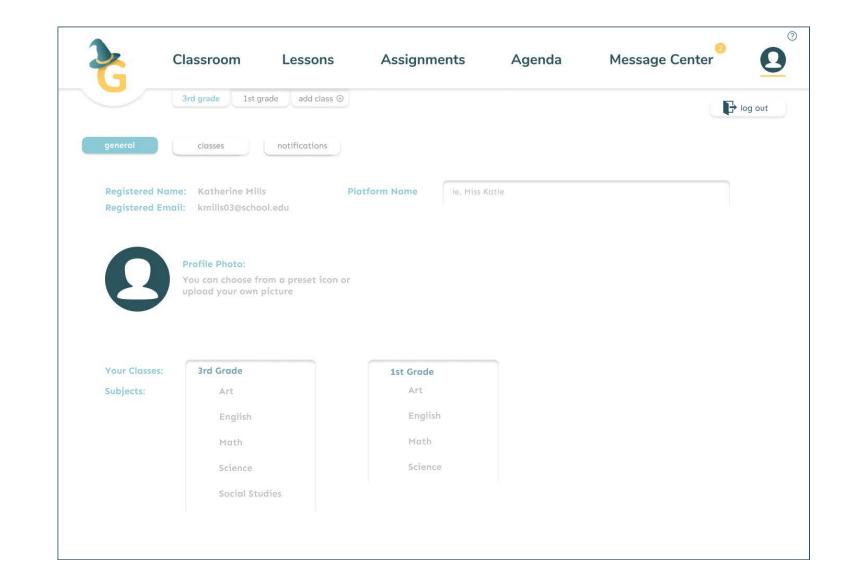




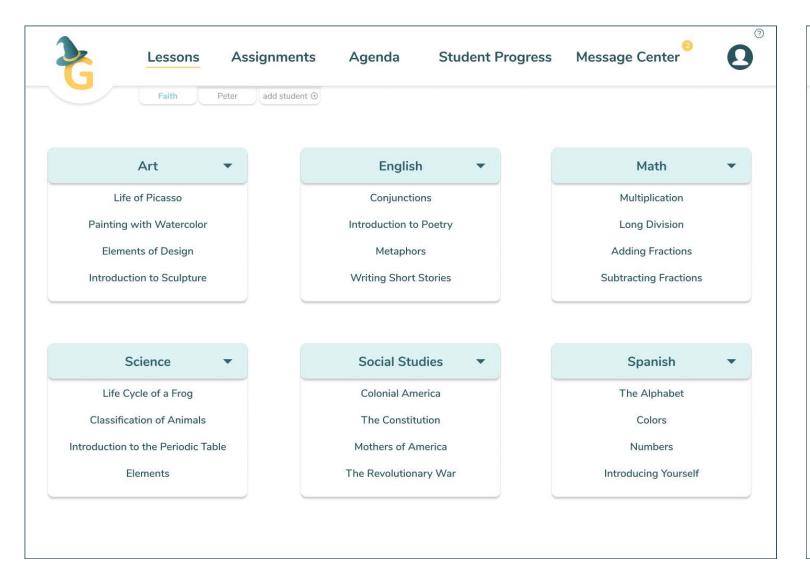


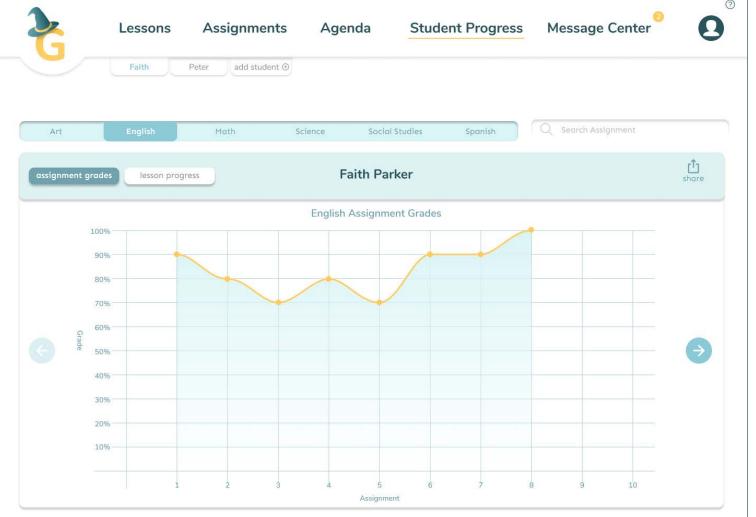


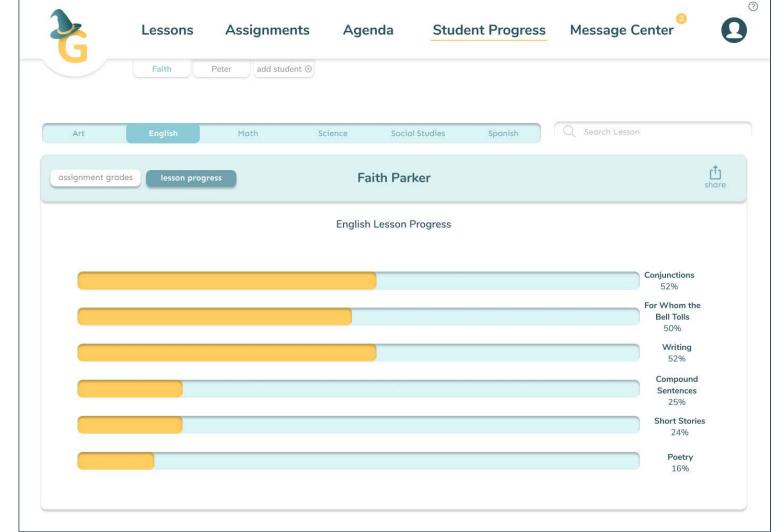




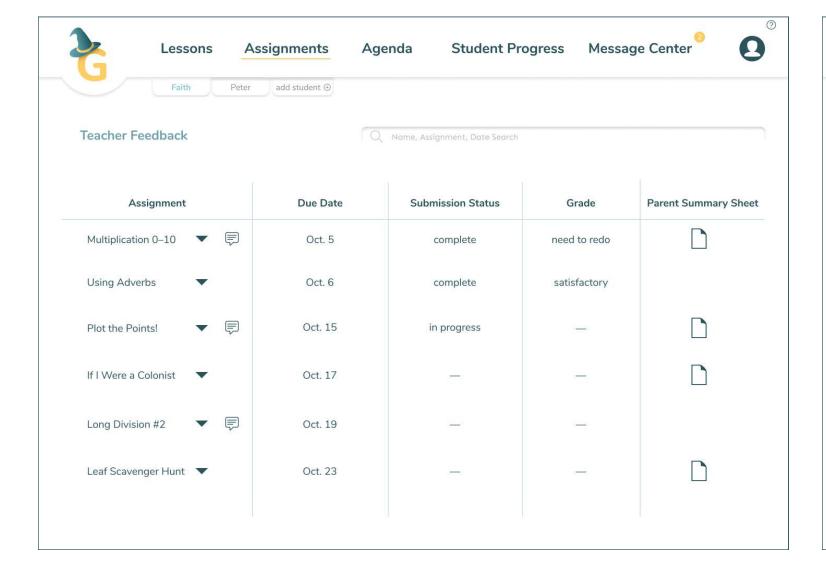
vi GamePlan screens- parent

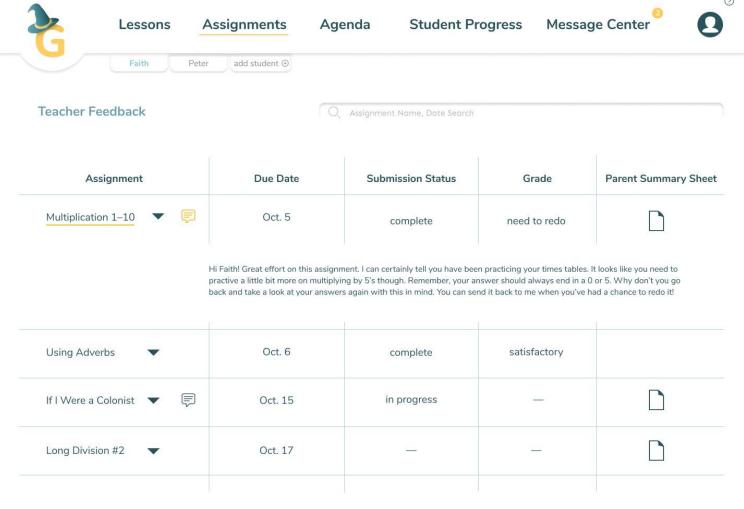


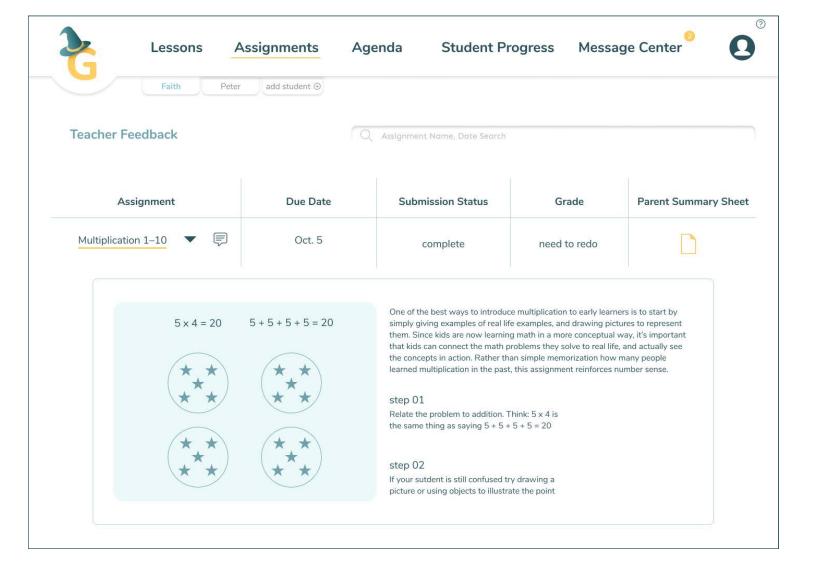




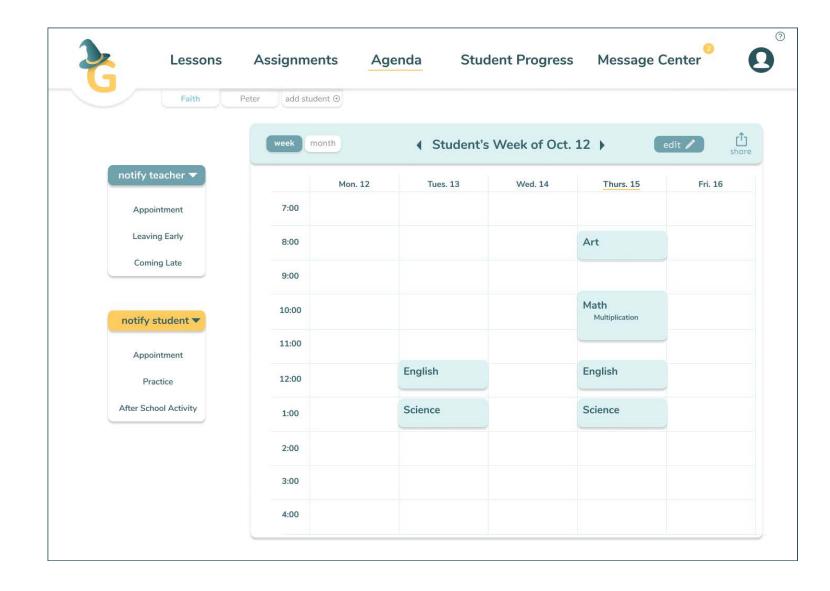
vii GamePlan screens- parent

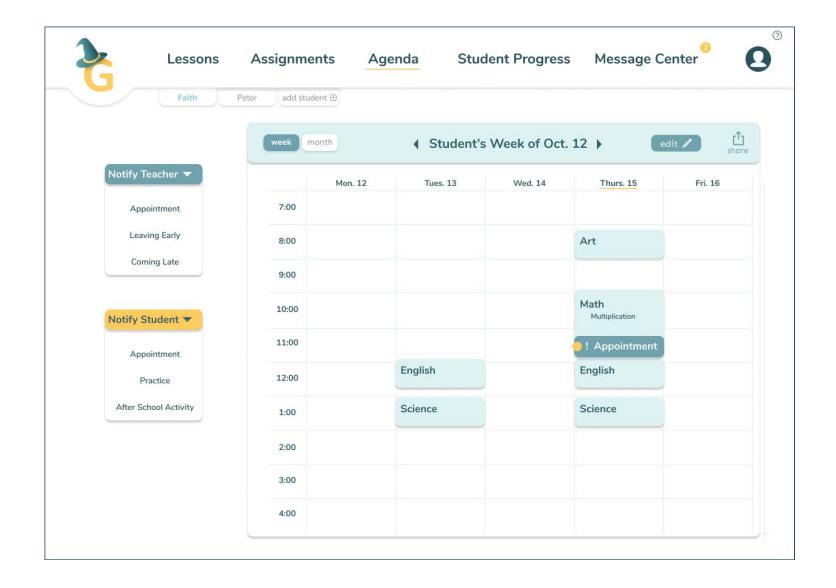






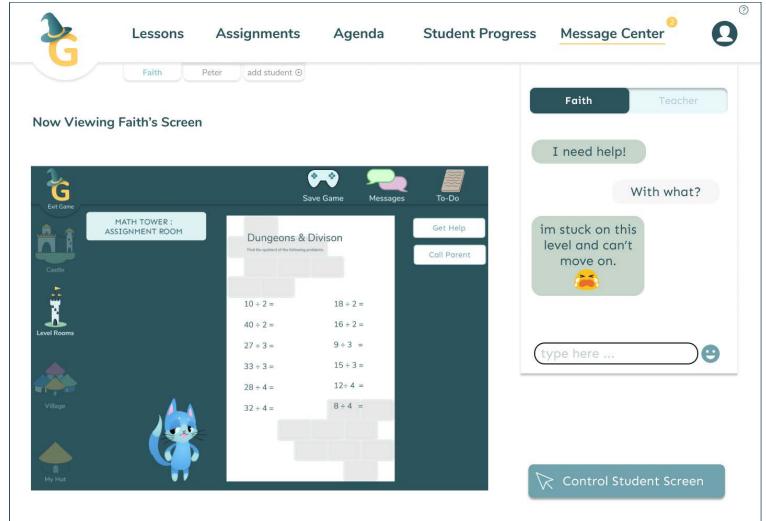
viii GamePlan screens- parent

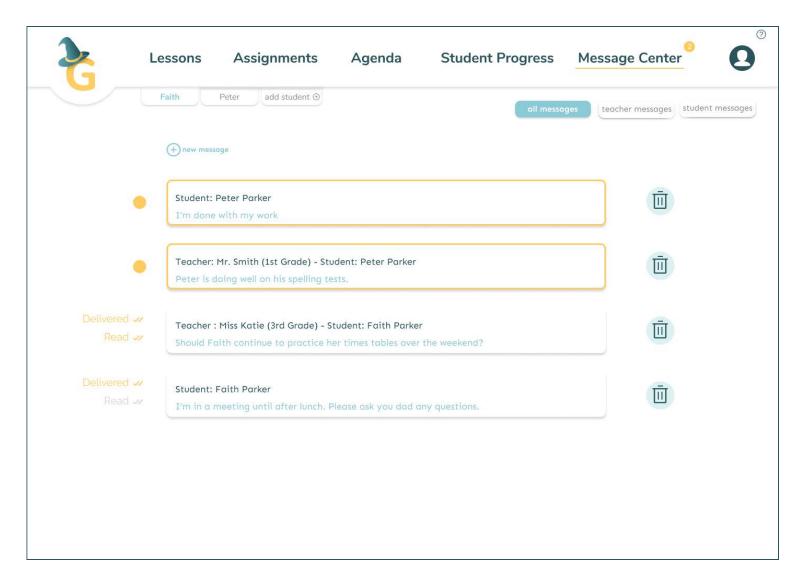


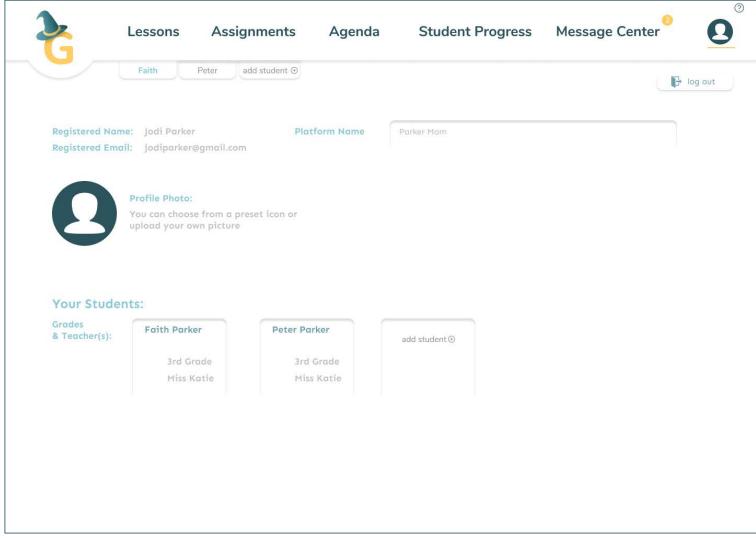


ix GamePlan screens- parent









GamePlan screens- students

