

Stembuds

Design Specification

31 July 2017



Grow your STEM!

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Introduction

Stembuds is an application for iOS that engages adolescent girls in STEM learning through involvement in a gamified community.

GOALS

- fun & engaging
- practical relevance of STEM
- a means to social integration

Stembud Activities

New users begin by choosing their bud and proceed to **“grow their STEM”** by completing do-it-yourself activities that are then shared with the app community. After completing and sharing an activity, the user gains a related activity badge and their Stembud levels up and grows.

Accessories Shop

When a user has accrued enough in-game currency from completing Stembud Activities they can buy special accessories to personalize their Stembud and gain additional currency by inviting new user’s to join the community.

User Stories

User’s receive notifications of community activity in the Stories section, where they can also share their Stembud or view others that have been shared.

Interest Clubs

When user’s have become proficient enough in a skill to experiment on their own they can share and discuss their creations with members that have similar interests by joining a corresponding interest club.

Concept Model



INSTALL APP



**CHOOSE YOUR BUD &
DO STEM ACTIVITIES**



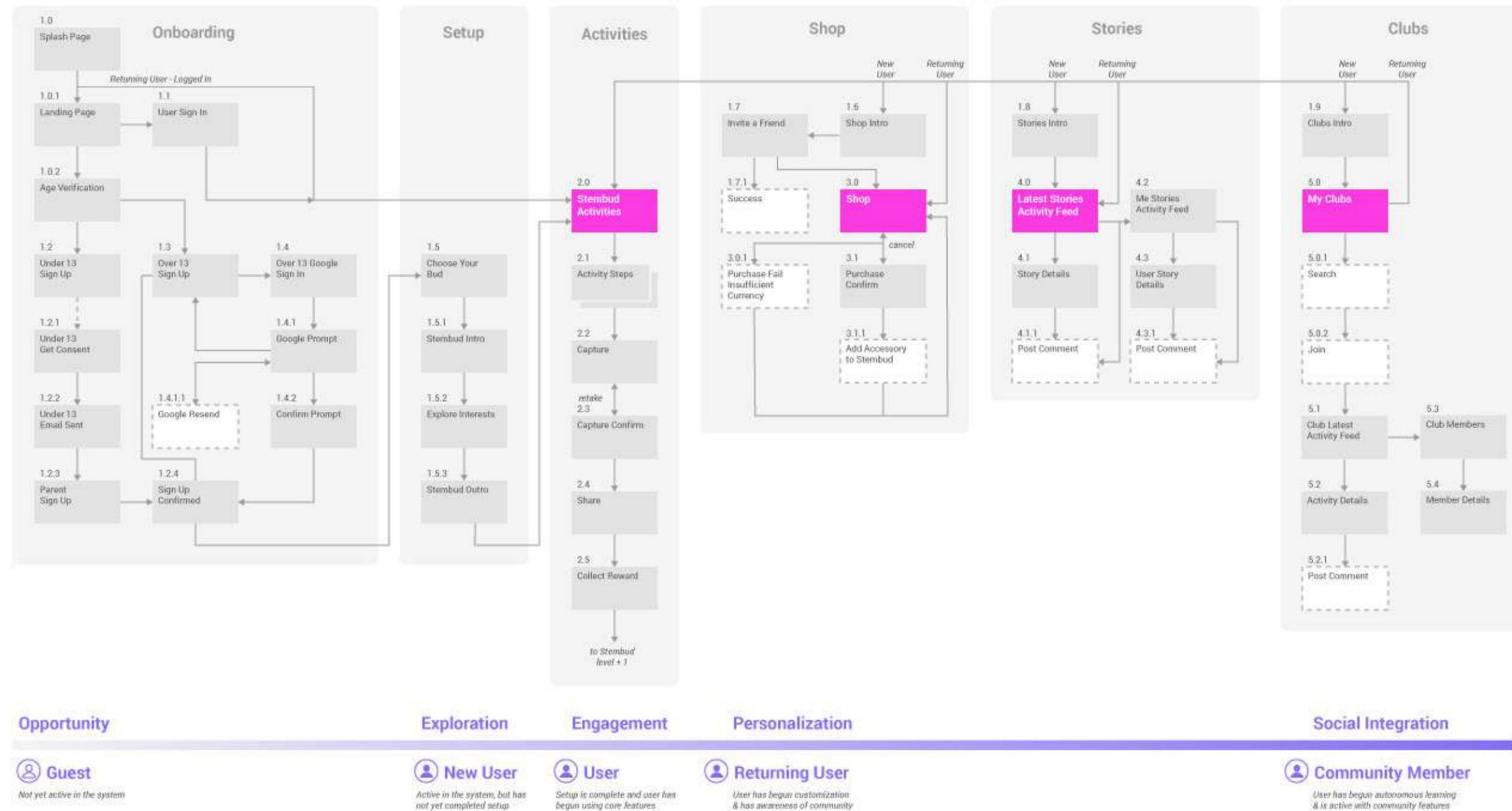
**LEARN & SHARE WITH
THE COMMUNITY**



**FIND YOUR STEM BUDS
& GROW YOUR STEM**

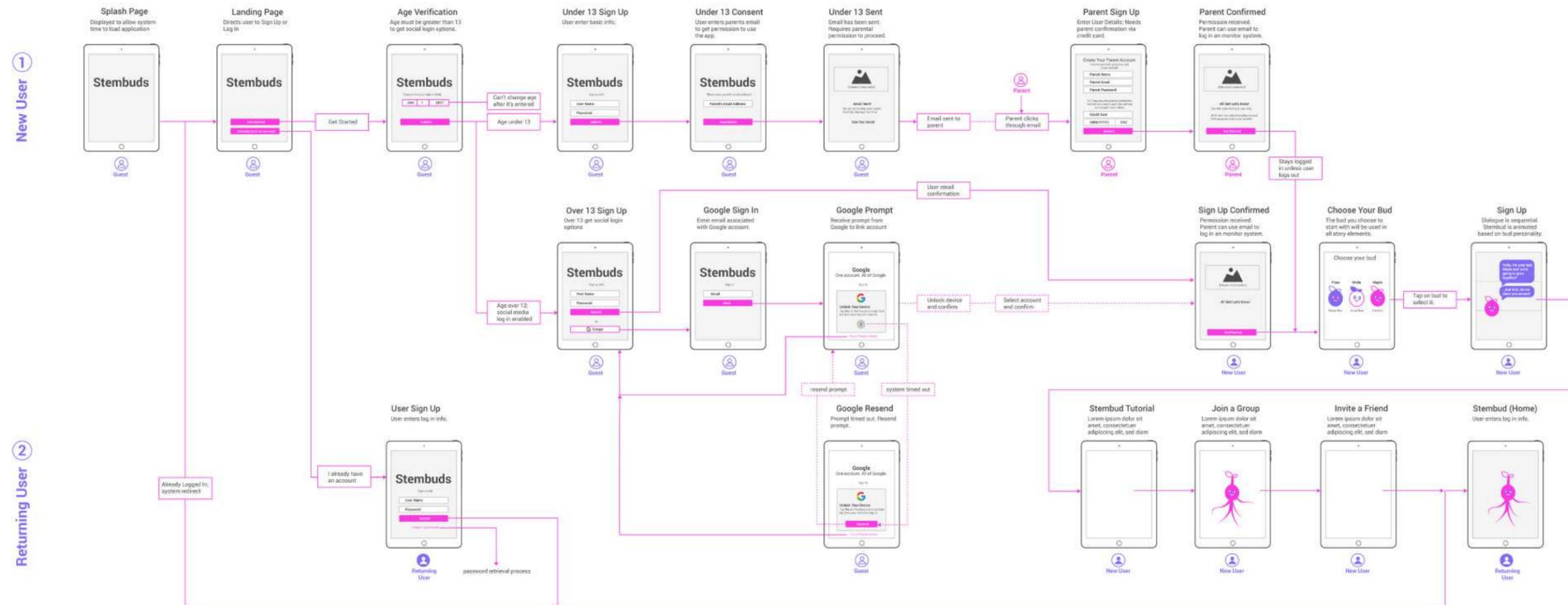
Application Diagram

The app has a hub and spoke architecture that is built around the primary navigation bar. The onboarding process screens the user's age for social media standards.



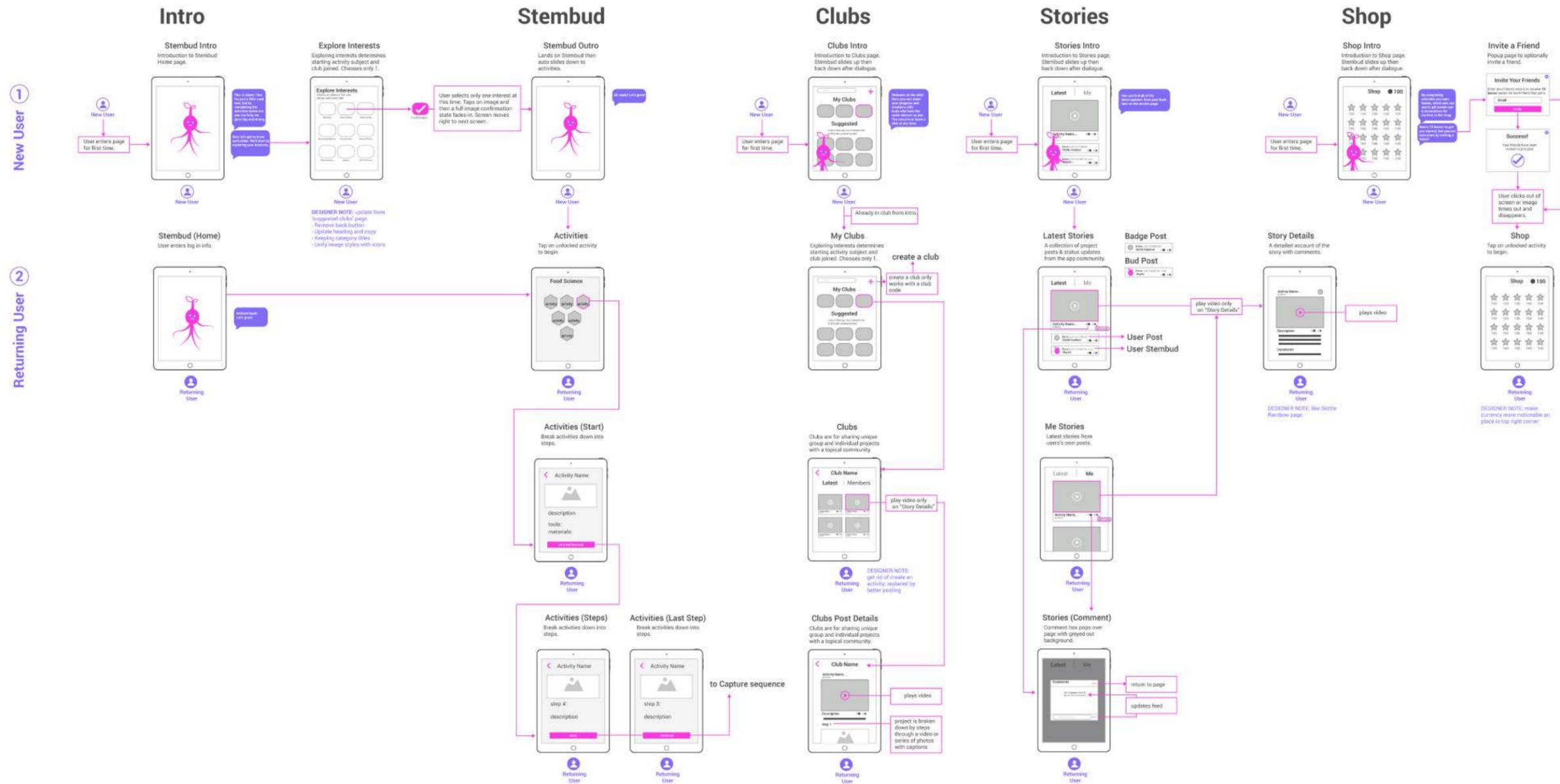
User Flow Diagram

Onboarding



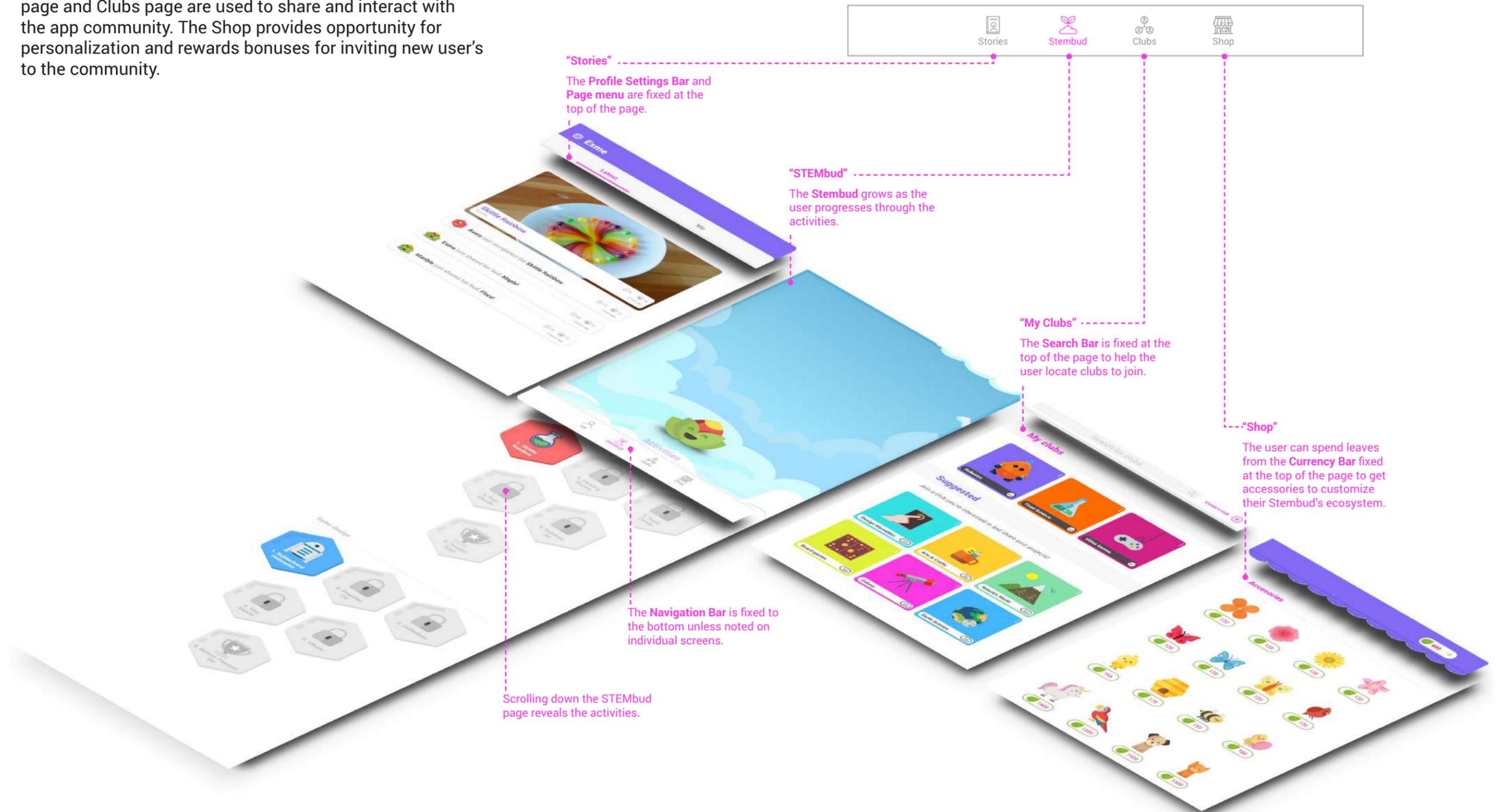
User Flow Diagram

User Flow



Interaction Model

The core features of the app are the **Stembud** and **Activities**, which are placed together on the home page. The Stories page and Clubs page are used to share and interact with the app community. The Shop provides opportunity for personalization and rewards bonuses for inviting new user's to the community.



Typography

Our typographic system is meant to convey an informal, yet structured tone. Hierarchy in the body text is built through weight and spacing to maintain consistent readability. Hierarchy in the headings is built through size, weight, and color to create a more playful tone. Unless otherwise specified in an individual reline, Roboto is the typeface used for this entire application. Components will reference a particular style found below.

Headings

A1 **Roboto** 50pt Roboto regular
rgba(255, 255, 255, 100)

A2 **Roboto** 30pt Roboto black
rgba(251, 59, 226, 100)

A3 **Roboto** 30pt Roboto black
rgba(132, 108, 246, 100)

A4 **Roboto** 20pt Roboto bold
rgba(132, 108, 246, 100)

Body

B1 Roboto 16pt Roboto regular
rgba(159, 159, 159, 100)

Button

B2 Roboto 16pt Roboto light
rgba(159, 159, 159, 100)

B3 Roboto 16pt Roboto medium
rgba(159, 159, 159, 100)

Color Palette

The goal of the color palette is to create an friendly and energizing space to motive learning, self expression, and social engagement for young women. Turquoise and violet were both found to be popular with young women. Pink is used to direct the user's attention to call-to-action's and key highlights.

Secondary colors are used to expand the palette for illustrations and key color features. The gradient provides a unique branding moment for the Stembuds logo. The interface is skinned in shades of grey and white allowing it to recede and further accentuate color features.

Primary



Pink
rgb(248, 69, 224)



Violet
rgb(132, 113, 243)



Turquoise
rgb(67, 225, 226)



Dark
rgb(76, 76, 79)



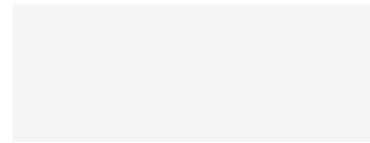
Medium Dark
rgb(154, 154, 154)



Medium
rgb(199, 202, 199)



Medium Light
rgb(235, 235, 235)



Light
rgb(245, 245, 245)

Secondary



Ruby
rgb(208, 43, 134)



Sky Blue
rgb(74, 184, 252)



Mint Green
rgb(135, 224, 170)



Leaf Green
rgb(226, 240, 75)



Orange
rgb(252, 108, 33)



Dandelion
rgb(254, 207, 70)

Components

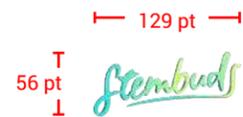
BRANDING

Stembuds Logo

C1. LARGE LOGO



C2. SMALL LOGO



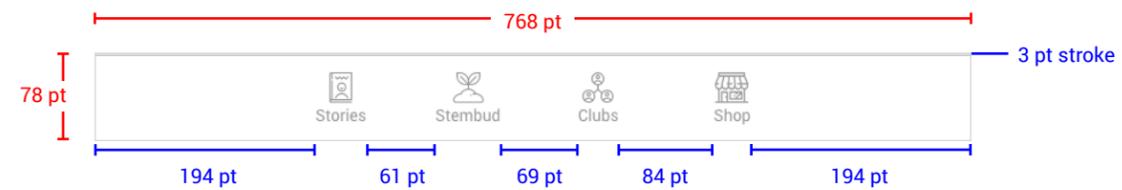
C3. MAPLE



NAVIGATION

Navigation Bar

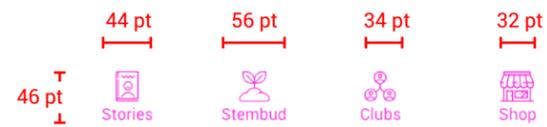
D1. PRIMARY NAVIGATION BAR



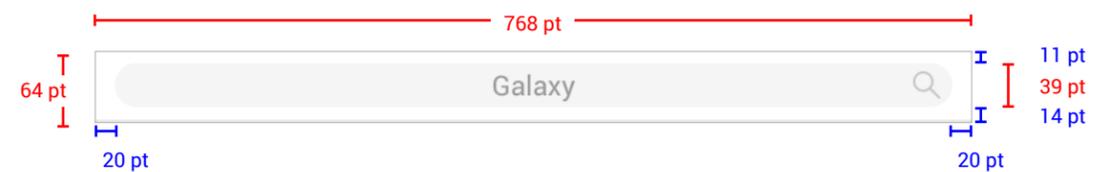
DEFAULT PRIMARY NAVIGATION BAR ICONS



ACTIVE PRIMARY NAVIGATION BAR ICONS



D2. SEARCH BAR



LEGEND

FEATURE



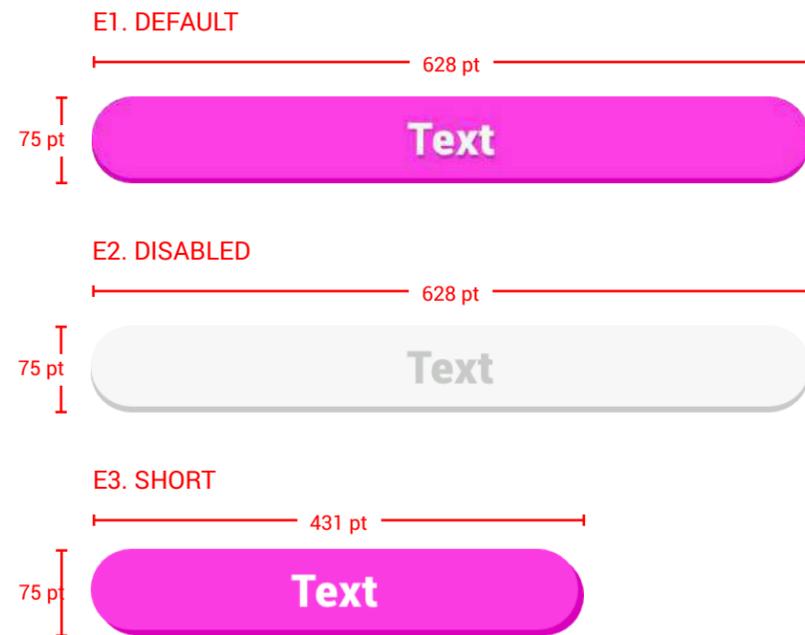
PADDING



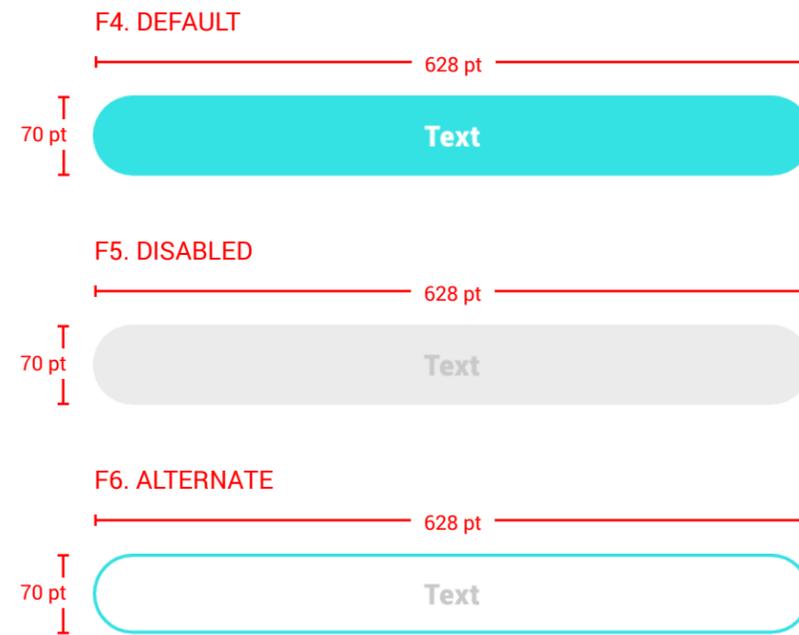
Components

BUTTONS

Primary Action Button

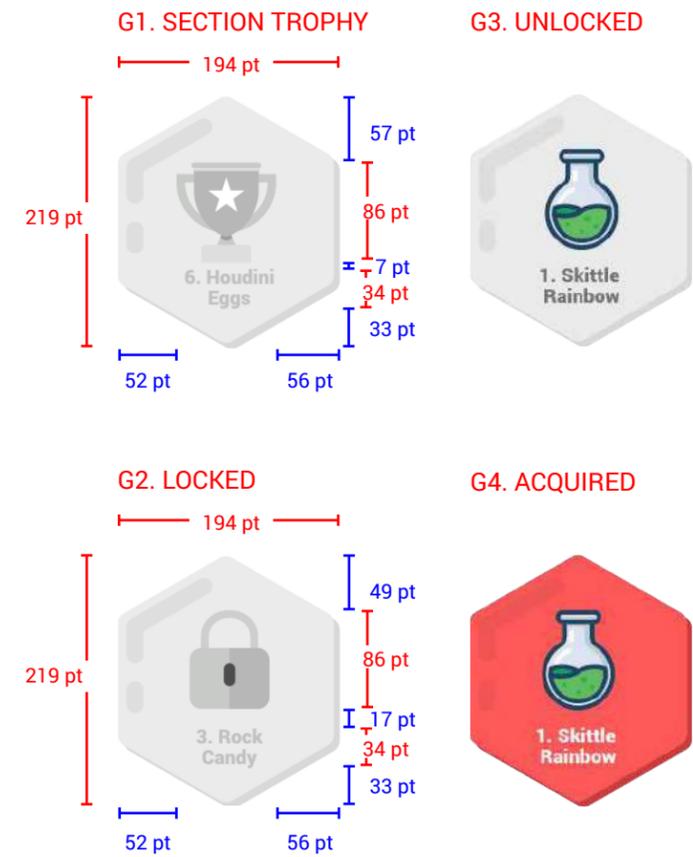


Secondary Action Button



BADGES

Activity Badge

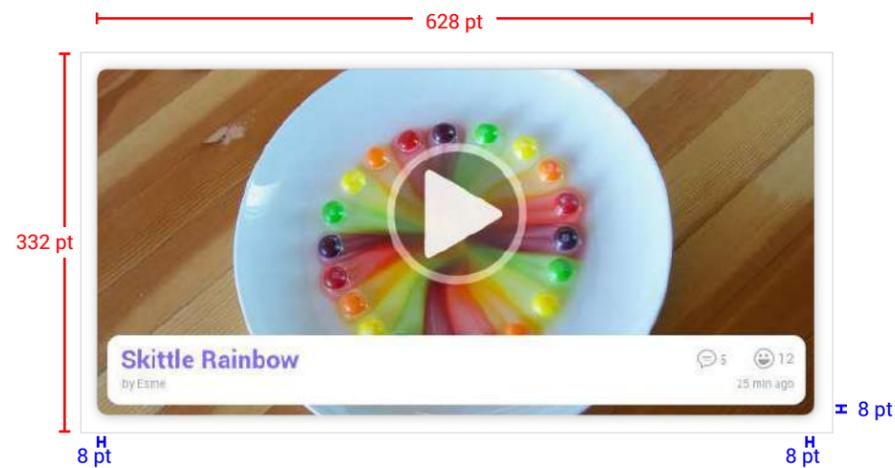


Components

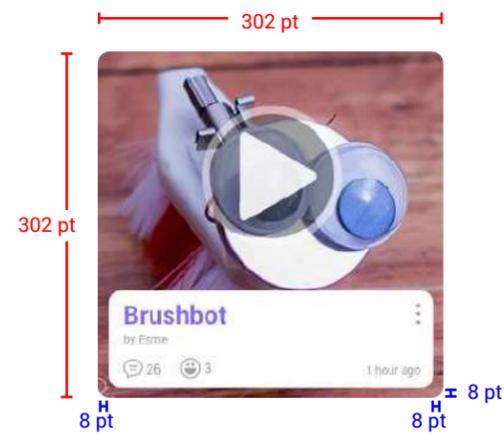
CARDS & PANELS

MEDIA

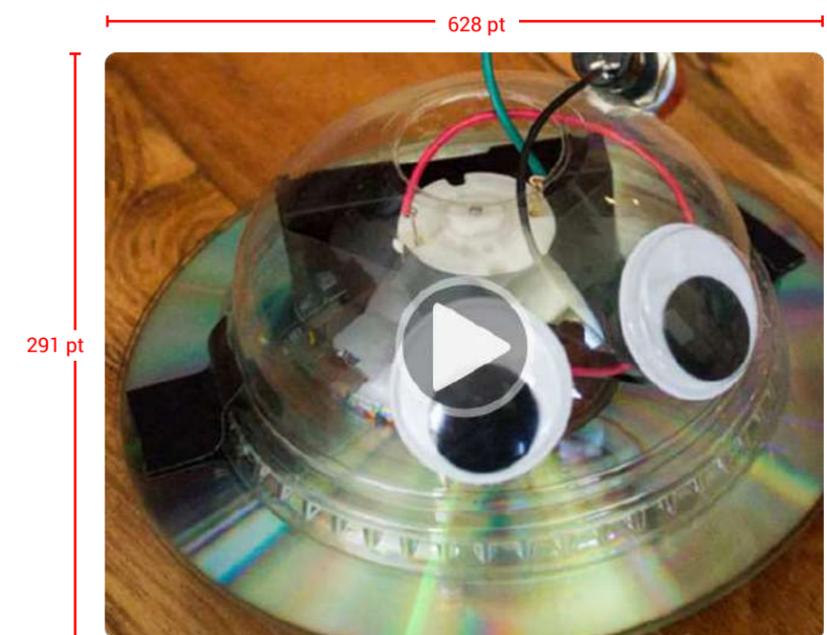
H1. POSTED ACTIVITY CARD



H6. DEFAULT



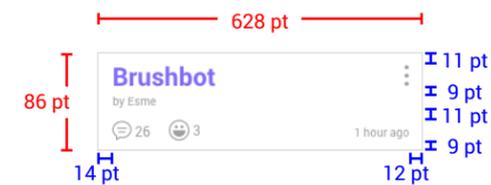
H8. INSTRUCTIONAL VIDEO



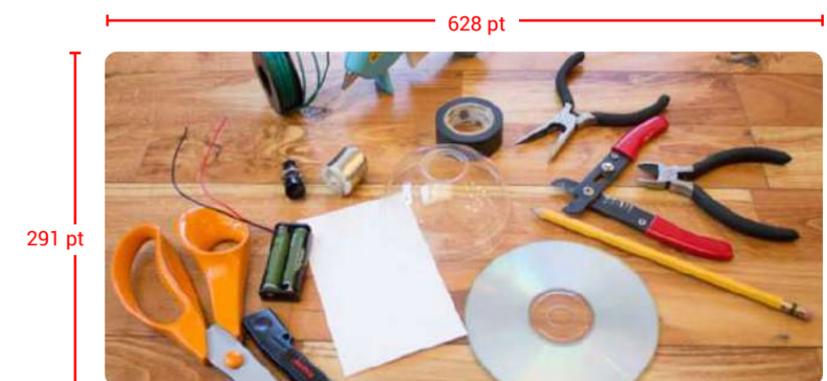
H2. ACTIVITY POST



H7. ACTIVITY POST



H9. INSTRUCTIONAL IMAGE



H3. VIDEO



H4. REACTION



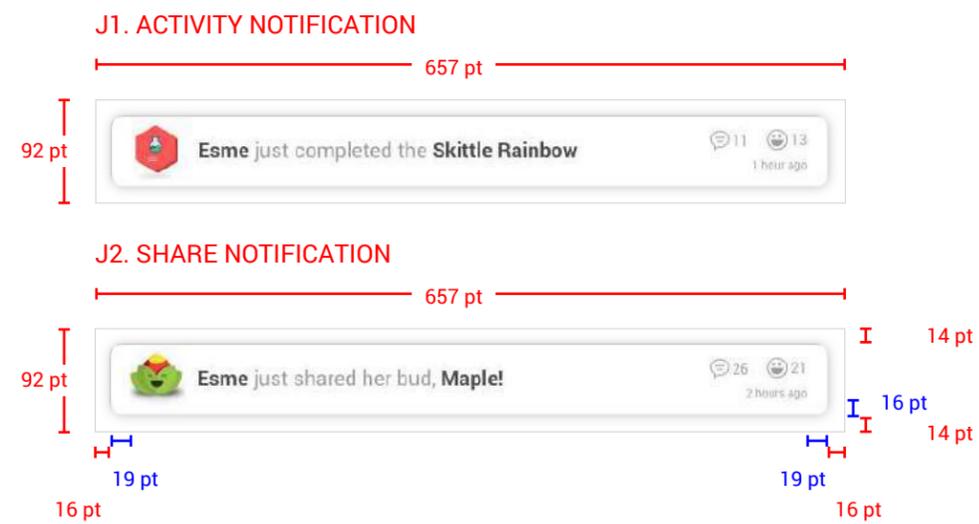
H5. COMMENT



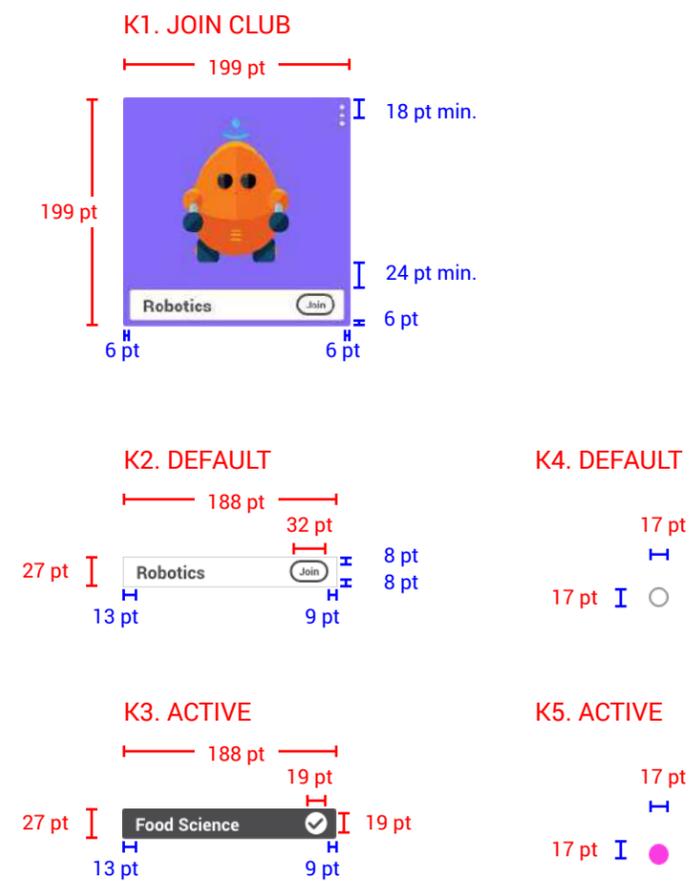
Components

CARDS & PANELS

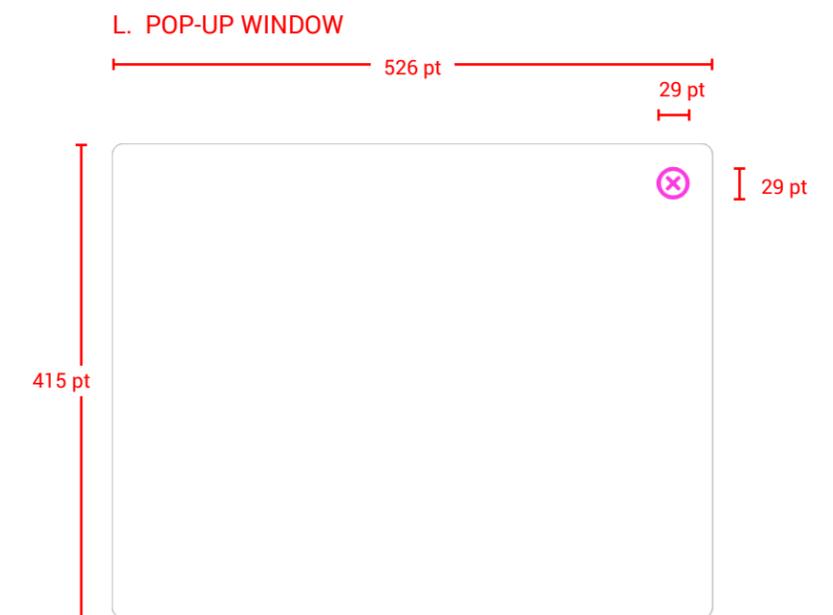
Posted Activity Card



Club Card



Window



Components

FORM FIELDS

TEXT ENTRY

M1. TEXT INFO



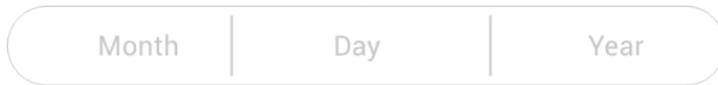
A single-line text entry field with rounded ends. The text "Text" is centered inside. A red dimension line above the field indicates a width of 628 pt. A red dimension line to the left indicates a height of 70 pt.

M2. CREDIT CARD



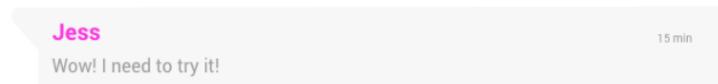
A single-line text entry field with rounded ends, divided into two sections by a vertical line. The left section contains the placeholder "(MM/YYYY)" and the right section contains "CVV". A red dimension line above the field indicates a total width of 628 pt. A red dimension line to the left indicates a height of 70 pt.

M3. DATE OF BIRTH



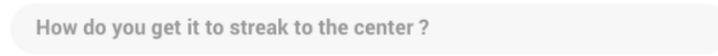
A single-line text entry field with rounded ends, divided into three sections by vertical lines. The sections are labeled "Month", "Day", and "Year". A red dimension line above the field indicates a total width of 628 pt. A red dimension line to the left indicates a height of 70 pt. Below the field, three red dimension lines indicate the widths of the sections: 197 pt for "Month", 225 pt for "Day", and 206 pt for "Year".

M4. DATE OF BIRTH



A single-line text entry field with rounded ends, containing a grey background. The text "Jess" is in purple, "Wow! I need to try it!" is in grey, and "15 min" is in grey. A red dimension line above the field indicates a total width of 630 pt. A red dimension line to the left indicates a height of 85 pt. A blue dimension line to the right indicates a width of 39 pt. A blue dimension line below the field indicates a width of 21 pt.

M5. I WONDER

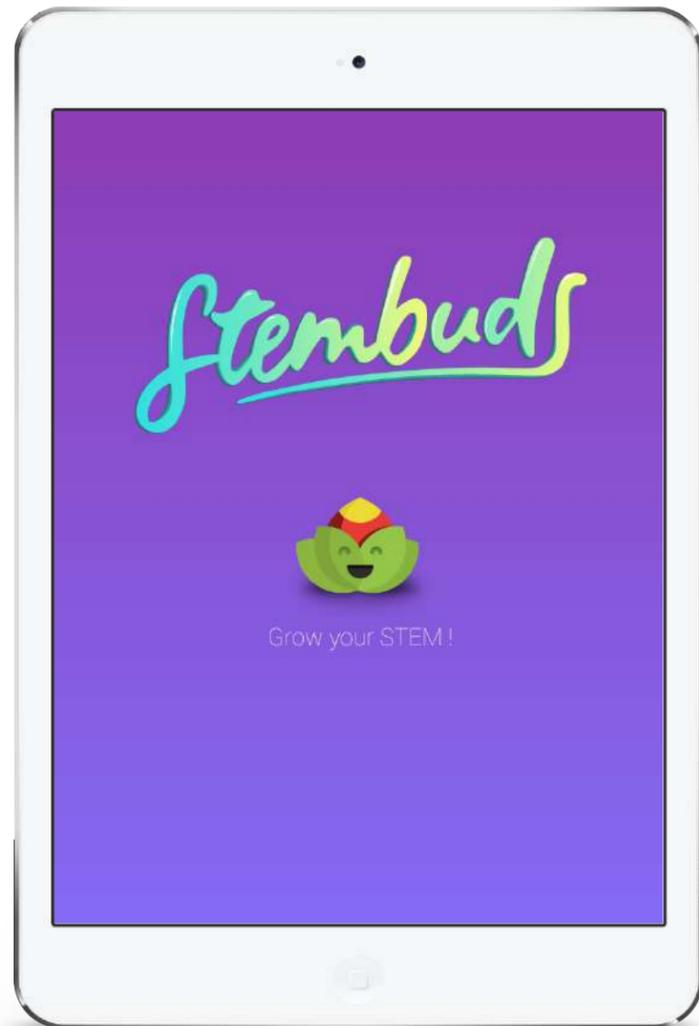


A single-line text entry field with rounded ends, containing a grey background. The text "How do you get it to streak to the center ?" is in grey. A red dimension line above the field indicates a total width of 630 pt. A red dimension line to the left indicates a height of 44 pt.

New User Onboarding

1.0

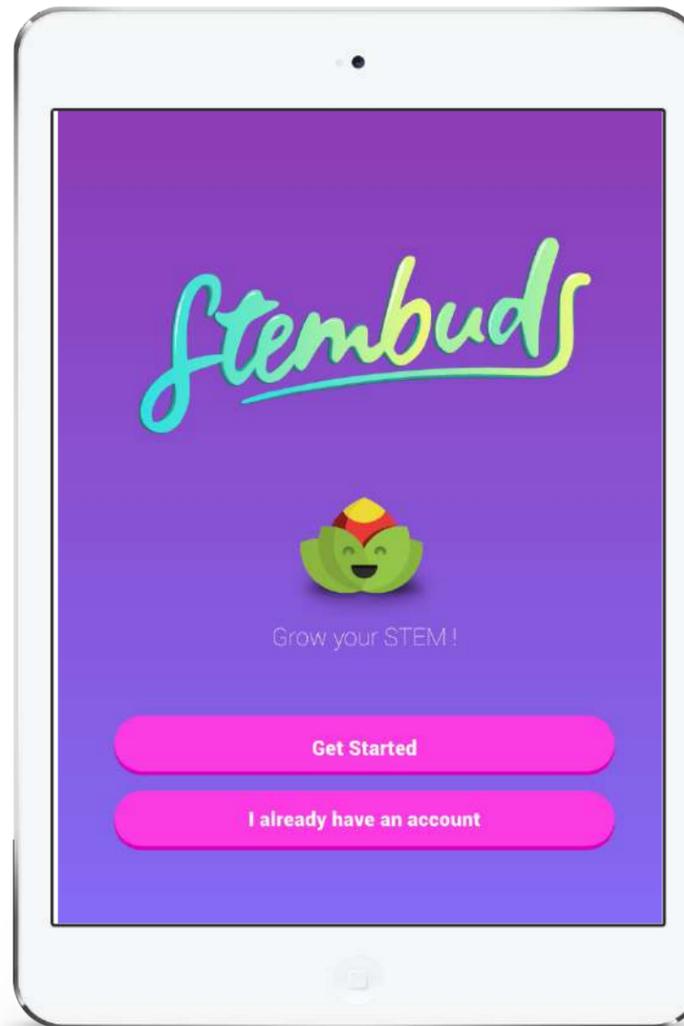
Splash Page



The user begins the flow by opening the app. The splash page appears momentarily for system loading and then passes through to the landing page.

1.0.1

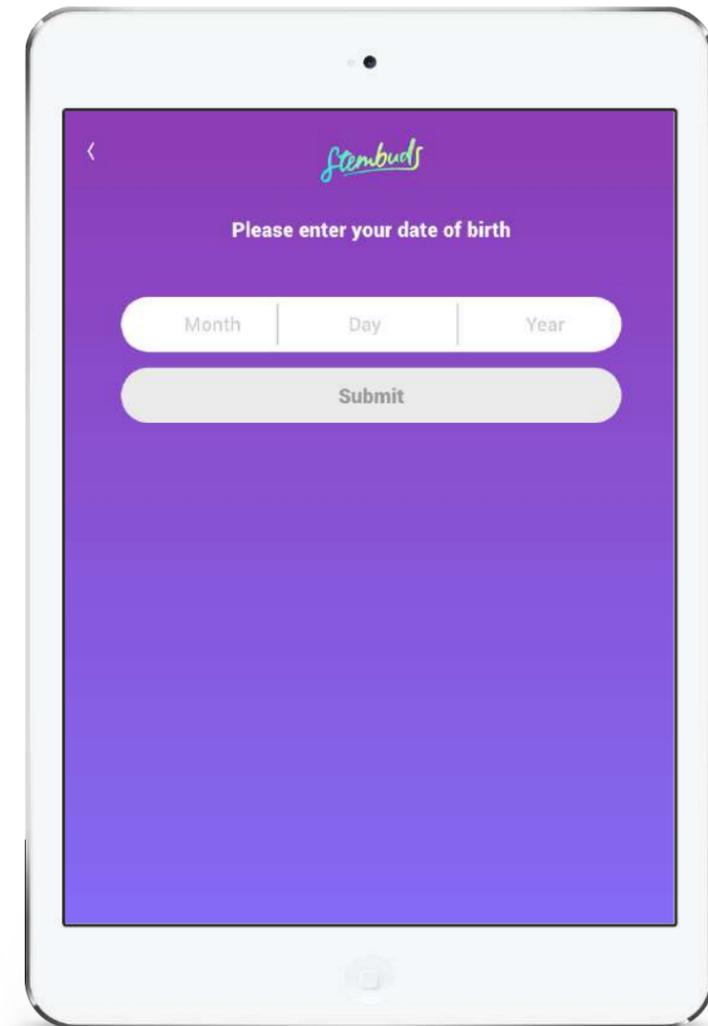
Landing Page



The landing page directs new users and returning users that are not signed in to the appropriate sign in process.

1.0.2

Age Verification



If the user is under 13, they are directed through a parental verification process. If the user is over 13, this is skipped and a social media log option is also provided.

New User Onboarding for Under 13

1.2

Under 13 Sign Up

The screenshot shows a mobile app interface for signing up. At the top, there's a back arrow and the 'Stembuds' logo. Below the logo, the text 'Sign up with' is centered. There are three white input fields stacked vertically: the first is labeled 'User Name', the second is labeled 'Password', and the third is a button labeled 'Submit'.

The user enters basic account details, avoiding the collection of any personal information for minors.

1.2.1

Under 13 Get Consent

The screenshot shows a mobile app interface for getting consent. At the top, there's a back arrow and the 'Stembuds' logo. Below the logo, the text 'What's your parent email address?' is centered. There is one white input field labeled 'Parent's Email Address' and a button labeled 'Send Email' below it.

The user then provides a parent's or guardian's email address.

1.2.2

Under 13 Email Sent

The screenshot shows a mobile app interface for email confirmation. At the top, there's a back arrow and the 'Stembuds' logo. Below the logo, the text 'Email sent!' is centered in blue. Underneath, it says 'We are contacting your parent. You will be playing in no time. See you soon!'. There are two buttons: 'Resend Email' and 'Use Different Email'.

An email is sent to the chosen adult's email account providing info about the app and detailing the reasoning and benefits of this security measure.

New User Onboarding for Under 13

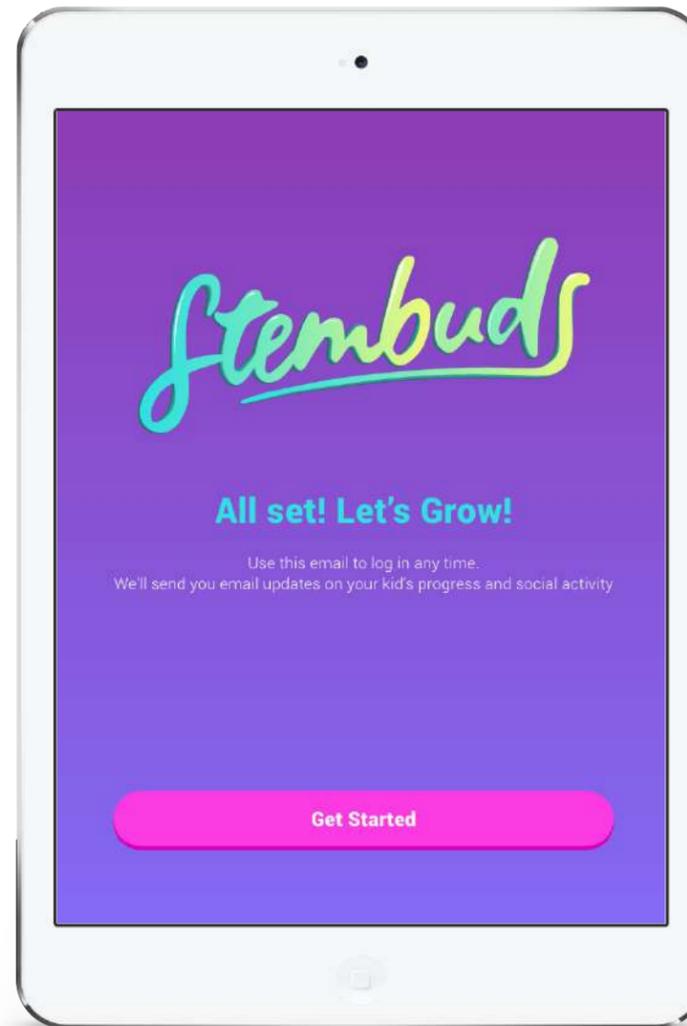
1.2.3

Under 13 Parent Sign Up

The user enters basic account details, avoiding the collection of any personal information for minors.

1.2.4

Sign Up Confirmed

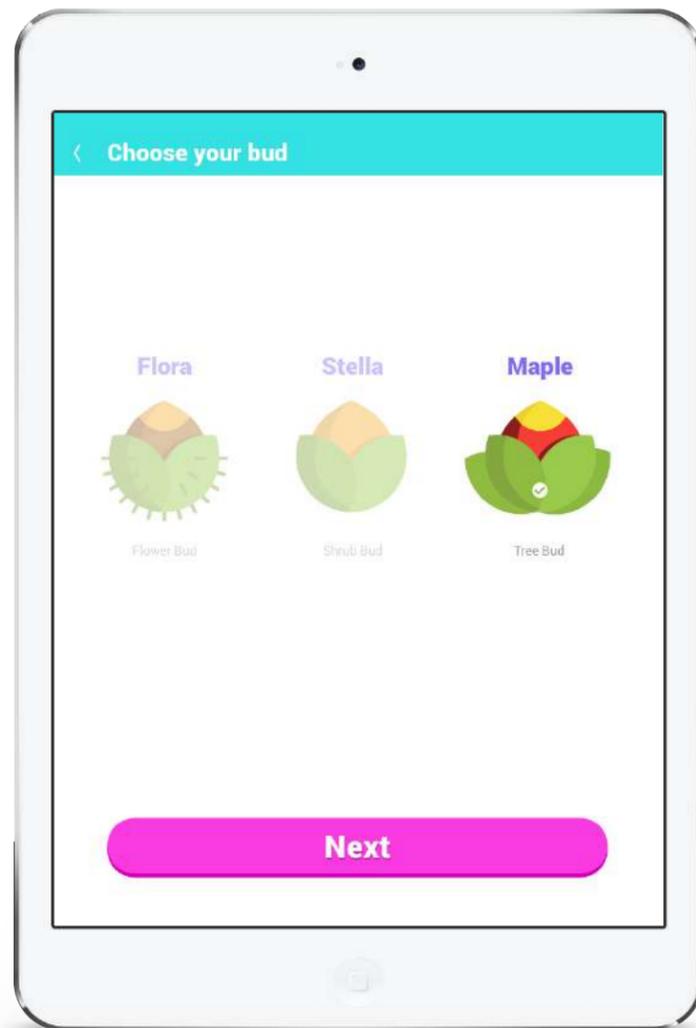


The user then provides a parent's or gaurdian's email address.

Stembud Intro for New User

1.5

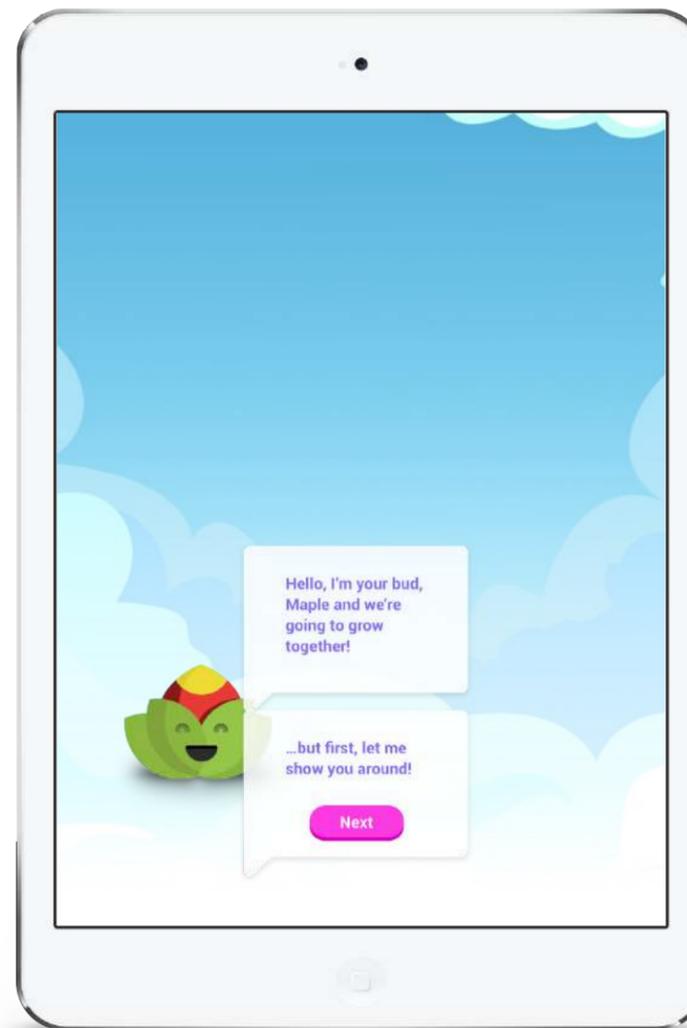
Choose Your Bud



The user begins the flow by completing sign up. They must then choose their bud from 3 types: flower, shrub, or tree. The user taps on their choice and then on next to confirm it.

1.5.1

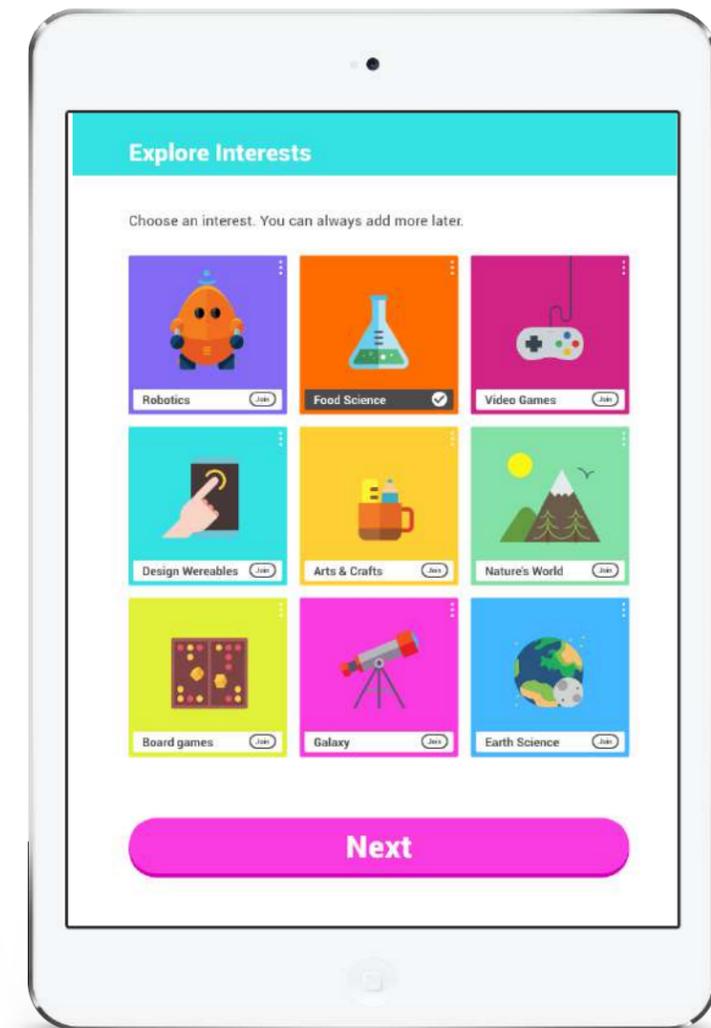
Stembud Intro



The user is introduced to the section through some two successive states of dialogue and then tap on next to select their interests.

1.5.2

Explore Interests

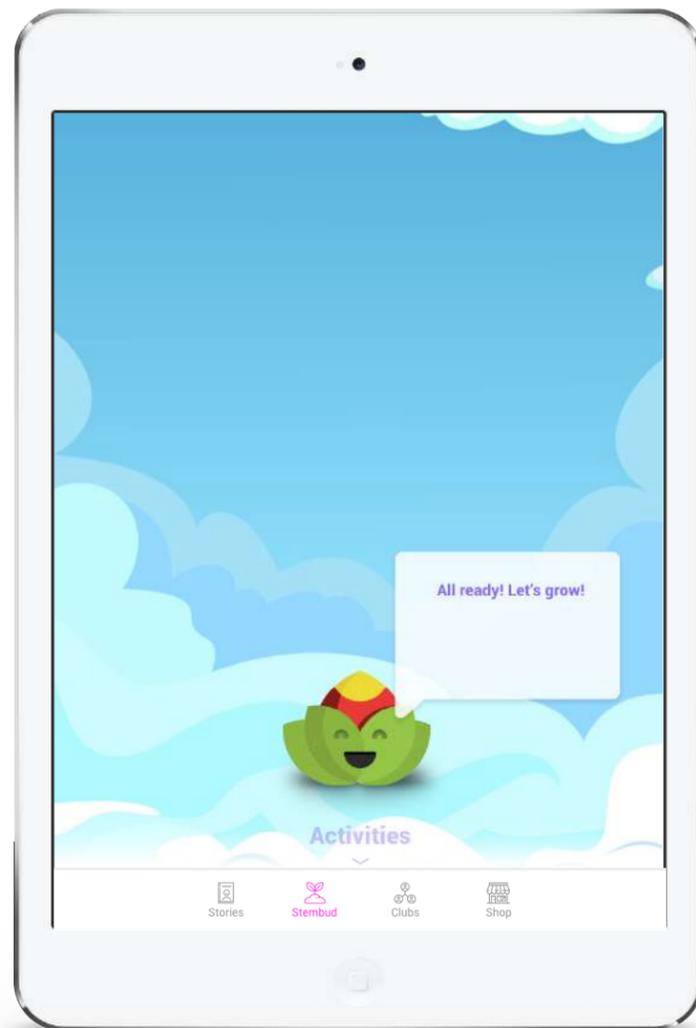


The user taps on their favorite interest and then taps on next to confirm the choice.

Stembud Intro for New User

1.5.3

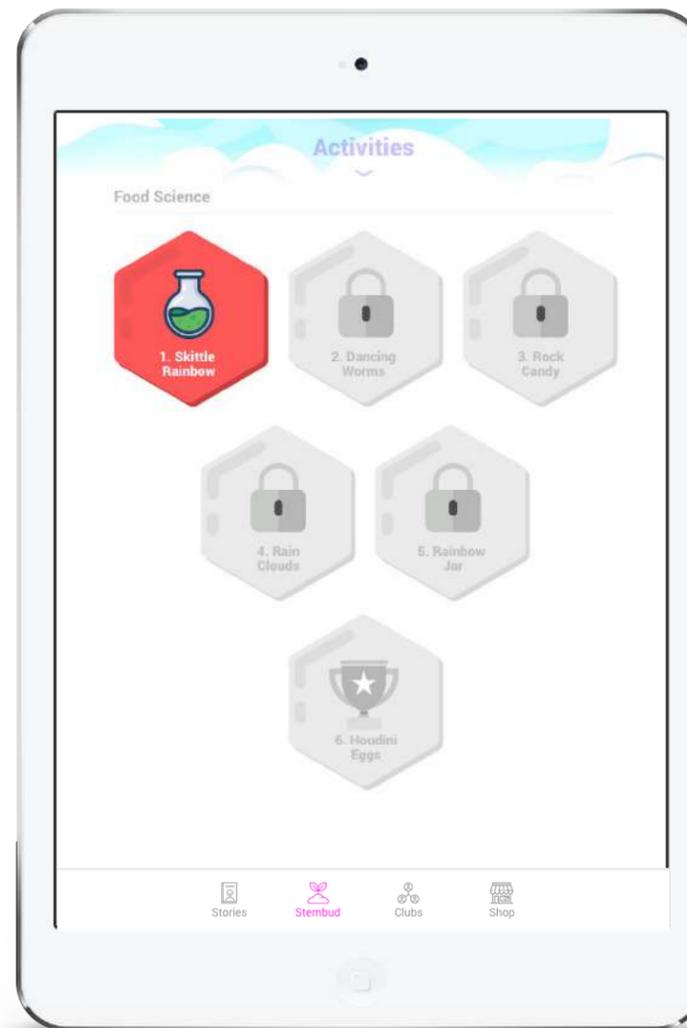
Stembud Outro



The user is returned to their Stembud for a final encouraging word.

2.0

Stembud Activities

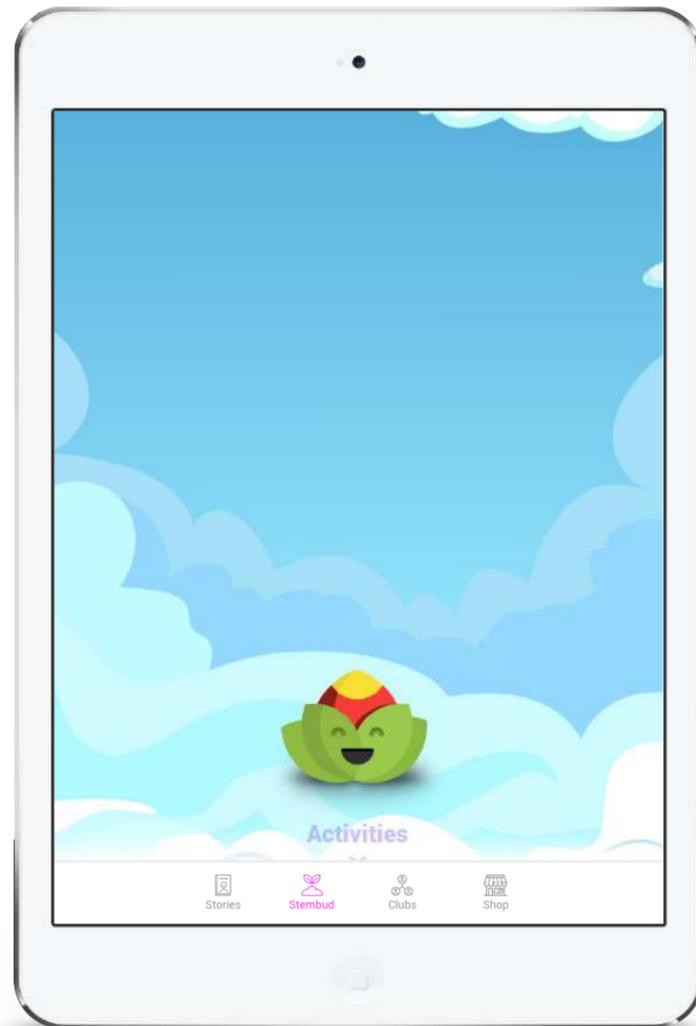


The screen then slides up to reveal activities related to the interest that they selected.

Complete an Activity

2.0

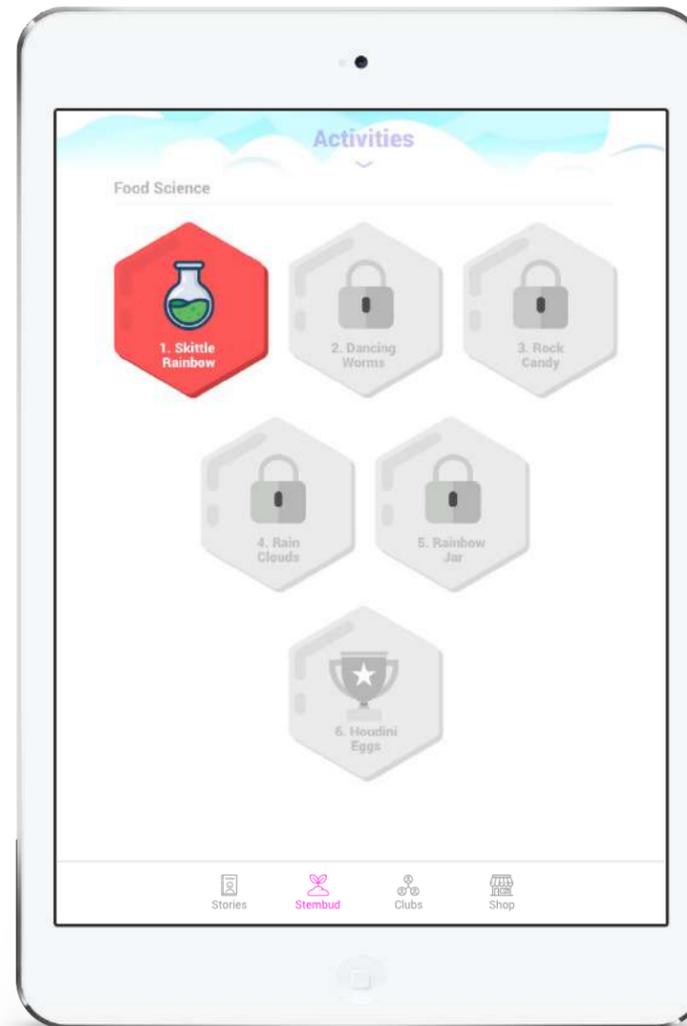
Stembud (Level 0)



A returning user begins the flow by opening the app and being directed by the system to the Stembud page.

2.0

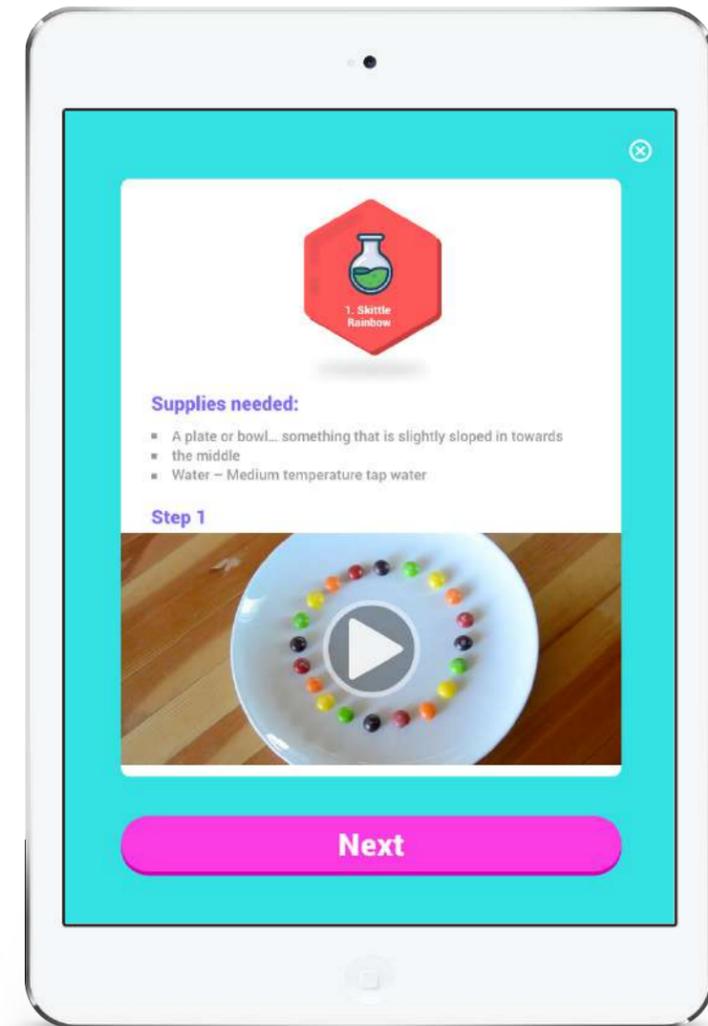
Stembud Activities



The user scrolls down to reveal the activities section and taps on an unlocked activity badge.

2.1

Begin Activity

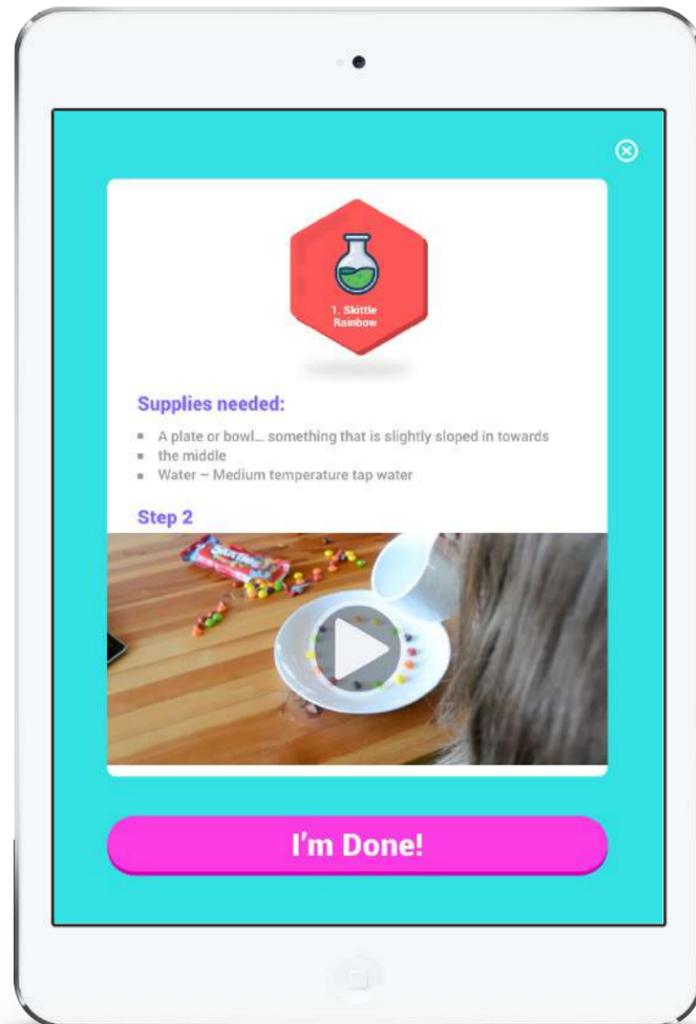


The user is then brought to the activity details, where they can check the supplies needed and watch the a video of the first step of the process. After tapping next they will see subsequent steps as is appropriate for the activity.

Complete an Activity

2.1

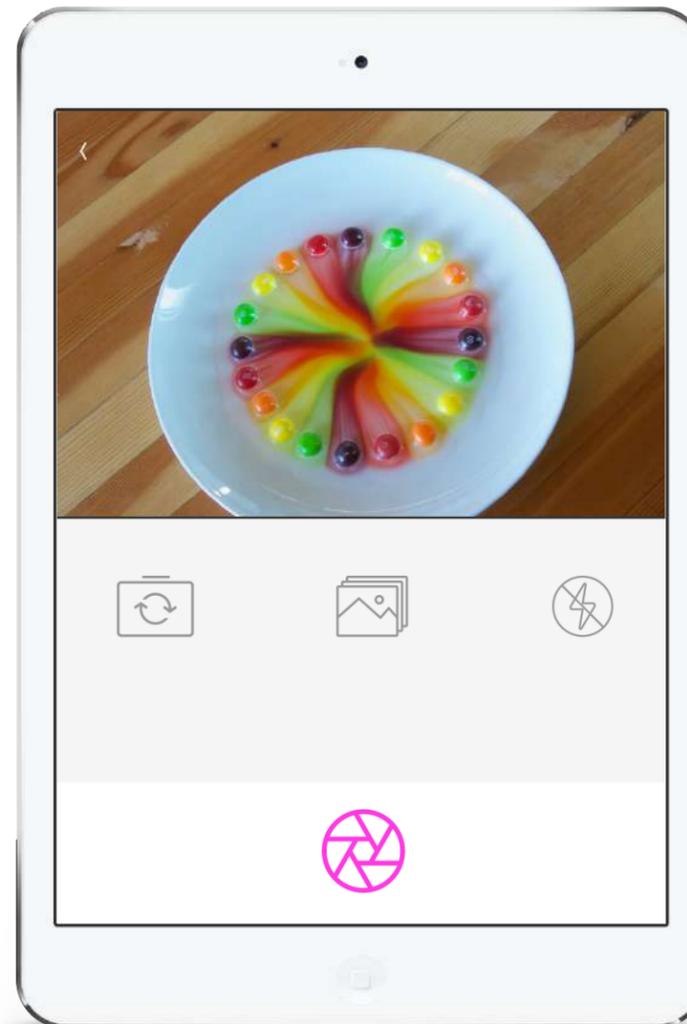
Complete Activity



After completing all steps of the process, the user taps 'I'm Done!' on the final step to begin posting their story.

2.2

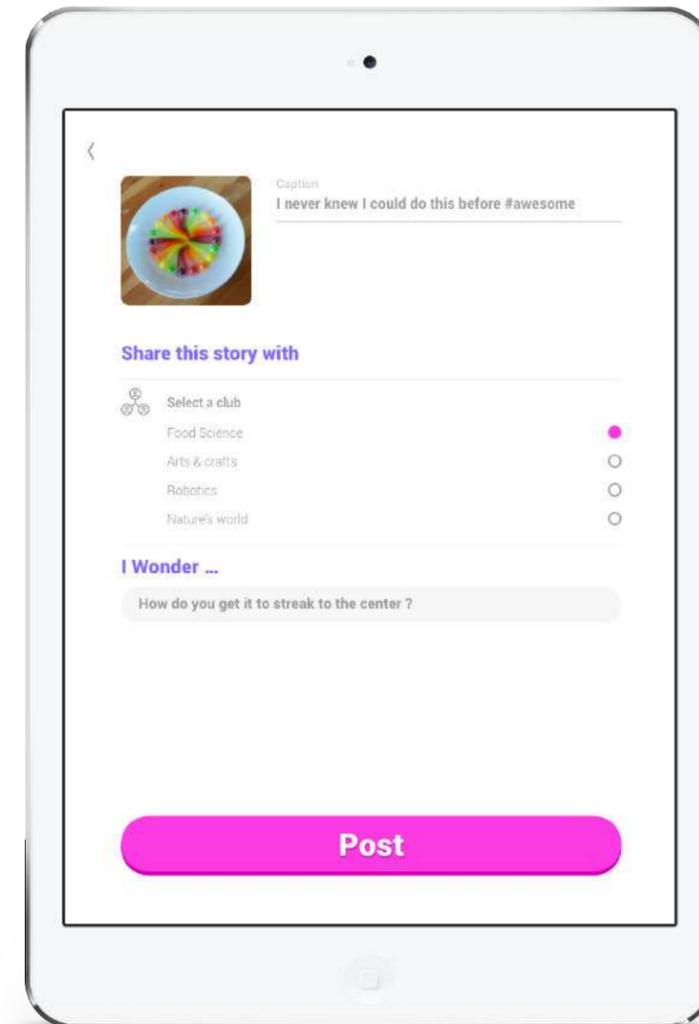
Capture Activity



The user is then brought to a camera screen to quickly capture their project as a photo or video. They can also flip the camera direction or turn the flash on and off.

2.4

Share Activity

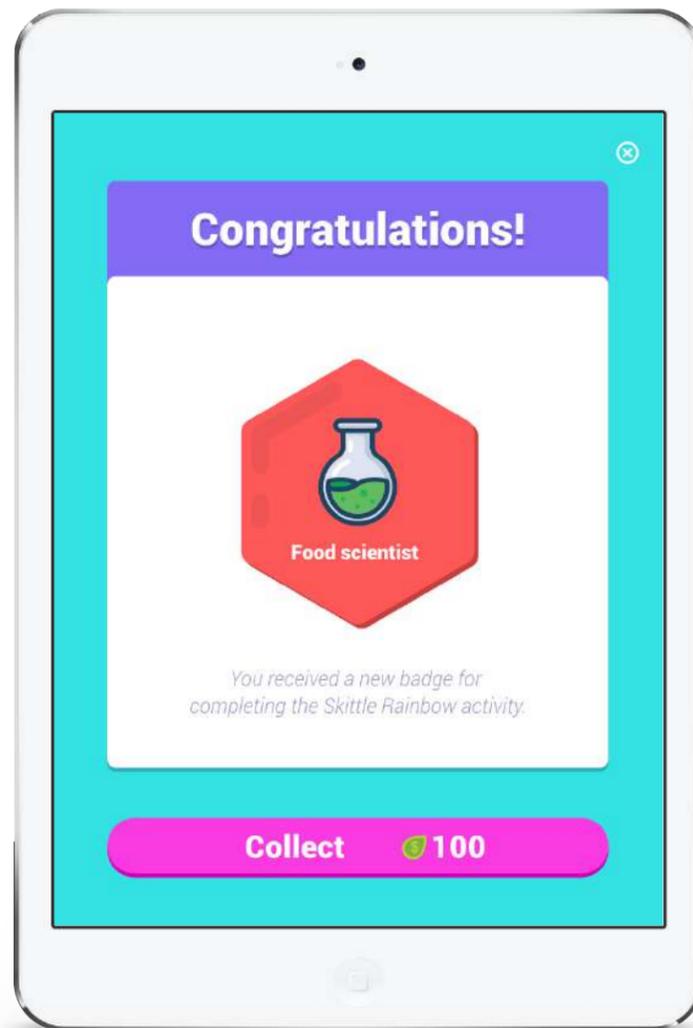


Once the capture is complete, the user the writes a quick caption, chooses where to share it, and writes a question about the project to facilitate further discussion.

Complete an Activity

2.5

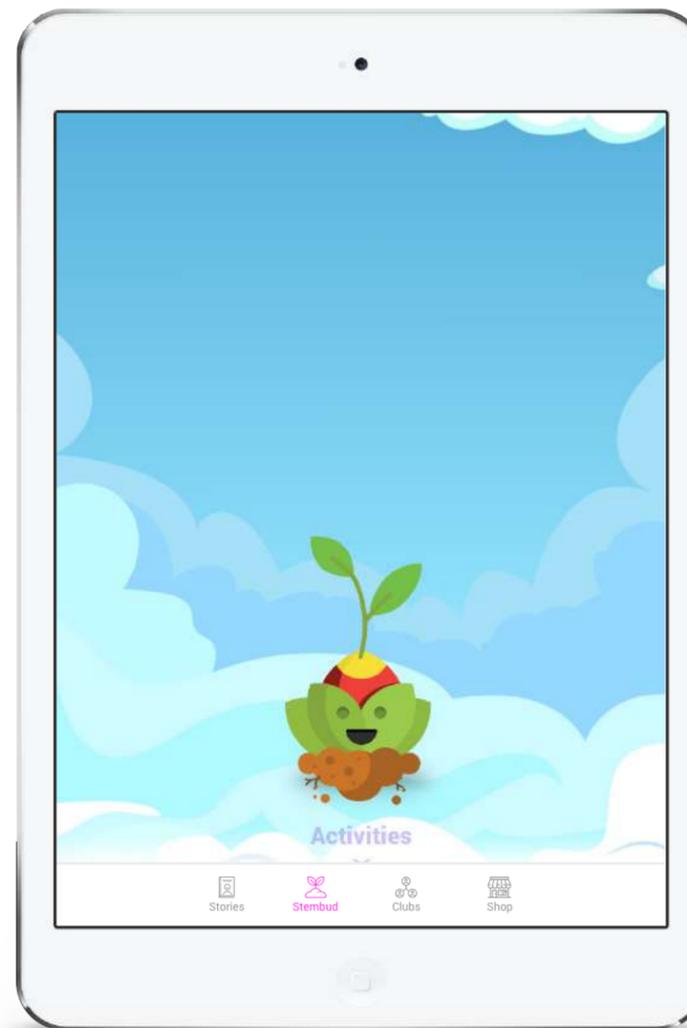
Complete Activity



After clicking post, the user receives their activity badge and collects leaves to spend on their Stembud in the shop.

2.0

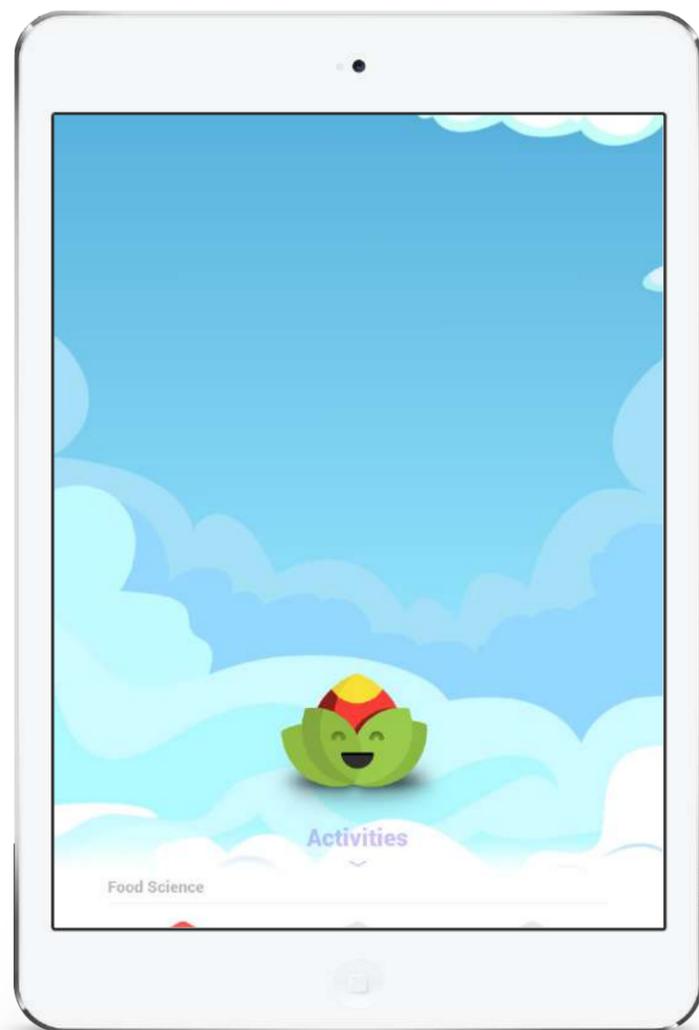
Stembud (Level 1)



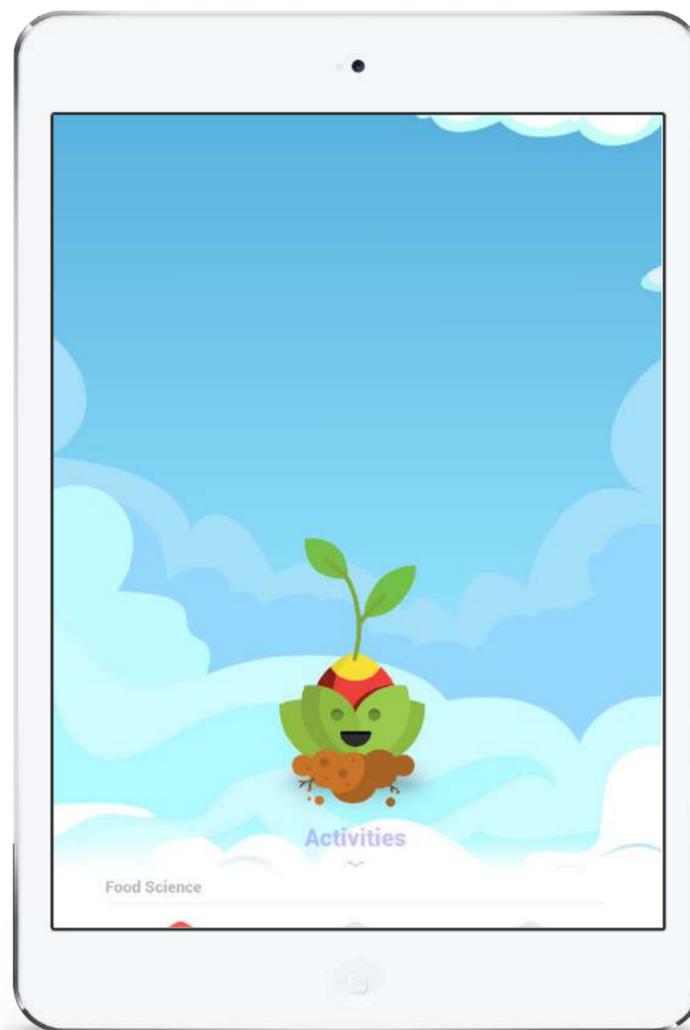
The user is then returned to their Stembud to watch an animation of its growth.

Stembud Level Progression

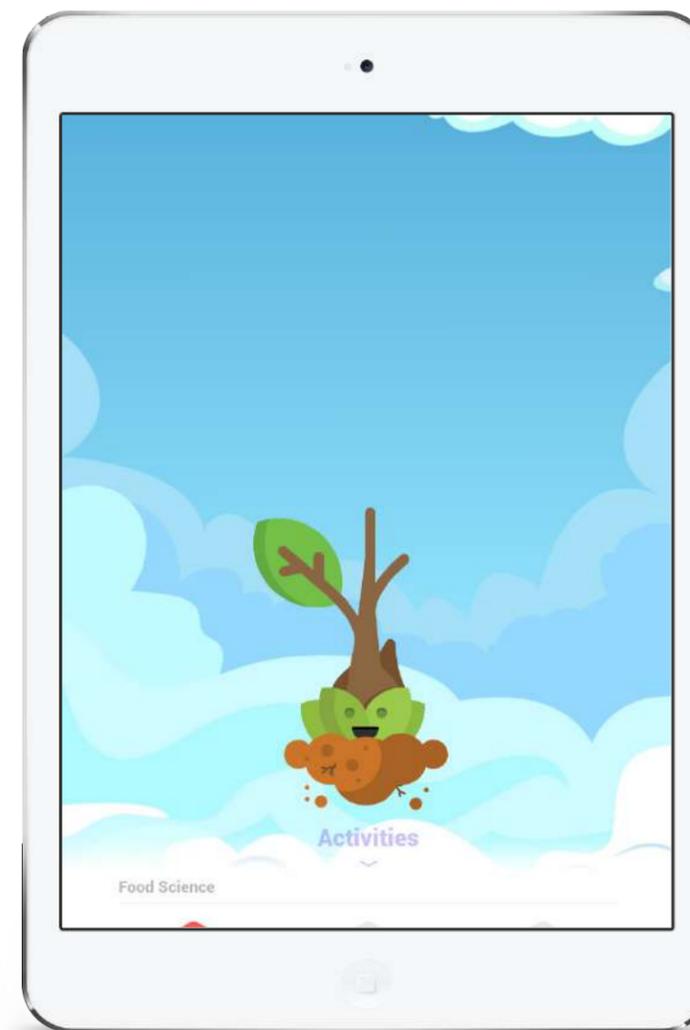
Level 0



Level 1

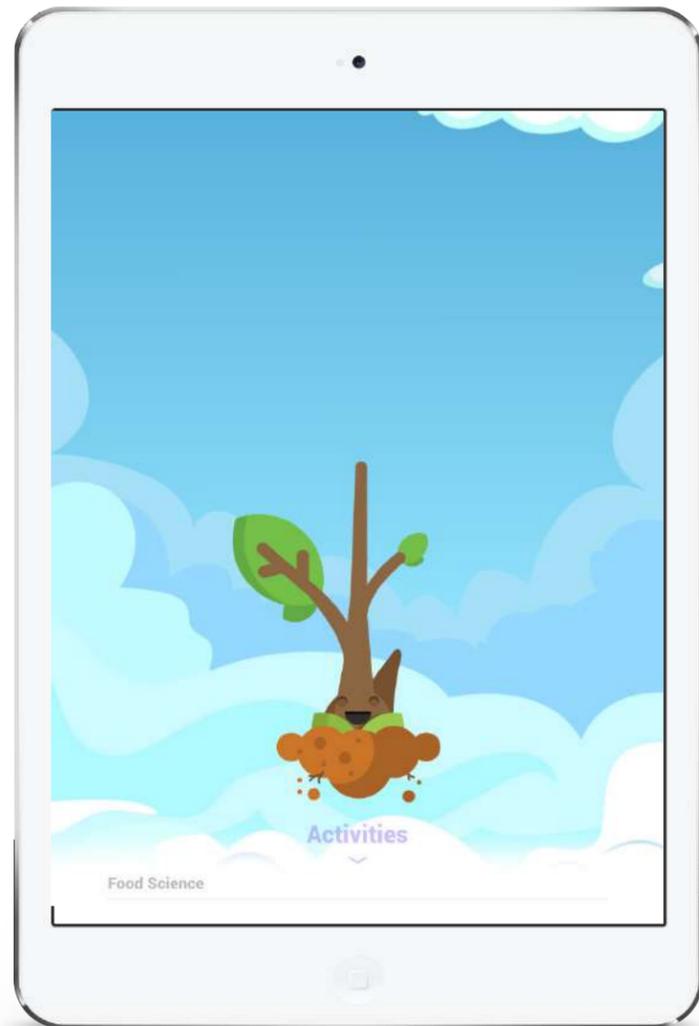


Level 2

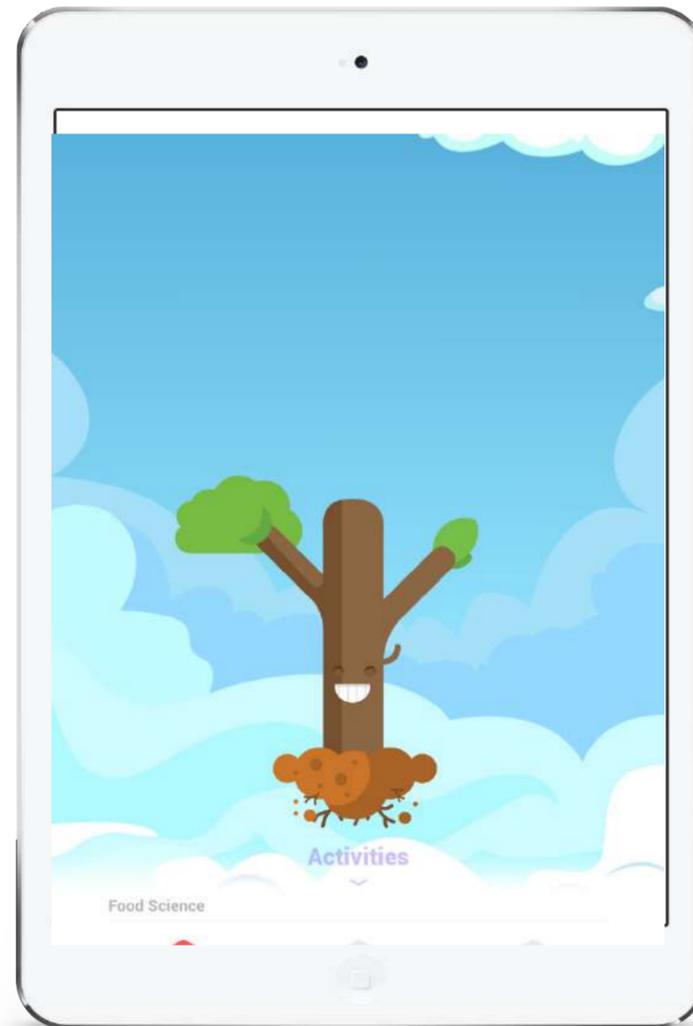


Stembud Level Progression

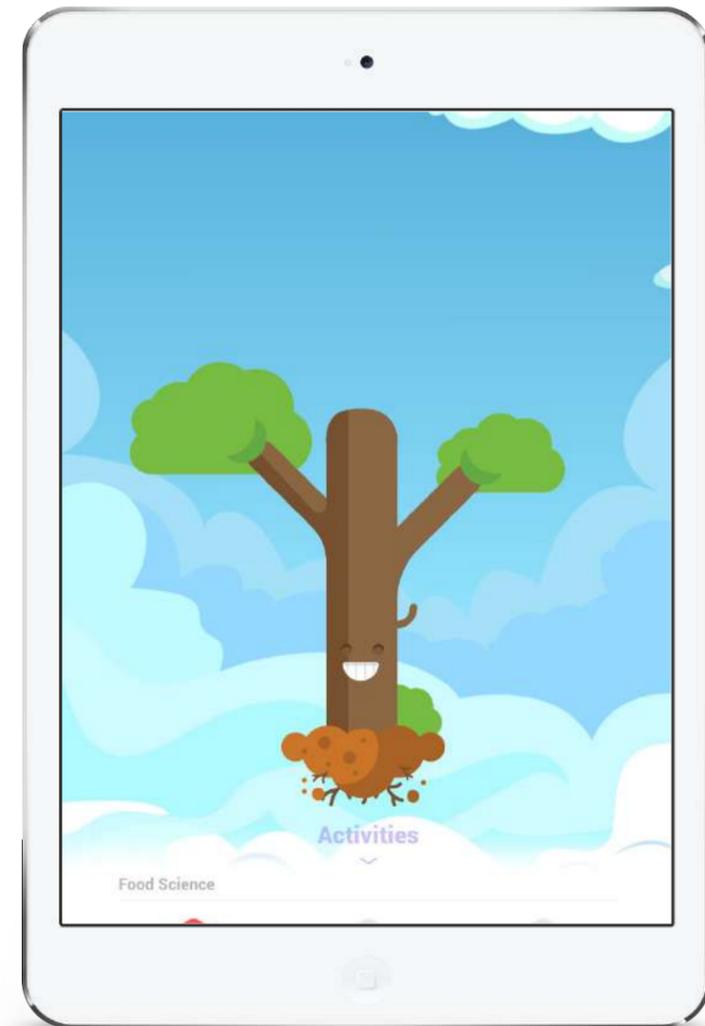
Level 3



Level 4

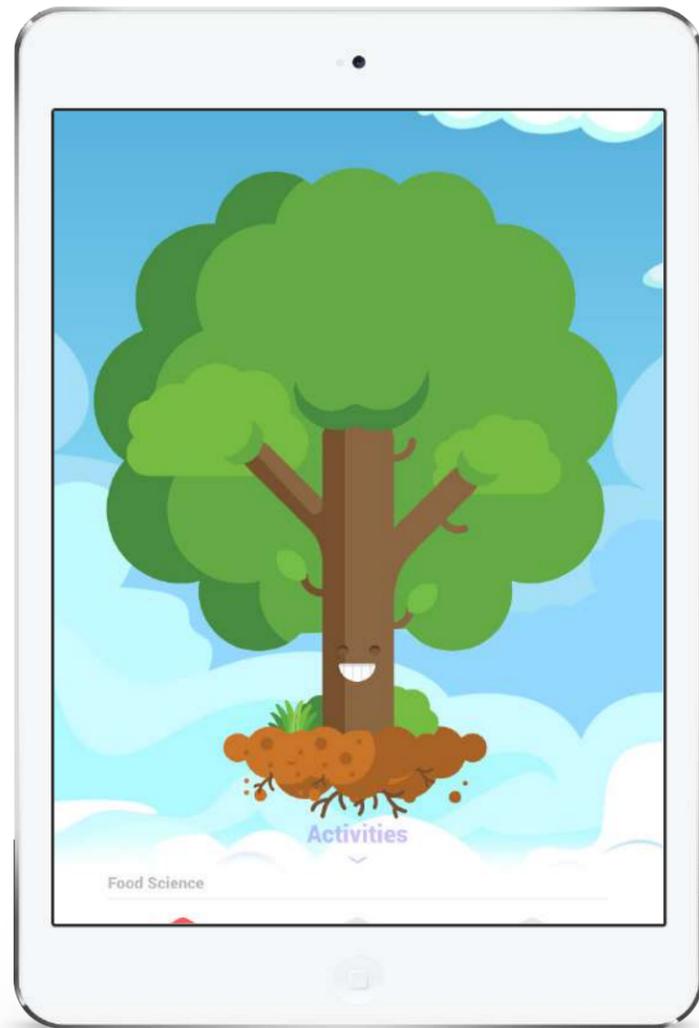


Level 5



Stembud Level Progression

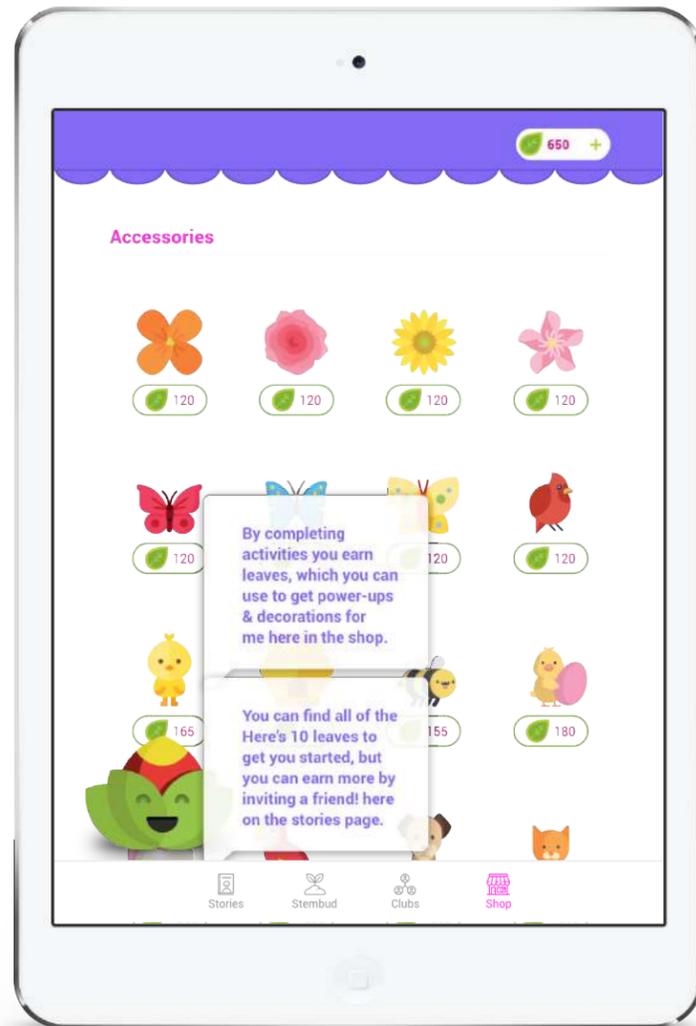
Level 6



Shop Intro & Invite Friend for New User

1.6

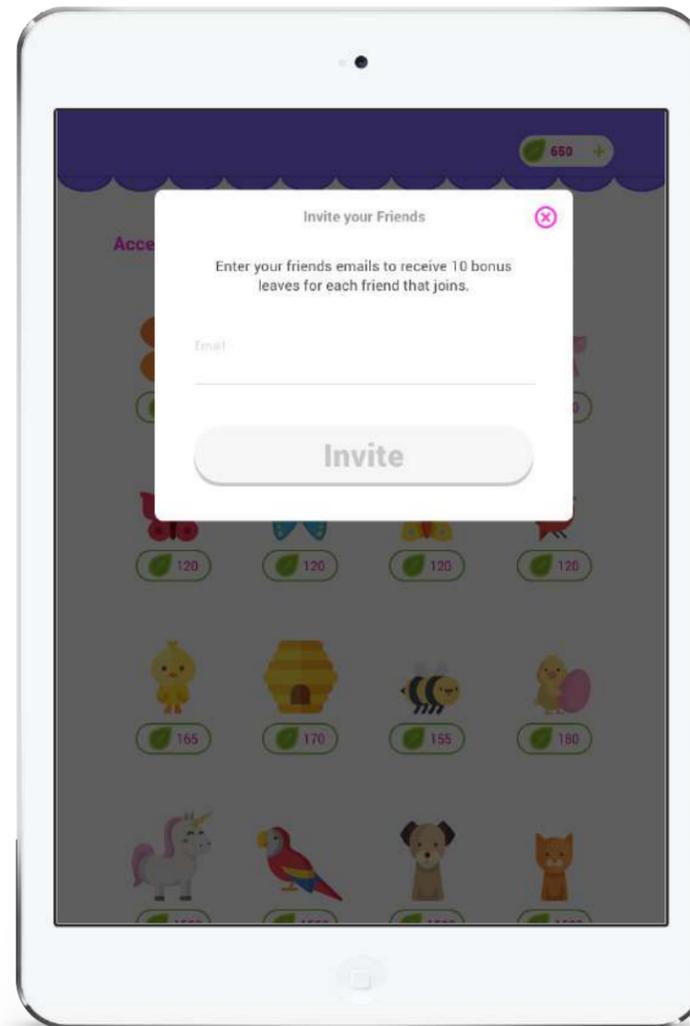
Shop Intro



The user begins the flow by tapping on "Shop" in the main navigation bar. The new user is greeted by successive states of dialogue explaining the purpose of the shop.

1.7

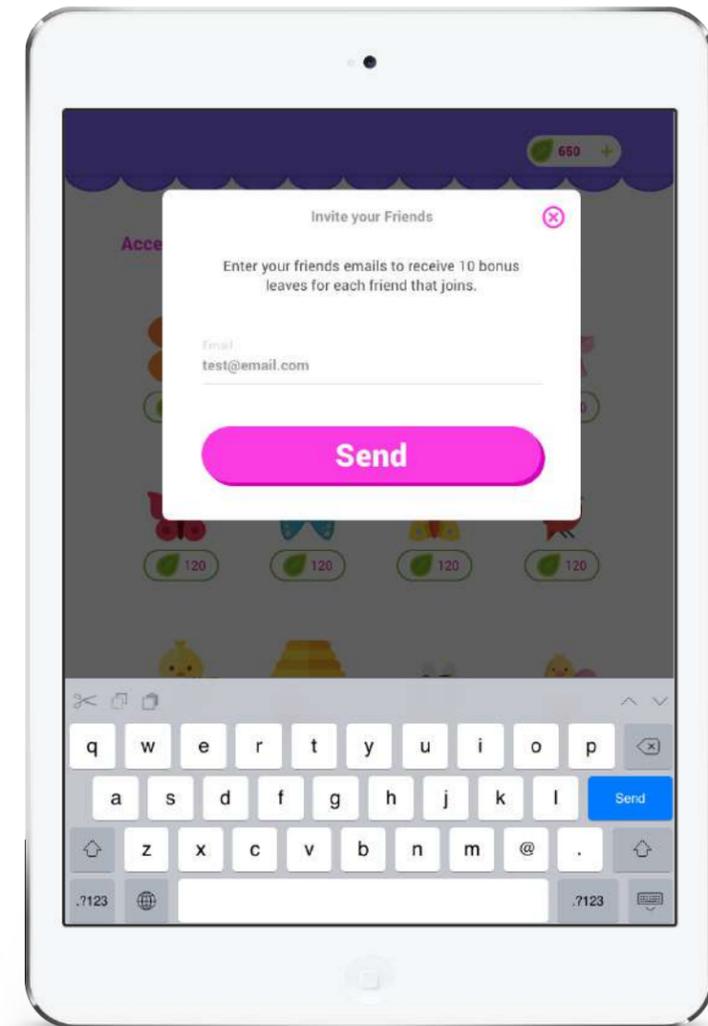
Invite a friend



They are then encouraged to earn more by inviting a friend to join the app through email. They can close the window without inviting or enter an email and click invite.

1.7

Invite a friend

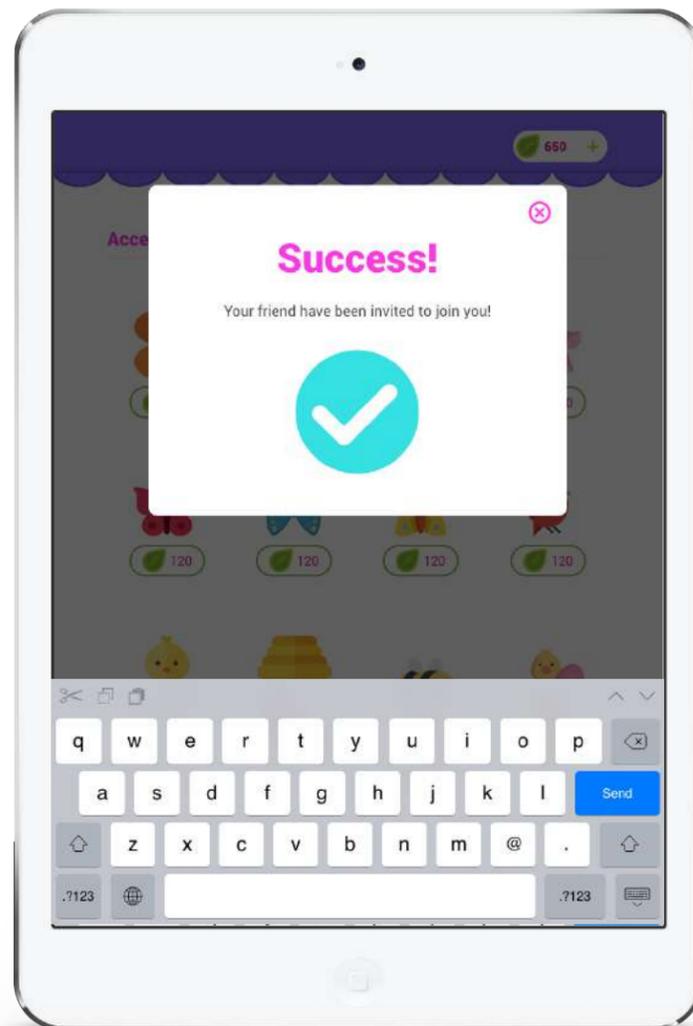


Clicking in the email field triggers the keypad to slide up. The user types an email and then taps send.

Shop Intro & Invite Friend for New User

1.7.1

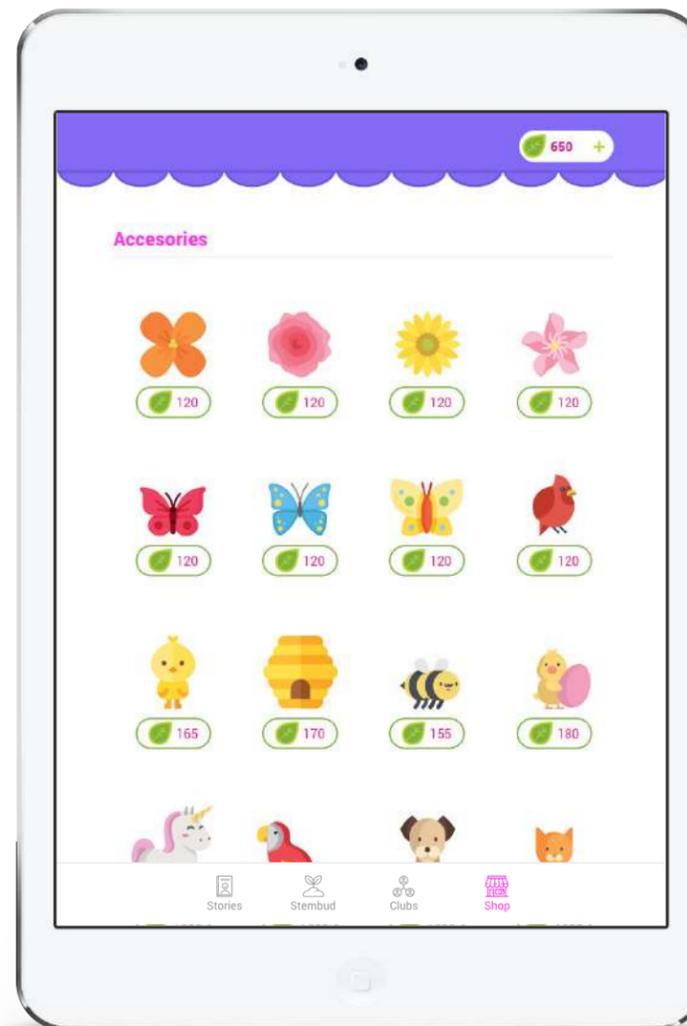
Success



They receive a confirmation and tap the grey space outside of the box to close or wait for it to time out.

3.0

Shop

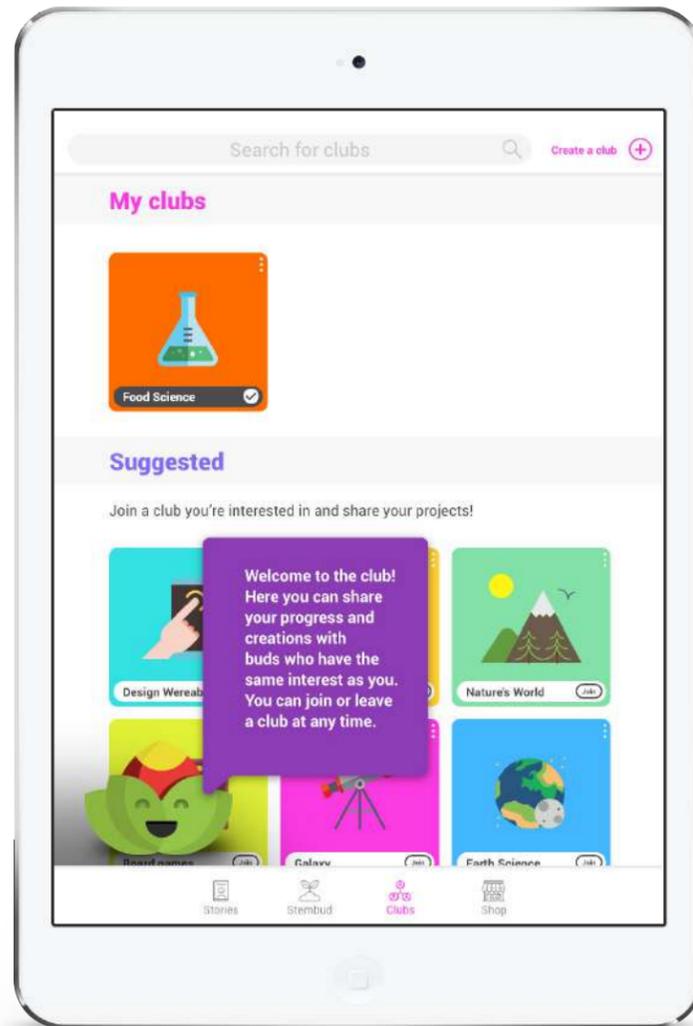


The user is then brought back to the shop page to purchase items for their Stembud. They will earn additional currency from the invite when their friend joins through the invite.

Join a Club for New User

1.9

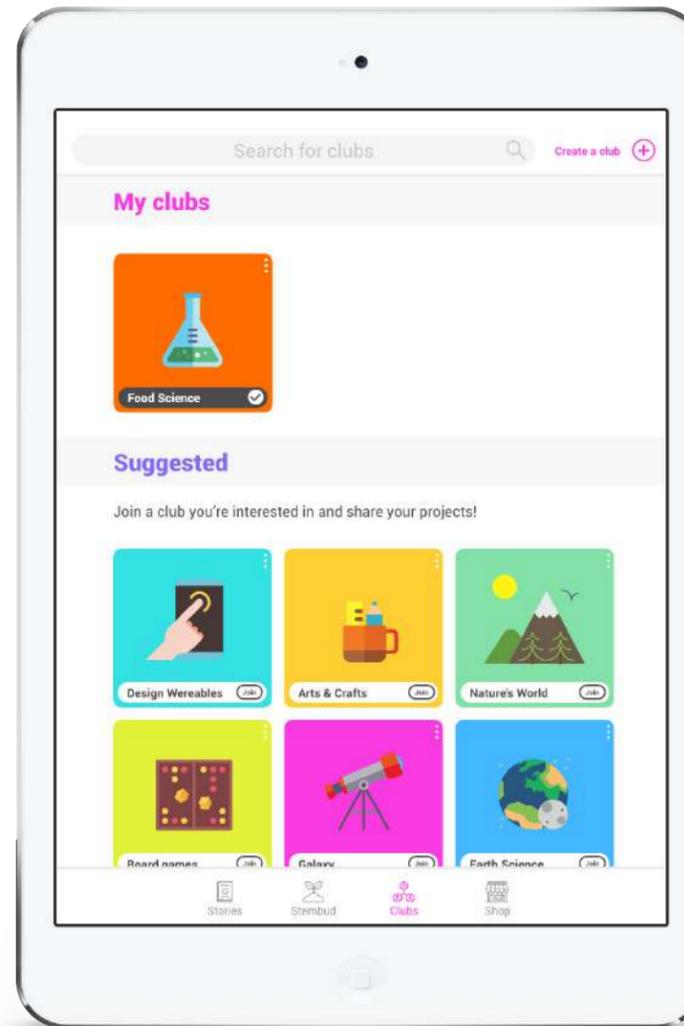
My Clubs Intro



The user begins the flow by clicking on "Clubs" in the main navigation bar. New user's are greeted by their Stembud sliding up from off screen to explain the purpose of a club. The user taps the screen to complete dialogue and the Stembud slides down off the screen again.

5.0

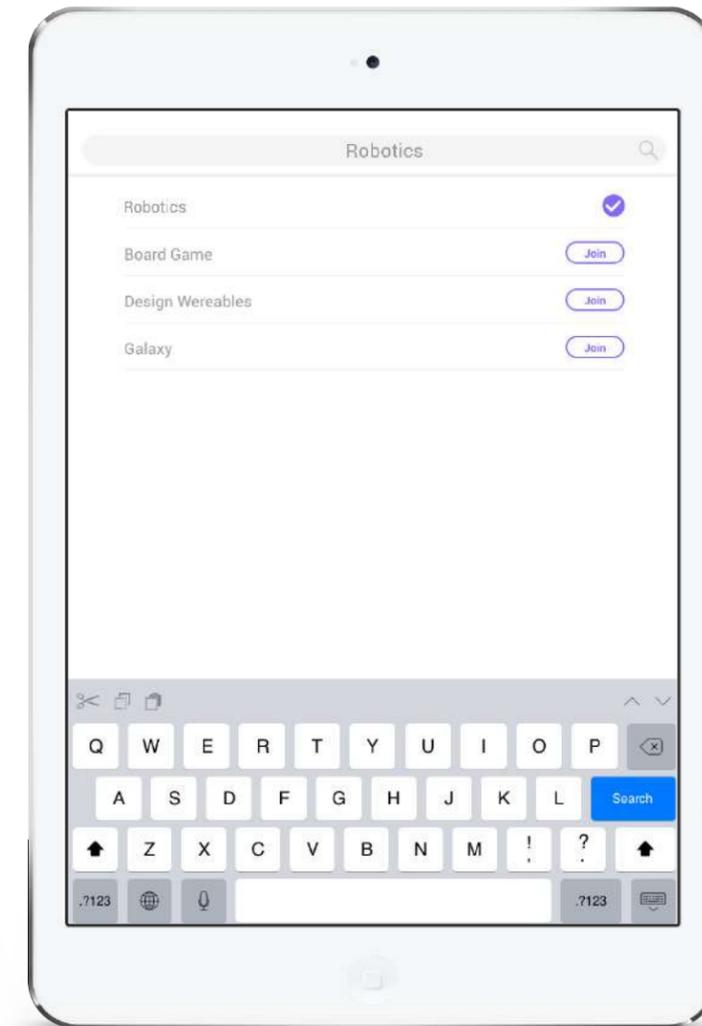
My Clubs



The user is then brought to the "My Clubs" screen to view, join, or search for a club. They can scroll down the page to view additional suggested clubs.

5.0.1 - 5.0.2

Club Search Results

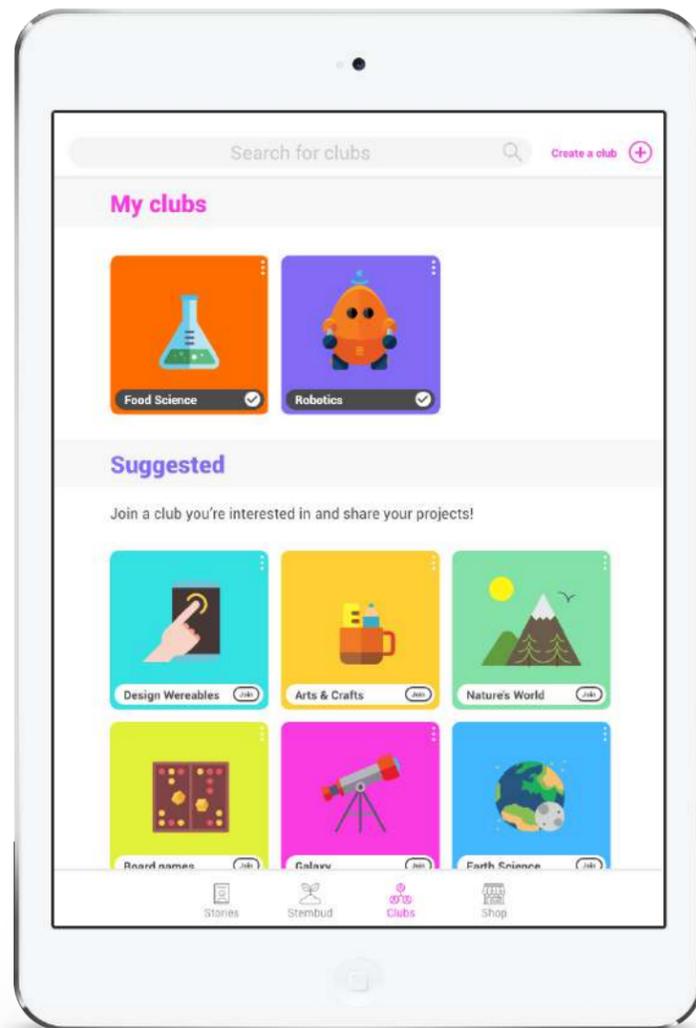


The user taps in the top search bar and the keypad slides up. the user types 'Robotics' and related search results appear. The user clicks join on Robotics to join the club.

Join a Club for New User

5.0

My Clubs Updated

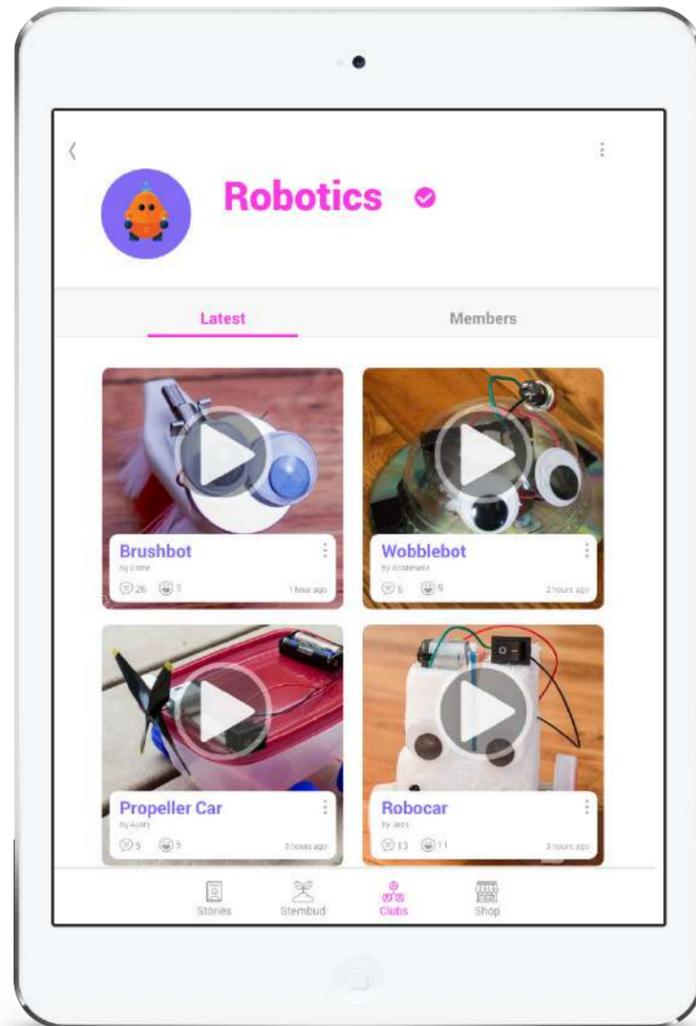


After tapping join, the club will appear in the user's "My clubs" section at the top of the page.

View Club Project & Comment

5.1

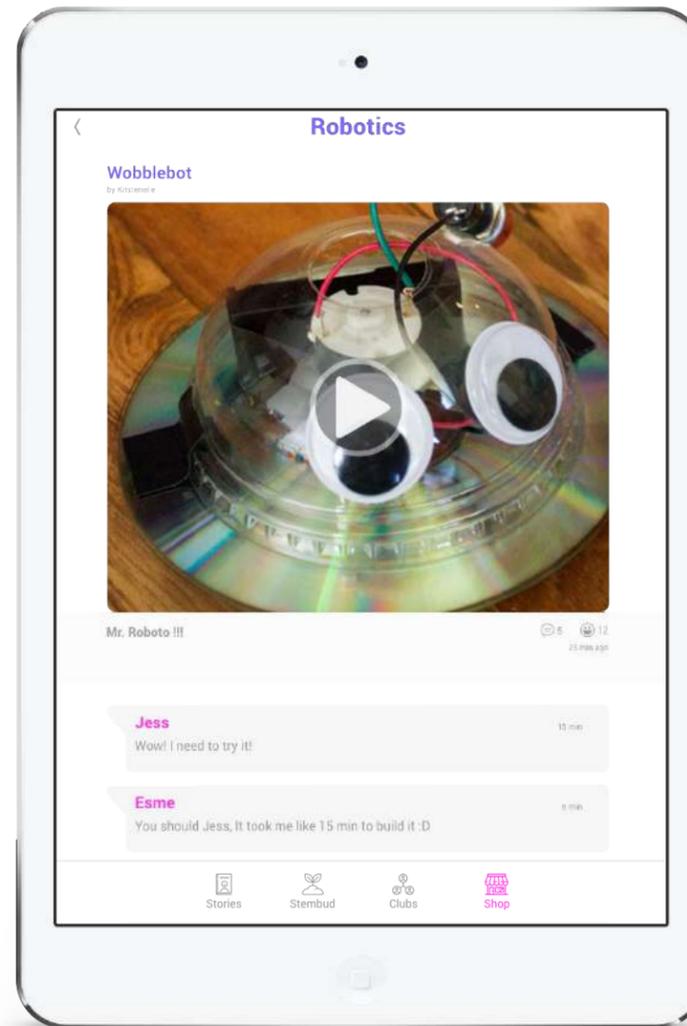
Latest Activity



The user has tapped on that image card from the "My Clubs" page to access the club. They see a feed of the "Latest" user DIY posts for that club.

5.2

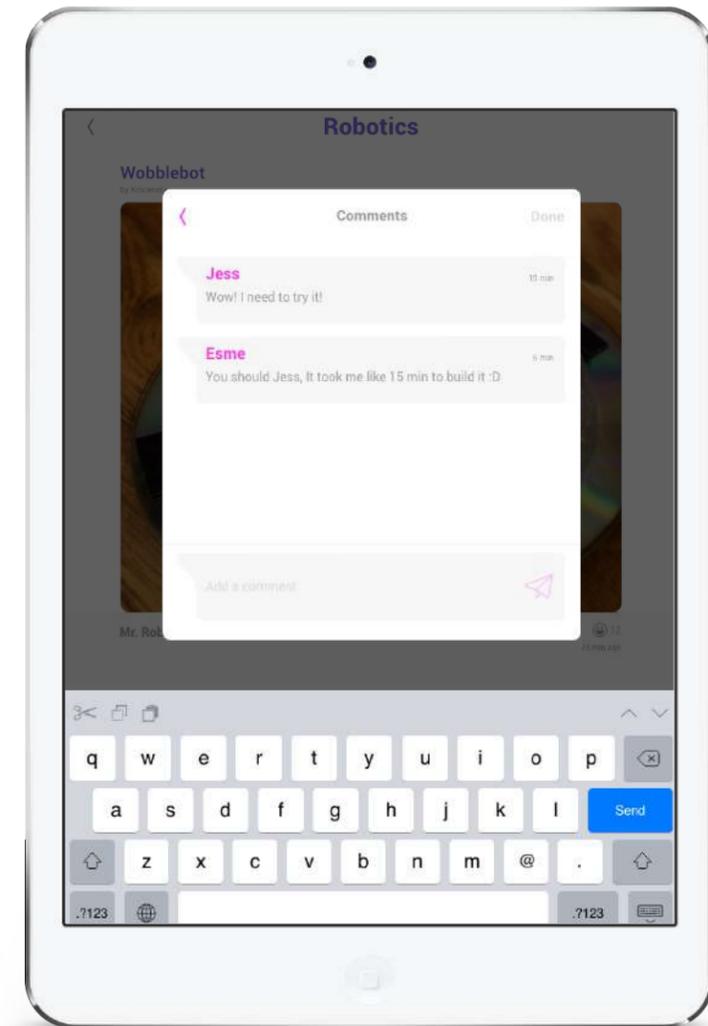
Activity Details



The user taps on an image card and is taken to a full listing of the project with a video and a series of images explaining how the project was made.

5.2.1

Post Comment

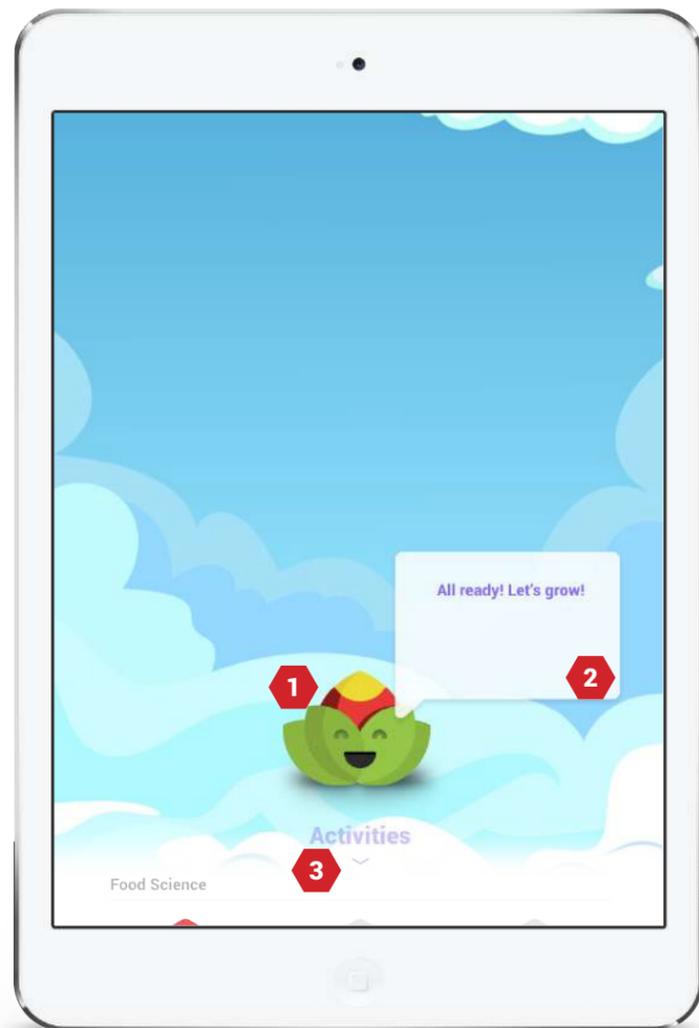


The user taps the comment icon to see all of the club member comments for the post. They tap in the comments box and the keypad slides up. They type a comment and tap post.

Stembud Home & Activities

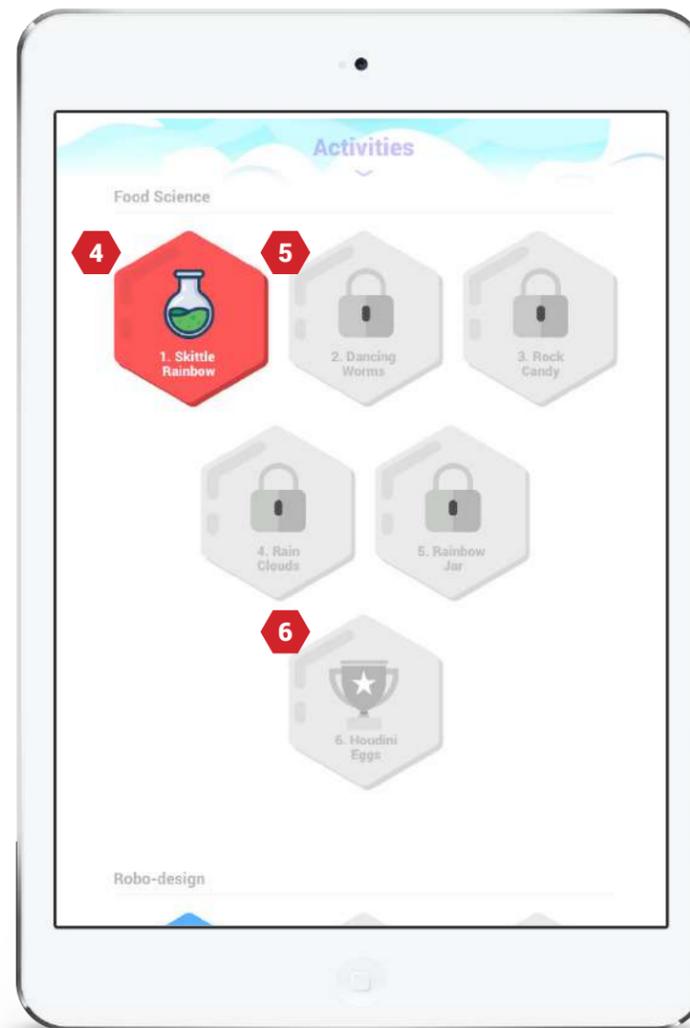
2.0

Stembud Home



2.0

Stembud Activities



Stembud Home

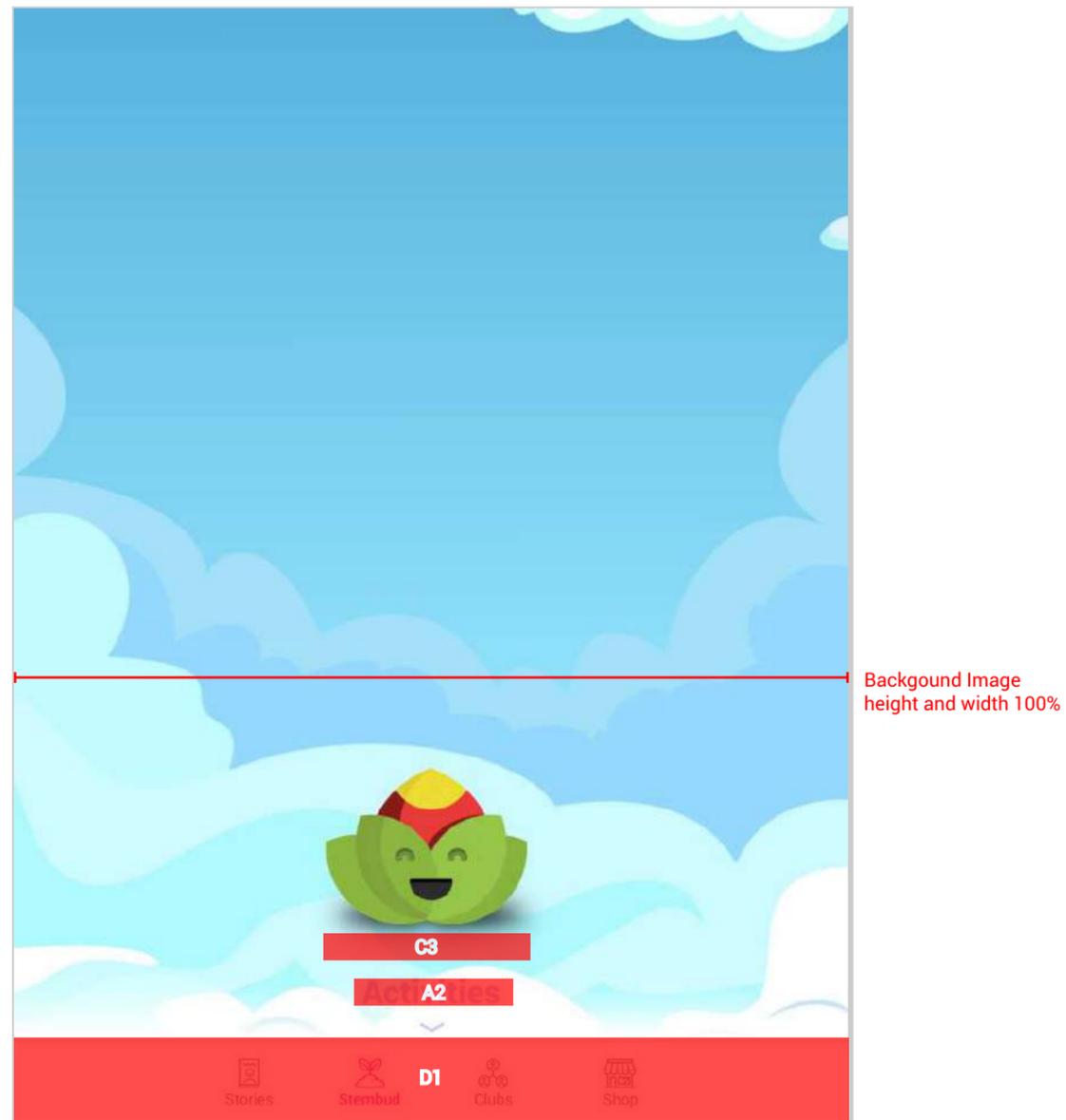
- 1 The Stembud character grows when an activity is completed. See motion study N4.
- 2 Text balloons appear and disappear automatically with a 200ms fade or on a user tap.
- 3 User scrolls down to activities section by swiping up.

Stembud Activities

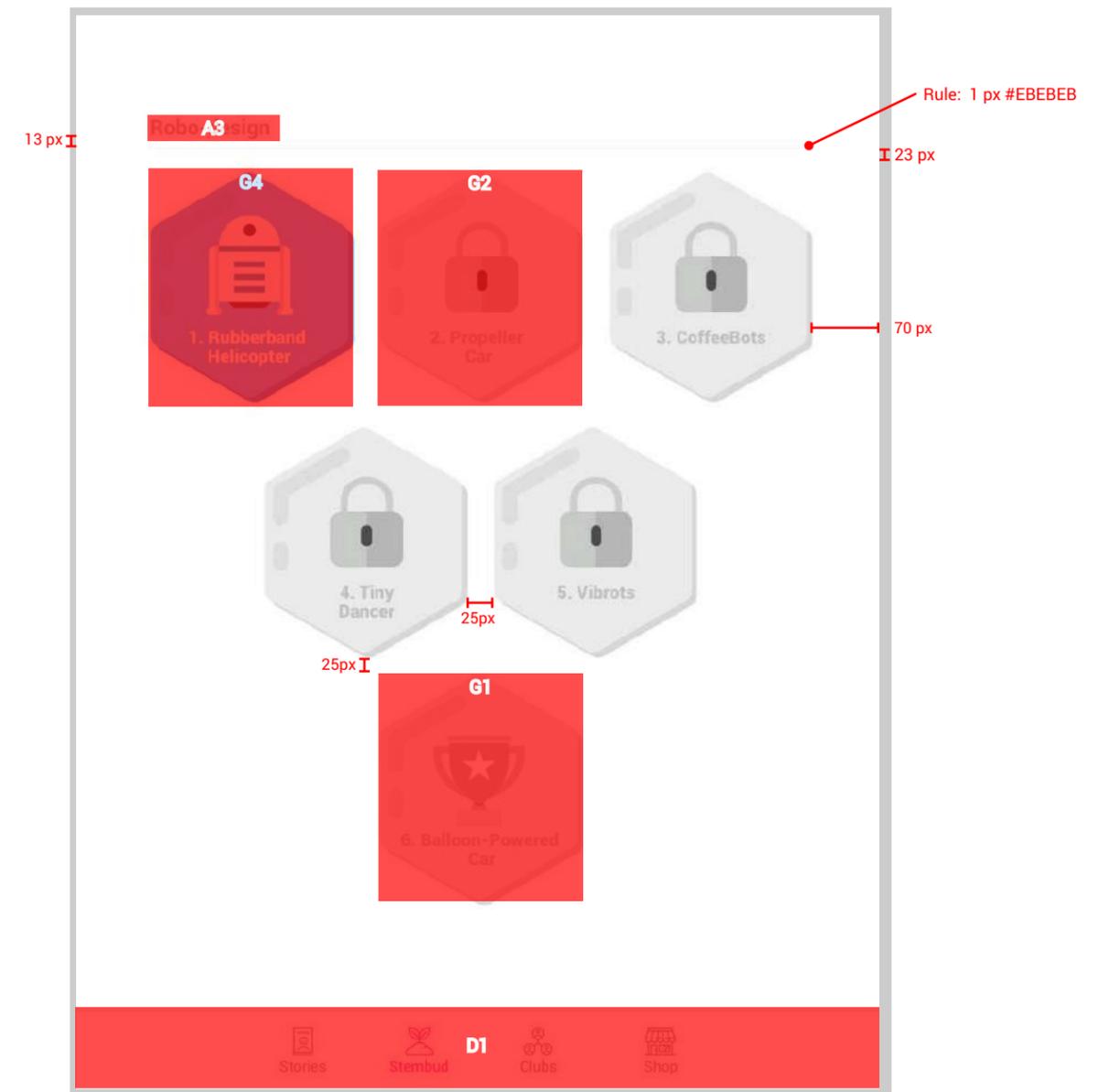
- 4 Tapping the icon takes the user to the activity steps.
- 5 New activities unlock when previous activity is completed.
- 6 Trophies unlock when all activities in a subject have been completed.

Redline

2.0 Stembud Home



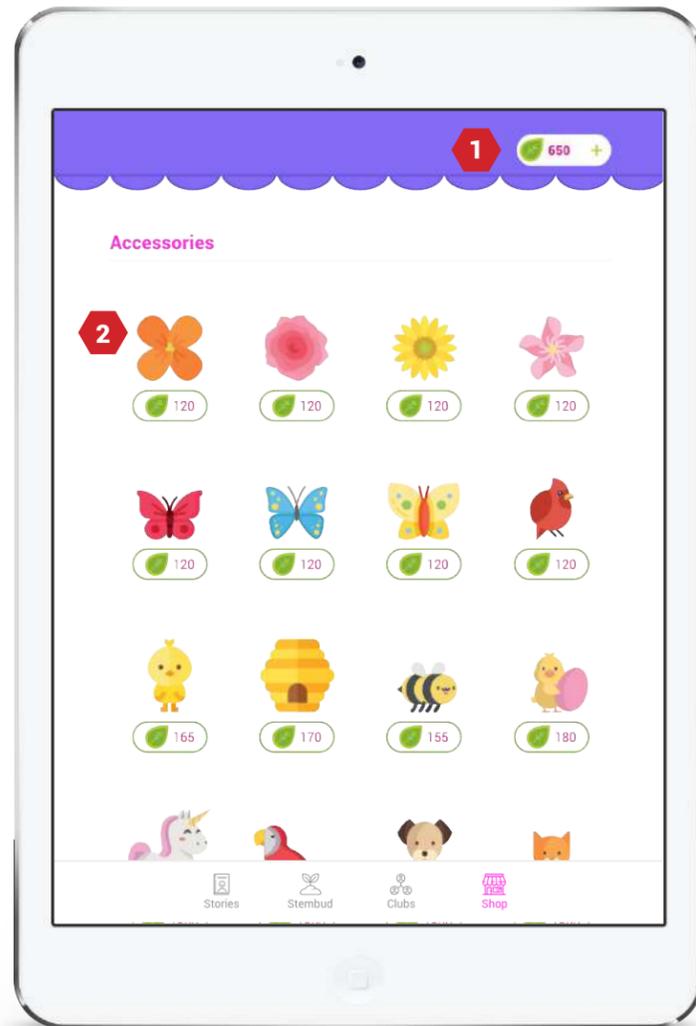
2.0 Stembud Activities



Shop

2.0

Shop

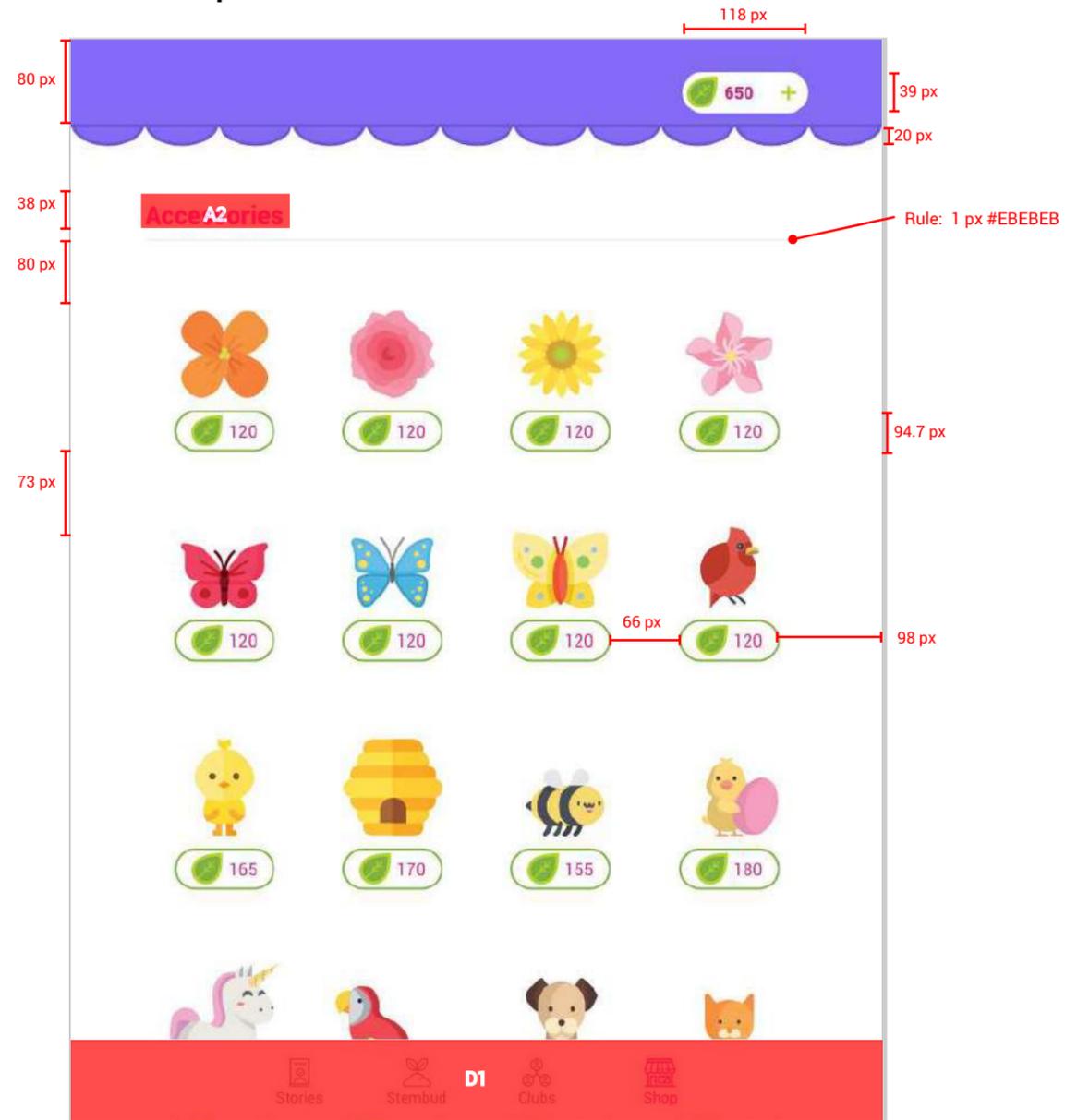


1 Indicates the currency the user currently possesses. Tapping on it allows the user to gain bonus currency by inviting a friend once per day.

2 Tapping the icon for an accessory will provide the user with a purchase confirmation dialog. If confirmed, currency will be deducted and the item will be placed on the Stembud home page.

Redline

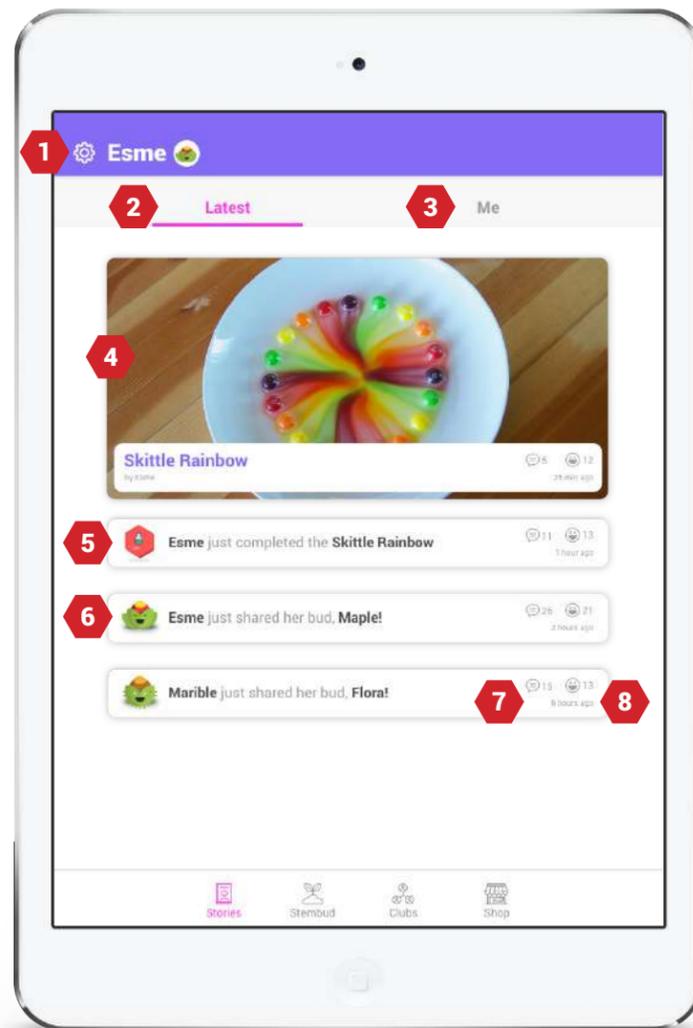
3.0 Shop



Stories

5.1

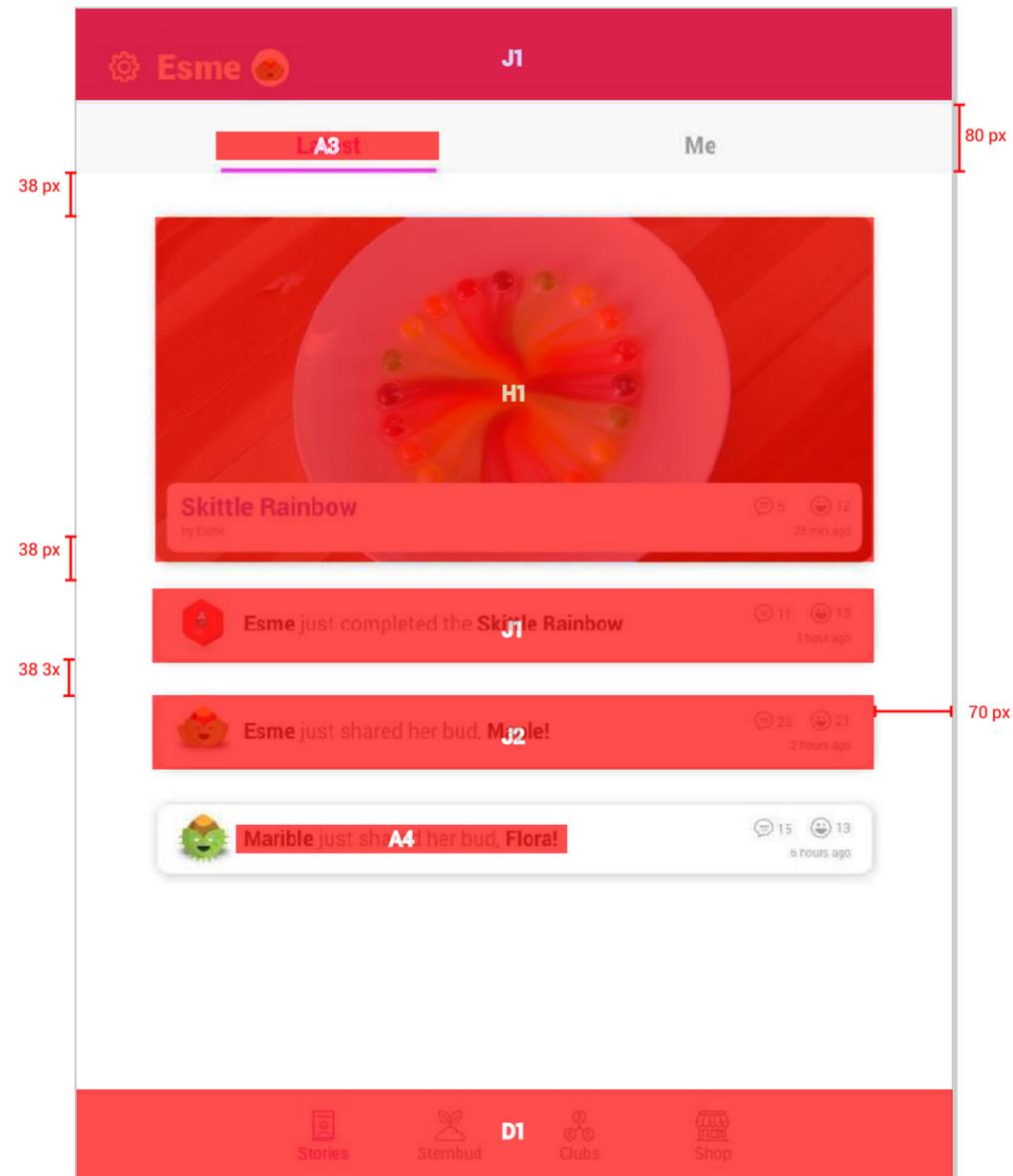
Latest Activity



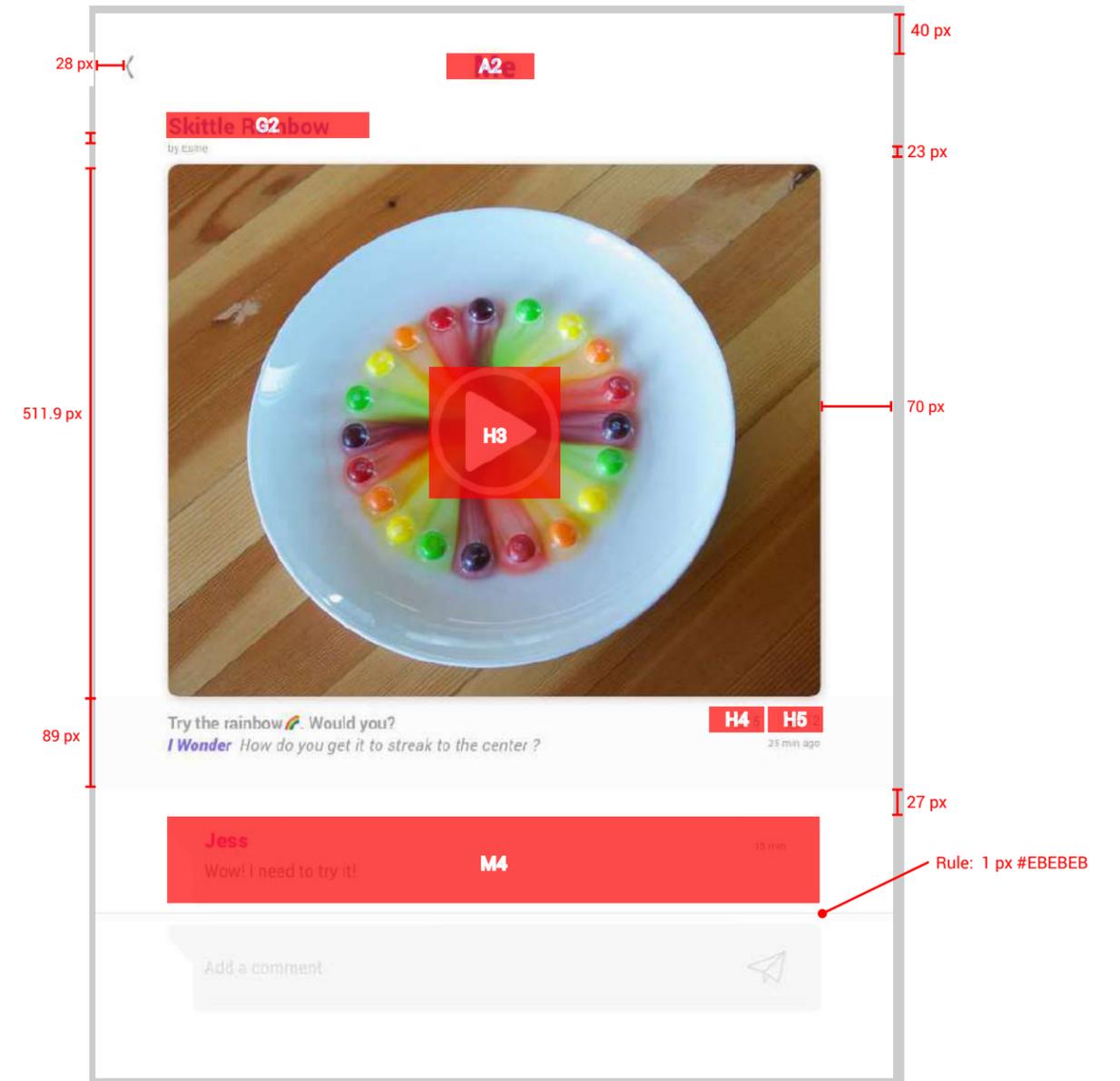
- 1 Tapping on the settings button allows provides a menu for the user to change basic details provided during sign up.
- 2 The pink highlighted section title indicates the current page. Tapping on 'Latest' takes user's to the latest news page for sitewide activity. The feed updates continuously.
- 3 Tapping on 'Me' takes the user to a feed of the users' own activities. The feed updates continuously.
- 4 Tapping on a user post will navigate the user to the 'Activity Details' page for that post.
- 5 Tapping on the progress update will navigate the user to the 'Activity Details' page for that post.
- 6 Tapping on the Stembud update will navigate the user to the shared 'Stembud' page to view the recent activity.

Redline

4.0 Latest Stories



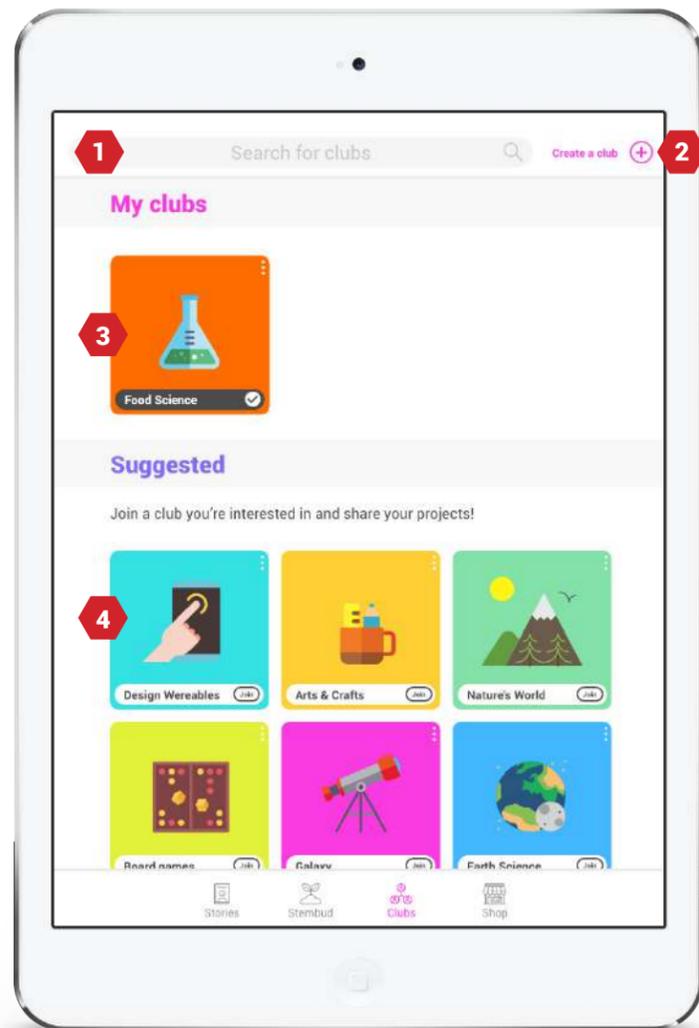
4.1 Story Details



Clubs

5.0

My Clubs

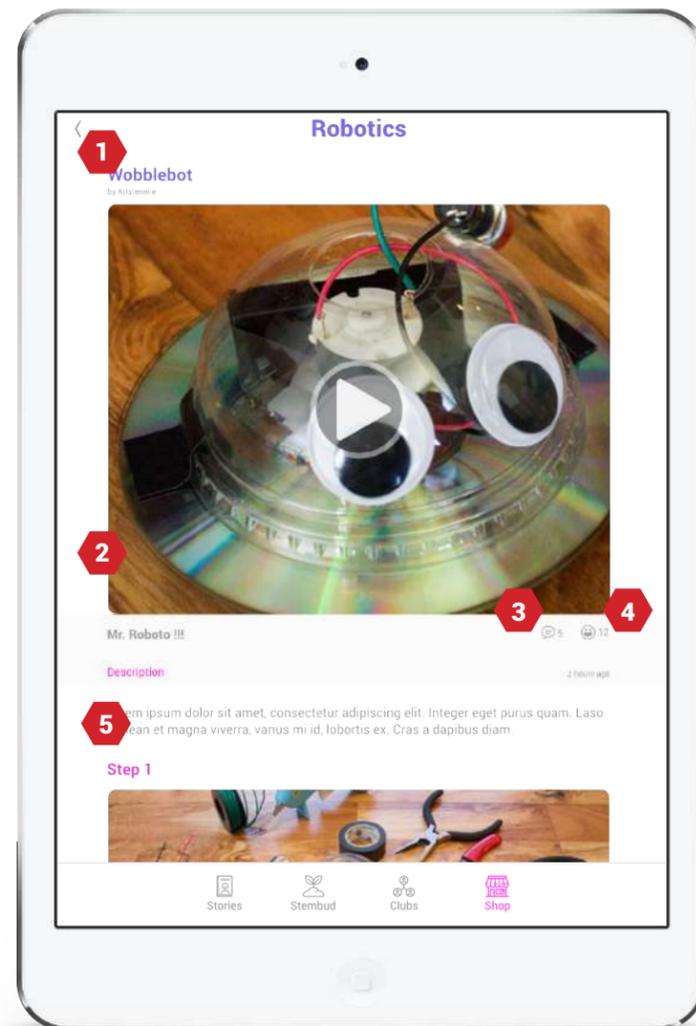


- 1 Tapping in the search bar triggers the keypad to slide up. As the user begins typing, the field provides a list suggested results based on user input.
- 2 Allows users to create their own club. The user must receive an access code from the system admin before it can be created. Clubs must be STEM related.
- 3 Tapping on a currently joined club will take the user to the Club's 'Latest' page.
- 4 Tapping on a suggested club will join the club and move it to the 'My clubs' section.

Clubs

5.2

Activity Details



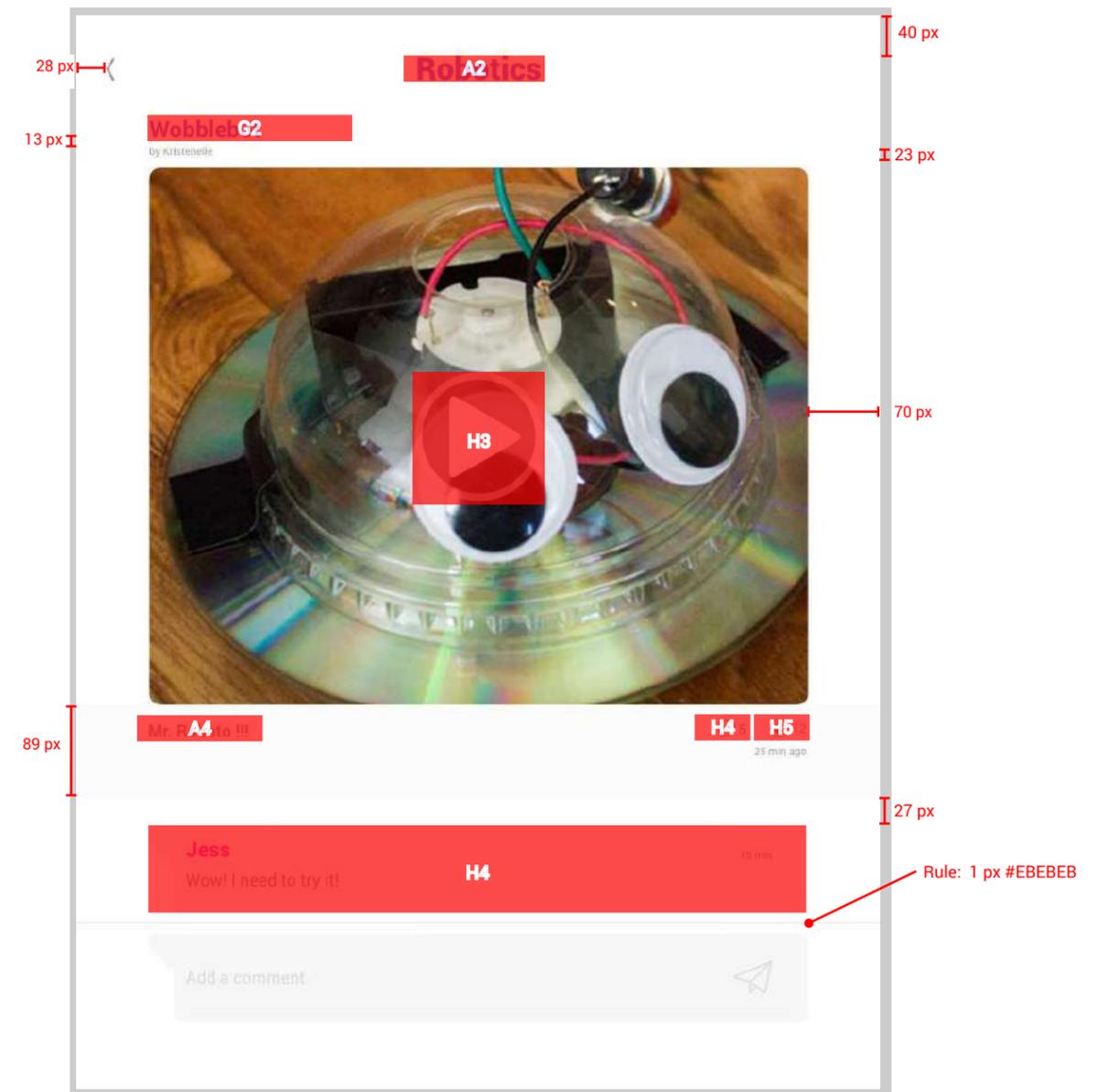
- 1 Tapping on the back button takes user to previous page. Use the standard iOS transition animation.
- 2 Tapping on the video poster plays the project video until completion and then changes to back to the video poster.
- 3 Tapping on the comments button causes the screen to grey out and the comment box to appear. See screen 5.2.1.
- 4 Tapping the reactions button will cause the emoji menu to open below the button. See motion study N3.
- 5 A brief description of the project provided by the user. Scrolling down the page reveals a step-by-step breakdown of the build process.

Redline

5.0 My Clubs



5.2 Activity Details



Stembud Motion Study

N1. Motion - Scroll

https://youtu.be/_BiBckYOYjU

N2. Motion - Clicks

https://youtu.be/Spjz_FdrAtQ

N3. Motion - Reactions

<https://youtu.be/jeOXdl47Acw>

N4. Motion - Tree animation

<https://youtu.be/jeOXdl47Acw>

