

IXD 330 | Design for Social Change

Disability Accessibility: Deaf



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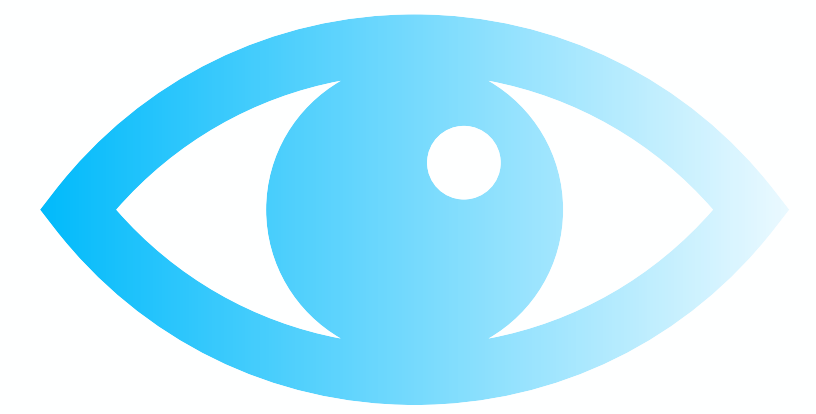
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General Outlook



Mission Statement

Aid in the accessibility of people with disabilities is top priority. We're here to pick a group within the community and provide detail on an app that will help them navigate a location such as the Suffolk County Farm.



Initial Thoughts

- ▶ Initially we were looking to design for deaf users at the farm
- ▶ Speaking with staff helped us think of more ways for increasing farm visitors



Pain Points

- ▶ Lack of navigation throughout the farm
- ▶ Not much interaction while exploring
- ▶ Lacking in Visual Appeal



Needs

- ▶ The Farm needs to be easily traversed. Being able to freely walk the entire farm based off of visual cues or auditory cues are an essential part to a good user experience
- ▶ The Farm needs to expand their land to the front portion of their property.
- ▶ The Farm requires the attention of its community and to let them know that it is accessible for any visitors with a disability too.



Goal

- ▶ To increase the farm's accessibility
- ▶ Improve and make the farm visit more engaging for visitors while keeping deaf users in mind.
- ▶ Create an enjoyable experience at the farm, that children and adults can intuitively follow without needing guidance from farm staff.
- ▶ A cost effective development that aids deaf users in their navigation and experience at the farm and attract more members of the community.



Value Proposition

- Firstly, identify the most visible spots for signage throughout the farm.
- Secondly, determining what level of interaction would become too intrusive for the visitor's overall experience at the farm.
- Lastly, our last steps would be to figure out how to implement this plan for the yet to be developed front end portion of the farm.



Research



Farm Research

Rough Roadways



One of the first aspects we learned and understood was that, the farm's roads cannot be paved over do to legal regulations. This causes a big set back for visitors who are wheelchair bound or have a hard time walking on uneven footing and far distances.

This problem is already in the process of being improved, by means of incorporating a accessibility ramp for the Wagon Ride.

Adrift Navigation



Another issue we discovered after visiting the farm was, it is quite difficult to know where you are and where you're going on the Farm grounds. Signage is either too small or not present throughout the paths.

This problem could be improved upon so that visitors can intuitively navigate the farm on their own without needing help from Farm Staff.

Outside Research

Deaf in a Hearing World



Here we learned that the Deaf have many hardships. For example the trouble of making connections. This videos shows how lack of interactions for people who are hearing impaired make them feel even more left out from the world than they already are.

This leads to an increase in anxiety for the person going through this hardship and can single handedly ruin their experience for whatever they are participating in

Designing for Hearing Impaired



With this website we learned the best tools to use for those that are hearing impaired. We found out that vibrations, visual notifications and the use of wearables for those that are experienced are very good for the hearing impaired.

Another thing that we learned is that relying on family is very effective but it makes the person feel dependent on their family which is generally negative when trying to explore.

A Day With No Barriers



In this video, Muharrem was secretly filmed as he walked through his neighborhood with his sister, Ozlem, and the people in his neighborhood "talked" to him using sign language!

The effect on Muharrem was truly touching. Although it was revealed at the end that this was really an advertisement Samsung made in Turkey for their "Duyan Eller" or Hearing Hands service, it showed how hearing-impaired people like Muharrem can be so deeply touched by nothing more than simple communication.

User Interaction Research

Magic Quest at Great Wolf Lodge



One of the main inspirations we found in our research was, Great Wolf Lodge's Magic Quest. This is an interactive experience provided for the youth who stay at the resort. The experience is designed to take about 4 days to complete, which is appropriate, for a vacation resort where visitors are expected to stay over a period of time.

The idea behind Magic Quest can be used to create an engaging and educational experience at the farm. Substituting Magic Quest's wand for the user's smartphone could open the door to a variety of scavenger hunt type activities to be done at the farm.

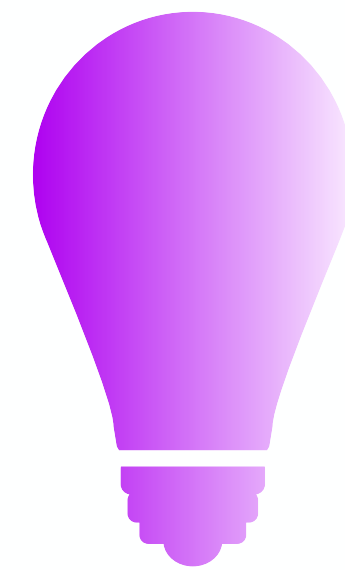
Theme Park Experience



We looked into the smaller side attractions used across different Amusement parks such as, Walt Disney World, Six Flags Great Adventure, Hershey and Dorney Park. The use of supporting attractions helps keep visitors to these parks entertained when they take a break from all the rides.

Keeping these attractions in mind, we should be able to develop a variety of these side attractions specifically to reinforce the things learned at the farm and keep children engaged as they travel around the farm.

Solution





Curious Carter

"Learning about animals is fun!"

Age: 9 Years Old

Education Level: Fourth Grader

Location: Long Island, New York

ABOUT

Carter is a young and very intelligent individual. He loves learning about animals and wants to be a vet when he grows up! Carter likes to play in his backyard a lot, he looks for cool creatures. Carter has also been deaf his whole life. Being deaf doesn't usually cause an issue for Carter, however in unfamiliar places he gets very anxious if he gets lost.

BEHAVIORS

- Interested in learning about different types of animals
- Wanders off on when he gets distracted
- Becomes shy around strangers
- Stresses out when he gets lost

GOALS

- To be able to navigate the farm on his own without needing to ask for any help.
- To enjoy his time learning about the different animals at the farm

PAIN POINTS

- Struggles to communicate with people he doesn't know
- Excitement may cause him to wander off and get lost
- Unfamiliar people and places give him anxiety
- Doesn't like to lose track of where he is

MOTIVATORS

- Draws the different types animals he has seen
- Explores his environment to find cool stuff
- Plays outside to discover new creatures
- Loves playing with animals

Curious Carter

"Learning about animals is fun!"

Situation: Carter is a 9 year old boy on a visit to the Suffolk county farm with his family. They're exploring the

FEELS

Exited

Can't wait to see the animals and see what they do to when they see him.

Burden

Knows that he has to have his family to make sure he can get communicate with others

Explorative

Wants to have new experiences despite his hearing impairment

Left Out

Because he can't hear he feels like he misses out on a lot



DOES

Runs around

Wants to see as many animals as possible.

Seeks Interaction

Loves to pet the animals and go see what goes on on the farm.

Stares

Doesn't know how to communicate with anyone else other than his family

SAYS

Sign language
Carter doesn't know how to properly talk so he attempts to use sign language to communicate with others

Laughs

When focusing on the animals he laughs because he's enjoying his time with them

Points

When sign language doesn't work he attempts pointing to what he needs or wants to communicate

Fun

Loves going around and experiencing all the new environments and animals

Panic

Can't find family and doesn't know what to do

Independent

Thinks he will be ok to run to the animals he wants to because and show he can do something on his own

Nervous

Doesn't want to talk to other people because he can't properly communicate

THINKS



Curious Carter

"Learning about animals is fun!"

Age: 9 Years Old

Status: Fourth Grader

Location: Long Island, New York

Situation: Carter is a deaf 9 year old boy on a visit to the Suffolk county farm with his family. He is exploring the farm and learning new things about all the different animals.

Opportunities

- Unable to communicate to Workers
- Dependent on parents
- Can't explore of his own free will

Arrives

- 1 See's farm animals as they drive past the front of the farm to the parking lot.
- 2 Wants to go see the animals as soon as possible after seeing them in the front.

Sign in

- 3 Parents tell Carter to be patient, go to sign in first
- 4 Sits through the sign in process anxiously
- 5 Doesn't know what is said by employe and is to exited to read rules on sign in sheet

Exploration

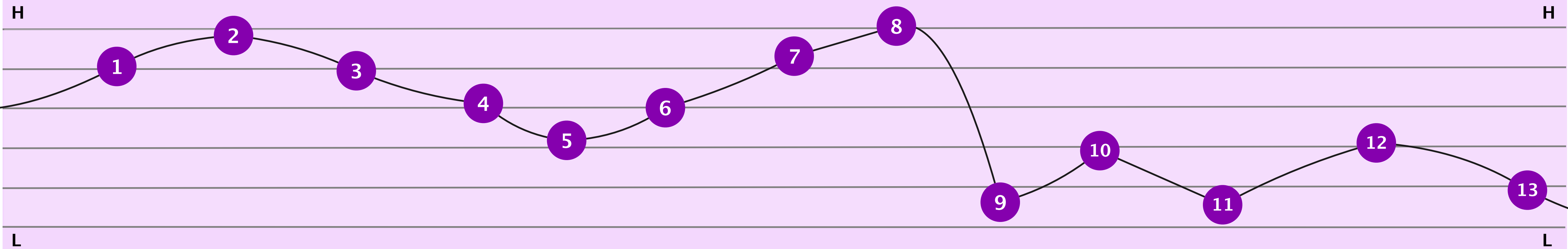
- 6 Finally gets to go and explore the farm.
- 7 Runs to all the exiting animals he can find without paying attention to where his family is
- 8 Feeds animals for the first time ever

Mistake

- 9 Turns around and doesn't see family
- 10 See's farm worker
- 11 Doesn't know how to communicate that he is lost

Leaving

- 12 Worker takes Carter to Visiting Center
- 13 Carter is upset because he got lost and couldn't properly navigate like most kids







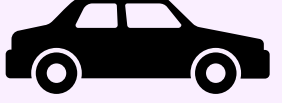
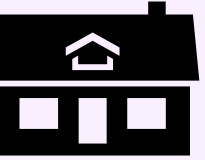










Pre, During and Post Service

Moment

Emotion

Notes

	PRE		DURING				POST	
	 Discovery	 Confirmation ★	 Arrival	 Exploration ★	 Worry	 Help	 Leaving ★	 Reminisce
	 Curious	 Excited ↑	 Eager ↑	 Thrilled ↑↑	 Anxious ↓	 Upset ↓↓	 Discouraged	 Thoughtful ↓
	Carter's parents find Suffolk County Farms on social media	Carter likes the idea and wants to visit the farm	They park and he sees how big the farm is	His family signs in His family tries to keep up with his excited pace He's distracted by an animal and gets separated from his parents	He only sees staff and starts to feel anxious Tries to find his way with signs, but doesn't see many around	He's lost on the farm Can't find his way back Staff member doesn't realize Carter is deaf	Reunites with his parents He still feels anxious from being lost They decide to leave without looking at camps	Happy he got to see animals Embarrassed because he got lost and left early

Confirmation

Who's Involved? Carter & his Parents

What needs are served? They are able to find the farm on social media.

What does it feel like? Carter is excited to see all the animals at the farm.

Why this moment matters: This is both his and his parents motivation for going.

What do you want to change? More information for how the farm works for people who find it on social media.

Exploration

Who's Involved? Carter, his Parents and Farm Staff

What needs are served? Carter's family is together up until they have to sign in.

What does it feel like? Carter is overflowing with excitement at first. When he realizes he's lost, he feels very anxious when the staff member tries to speak to him.

Why this moment matters: This occurs because his parents were distracted by the sign in process and didn't notice he left. This moment can be used to improve the experience for Carter's family at the farm.

What do you want to change? Carter needs something to do while his parents are signing them in. Clear signage with directions for the farm need to be added to avoid anyone getting lost on the farm through these changes.

Leaving

Who's Involved? Carter & his parents

What needs are served? Carter is eventually reunited with his family

What does it feel like? Carter is embarrassed by this experience, his parents don't feel comfortable leaving him at camp by himself.

Why this moment matters: This is the final interaction between Carter's family and Suffolk County Farm. This the last chance to leave a lasting impression on.

What do you want to change? Souvenirs have always been a great reminder of a good trip. Including some sort of way for commemorating Carter's first trip to the farm could be strong positive reinforcement for Carter to return to the farm again.

Ideation

Brain Storming



Food Trucks
Carnivals
Heat lamps



Train rides
Ferris Wheel
Parties



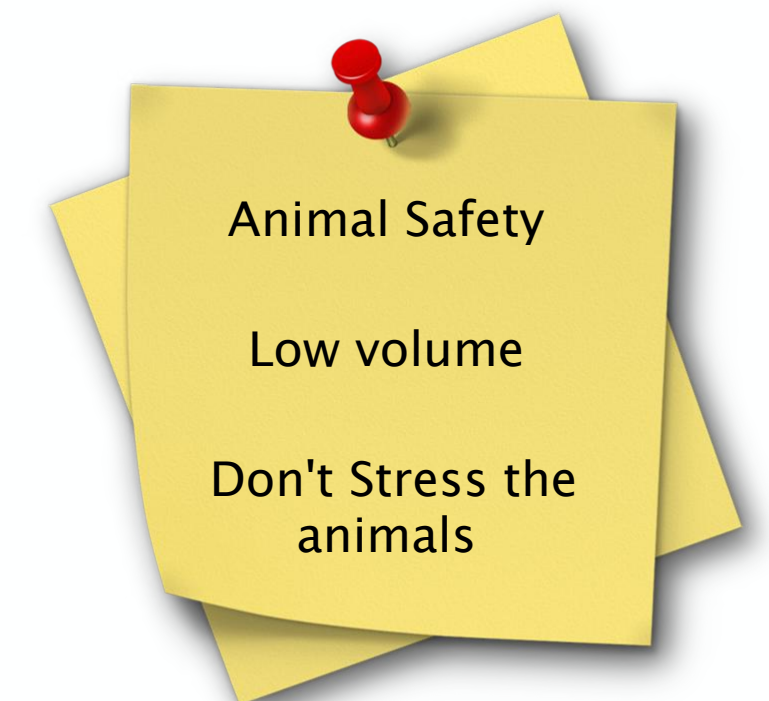
Landmarks
Exploration
Discovery



Animal rides
No Pavement
Building



Children
Games
Running around



Animal Safety
Low volume
Don't Stress the animals

Ideation

Topics

Animal Happy Hour, all animals get to roam around in a certain area with people.

Development of an interactive road map

Signage

Corn maze

Pathing

Theme Park-ify

Group Art sessions

Carnivals to help the kids have fun

Bring food trucks to the Farm to attract crowds

Animal Rides

Haptic Feedback Vest

Vibration and Navigation App

How Might We...

How might we help people navigate the farm

Adding theme park elements to the farm will help the navigation and overall engagement of visitors at the farm.

How might we make the farm experience more engaging

While the animals are the main attraction, making use of educational side attractions throughout the journey at the farm will make the experience more engaging and help providing an educational experience. These attractions can be placed within the new visitor center as well as outside along the pathing of the farm experience.

How might we make the experience accessible to people with disabilities

Making the attractions relevant to the respective animals of the area will be important in keeping kids engaged during their visit to the farm. It is important that these attractions give both visual and haptic feedback to the user considering deaf and blind users might visit the farm as well.

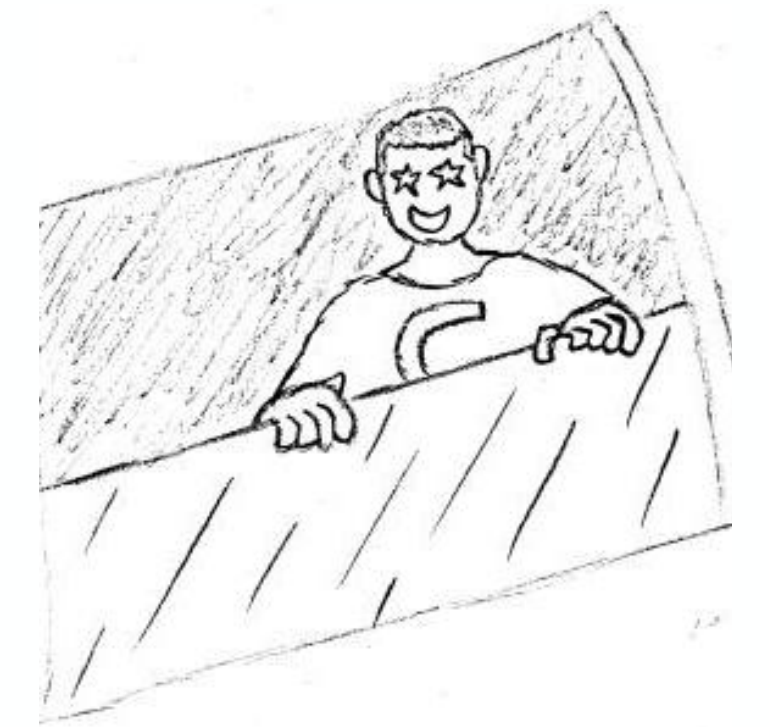
Story Board



Carter's parents find Suffolk County Farms on social media.



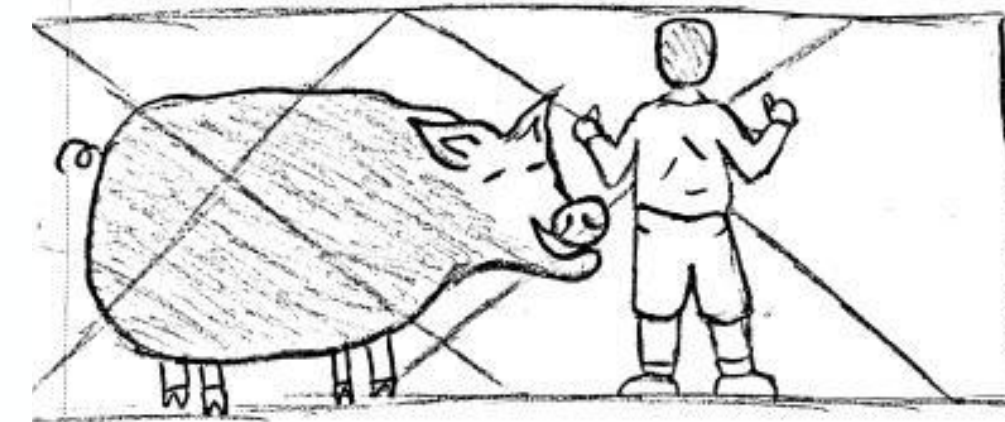
Carter likes the idea and wants to visit the farm.



They park and he sees how big the farm is.



His family signs in. His family tries to keep up with his excited pace. He's distracted by an animal and gets separated from his parents.



Carter finds a big pig named Lucky and watches him eat his lunch! After a while he looks around and only see's staff.



He only sees staff nearby. He can't remember the way back and becomes anxious. Tries to find his way with signs, but doesn't any around.

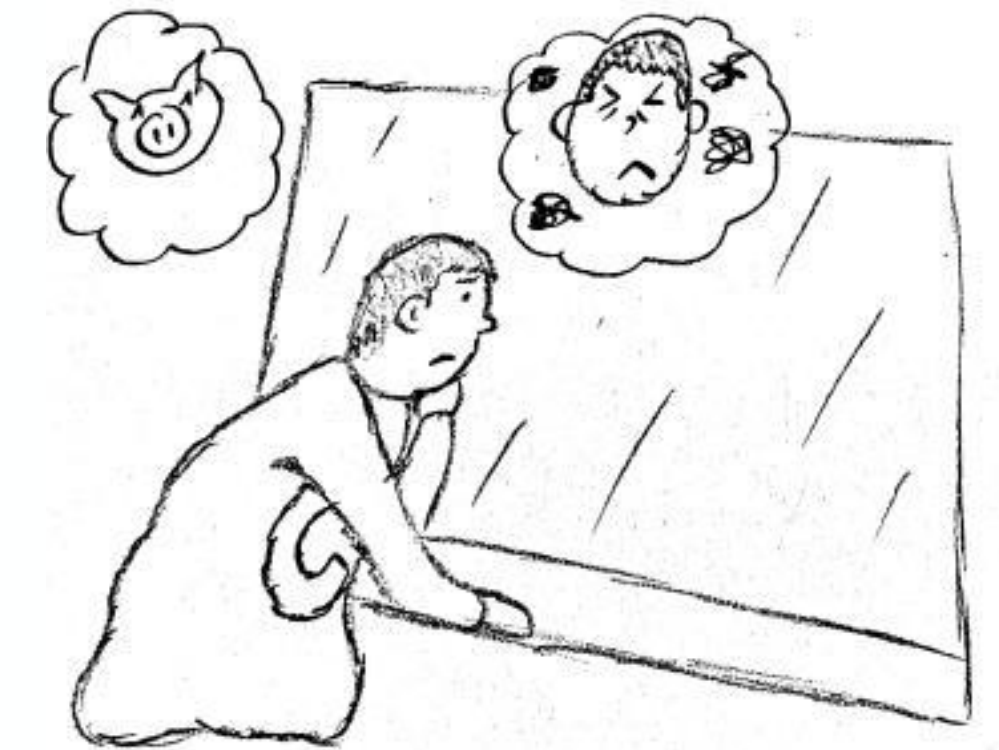
Story Board



He's lost on the farm and can't find his way back.
A staff member doesn't realize Carter is unable
to hear him.



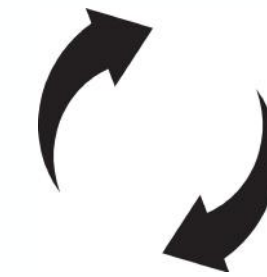
He's reunited with his parents. He still feels
anxious from getting lost. They decide to leave
without looking at any of the camps.



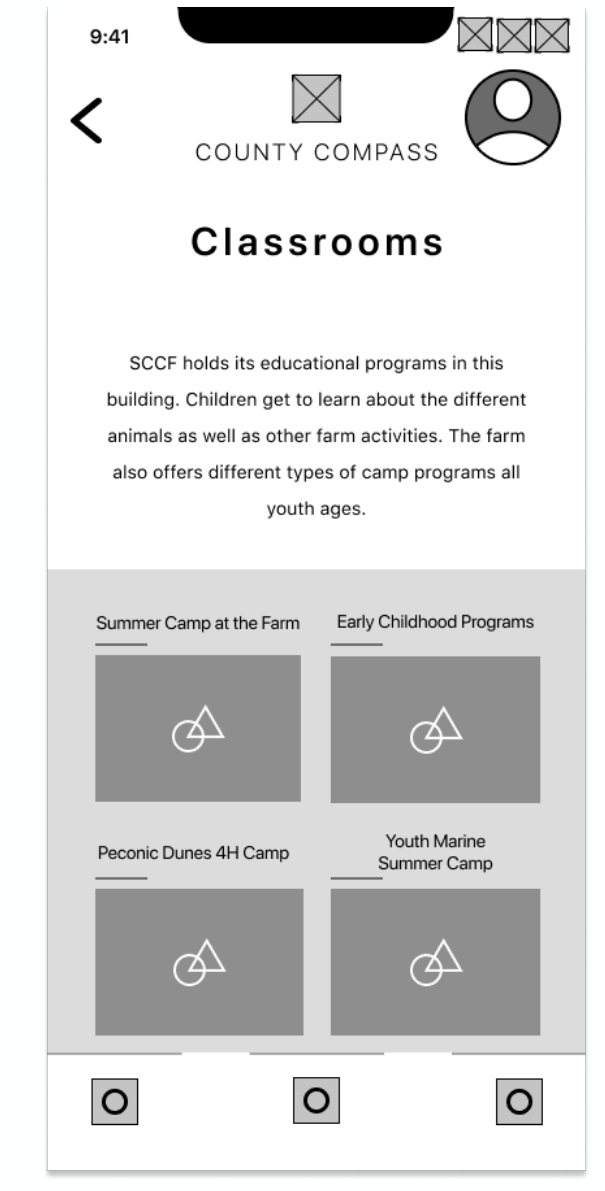
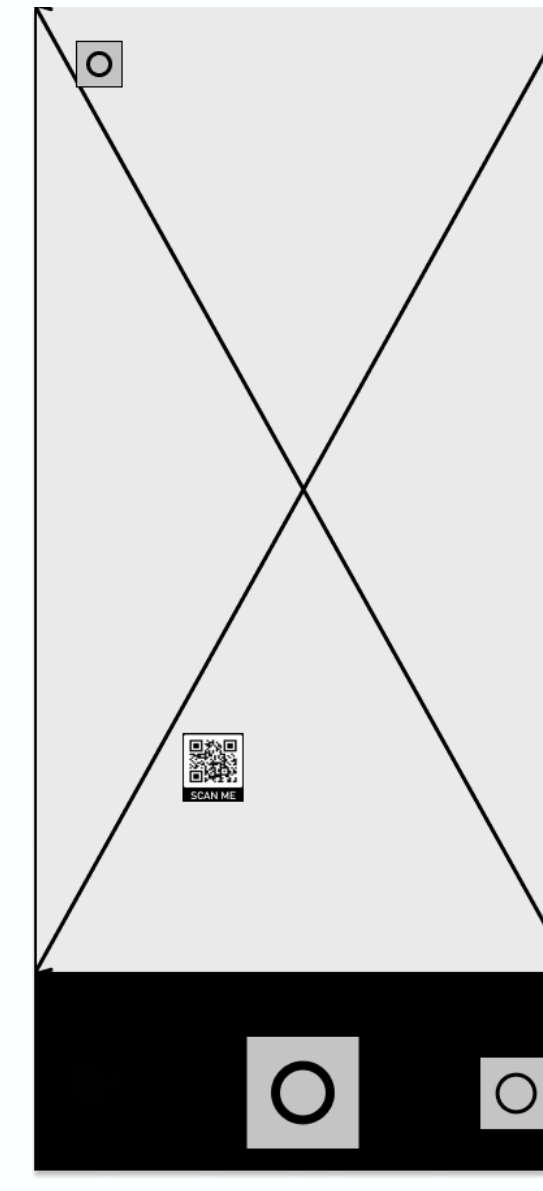
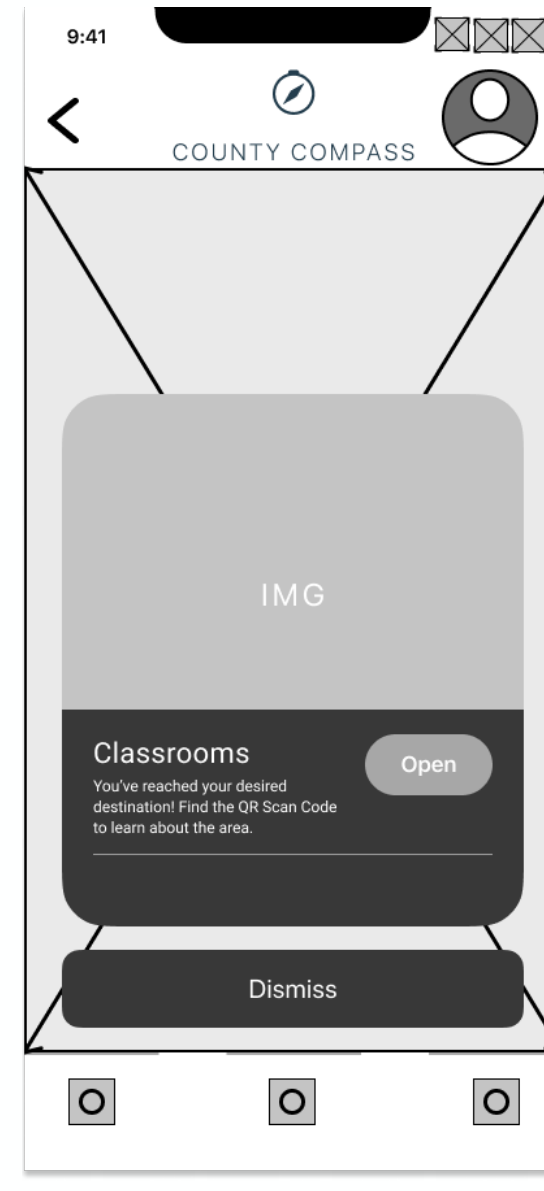
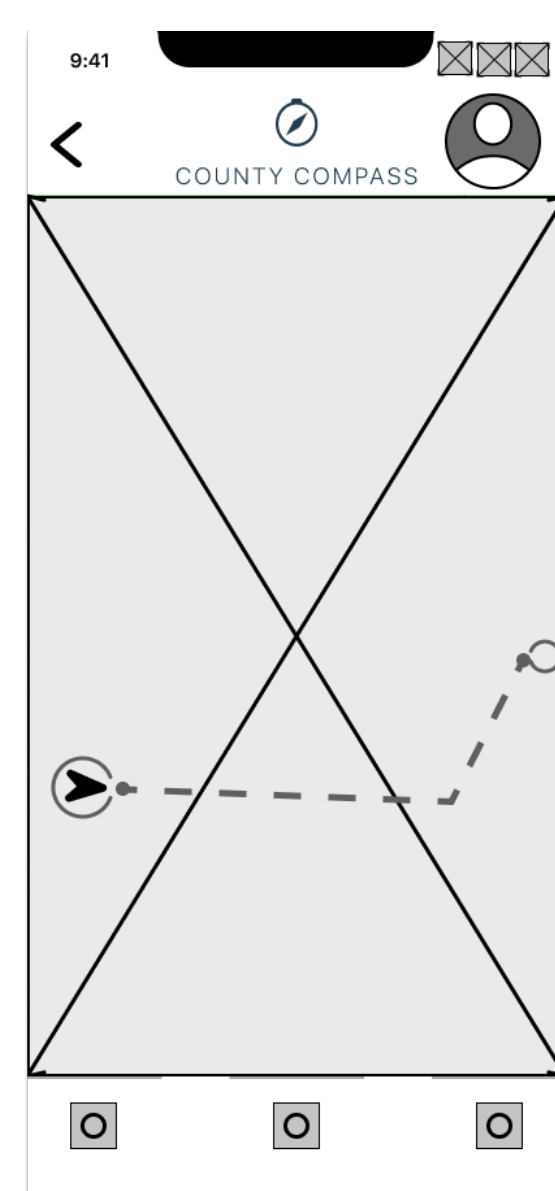
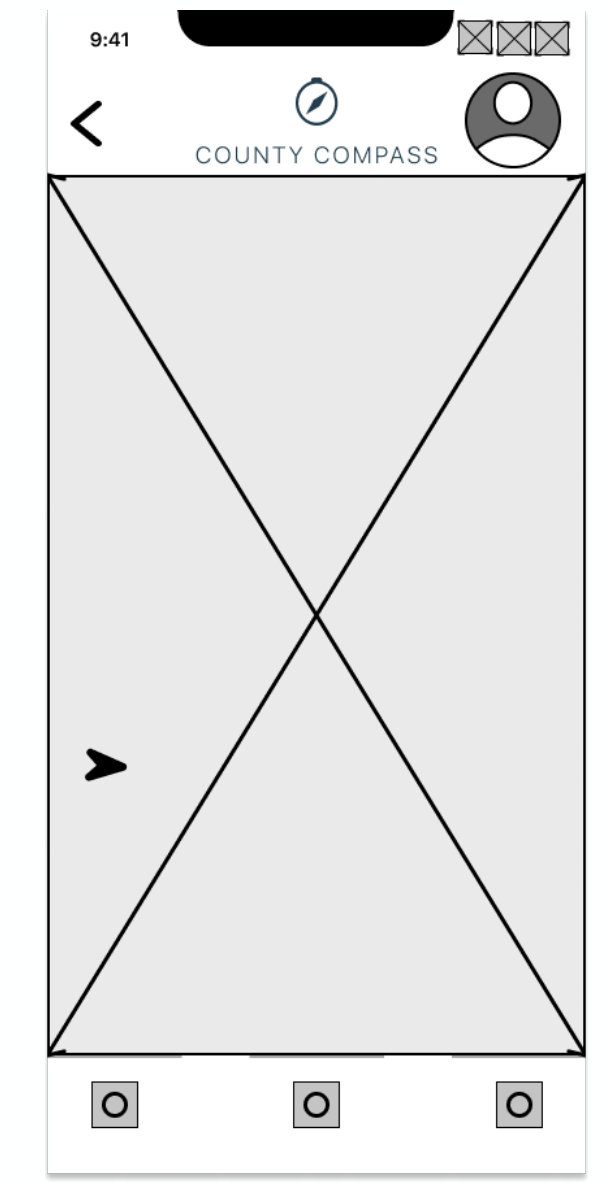
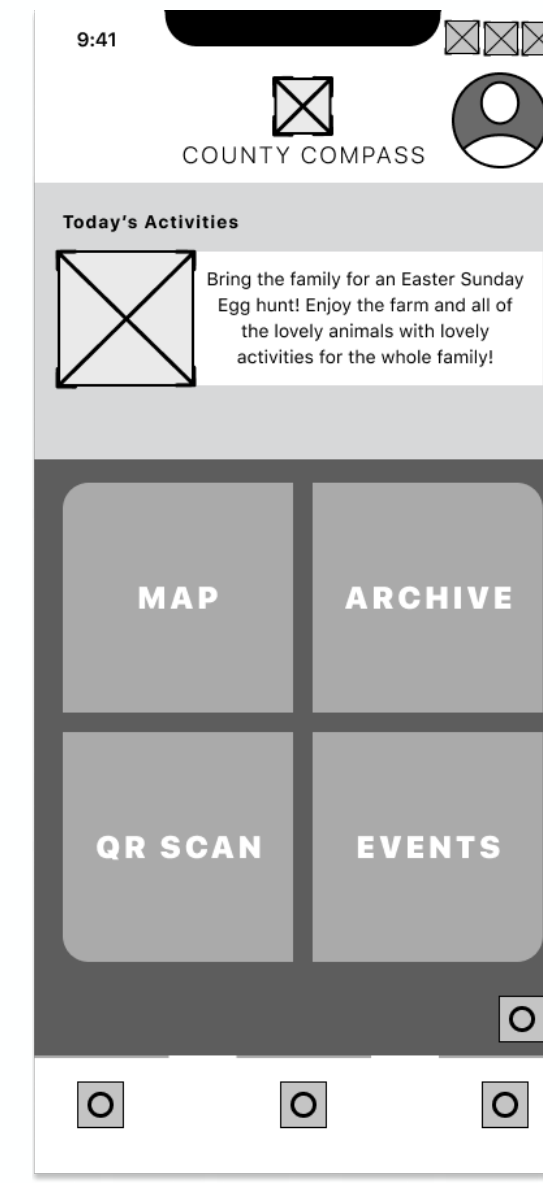
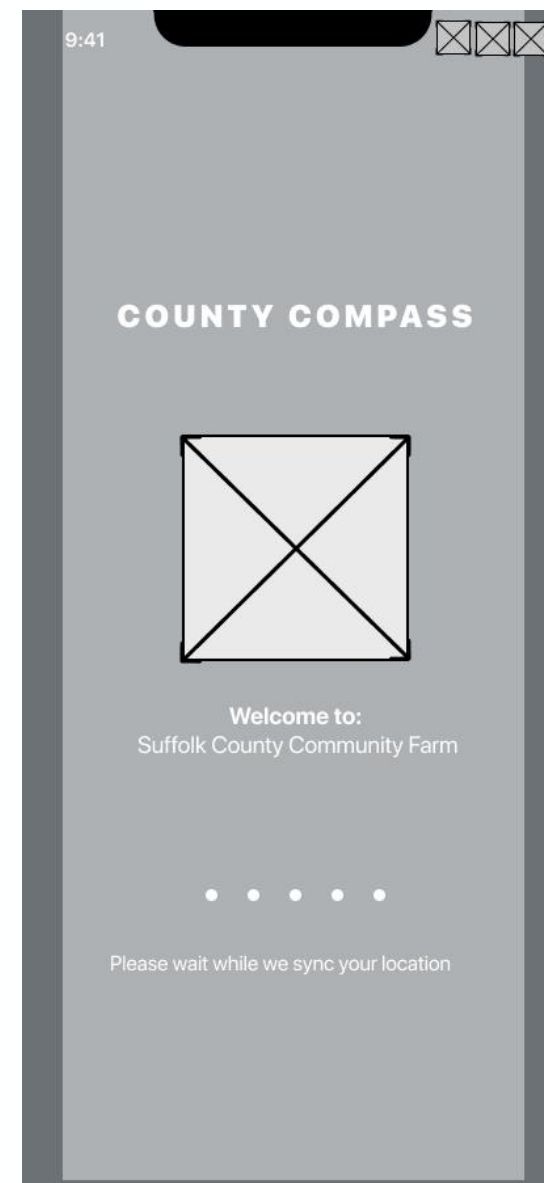
Carter is happy he got to see the farm's animals,
but is embarrassed because he got lost and they
left early.

Theme Park-ification

The farm has many different types of activities going on. Since visitors walk throughout the area, adding theme-park like **side attractions** and **landmarks** to the farm will create an interactive experience for all visitors.



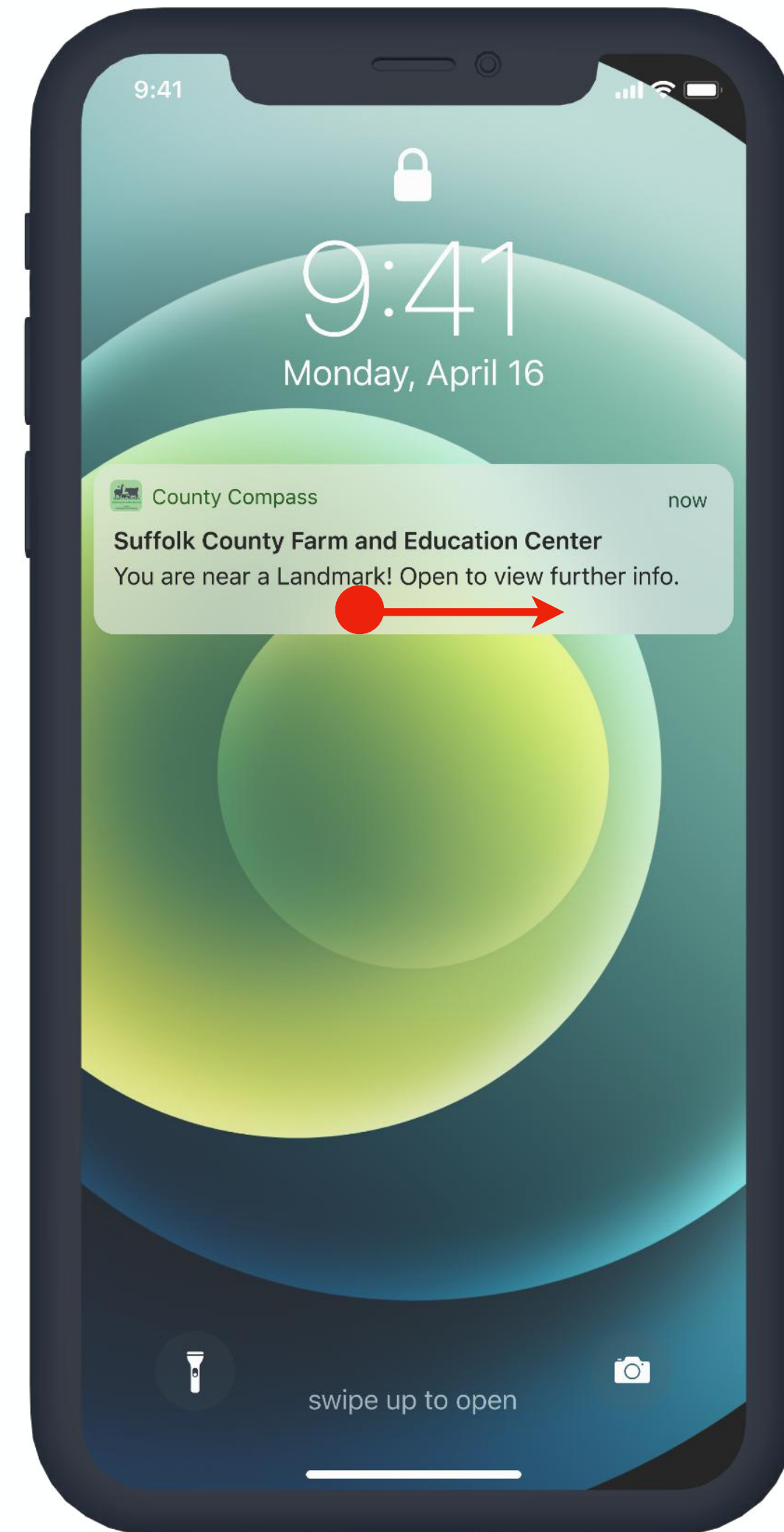
Wireframes



Final Comp



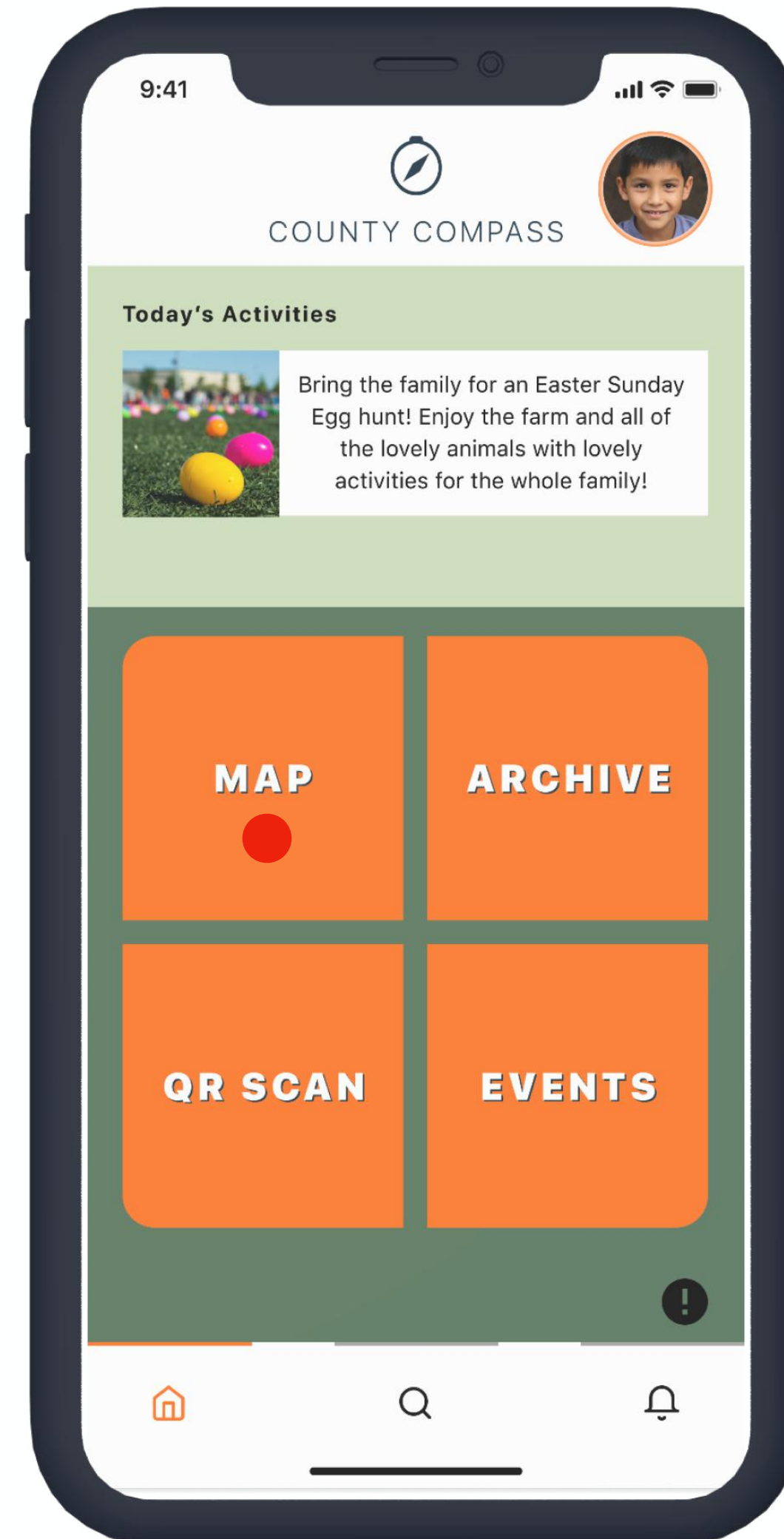
Arrival Notification



Loading Screen



Home



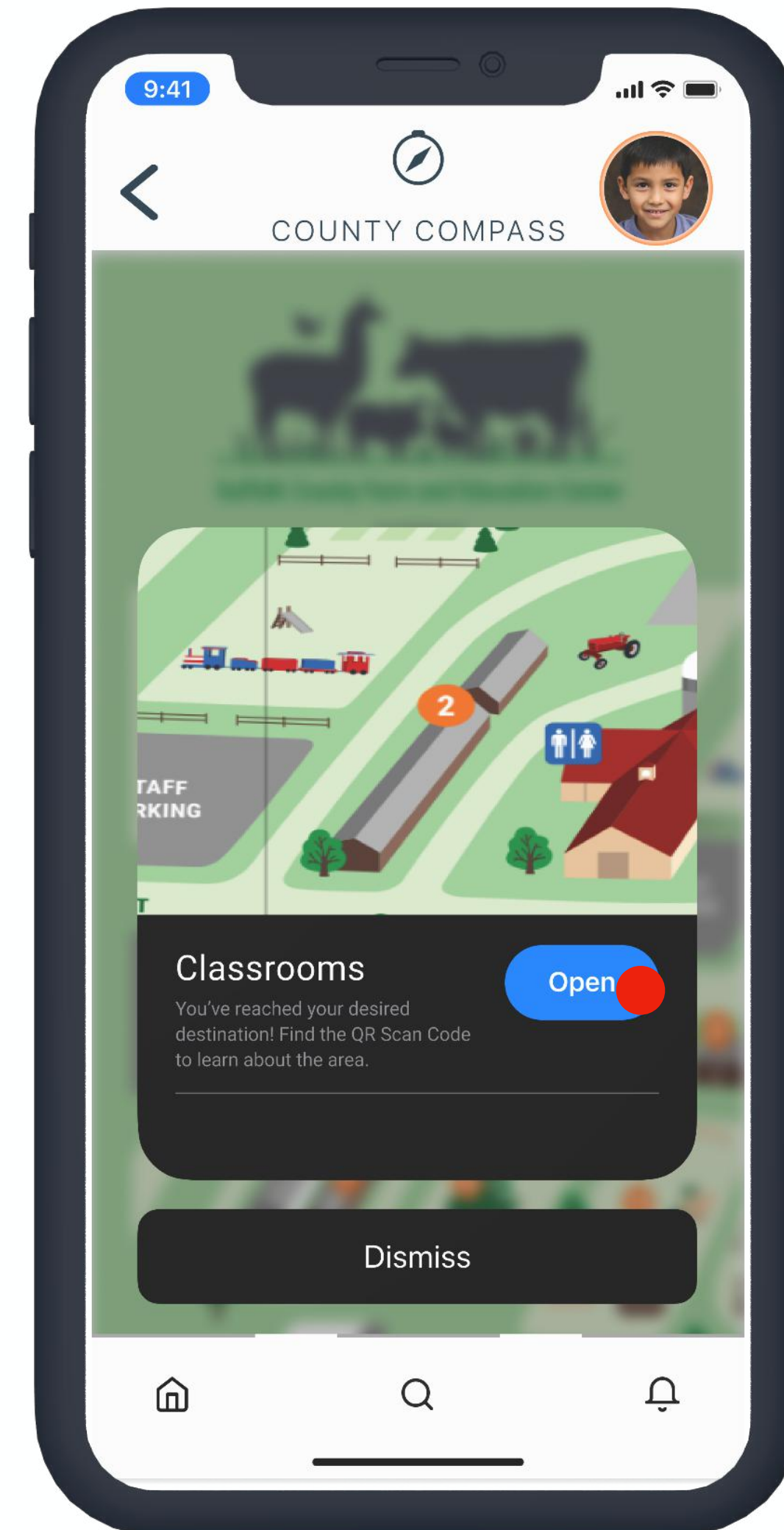
Map



Map: Navigation



Map: Notification



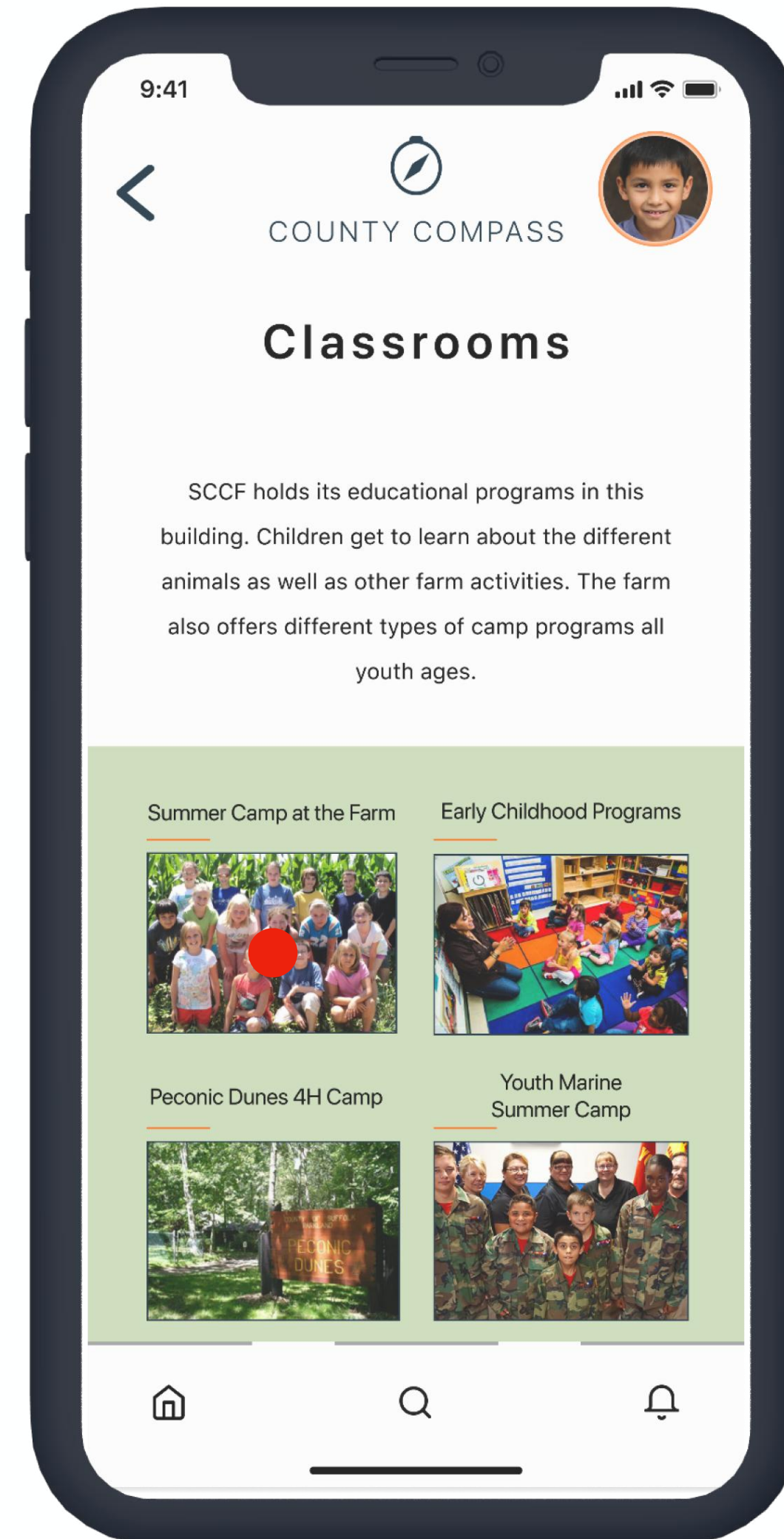
QR Scanner



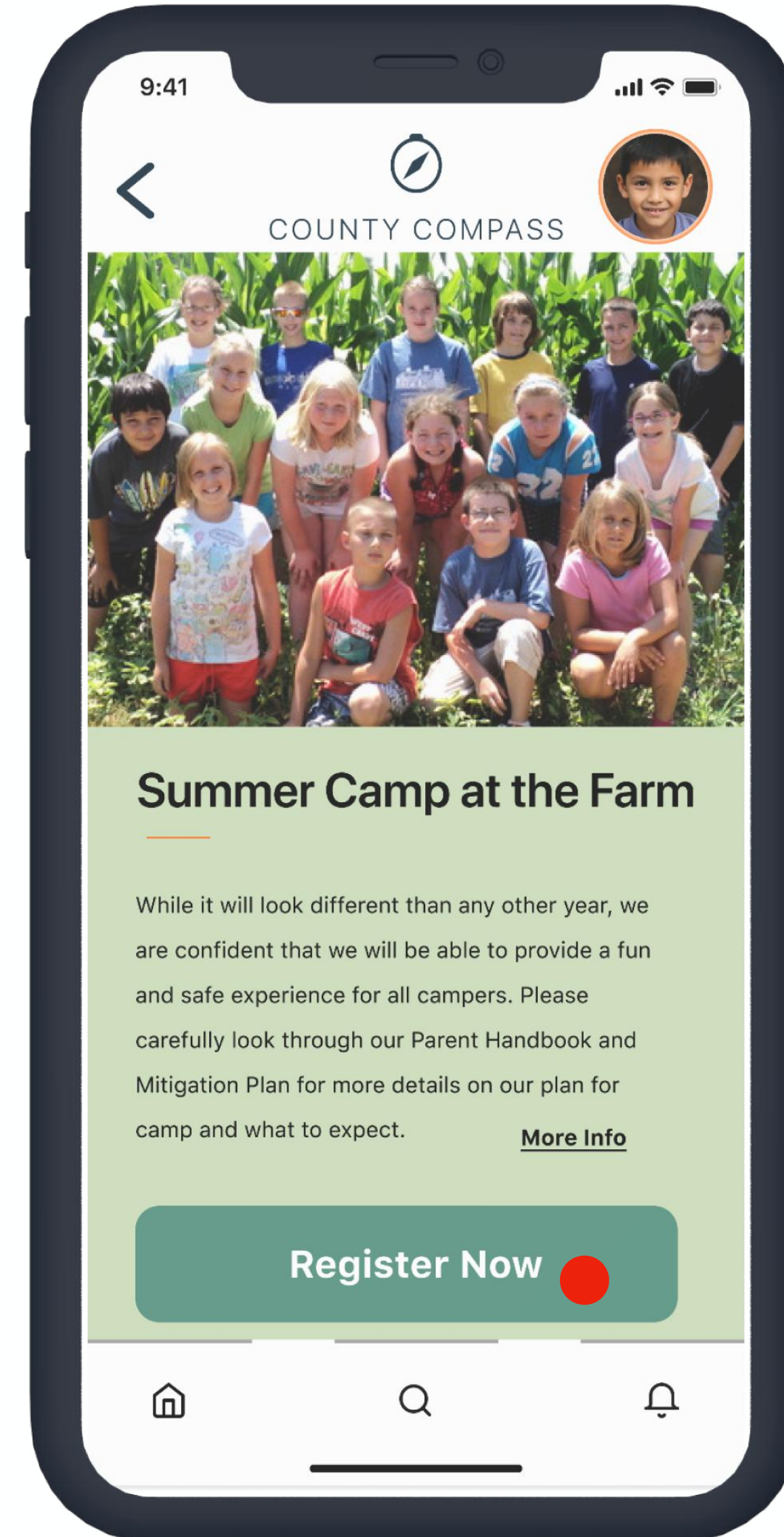
QR Scanner Notification



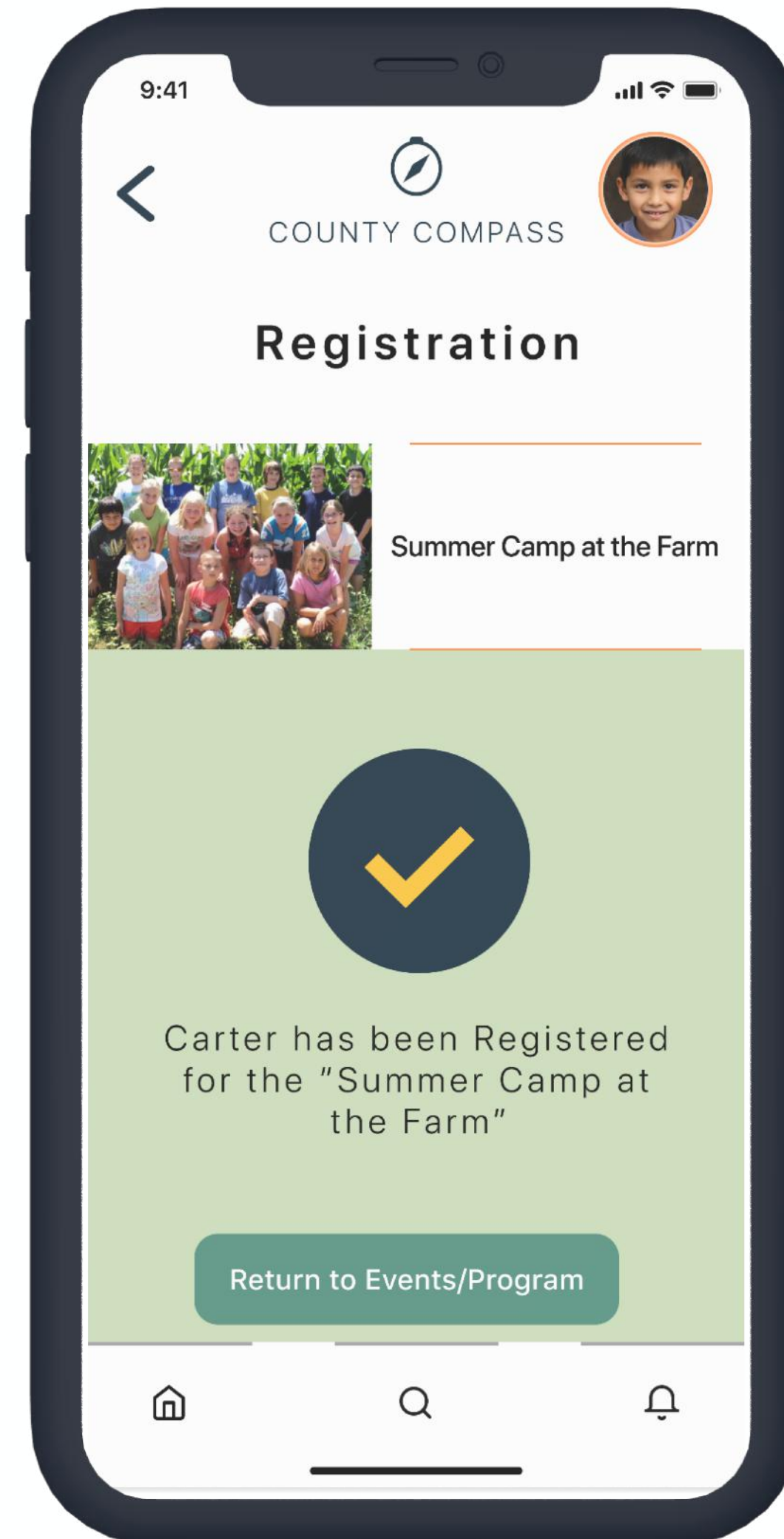
Location Information



Program/Event



Registered



Thank you for your time

