

Creatures

Make the change *everyday*.

Click Here To Play!

<https://projects.invisionapp.com/prototype/ck41scza0002fj101o1t76os5/play>



Context

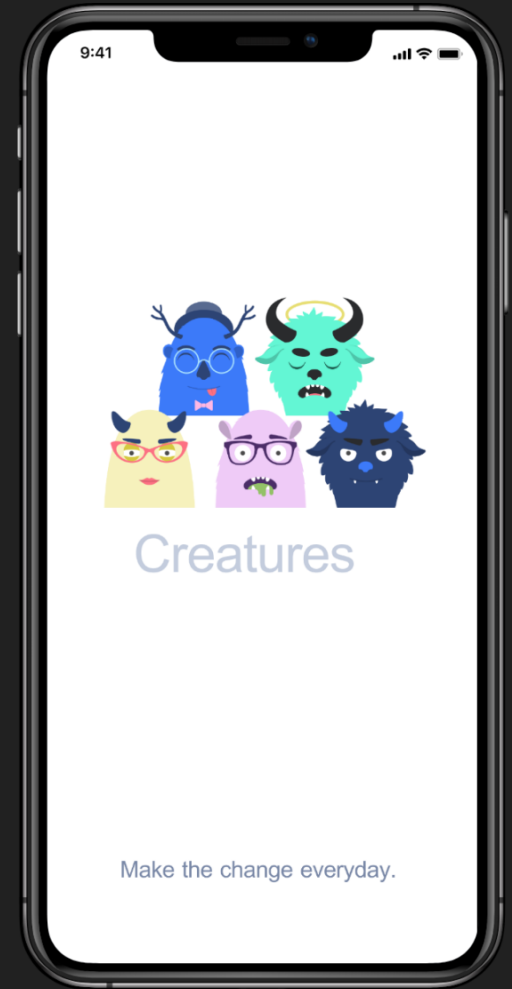
“ Reduce community-wide greenhouse gas (GHG) emissions **25%** by 2025 and **90%** by 2050. ”

-- Ann Arbor Government



Data

- **75%** don't really know much about trash recycle of Ann Arbor.
- **94%** will think about trash sorting before throwing trash to the bin for most of the time.



Solution

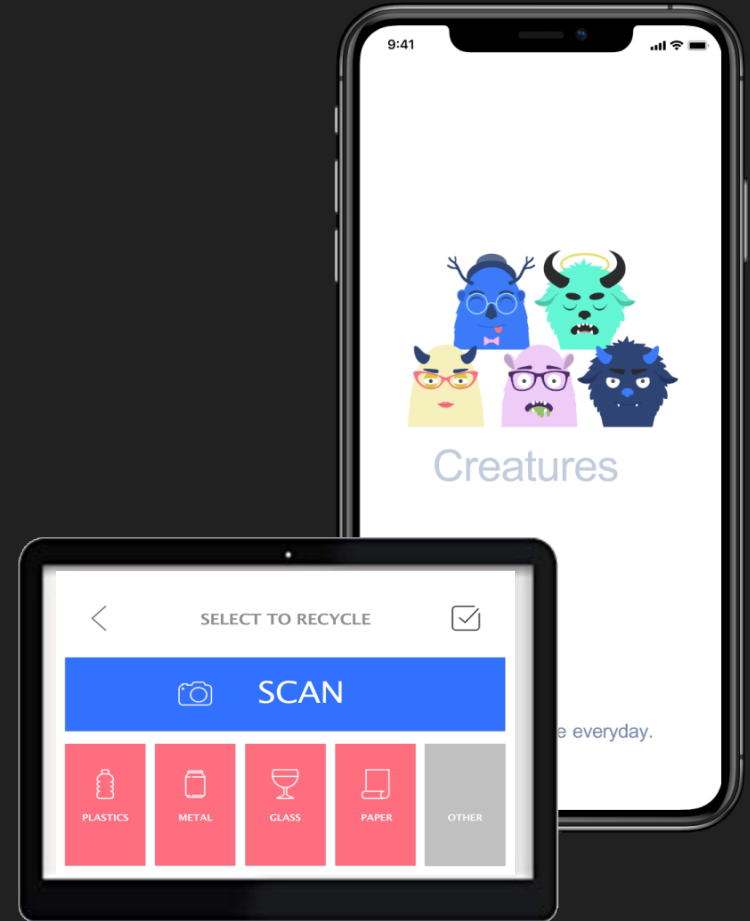
Creatures

An Eco-Friendly System: Smart Trash Bin + App

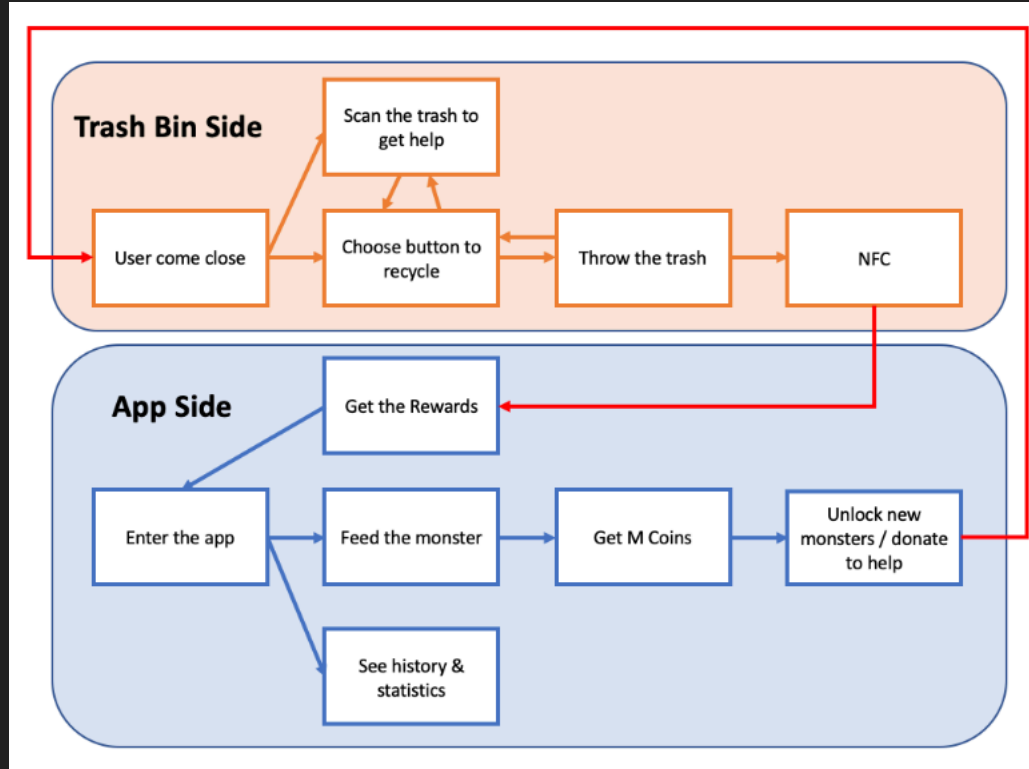
- Help people form the habit of trash recycling.
- Help recycle organizations better sort the trash.
- Help make the world better for all creatures.

Design Philosophy

- Easy to use.
- Last long.
- Help to connect.
 - People & Things.



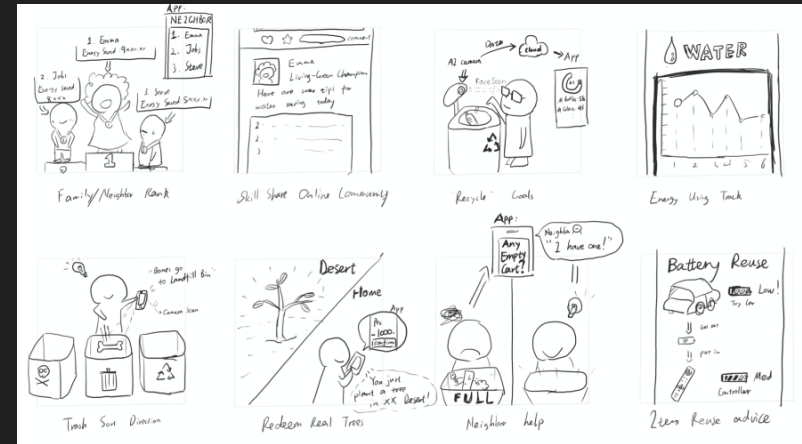
Interaction Flow



Design Process

Strength & Weakness Comparison Chart

	DTE Energy	City of Ann Arbor	Recycle Ann Arbor	MuniBilling	Go Green	RecycleNation
Things Covered	Gas, Electricity	Water, Normal Trash	Recyclable Trash	Gas, Electricity, Water, Normal Trash	Gas, Electricity, Water, Trash	Recyclable Trash
Platform	Web/Mobile	Web	Web	Desktop	Mobile	Mobile
Price	Free	Free	Free	Pay to use	Free	Free
Bill & Payment						
Account Opening	Phone Call	Phone Call	Phone Call	Web / Phone Call	Mobile	Mobile
Account Management	Web/Mobile/Call	Web/Call	Phone Call	Web / Phone Call	Mobile	Mobile
Maintenance Report	Yes	Yes	Yes	Yes	No	No
Online Pay	Yes	Yes	No	Yes	No	No
Bill History	Yes	Yes	No	Yes	No	No
Living Green						
Tutorial Difficulty	Medium	Medium	Hard to follow	Medium	Easy	Medium
Daily Usage Monitoring	Yes	No	No	Yes	Yes	Yes
Visualization	Simple	No	No	Good	Good	No
Living Green Goals	No	No	No	No	No	No
Living Green Instructions	No	No	Yes	No	Yes	Yes
Online Community	No	No	No	No	Part Of	No



Sketching

Competitive Analysis

Design Process



Storyboarding

Pro Persona #3

Billy
Male
74 years old
Entry-level App User
Retired Resident



"Sometimes I feel I am too old to memorize things. Every time I went to the trash bin, I had no idea what to do, my mind just went blank completely." — Billy

About Billy:

Billy is a retired resident living in Ann Arbor. His children are living in East Coast and his wife died a few years ago, so he lives alone. Billy noticed that Ann Arbor is promoting recycling trashes these years and he wants to support the local government. But because of his age, he finds it hard to memorize which trash belongs to which cart and he has difficulty reading the trash sorting signs on the trash bin.

Billy's memory started to fail about three years ago. He could sometimes forget very important things and feels difficult to learn new things.

He thinks the graphs and the texts on the trash posters/signs are too difficult for him to read and he always forget which cart to throw in the trash, even if he carries the same trash as last time "Sometimes I feel I am too old to memorize things," Billy sighs, "Every time when I went to the trash cart, I had no idea what to do, my mind just went blank completely." Billy wants some help and remainder on the trash sorting.

Frustrations:

- Memory started to fail so that he can't remember how to sort the trash very often.
- Reading the graphs and texts are too difficult for him.
- Nobody could help him when he comes to the trash bin.

Motivation:

- Want to support the local government to recycle trashes.
- Very independent, wants to solve problems by himself.

Goals:

- Need a tool/guidance to remind him which trash belongs to which cart.
- Want to be corrected when throwing a trash into a wrong cart.
- Want some throwing trash history to remind him the mistake he made for the future good.

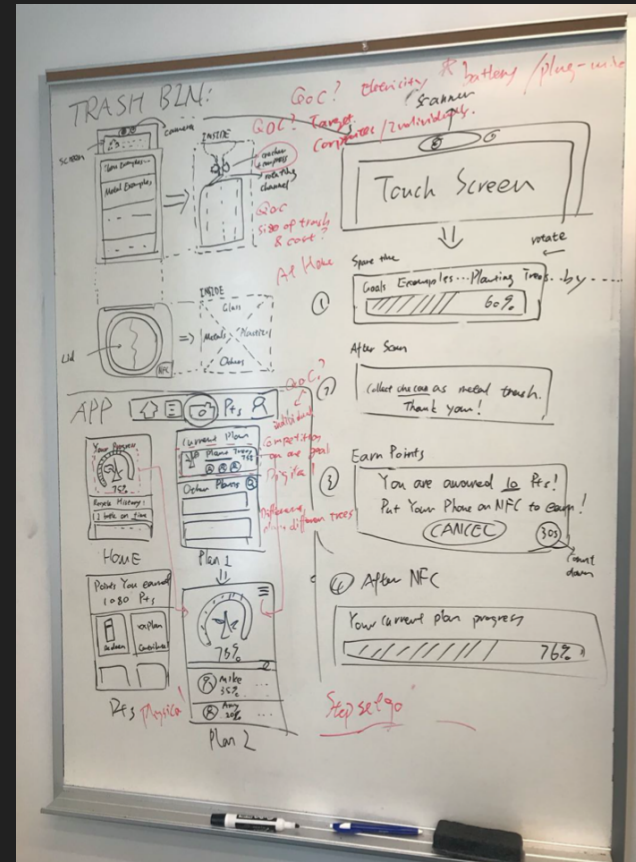
Personas

Design Process

QOC Table 1: How to identify the user in a good way?

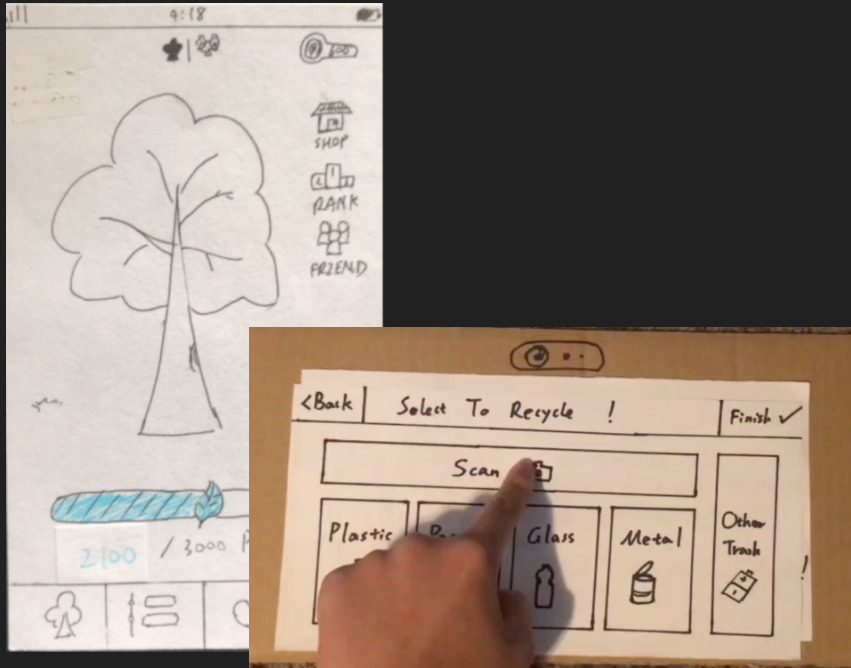
	Bluetooth	QR code	NFC
User Privacy	-1	0	1
Convenience	1	-1	0
Accuracy	-1	1	1
Cost	0	1	0
Total	-1	1	2

QOC Analysis



Brainstorming

Design Process



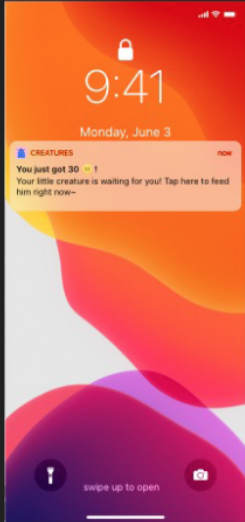
Paper Prototype



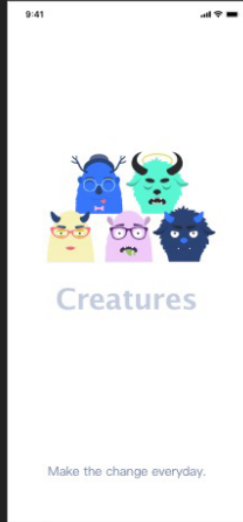
Digital Prototype

Overview

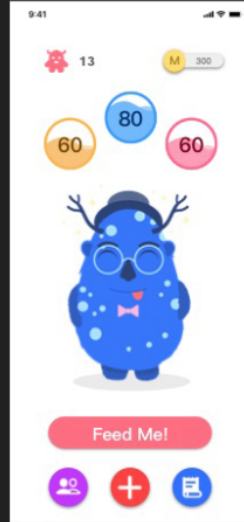
iPhone 11 Pro Max



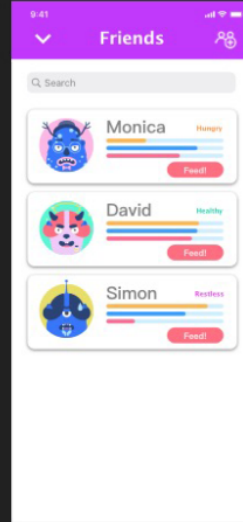
Welcome



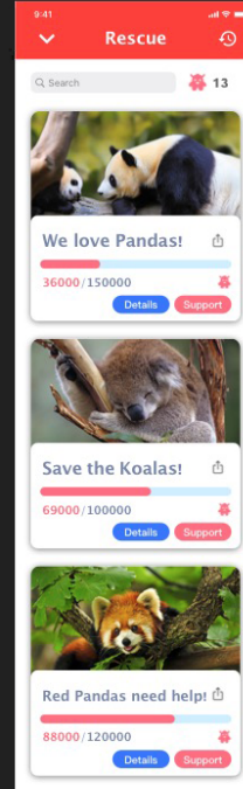
Creature



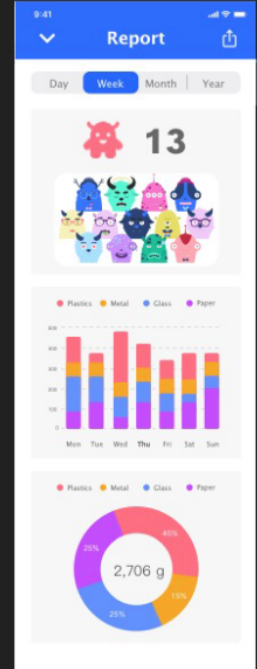
Friends



Rescue



Report





COINS REWARDED!



THANK YOU FOR RECYCLING!



PUT YOUR PHONE CLOSE
TO THE TRASH BIN TO
RECEIVE POINT!

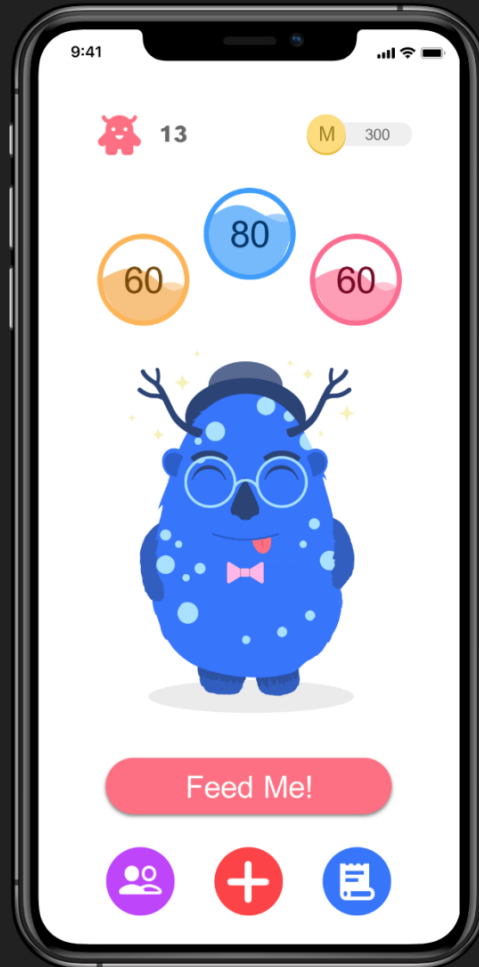




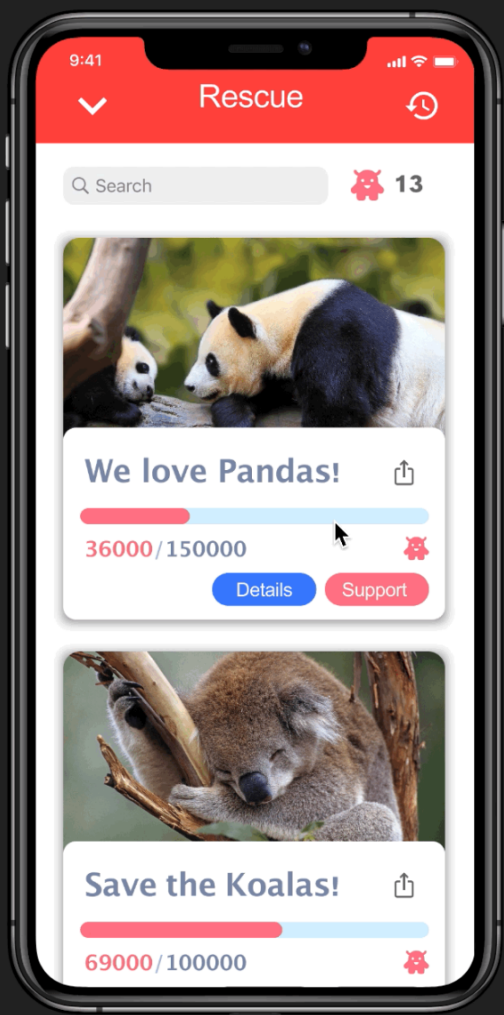
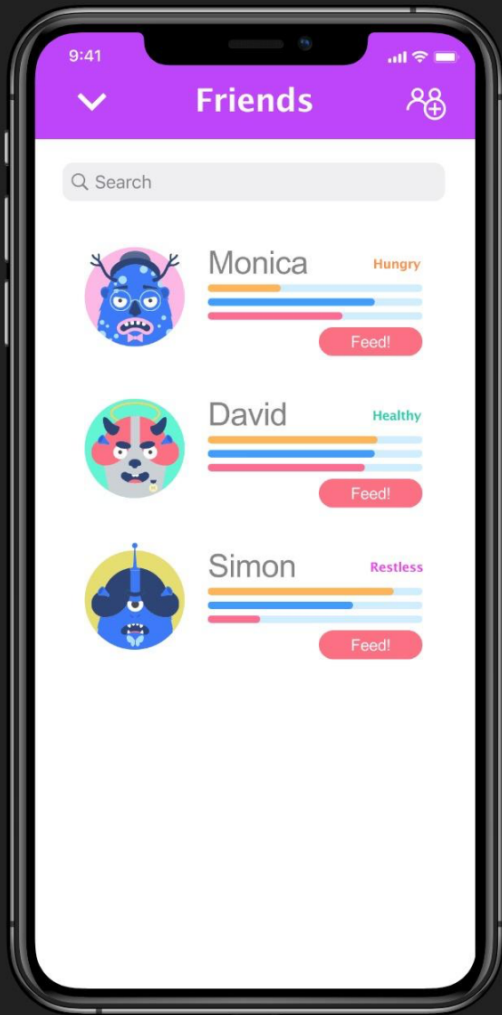
A few seconds

later...

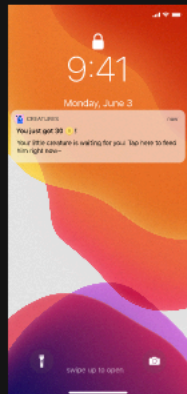
Feed Me.



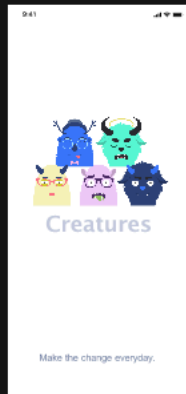
Make the change.



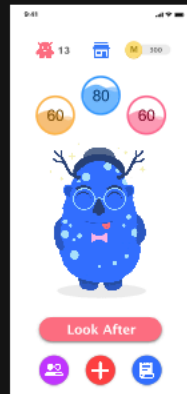
iPhone...



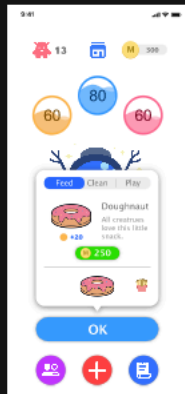
Welc...



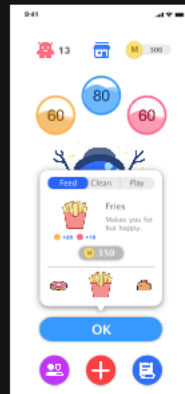
Creat...



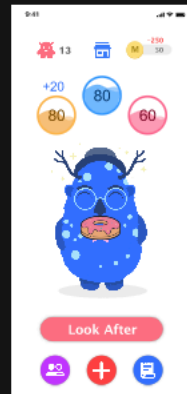
Feed



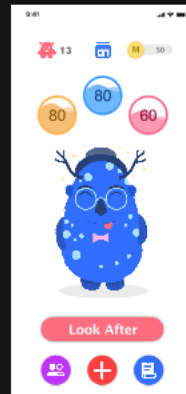
Feed 1



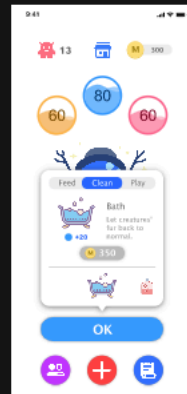
Feed 2



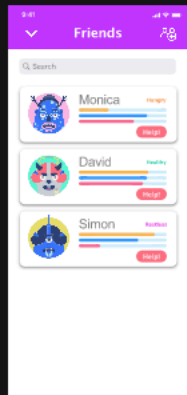
Feed 3



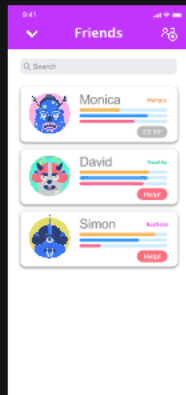
Clean



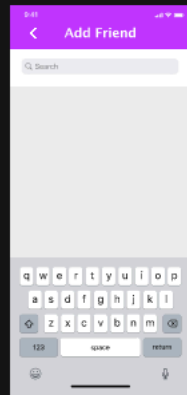
Frien...



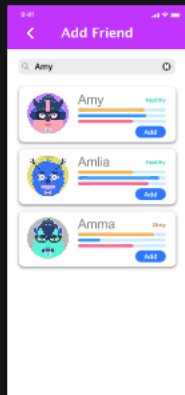
Help...



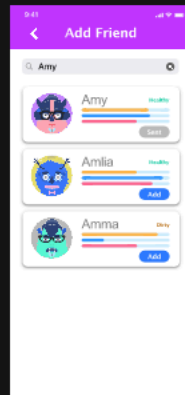
Add F...



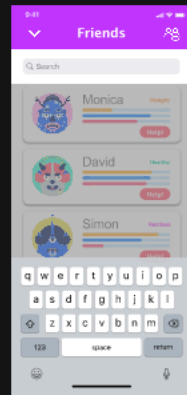
Add F...



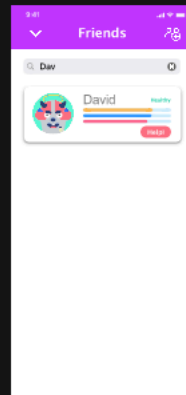
Add F...



Search...



Search...




Rescue

9:41

Rescue

Search 13




We love Pandas!

1, 236, 012 **Sent**

13 by you, 34 by friends.

Details Support




Save the Koalas!

245, 236, 001 **Sent**

39 by you, 108 by friends.

Details Support



Red Pandas need help!

2, 453, 087 **Sent**

2 by you, 65 by friends.

Details Support

Rescue 1

9:41

Rescue



We love Pandas!

1, 236, 012 **Sent**

13 by you, 34 by friends.

1 2 3

Why should we save the giant panda?

Support

Because we can.

But pandas also play a crucial role in China's bamboo forests by spreading seeds and helping the vegetation to grow.

So by saving pandas, we will also be saving so much more. We will be helping to protect not only these unique forests but also the wealth of species that live in them, such as dwarf blue sheep and beautiful multi-coloured pheasants.


And we will be providing a lifeline for a host of other endangered animals, including the golden snub-nosed monkey, takin and crested ibis that share these magnificent forests with

Rescue 2

9:41

Rescue

Search 13



We love Pandas!

Tap to share with AirDrop

Basak's Mac Scott's iPad Carmen's iPhone

Message Mail Add to Notes Facebook


Copy Print Save to Files Create PDF

Cancel

245, 236, 001 **Sent**

39 by you, 108 by friends.

Details Support



Red Pandas need help!

2, 453, 087 **Sent**

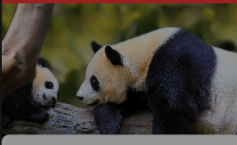
2 by you, 65 by friends.

Details Support

Rescue 3

9:41

Rescue



We love Pandas!

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Report

9:41

Report

Day Week Month Year

13

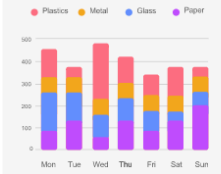


Tap to share with AirDrop

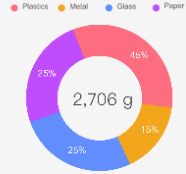
Basak's Mac Scott's iPad Carmen's iPhone

Message Mail Add to Notes Facebook

Copy Print Save to Files Create PDF



Day	Plastics	Metal	Glass	Paper
Mon	100	100	100	100
Tue	100	100	100	100
Wed	100	100	100	100
Thu	100	100	100	100
Fri	100	100	100	100
Sat	100	100	100	100
Sun	100	100	100	100



Material	Percentage
Plastics	45%
Metal	25%
Glass	25%
Paper	15%

2,706 g

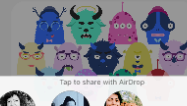
Report 1

9:41

Report

Day Week Month Year

13



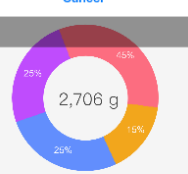
Tap to share with AirDrop

Basak's Mac Scott's iPad Carmen's iPhone

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Cancel



Material	Percentage
Plastics	45%
Metal	25%
Glass	25%
Paper	15%

2,706 g