

Design Report

Website Design & Implementation Assessment

Introduction to Web Design (DECO1400/7140)
Semester 1, 2019

By YIFAN WU (45203811)

Part A

Introduction

My design aims to guide the children from five to eight to develop good eating habits with the well-known Garfield comics. I used some characters in this comic and design some interactive games to make the website more acceptable to children of this age group. The design report contains part A and part B. Part A includes some preparatory work such as target audience, getting to know the stakeholders and the navigation and organization, In part b, I will talk about aesthetics and website implement

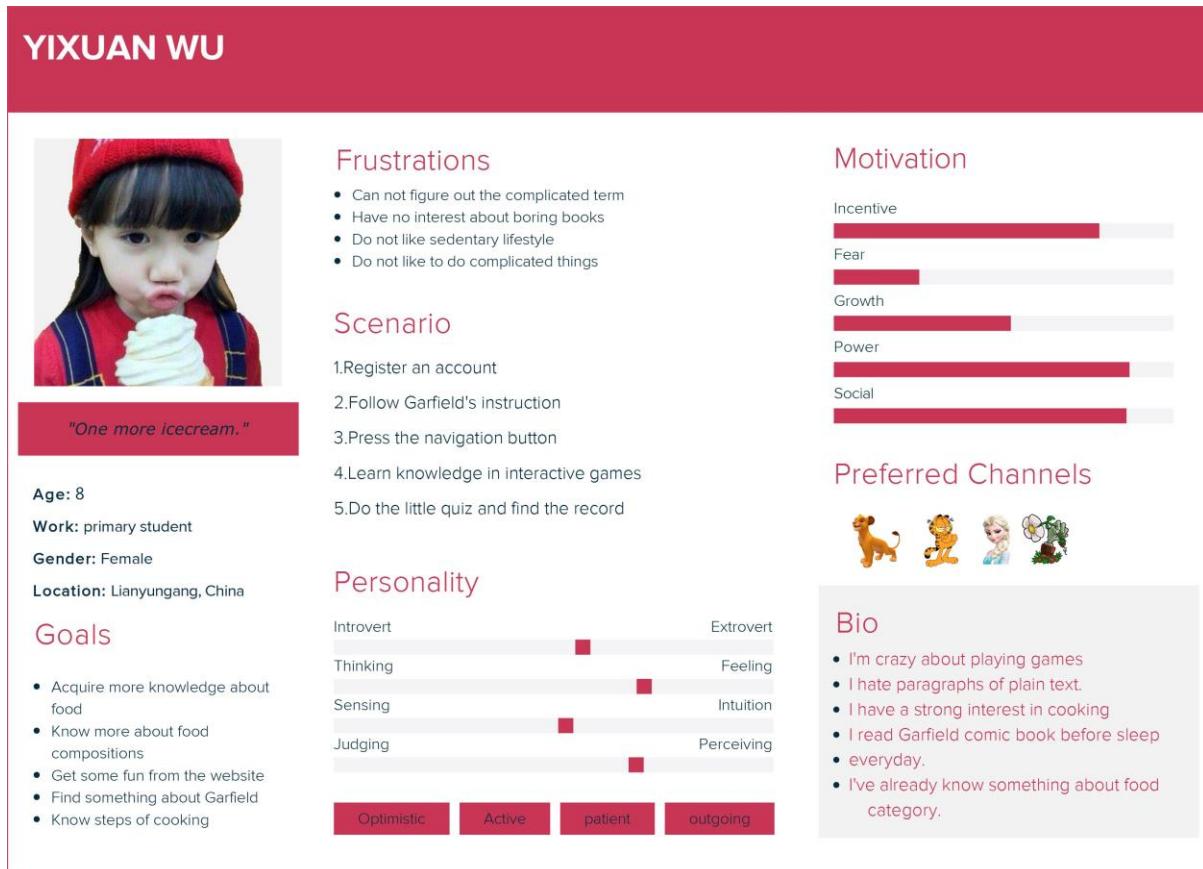
Introduce myself

I have a bachelor's degree in environmental design, and I have worked in a design company for some time, so I have some experience about design. Because of this experience, I'm good at create visual effect of the overall environment. In daily life, I like cooking and always cook for my family, so I am skilled in making various delicious food. In addition, because I often exercise, I need to control my daily nutrition intake. Therefore, I also know the nutrition of most kind of food. Due to the difference between my previous major and current major, I have never access to the knowledge of programming, so almost everything in this course is unknown to me, except the knowledge of graphic design. I took an active part in lecture, practical and tutorial, and review the slide of lecture and exercise it in practical. If I have questions, I will do self-study through videos and consult the tutor in practical. I also consult the classmates who have learned html and get their evaluations about my web page and revise by them.

Getting to Know Stakeholders

Target Audience

My target Audiences are children from five to eight, they are in a period of being curious about the world, the website will bring them to explore the composition of plants. It also aims at the children who like playing games. It will let them learn some simple steps about cooking when they play games.



ZIHAN ZHANG



"Could it be more challenging?"

Age: 6

Work: kindergarten student

Gender: male

Location: Shanghai, China

Goals

- Get something about animation
- Find something interesting from the website
- Play some games on the website
- Get something other kids don't know
- Know how food is prepared

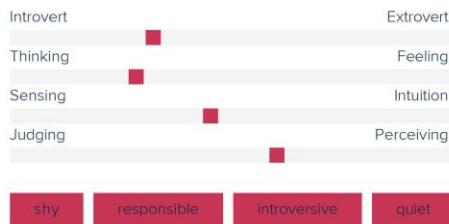
Frustrations

- Can not get enough information in class
- Be bored with the teaching methods in kindergarten
- Have no new games to play
- Do not want to find the target easily

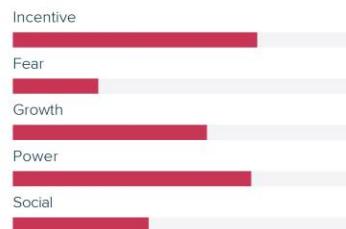
Scenario

- 1.Register an account and explore pictures on the first page
- 2.Read introduction about characters in Garfield comic
- 3.Click Jon's Garden and learn something about vegetables.
- 4.Keep browsing the rest of the content and catch all details
- 5.Share this website with his little sister and show what he knew from it

Personality



Motivation



Preferred Channels



Bio

- I like doing something challenging
- I'm curious about the unknown
- I want to know something deeper than what kindergarten teaches
- I want to play new forms of games
- I like to finish the task by myself, but I will share the result with my friends after finishing it
- I learn things and absorb them quickly, so I want to have a fast paced study

My first persona is an eight-year-old girl who is a real foodie. She is energetic and wants to taste all kinds of delicious food in the world. But many of the dishes can't be found around her house, so she wanted to learn to cook by herself. Since complicated recipes are too challenging for her, she decided to start with the easy one.

The second persona is an introverted boy who wants to be knowledgeable and admired by the classmates around him. He likes to study things by himself, explore the world and try some challenging things. Since he has tried most computer games which is available to him at his age, he wants to try some new forms of games.

For these personas, the girl is interested in food, and the other one is a child who likes to explore the unknown and be admired by others.

Therefore, the recipes provided in the food course should be simple and easy to operate. Children should be attracted by the aesthetic layout because they may be bored with long paragraphs of text. In addition, the website should have a certain degree of exploration content and moderately add the knowledge that is not expanded in the common class.

Chosen Educational Content

My website encourages children to develop a balanced and healthy diet. It gives information about vegetables, such as what they contain and which part they belong in the whole plant. There are also some audio recordings which aims to stimulate children's interest in eating wide range of foods. It also provides some simple recipes for kids to experience the cooking process. For children from five to eight years old, the way of playing is more likely to stimulate their interest, because it's their nature to play, and their over-active personality makes them not easy to read long paragraphs of text patiently. In addition, children are always eager to explore the unknown, so the process of exploration is particularly important. The site will accommodate this nature by adding exploratory elements such as clicking on images to discover hidden information

Chosen Story

I choose the Garfield Volume 1 comic written by Jim Davis (Author), Mark Evanier (Author) and Gary Barker (Illustrator, Artist). This book tells the funny daily life among fat cat Garfield, his owner Jon, dog Odie and his animal friends. The Garfield Show writer and comics luminary Mark Evanier teams up with beloved Garfield strip cartoonist Gary Barker to bring us all the laughs. The reason why this story is an interesting choice for the website's visuals and theme to the target audience is that Garfield is a well-known character to children. The cuteness of the cat itself can meet the standards of children who likes cute things. The wonderful plot and cartoon style is also attractive to children. In the theme, as a foodie, Garfield can resonate with many children who love delicious food. Having various delicious food and develop a healthy diet is also the theme of the website.

Navigation & Organisation

Card Sorting

Testing plan

1. Content

1. Users can do a simple interaction with Garfield during the q & a session before entering the website.
2. Users can register and log in directly next time.
3. Users can search for content directly on the site.
4. Users can click on the cartoon image on the home page to get detailed information about main characters in Garfield comic.
5. Users can click on the picture to get knowledge directly.
6. Users can experience interactive games and get knowledge from it.
7. Users can click on images to get relevant audio information.
8. Users can detect the pairing of audio messages and images by matching game.
9. Users can test what they've learned throughout the page with quizzes
10. Users can view their scores and review questions and errors.

2. Items

Jon's garden	pumpkin, carrot, cabbage, vitamin, the parts of the plants we eat
Garfield's dining room	steps of washing hands, yummy food, pork roll, beef burger, pizza, pasta, lasagne, cake
Arlene' s music room	sounds of eating, matching games
Garfield's test	quizzes, record

3. Actions

choose; register; click; explore; Hover the mouse; drag the mouse; play; submit; review

4. Frequent

1. Users can do a simple interaction with Garfield during the q & a session before entering the website.
 2. Users can click on the cartoon image on the home page to get detailed information about main characters in Garfield comic.
 3. Users can click on the picture to get knowledge directly.
 4. Users can experience interactive games and get knowledge from it.
 5. Users can click on images to get relevant audio information.
 6. Users can detect the pairing of audio messages and images by matching game.

5. Infrequent

1. Users can test what they've learned throughout the page with quizzes
 2. Users can view their scores and review questions and errors.

Photos of the activity running	
Feedback	How did it inform my early content organisation decisions
1.The navigation system should help users find where they are in the present.	1.Add breadcrumbs to help users locate.
2. The interaction of the introduction of vegetables should be strengthened.	2. Strengthen the interaction of the introduction of vegetables by adding voice when people click it.
3.The Garfield's dining room and “Parents” column can be integrated.	3.Use customized voice in “sounds of eating” column and let Garfield make action when the voice is played.

4.The activity of “Parent” column should be more specific.	4.Remove “Parents” column and add interactive game about cleaning hands in Garfield’s dining room.
<p>5.The sound could be customized to attract users.</p> <p>① What's exact function of "search"?</p> <p>② If it just introduces different vegetables, maybe instead of introducing between users and computers.</p> <p>③ Maybe two parts can be integrated.</p> <p>④ Parents should join in children's activities, in order to know their kids more.</p> <p>⑤ What are exact activities? video games?</p> <p>⑥ Customising the sounds maybe attract more users, I think, if you want to.</p>	<p>5.The navigation system need to be improved to meet users need of locating. I will use primary navigation and secondary navigation in every page and combine them with breadcrumbs which is a good way to help users do route decisions.I will use horizontal navigation bacause it's more adaptable than the others.In addition,I can hide it to leave more space for the display of pictures so that users can have a better visual effect.The visual organisation could also be strengthened by it because it adds dynamic elements.</p>

Navigation Systems

The key thing I learned from your Navigation Systems group discussion is mental mapping. During the discussion, I asked a question about how to do mental mapping to reflect on the website. This is one of the four core components of wayfinding. The users can know what from their previously experience can help them there. The experience should be consistent and understandable and help them know where to go next. The good websites always use impressive elements to show mental mapping. For example, the pandora garden use a whole scene animation to show their new products. Therefore, the effective navigation should use it to connect all the elements on the website. The mental mapping also needs to combine with the other core components of wayfinding: orientation, route design and closure. They can also help users to accelerate the formation of mental mapping.

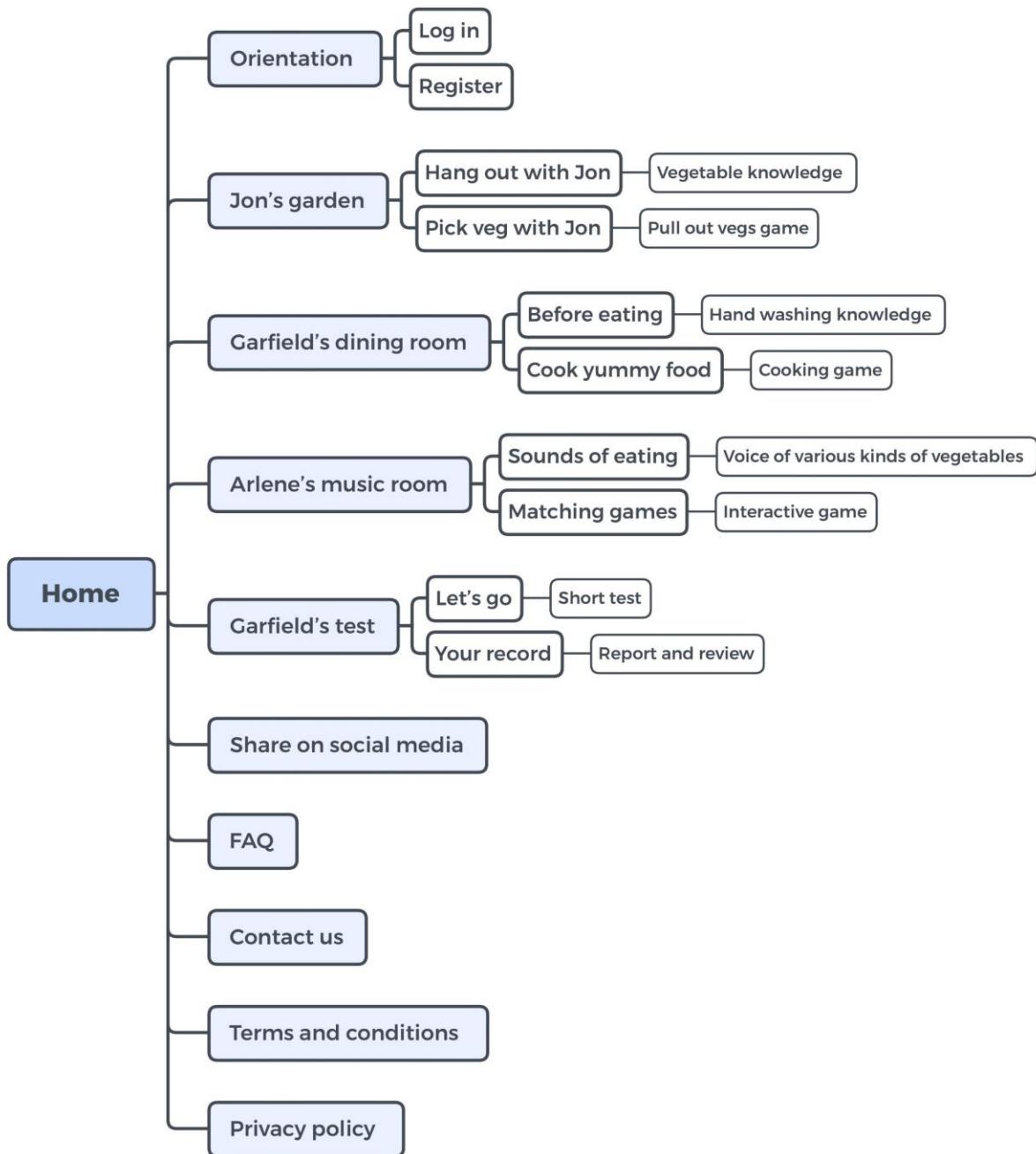
The second question I asked what the function of utility navigations is and how they usually show. They are always at the top left and top right of the page. They are usually look like this

and their icons are consistent with other icons website style. I think users should find them on nearly every page so that they can know where they can go and what to do in the next step.

The third question I asked is how we can make a drop-down menu unsurprising and if they are different from the poor example. Firstly, the dropdown should have the same colour and style as the upper menu such as the primary navigation.

The fourth question I asked is what form we should adopt to combine route decision with the failure case. A jumble of pictures and text affect the navigation system. We can add supplementary navigation under primary navigation, then these jumble of contends would be better organized. The breadcrumbs can also remind users where they are and help them do the decision.

In my website, I will use primary navigation, secondary navigation, breadcrumbs and footer navigation. With the help of the universal navigation, we can help users on orientation, route decision and build mental mapping. Because I adopt the horizontal navigation, the combination of primary navigation and secondary navigation could be a good choice. It is because I do not have too much items to show in the navigation area and I nee to ensure the width of the picture would not be occupied by the navigation area. Most users are used to browsing the site from left to right, especially the children because they are weak in reading. Based on how users read and process information in this way, they may be inherently more inclined to browse horizontal menus. The breadcrumbs can help users to locate themselves and the footer navigation can show some FAQ and legal notice which users could not want to see in normal times.



Site Map

Storyboard

PERSONA: YIXUAN WU



Yixuan Wu found this website when she browsed her friend's wechat moment



Yixuan Wu invited her mother to surf this website and have some fun together.



They opened the website on the laptop in Chrome browser.



Yixuan Wu tried to explore the hidden information on the website with mother's help.



She entered into Jon's garden and played the game of pulling up vegetables.



She found this website interesting and recommended it to her friends.

DATE: 07/04/2019

STORYBOARD NNGROUP.COM

From the storyboard ,we can see that the girl want her mother to play the website with her.

Then she asked her friends to play together. It means this site is suitable for singles and is also suitable for multiplayer

Visual Organisation

The key thing I learned from my Visual c group discussion is function of white space. It is an essential element in website and can separate different parts clearly. It is like Chinese painting, white space in it can make painting well-organised. Good structure must have white space to divide the pages. The guiding question I asked in the group discussion is which one is it your preference compared with Chinese video website. My answer is I prefer youtube because its navigation system is better than Chinese video website. We can search anything at any time and the vertical navigation cannot be changed so that I can know where I am. Its balance in visual organization is also better than the Chinese one because it uses vertical navigation to be symmetrical. In addition, it arranges footer at the bottom of the navigation column and the column can be hidden, so users can enjoy a tidy and contracted webpage.

Interactivity & Functionality

1. Wireframe

Homepage



(1) Interactive element functions:

The words fade when the user hovers over them;

Character details appear when the user clicks on the image.

(2) Designs used to engage specific target audience:

Use the picture of main character of the comics in title to attract children.

Make pictures of various characters in the comics as navigation icons.

(3) Designs used to strengthen the educational content:

Concealing relevant educational elements in pictures so as not to offend them.

It can also stimulate their desire to explore in the back part.

(4) Implementation method at this stage:

HTML tags:

<header>: Contains titles, search box, home button;

<nav>: Contains navigation bar;

<section>: Contains introduction pictures, arrow icon.

<footer>: Contains help, privacy, terms, contact us;

: Connect to the previous menu and home page;

: Defines images;

div: hover {color: red;} : Change the colour of the word when user hover the cursor on it;

<label for= " " </label>: Bind elements in the page such as the individual and the pop-up instruction box. It means when the user clicks on the character, they can see the big picture pop up.

CSS property:

font; background-colour; animation; flex; target.

Jon’s Garden/ Hang out with Jon



(1) Interactive element functions:

Click on vegetable pictures to get their instructions;

Click on Jon and Garfield to get different hints.

(2) Designs used to engage specific target audience:

Use the familiar characters in comics to do comment to increase their appeal;

Use bright colours to increase sensory stimulation and interest children;

Use Garfield’s funny language to create a relaxed learning atmosphere and make it easier for children to accept.

(3) Designs used to strengthen the educational content:

Use most common images of vegetables and fruits and a few parts that are not common and broaden their knowledge while giving them a sense of familiarity;
Use a summary to outline what they rarely know.

(4) Implementation method at this stage:

HTML tags:

<header>: Contains titles, search box, home button;

<nav>: Contains navigation bar;

<section>: Contains pictures of vegetables, fruits, Jon and Garfield.

<footer>: Contains help, privacy, terms, contact us;

: Connect to the previous menu and home page;

: Defines images;

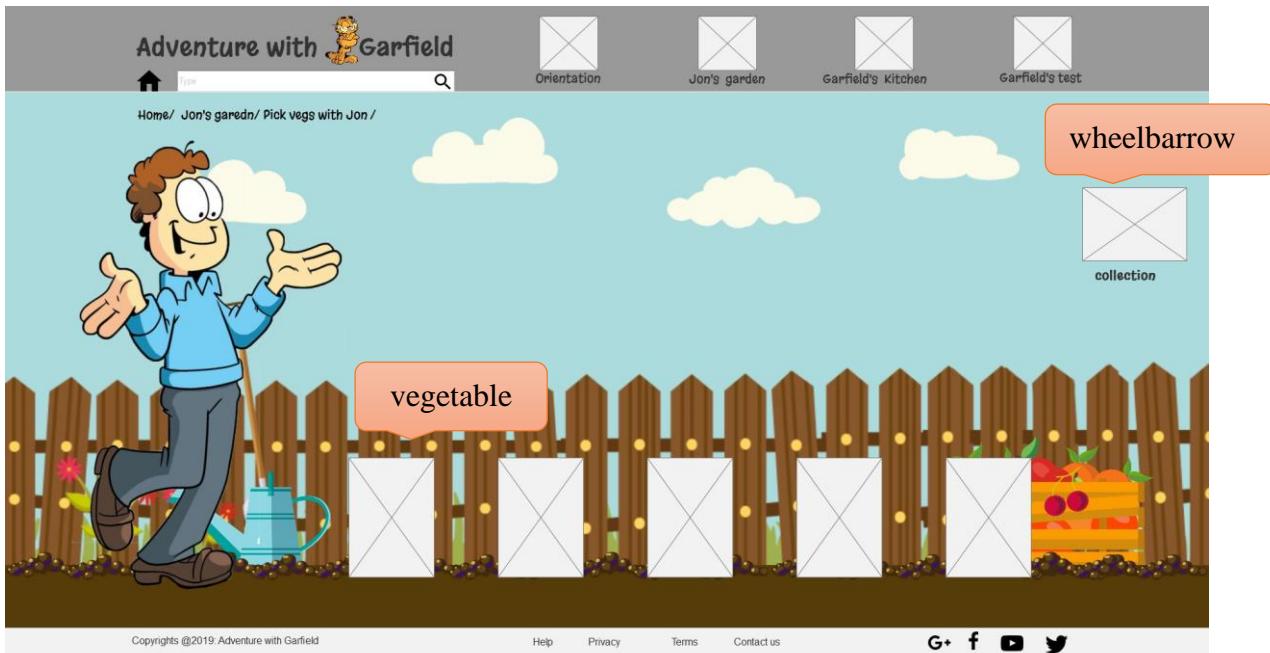
div: hover {color: red;} : Change the colour of the word when user hover the cursor on it.

<label for=“ ” </label>: Bind elements in the page such as the individual and the pop-up instruction box. It means when the user clicks on the character, they can see the big picture pop up.

CSS property:

font; background-colour; animation; flex; target.

Jon's Garden/ Pick veggies



(1) Interactive element functions:

- Drag the mouse to pull the vegetables out of the soil;
- Collect them into a wheelbarrow;
- Jon makes an explanation when the vegetable is pulled out.

(2) Designs used to engage specific target audience:

- Use the familiar characters in comics to do comment to increase their appeal;
- Use bright colours to increase sensory stimulation and interest children;
- Use game elements to increase its appeal.

(3) Designs used to strengthen the educational content:

- Use most common images of vegetables and fruits and a few parts that are not common and broaden their knowledge while giving them a sense of familiarity;
- Use Jon's instruction to teach knowledge about vegetables.

(4) Implementation method at this stage:

HTML tags:

<header>: Contains titles, search box, home button;

<nav>: Contains navigation bar;

<section>: Contains pictures of vegetables, fruits and Jon.

<footer>: Contains help, privacy, terms, contact us;

: Connect to the previous menu and home page;

: Define images;

div: hover {color: red; }: Change the colour of the word when user hover the cursor on it.

CSS property:

font; background-colour; animation; target; flex; animation(cloud).

jQuery: Use jQuery UI droppable function to implement drag-and-drop.

Garfield's Kitchen/Cook yummy food

Picture 1

Picture 2

Picture 2



Picture 3



Picture 4



Picture 4



(1) Interactive element functions:

Picture 1:

Garfield gives an instruction about the importance of washing hands.

Picture 2:

Click on the food on the table to get recipe;

Click on Garfield to get some suggestion;

Click on Odie to go to the next step.

Picture 3:

The user drag food shows in the recipe to pans within 60 seconds, then click on cook button. If the user can do it correctly within 60 seconds, it will turn to the page It will jump to the page where Garfield eats food. If the user cannot do it, it will show the picture of Jon.

(2) Designs used to engage specific target audience:

Use the familiar characters in comics to do comment to increase their appeal;

Use bright colours to increase sensory stimulation and interest children;

Use game elements to increase its appeal to children;

Show different outcomes to increase the playability of game.

(3) Designs used to strengthen the educational content:

Show the approximate content of the recipe for children;

Use game to deepen children's impression of recipes;

Use Garfield's instruction to interest children.

(4) Implementation method at this stage:

HTML tags:

<header>: Contains titles, search box, home button;

<nav>: Contains navigation bar;

<section>:

Picture 1: Contains pictures of towel, hand sanitizer, hand washing step and Garfield;

Picture 2: Contains pictures of Jon, 6Garfield, Odie, food, timer;

Picture 3: Contains pictures of food, pan, Garfield, timer.

<footer>: Contains help, privacy, terms, contact us;

: Connect to the previous menu and home page;

: Defines images;

div: hover {color: red;}: Change the colour of the word when user hover the cursor on it.

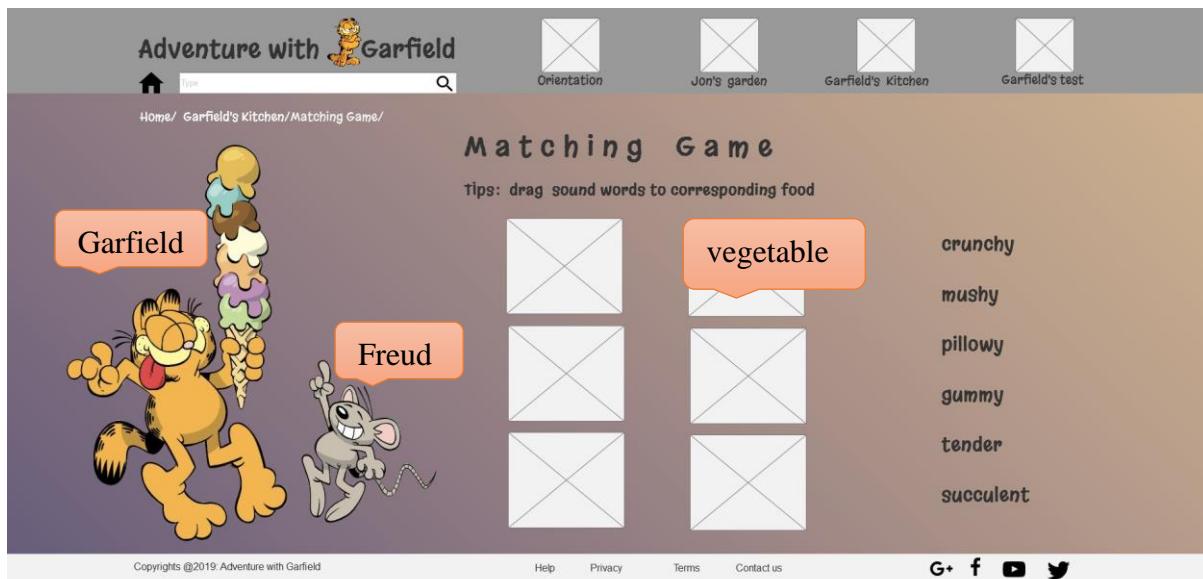
Use jQuery UI droppable function to implement drag-and-drop.

CSS property:

font; background-image; target.

jQuery: Use jQuery UI droppable function to implement drag-and-drop.

Garfield's Kitchen / Matching Game



(1) Interactive element functions:

- Drag word to the corresponding vegetable;
- Click the picture of Garfield and Freud to get hints.

(2) Designs used to engage specific target audience:

- Use the familiar characters in comics to do comment to increase their appeal;
- Use bright colours to increase sensory stimulation and interest children;
- Use game elements to increase its appeal.

(3) Designs used to strengthen the educational content:

- Use most common images of vegetables and fruits and a few parts that are not common and broaden their knowledge while giving them a sense of familiarity;
- Use matching games to enhance their interest in a variety of foods, especially vegetables and fruits.

(4) Implementation method at this stage:

HTML tags:

<header>: Contains titles, search box, home button;

<nav>: Contains navigation bar;

<section>: Contains pictures of vegetables, Garfield, Freud and words which are used to describe foods.

<footer>: Contains help, privacy, terms, contact us;

: Connect to the previous menu and home page;

: Define images;

div: hover {color: red;}: Change the colour of the word when user hover the cursor on it .

CSS property:

font; background-colour; target; flex.

jQuery: Use jQuery UI droppable function to implement drag-and-drop.

Garfield's test/Let's go+ Record

Question 1: Which part of the whole carrot do we eat in our diet?

- Root
- Fruit
- Leaf

Question 2: Which part of the whole broccoli do we eat in our diet?

- Root
- Fruit
- Leaf

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Question 3: Which part of the whole potato do we eat in our diet?

- Root
- Fruit
- Leaf

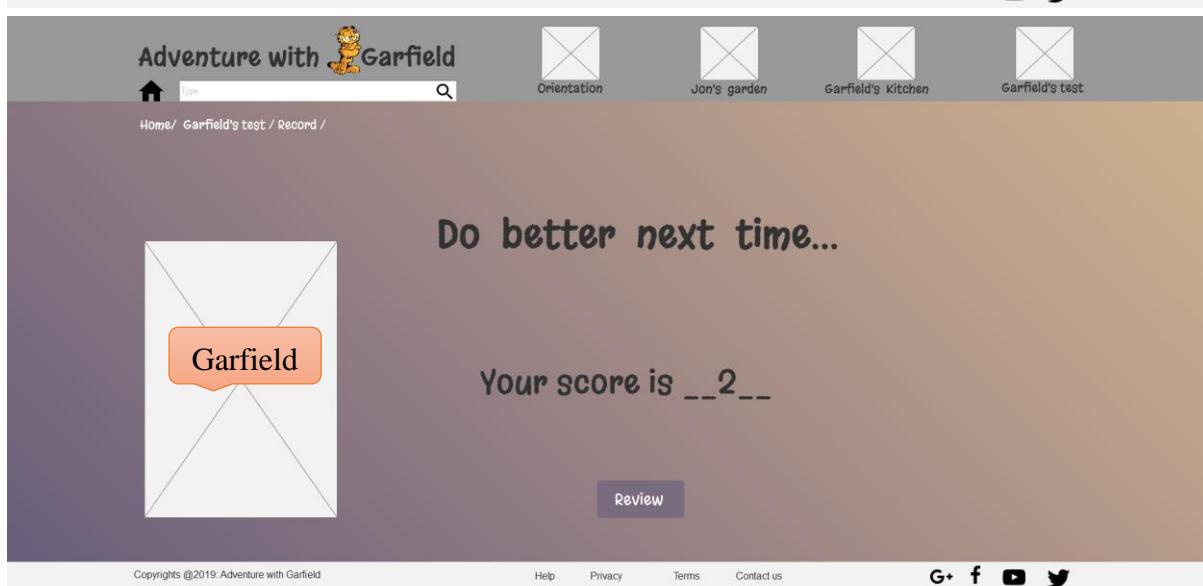
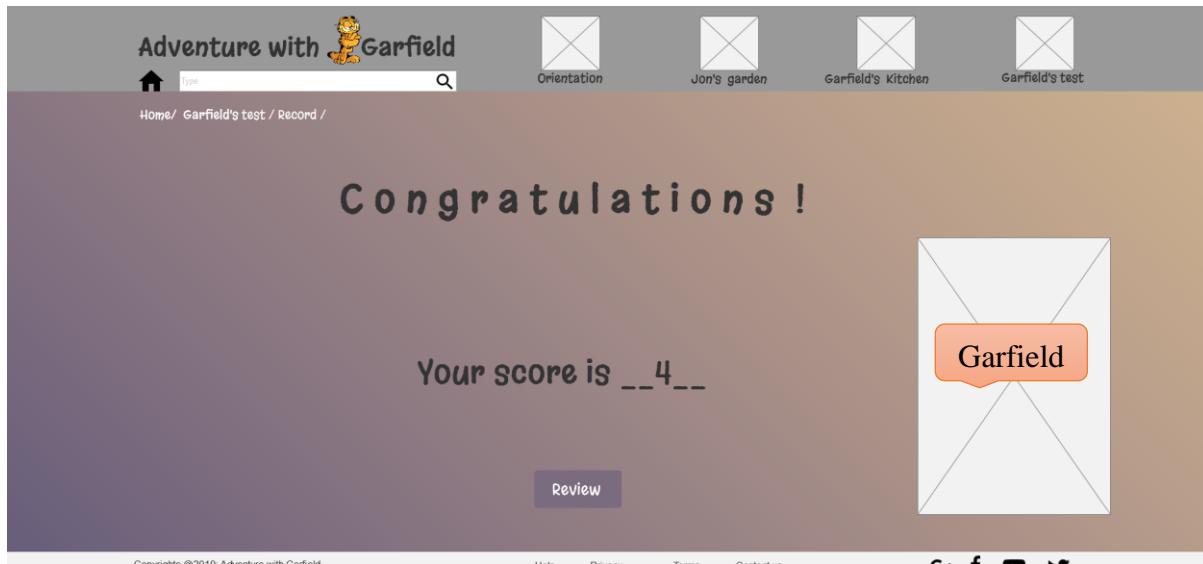
Question 4: How many steps do we need when we wash hands before eating?

- Root
- Fruit
- Leaf

Submit

This part grows underground.

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(1) Interactive element functions:

Click on the picture of Garfield get suggestions;

Click on the hint button to get hint;

Set two consequences. If the user gets more than 2 points, it will show a picture of happy Garfield and “congratulations” to encourage him; If the user gets less than 3 points, it will show “do better next time” and an unsatisfied Garfield.

(2) Designs used to engage specific target audience:

Use the familiar characters in comics to do comment to increase their appeal;

Use bright colours to increase sensory stimulation and interest children;

Use hints to reduce difficulty.

(3) Designs used to strengthen the educational content:

Use most common images of vegetables and fruits and a few parts that are not common and broaden their knowledge while giving them a sense of familiarity;
Use a quiz to enhance children's memory of the knowledge gained throughout the website and provides review option.

(4) Implementation method at this stage:

HTML tags:

<header>: Contains titles, search box, home button;

<nav>: Contains navigation bar;

<section>: Contains pictures of Garfield, hints and multiple choice.

<footer>: Contains help, privacy, terms, contact us;

: Connect to the previous menu and home page (review button)

e.g.:

<button></button>

;

: Define images;

div: hover {color: red;} : Change the colour of the word when user hover the cursor on it.

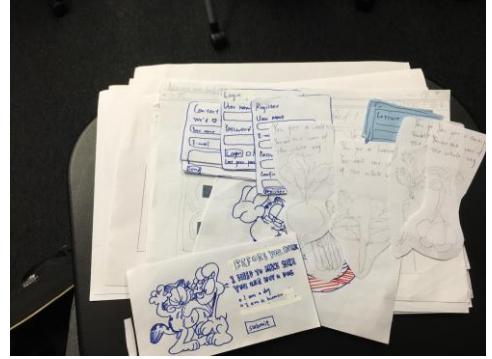
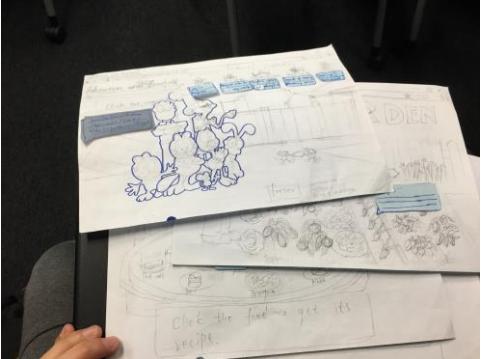
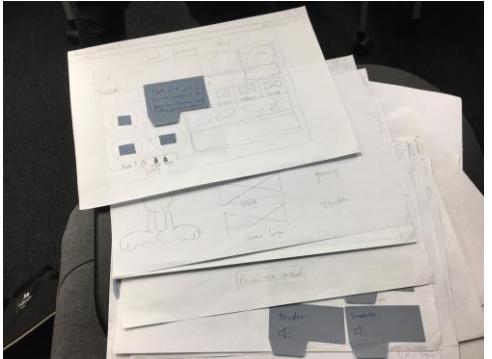
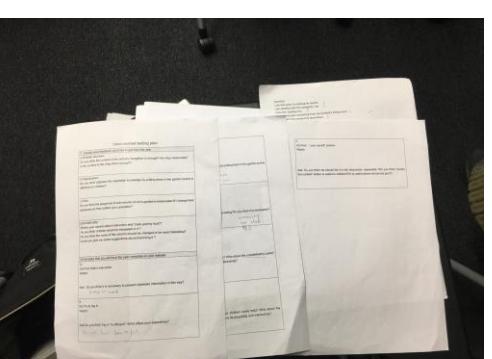
<input type="checkbox" name=" " />: Set multiple choice.

CSS property:

font; background-colour; target; flex.

Paper Prototyping

1. Photos of my paper prototyping

The response page	
The home page	
The other pages	
The test plan, questionnaire and likert scale	

2. Testing plan

1. Decide what feedback you'd like to get from the user	
Question	Answer
<i>a. Website structure</i>	
1: Do you think the content of the primary navigation is enough? Are they reasonable?	I think they are reasonable enough for me to operate.
2: Is the content in the drop-down enough?	I think something is redundant such as “contact us”. Maybe you can put it in the footer.
<i>b. Organization</i>	
Do you think organize the vegetable knowledge by putting them in the garden scene is effective for children?	I think it is a good idea. It increased the interactivity and set a landmark for the website.
<i>c. Flow</i>	
Do you think the sequence of sub-column of Jon's garden is reasonable?	I agree with this arrangement. I think you do not need to change it. If you change their sequence, there is no problem in operation, but the present arrangement could be more reasonable because children may solidify the knowledge they got in “hang out with Jon” when they play the interactive game in “pick veggies with Jon” session.
<i>d. Functionality</i>	
What's your opinion about instruction and “cook yummy food”?	I think Garfield should have a reaction when the yummy food is ready.
Do you think children would be interested in it?	Yes, I think it is quite interesting.
Do you think the name of the column should be changed or be more interesting?	Yes, some of them.
Could you give me some suggestions about how to improve it?	I think you should change “sounds of eating” into Arlene’s special instrument to arouse children’s interest.

2.Tasks that you will have the user complete on your website	
a. Do: Find Odie's instruction	
Watch	<p>Enter into the website</p> <p>Choose I'm a human to get into it.</p> <p>Click the picture of character on the first page.</p>
Ask Do you think it is necessary to present character information in this way?	I think you should make them move when user click it.
b. Do: Try to log in	
Watch	<p>Click the home icon and failed.</p> <p>Follow the instruction and register firstly.</p>
Ask Do you think "log in" is efficient? Will it affect your experience?	<p>It is necessary, but I think you'd better set a "remember me".</p> <p>option to make it convenient for users to log in next time.</p>
c. Do: Get into Jon's garden	
Watch	<p>Click the correct icon.</p> <p>Watch Jon's instruction, click the tomato and see the introduction.</p>
Ask Do you think organize the vegetable knowledge by putting them in the garden scene is effective for children?	I think it's good, but it still can be improved such as playing a voice when the instruction appears.

d. Do: Try to enjoy Garfield 's food	
Watch	<p>Click Garfield's dining room.</p> <p>Click the second element “cook yummy food” in the drop-down.</p> <p>Play the interactive game, drag the food onto the pan, choose the high fire and then click cook.</p> <p>Get successful message.</p>
Ask	<p>I think it's a good idea, but maybe children would skip this step, so you can add it in the second column and put it in first.</p> <p>You can add animation about the way Garfield eats after the food is ready.</p> <p>Add a waiting picture before the successful message is also a good choice.</p>
e. Do: Try to get into Arlene's music room.	
Watch	<p>Click the correct icon</p> <p>Click “sounds of eating”</p> <p>Click images of vegetables</p>
Ask	<p>It's not boring as a whole. But I think Garfield should move when people click images. In addition, this part may be combined with Garfield's dining room because of their similar functions.</p>

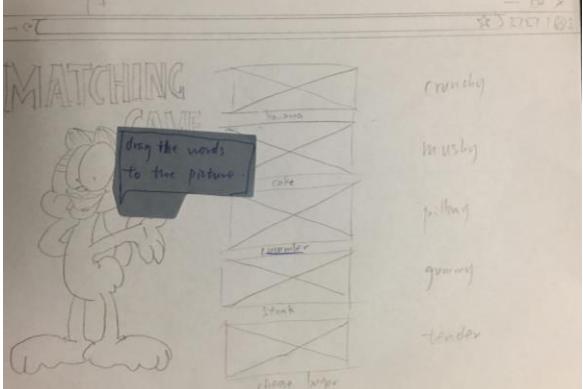
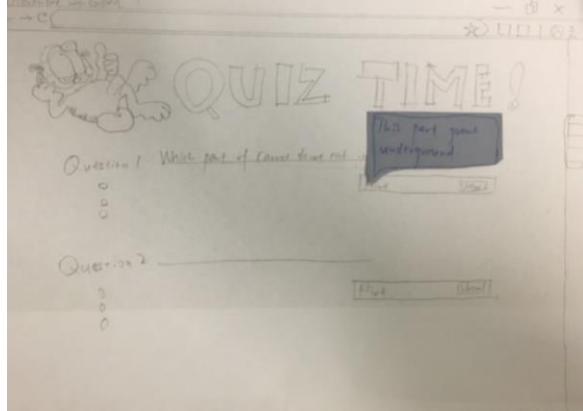
f. Do: Try to test what you learned today	
Watch	<p>Click Garfield's test icon.</p> <p>Click "Let's go".</p> <p>Click the hint and do the multiple-choice quiz</p>
Ask Do you think we should use "hint" to give children some help? What about the unsatisfactory parts? Any suggestions to improve its playability and interactivity?	Yes, hint is useful. You can add some gif when user completed one and the gif depends on whether the answer is right or wrong.
g. Do: Find "your record" column	
Watch	<p>Click the record icon in the drop-down.</p> <p>Check the record.</p>
Ask Do you think we should list it in the drop-down separately? Do you think "review the content" button is useful to children? If it is useful, where should we put it?	Yes, because it's convenient for users to check the last record. I think you should show the history records rather than just last time.

2. Photos of the activity running & feedback

Title	Picture	Feedback
Before entering		Interesting
Home page		I think you should make them move when user click it.
Hang out with Jon		I think it's good, but it still can be improved such as playing a voice when the instruction appears.

Pick vegetables with Jon page1		Add some voice
Pick vegetables with Jon page2		Use gif
Before eating		I think it's a good idea, but maybe children would skip this step, so you can add it in the second column and put it in first.

Cook yummy food page1		You can add animation about the way Garfield eats after the food is ready.
Cook yummy food page2		Add a waiting picture before the successful message is also a good choice.
Sounds of eating		It's not boring as a whole. But I think Garfield should move when people click images.

Matching games		This part may be combined with Garfield's dining room because of their similar functions.
Let's go		Hints are useful. You can add some gif when user completed one and the gif depends on whether the answer is right or wrong.
Your record		It's convenient for users to check the last record. I think you should show the history records rather than just last time.

Likert scale

Question	
I can find what I'm looking for quickly	3
I am satisfied with the navigation bar.	3
I love the loading icon.	5
I can clearly learn something from the Garfield's dining room.	4
I can predict the contend by drop-down.	5
I can understand instructions clearly.	4
I had a great interactive experience	4
tips:1totally disagree 5totally agree	

Part B

Aesthetics

Style Guide

1.Summarise the general aesthetic you've chosen and your design intentions.

Based on the age of the users is 5 to 8 years old, on the one hand, their pursuit of colour is mainly rich and rich at this stage. On the other hand, children often show strong curiosity.

They prefer to choose artworks which are in accordance with their aesthetic characteristics, which can help to develop their aesthetic awareness. For these reasons, the colour of the elements in my website has the above characteristics and contrasts.

The design principle of the website is to arouse children's desire to explore under the premise of ensuring that the website is educational, and then let them promote each other.

In the website, I use animation effects to makes the user interface more attractive. By using all the characters in the comics as the background on the homepage and reduce their transparency, the main elements of the interface are highlighted, and the cartoon image of the webpage is used to attract children's interests mostly.

Under the guidance of interest and explore new things from entertainment, children can learn actively. Therefore, I do not show the elements directly. By contrast, I hide them to let children explore the key elements by themselves.

By exploring, they will discover more interesting pictures and knowledge. This visual contrast not only serves to guide their interaction, but also allows their enthusiasm to be continually mobilized.

In the website, all the pages use the same navigation and footer to unify the style of the website. The navigation column uses the image of cartoon characters in Garfield, and the picture taken is yellow in colour as a whole. The footer also used the bright yellow colour of Garfield. In this way, users can get a more unified and systematic aesthetic experience.

3. The ways of visual aesthetic engage specific target audience

To be specific, the search bar of the search box uses the animation of the colour gradient to cause their click desire.

The title of the homepage uses the image of Garfield to make the text more attractive, thus getting rid of the children's stereotypes about the boring character of the text. All the navigation bars use the image of cute cartoon characters in comics, such as Garfield's owner Jon, his partners Odie and Nermal. In the drop-down menu, I used the colour of Garfield fur to make the style of the website closer to comics and to improve the consistency of the web style.

Apart from using cartoon characters, I also combined them with the education content. On the home page, there is a picture of fruits and vegetables above each character and play in turn. This represents the image of the cartoon characters below. For example, the picture over Garfield's head is onion and tomato, which is included in his favourite linage recipe. In this way, the pictures and comic images of the educational content can be more closely combined to achieve the unity of aesthetic. In addition, the home page uses a playing card as a photo frame. For example, Jon, who is the owner of Garfield, is set as the icon of the king in the playing card. Liz is set as the icon of the queen as the hostess. Garfield is set as the icon of the clown because it is naughtier. The background colour of the frame used in each character frame is also a colour similar to the character image. For example, Jon's card is the colour of the blue shirt he often takes, and Garfield is the colour of his hair. In addition, in the order of the characters, Garfield is placed in the centre position, reflecting the main elements of the website.

In terms of exploration, I used the pop-up bubble dialog as a caption. The colour of the dialog box also uses bright yellow as the background colour and border. When the user explores the corresponding element, the elements of the website can correspond to the content which are explored. For example, in "pick veggies", when the mouse is hovering over one of the menus, a bright yellow dialog box appears. I put all the interactive texts in the dialog box with the same background colour. When the mouse hover on it, the text will show a yellow background and the text can become larger, which can enhance consistency. In pick veg, when the user pulls out the vegetables, the vegetables can automatically jump out of the soil and present a dynamic visual effect. When the user clicks on a vegetable continuously, the vegetables will go to the soil and express the information that refuses to be pulled out, thus guiding them to explore other vegetables. In addition, in the "cook food", when the user puts four vegetables which was used to make lasagne into the pot, it will show the effect that Garfield is eating and enhance the child's sense of accomplishment. The same effect is achieved in "contact garfield". When the user clicks submit, a picture of Garfield's celebration will appear and thank the user for their efforts to improve the webpage.

4. Visualise

On most web pages, I try to use a single colour as the background. It does not cover the home page because the background needs to use comic image to combine with the introductory features of the page. It means it will introduce the information of the main character.

On the exploration page, apart from the elements of the garden, I used the blue gradient sky as the background. I use #6ab7be and #ecedbc to make the gradient ramp. The #ecedbc is lighter, so it would not affect the exhibition of the vegetable picture. By contrast, it would strengthen the environment of the garden by the contrast with the fence which colour is #85562d.



In pic veggies, I used #b0c153 and #70390f as the main colours, which is grass and fence separately. These two colours cross each other and highlight the green colour of the vegetable, which is the main element of this page,



On the wash hands page, in order to highlight the theme of water, I used blue(#a0cbcb and #0a9fa9)as the main colour and embellished with the yellow #edbc46of Garfield and the red #d13818 of the hand soap.



On the other page such as the get recipes, I use #c9ad8e and #73667d to make the gradient ramp because they are contrasting colours, the deep purple background is a good way to set off the main hair of the Garfield.



Index	Exploration				
#cfa946 #d75837 #b23f5a #719d9d #eeba21	#0c7e9c #b0c153 #edbc2a #fdb232 #8f562d				
Pick veggies	Wash paw				



Describe your text treatments. Include font names, sizes and weights.

In terms of text, considering the children's cognition ability, I used a sans-serif font to reduce their difficulty in recognition. The only font I choose is Margarine font, whose overall style is cute, so it can matches the style of Garfield comics. In addition, the single font can make the site consistent.

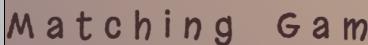
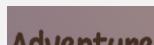
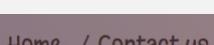
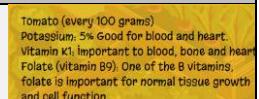
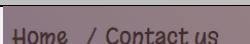
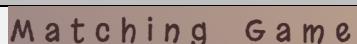
In terms of font size, I used three different font-sizes to meet different needs.

Firstly, I use 2.8em font as the main title of the page. This kind of title, which is the only text in the main body, should be conspicuous enough so that the user can recognize the content which could shows on the page.

Secondly, in the title of the entire website, I used the 1.8em font, which is much larger than the font of the text and is very easy to identify.

Thirdly, in breadcrumb, I use 1.4em font-size, which can allow people to see this part clearly because it can differentiate from the body of the text.

Fourthly, the text in main body is 1.1em, which is a little bit larger than the default font. It is because there is not too much text in main body. So I made it bigger to enrich the whole page.

Font name	Margarine			
				
Sizes	2.8em	1.8em	1.4em	1.1em
				
Weights	400		700	
				

Description of images and icon treatments.

	Type 1	Type 1
Image		
Icon	Type 2	Type 2
		 

Image treatments

About the image treatments, I have two kinds of images in the website overall. The type 1 is the image from the Garfield comic book. They always help to explain educational elements, help user to navigate and pop up as a surprise. For example, when user click the submit, the picture of Garfield will pop up and say “got it”.



Type 2 picture is the image from the royalty-free website. They are always used to construct the little game which can convey the educational elements to the user. They are also used to construct the environment and build up the atmosphere. For example, in cook food, I use board, pans and gas cooker to build the cooking area in kitchen.



Icon treatments

About the image treatments, I also have 2 types as a whole. The first type is the button of the breadcrumb navigation. They exist when user hover on the text of the breadcrumb.

The second type has navigation function. They performed like the navigation text. When user click the picture, they can jump to the certain page by the content delivered by the image. It performs better than the text because its target is much bigger than it.

Description of button/link treatments

The main application areas of the button are the breadcrumb and the submit option in “contact Garfield”. When user hover the pointer on the button, the text will be enlarged and the button will exist at the same time. Such a button directly expresses its meaning by words, and attracts the user's attention through the changed font color and background.

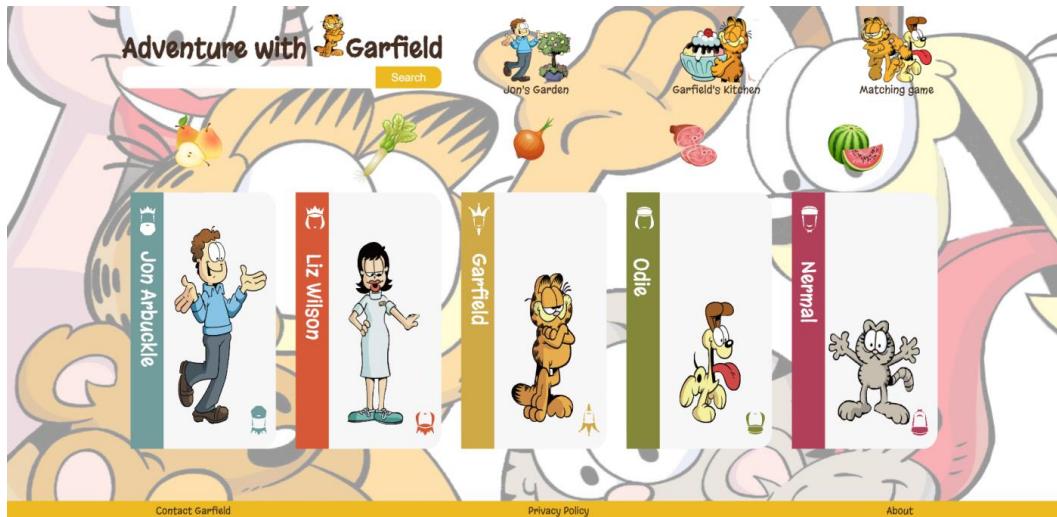


In addition, the picture of the navigation bar can be thought of as a big picture button. The user can direct to the page described by the picture by clicking the button. Such buttons express their meaning through metaphors and have the effect of stimulating the interest of children and supplementing the navigation of the text below.



1.2 Aesthetics User Testing

1.2.1 Screenshots of the mockups



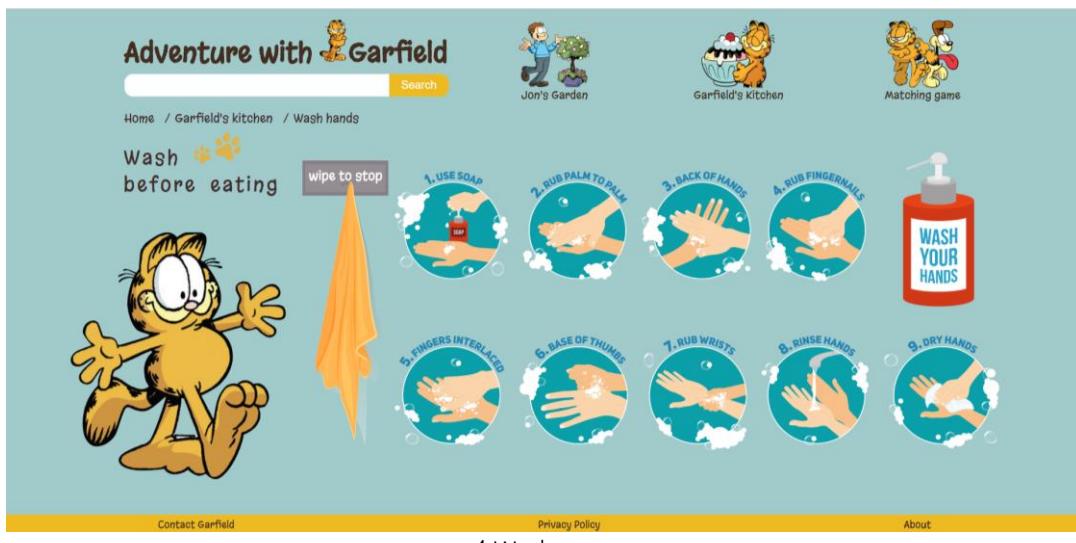
1 Home page



2 Pick veggies



3 Exploration



4 Wash paws



5 Get recipes



6 Cook food



7 Matching game



8 Contact Garfield

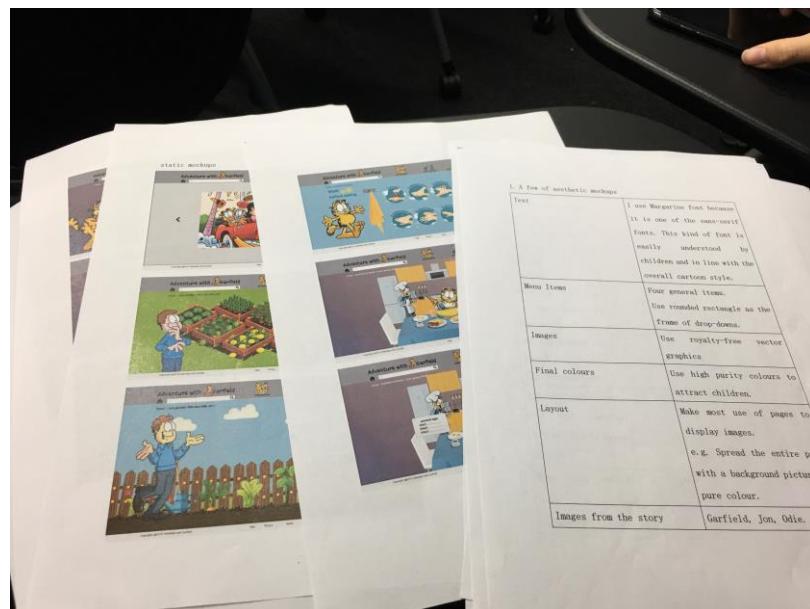
1.2.2 Testing plan

Text	I use Margarine font because it is one of the sans-serif fonts. This kind of font is easily understood by children and in line with the overall cartoon style.
Menu Items	Four general items. Use rounded rectangle as the frame of drop-downs.
Images	Use royalty-free vector graphics
Final colours	Use high purity colours to attract children.
Layout	Make most use of pages to display images. e.g. Spread the entire page with a background picture or pure colour.
Images from the story	Garfield, Jon, Odie.

visual and functional aesthetics	
Is the chosen colour scheme suitable for children?	
Do these pages have a good colour contrast?	
Does the typography follow the standard of good body typeface (high x-height/low stroke contrast/strong characters)	
Does additional colour support base colour?	
Is the font size, line length and line height suitable to read?	
Can type face, type-family and font convey information clear and efficient?	
Is the alignment used on the page suitable for reading?	
Does the page use too many images to replace text?	
Are the annotations enough to explain the information?	
Can the appearance of the button attract you to click on it?	
Does the website have a clear imagery?	

Verbal Review
Ideas used to correct misconceptions
Its strengths and weaknesses
What could be improved by offering solutions
How the critique is challenging you to think differently
Gather feedback (record them in sketchbook or notebook)
Reflect on criticism and re-evaluate your ideas in Design Report

1.2.3 Photos of the activity running



1.2.4 Feedback and Response

Feedback: The background colour of the homepage can be more lively

Response: However, if the background colour of the home page is livelier, it will affect the expression of the main element. So, I think I can do some animation on the character instruction to make them more interesting.

Feedback: You can get an action prompt in Exploration

Response: Good idea, I agree with you. I think Garfield can also do some supplements about educational content, such as eating more vegetables.

Feedback: Pick veggies' activities can have more changes. It could be better to let users try to click on more vegetables through these changes.

Response: Ok, I think it's possible to add a vegetable to the deeper after clicking again. It can be explained that if you click on a single vegetable, they will be shy, which will prompt the child to click to find other vegetables.

Feedback: The hand-washing interface knowledge display picture is too monotonous and can be supplemented by animation.

Response: Ok, I think you can make each step to show step by step and provide a button to pause in time so that the user can quickly go to the next selection menu.

Feedback: The menu only shows that it is too crowded above the food, it is not convenient to watch, and the food is a bit more, I seem confused.

Response: Ok, they will all be displayed on a wooden board on the side, and each time the user hover, the corresponding menu will be displayed.

Feedback: In the cook food interface, there are too many objects with a prompt box, which is easy to cause confusion. It is recommended to delete.

Response: Ok, I only keep a Garfield profile dialog.

2. Website Implementation

2.1 Accessibility, Graceful Degradation & Progressive Enhancement

2.1.1 Key things from the Accessibility, Graceful Degradation & Progressive Enhancement group discussions

For accessibility, the group discussion told me that everyone should have fair access to the network. Considering some group of people who are unable to use the network smoothly, such as the elderly, those who are not well-educated, and people with disabilities. Among those group of people, people with disabilities face the most serious problems. So, we have to do a specific design for them, it is our moral obligation to make our web pages accessible for everyone. They may use certain external tools such as motion capture sensors to assist them.

But as a web designer, what we can do is making the buttons on the website bigger, so that older people can click the buttons more easily due to the fact that their hands will involuntarily shake. The annotation of the technical terms on the web is necessary for less educated people so that the particular words won't deter them from browsing. We can also add letters to video content on the web to help people with hearing loss to navigate to the video content.

The design we do should base on the web accessibility design principles provided by W3C. The most thing I have learned from the principle is the understandable principle. The specific implementation method I understand is when we create a web page for Australian users, we should use `<p lang = "en">` and add notes for every unusual word and word abbreviation that users can hover over.

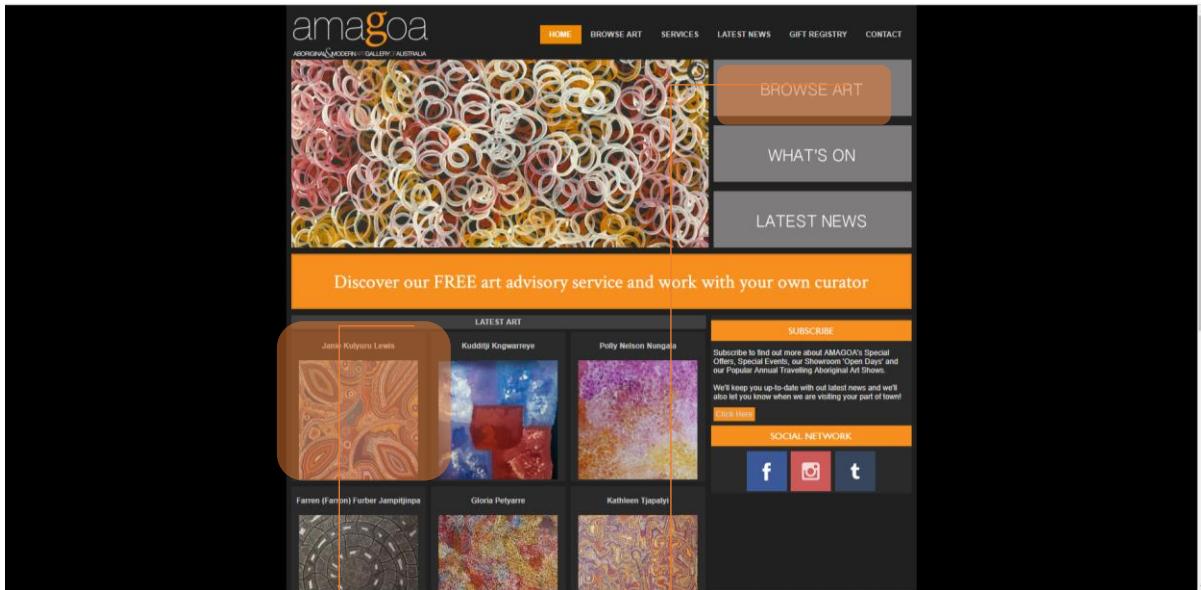
In the respect of Graceful Degradation & Progressive Enhancement, In the group discussion, we delved into the specific performance of this aspect and compared it with some examples. During the period we were completely opposite to the leader's point of view, but we convinced the leader in the end. The most important thing I learned in Graceful Degradation is that we can't use JavaScript to implement the basic functionality of the page, because we want to make sure that the page still works when it is turned off. So, the basic functions should be written in html and CSS. The main function of JavaScript should be enhancing the interaction between the website and the user rather than show the main function.

The group's presenter uses Wikipedia as an example of Graceful Degradation. When we turn off the JavaScript for this site, its basic functionality is still achievable; using eBay as an

example of Progressive Enhancement, because when we turn off JavaScript on this site Some features cannot be used. This is the unanimous opinion we finally reached.

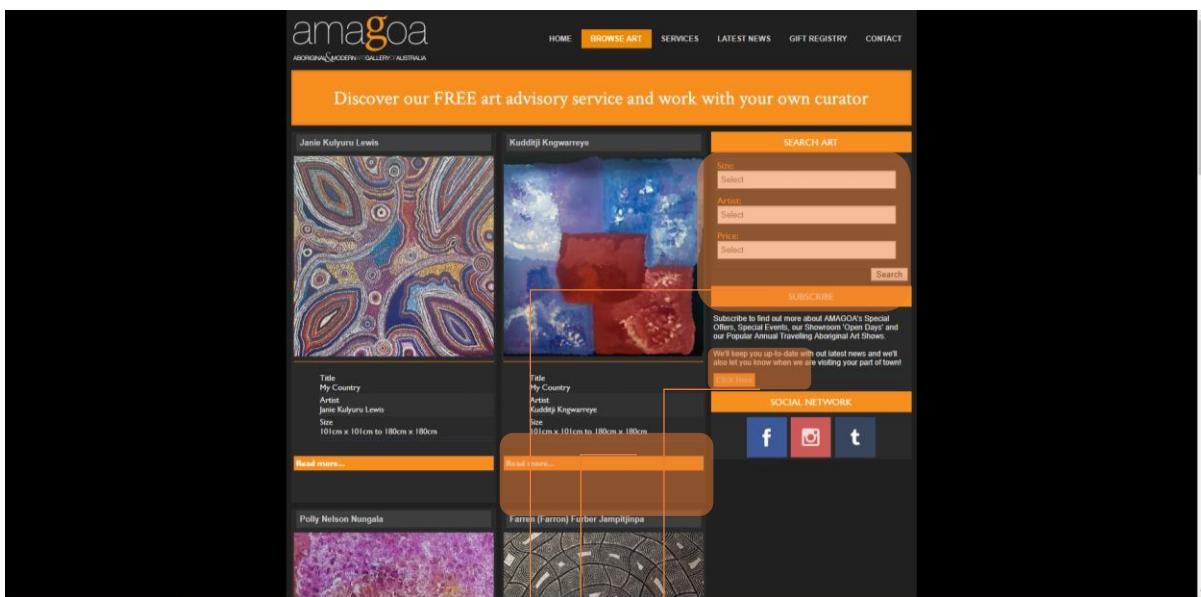
2.1.2 Group discussion.

2.1.2.1 Accessibility



Use text alternative

Use big buttons to make it easier for users
such as the elderly to access.



Use placeholder to guide users
Use colours to highlight content

Sauce: <http://www.amagoa.com/>

I used the Amagoa website, which is a website for Aboriginal Modern Art Gallery. The audience for this site is everyone, so special attention should be paid to site accessibility. When clicking the search icon.

Firstly, it uses big pictures as the text alternative, which follow the perceivable principle.

Secondly, it follows the principle of adaptable because the structure is maintained when the format of the format is changed.

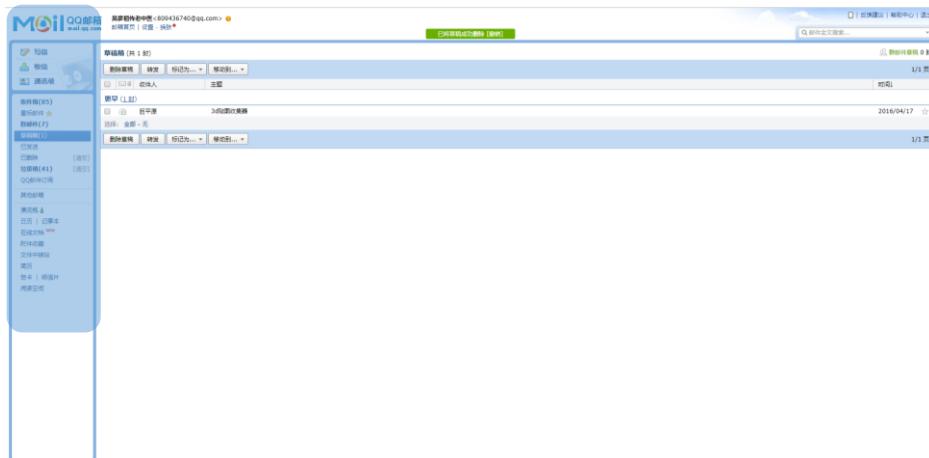
Thirdly, it uses colour to highlight the content such as "read more", which follows the principle of distinguishable.

2.1.2.2 Graceful Degradation & Progressive Enhancement

When the javascript was closed, there is a slight difference in the line spacing, but it doesn't affect read totally.

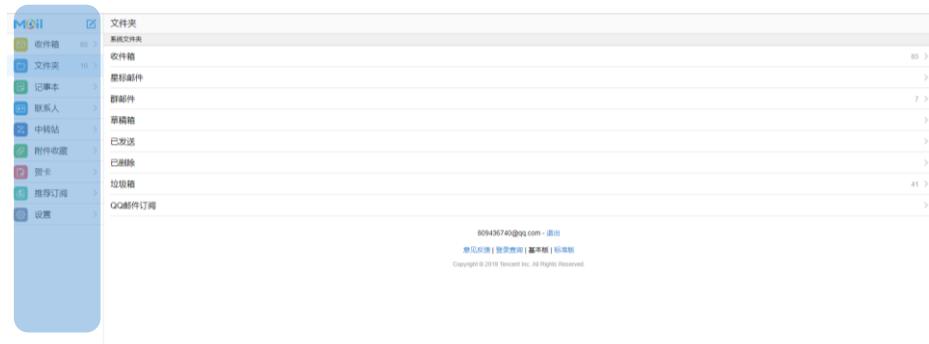
When we close the JavaScript, there is almost no effect on the arrangement of the text, only some parts about video missed.

Sauce:<https://www.abc.net.au/>



1The normal version

When the JavaScript was closed, the website jumps to the basic version automatically and all the common functions such as sended mails and the accepter mails can be used



2The basic version

I will use QQ mail as an example of graceful downgrades and use ABC's website to deepen my understanding of progress enhancement.

In QQ mail, when I turn off JavaScript, all the basic functions can still be achieved, but some decorative effects of the website have disappeared. For example, the star icon in front of the collection mail is gone, and the hover effect of pointer has disappeared. Overall, this site is compliant with the Graceful Degradation feature that turns off all of the basic functionality of JavaScript.

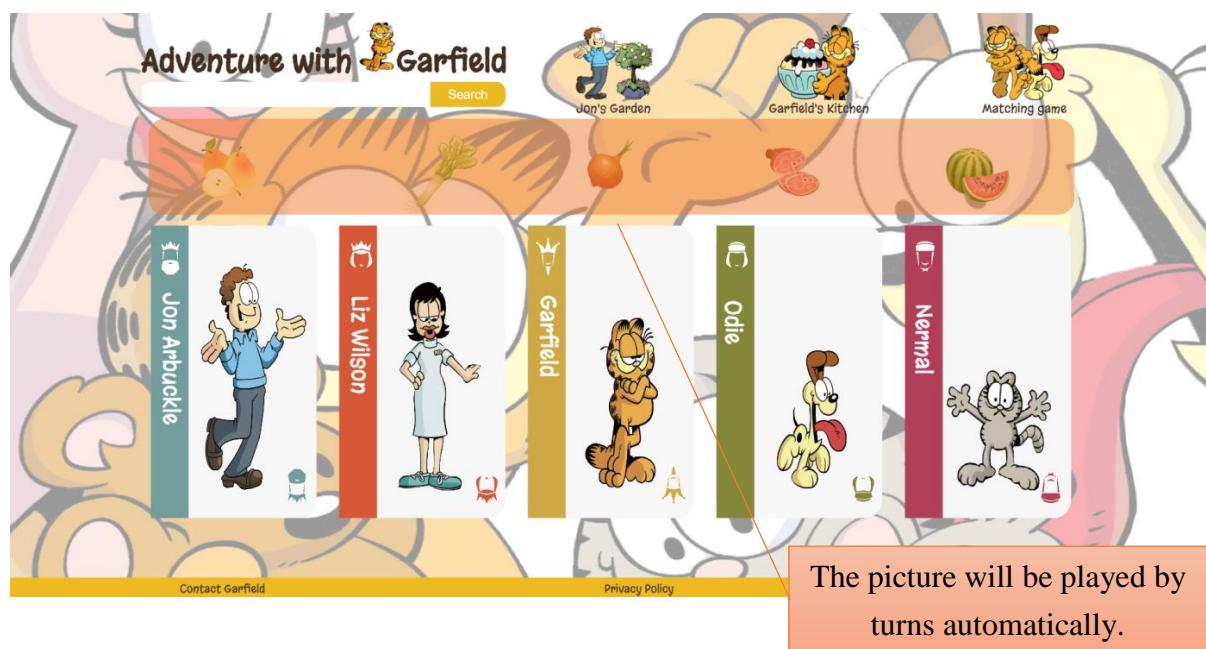
ABC news is an example of progressive enhancement. Because it is a news website, it focused more on contents instead of attractive functionalities. Even if it has JavaScript functionality, it can be adapted to different when the JavaScript test observation is turned off. Version of the browser and show the core content to users.

2.1.3 Rationalised JavaScript

In my original version, I was not quite willing to use JavaScript. It is because I thought that CSS can also do some special effects without having to use more complex JavaScript. In addition, considering the reasons for Graceful Degradation, I always try to avoid using it. However, when my CSS couldn't implement some features like draggable and droppable, I have to choose it. At this point I found that it is much more interactive than CSS. CSS cannot be implemented in terms of functions that require or not to be determined. At this time, using JavaScript will become simple and clear, and in the case of jQuery, coding will become very concise and clear, which will help the realization of the website idea. Some embedded plugins are more straightforward and can be implemented directly by embedding text in html.

I use five kinds of JavaScript in my website to enhance interaction with users, use them to implement some small games and combine comic content with educational content to make children's users more willing to explore.

My first JavaScript is on the home page. It's a slideshow plugin for jQuery built around ease-of-use. I choose the automatic fade function to show the multiple fruits on the top of the character's head. This plugin plays a role in introducing the educational content of the website, letting the children know the next What kind of knowledge to learn. In addition, it also plays a role in the character of the character below, which is quite a label of the character. For example, Garfield likes to eat lasagna, then its head is a picture of the lasagna ingredients that are played in turn. The use of carousel images helps to arrange the pictures of the ingredients in a limited space, making the interface clear and clear.



In the second JavaScript, I use click function and animation effects. At first, I only used CSS to make animations, but the auto play effect made it impossible for users to interact with it. Therefore, I decided to use JavaScript to combine click and animation effects and write animations directly in JavaScript. When I click on the vegetable, it will dig out of the ground and become bigger. When I click again, it will drill back into the ground and drill deeper to guide the user to click on other vegetables.



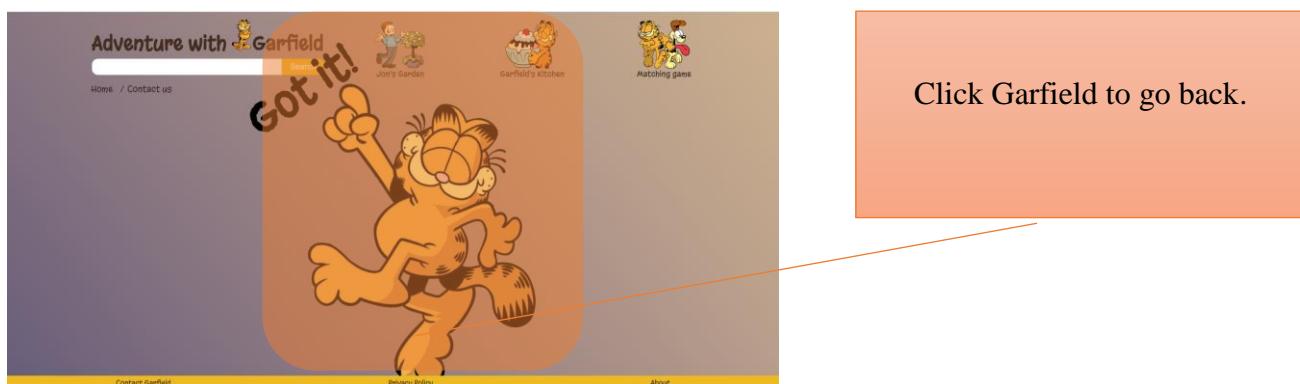
In the third JavaScript, I use is draggable and droppable and combines them with alert pop-up window. When the user drags four ingredients onto the pan, when the drag account is greater than or equal to four, the condition is reached, and then showing the image of Garfield eating and hiding other elements. In this process, the drag account is judged.



About the fourth JavaScript, I use is draggable, droppable, alert, and conditional judgment. When the user drags the text onto the correct object, the alert drags the correct, and the alert drags the error when the user drags the wrong object.



About the fifth JavaScript, I use is the click function. When the user submits the form, it will show the pop-up image. The user can click the image to return to the original page.



2.1.4 Great effect achieved

In my point of view, Html mainly provides the main content that the website needs to display, and then edits the html through CSS to achieve some dynamic effects such as hover effect and animation effect. However, when it comes to the need for logical judgment, it shows certain limitations. Although it can still be implemented in some cases, such as the matching of multiple animations, the workload of coding will become very large and it could be harder to debug. It means it is the time to use JavaScript to coordinate, which can make logical judgments and does not need a lengthy code.

Specifically, in my web page, I use html to create the basic framework of the web page, in which head, navigation, main-section and footer are planned. At this time, the order of all elements should be arranged in html, and the default ordering is used to reduce the workload. For example, the image arranged in the lower layer should be on the upper layer. With this, we can solve some problems about layer in advance. Href and image references are very important part of html and can be used to connect pages and load images separately.

In the head, I put information about Google fonts and CSS style sheets. Sometimes I put JavaScript here depending on the situation.

The text of the Main section is also an important part of html, but since my website uses the form of games to display educational content, so that children can get rid of the traditional and boring way of teaching. Therefore, there are not many parts of the text.

In the footer I set up contact Garfield, privacy policy and about us. This part is used to collect feedback and rubric aspects.

Second, I will use CSS styles to typeset websites and add effects to the site. These include text styles such as font size adjustments, colour settings, and skeleton adjustments. In my website, skeleton adjustments occupy the most time I used. I usually use flexbox, position, margin to achieve this. In this way, the website can guarantee to maintain the original layout in the case of scaling.

Finally, I added JavaScript to add interactive effects to the site, enhance the combination of educational content and comics, and allow kids to learn while playing.

Combining the above three aspects, the great effect can be generated.

2.2 Security & Privacy

2.2.1 Key thing learned from group discussion

From the group discussion, I know why the SSL is important. Briefly speaking, it is the standard implementation for establishing a secure and encrypted link between the computer and the web server. It is also the basis for secure http or https. However, not all SSL certificates and certificate providers are made equal. One of the top-tier types of certificates base the certificate's name itself is displayed on the browser.

In actual performance, it mainly appears as protecting data packets while transforming and prevent malicious actions on the website.

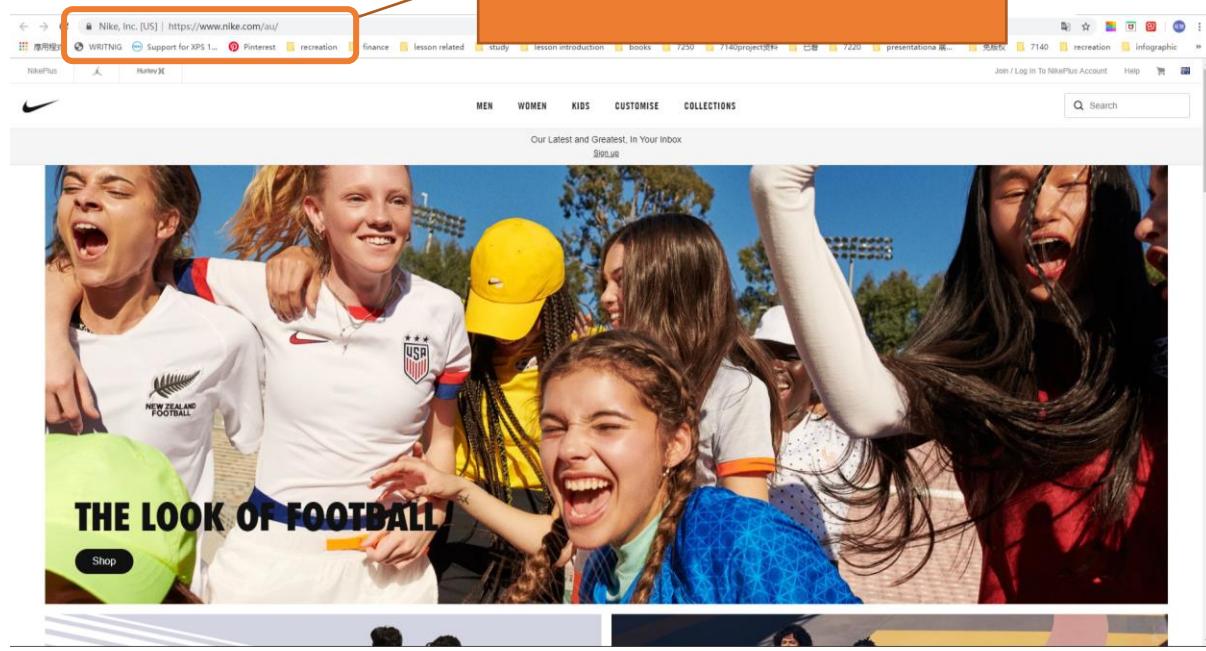
Secondly, to make my website more reliable, I should reduce the number of the pop-up and give the obvious way to find and write feedback. This is what I learnt from the armour sport website presented by the presenter.

In terms of privacy and cookie, I have learned the privacy show the way they collect user's data and the cookies can track users' operation. The group leader shows us an app which can help us find the malicious behaviour about cookie, I think it is quite useful for the user who are worry about the security of the Internet environment.

2.2.2 Group discussion

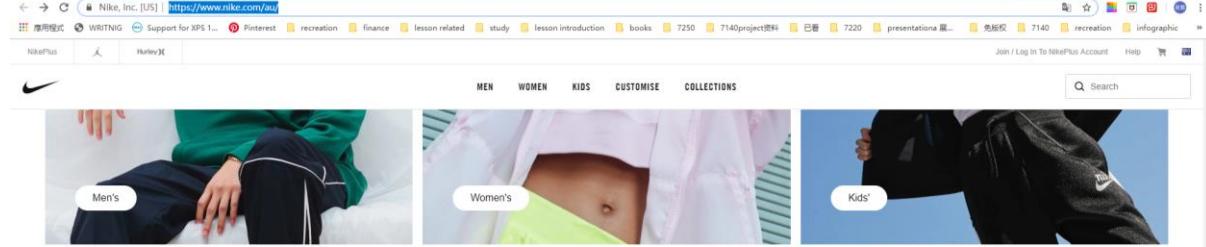
2.2.2.1 Security:

HTTPS means can secure the address



The Look of Football

Shop



Shoes	Clothing	Kids'	Featured
Sneakers and Shoes	All Clothing	Kids' Sneakers	New Releases
Football Boots	Shorts	Kids' Backpacks	Bags and Backpacks
Running Shoes	Trousers and Leggings	Kids' Football Boots	Footballs
Netball Sneakers	Tracksuits	Kids' Running Shoes	Goalkeeper Gloves

FIND A STORE
JOIN NIKE+
SITE FEEDBACK

GET HELP
Shipping and Delivery
Returns
Payment Options
Contact Us

ABOUT NIKE:
News
Careers
Investors

The feedback is hard to find out

Source: <https://www.nike.com/au>

NIKE PRIVACY POLICY AND COOKIE POLICY

IF YOU ARE LOCATED IN ONE OF THE FOLLOWING COUNTRIES, CERTAIN COUNTRY-SPECIFIC TERMS APPLY.

Americas: Argentina
Asia: Korea
Middle East: Bahrain, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, the United Arab Emirates

WHO Is Responsible for the Processing of Your Personal Data?

The Nike entity responsible for the processing of your personal data will depend on how you interact with our Sites and Apps and where you are located in the world. The relevant Nike affiliate(s) or Nike, Inc. are referred to as "Nike" or "we". Please review our [List of Local Entities](#) for the name of the Nike entity responsible and appropriate contact information.

WHAT Personal Data We Collect and WHEN

We ask you for certain personal data to provide you with the products or services you request. For example, when you make purchases, contact our consumer services, request to receive communications, create an account, participate in our events or contests, or interact with our Sites or use our Apps. This personal data includes your:

- Contact details including name, email, telephone number and shipping, billing address
- Login and account information, including screen name, password and unique user ID
- Personal information such as gender, hometown, date of birth and purchase history
- Payment or credit card information
- Images, photos and videos
- Data on physical characteristics, including weight, height, and body measurements (such as estimated stride and shoe/foot measurements or bra size)
- Fitness activity data provided by you or generated through our Sites or Apps (time, duration, distance, location, calorie count, FuelPoints, pace/stride)
- Personal preferences including your wish list as well as marketing and cookie preferences

We use additional personal data in order to enable particular features within our Sites and Apps or services. For example, we request access to your phone's geolocation data in order to log your run route, your contacts to allow you to interact with your friends, your calendar to schedule a training plan or your social network credentials in order to post content from an App to a social network. This personal data includes your:

- Movement data from your device's accelerometer
- Photos, contacts and calendar information

Source:https://agreementservice.svs.nike.com/au/en_gb/rest/agreement?agreementType=privacyPolicy&uxId=com.nike.unite&country=AU&language=en&requestType=redirect

I explored Nike's online store and tested its security. First of all, it is https instead of http, which means that when you shop or browse above, the user's security can be guaranteed, and you have a secure network environment. However, some factors also make its security drop, such as the difficulty of finding the entrance to the feedback, which will reduce the user's expectations, but its good structural layout makes this shortcoming to some extent ignored. In addition, privacy text is also used in privacy to guide people to read.

2.3 Hi-Fi User Testing

2.3.1 Testing plan

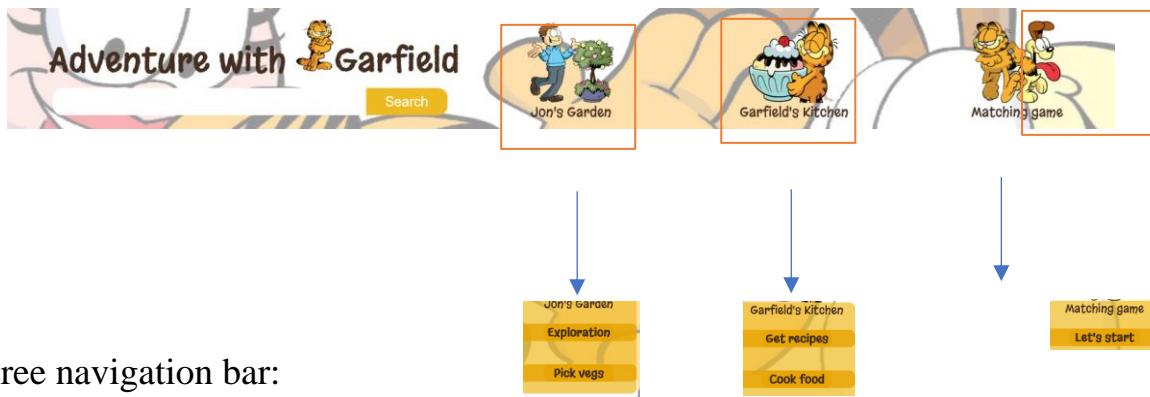
Hi-Fi testing plan

2.3.1.1 Instruciton

The website utilises the Garfield comic to lead children to develop an healthy eating habits. They will learn a lot about nutrition and acquire the knowledge from the little game.

2.3.1.2 The considered elements

Text	I use Margarine font because it is one of the sans-serif fonts. This kind of font is easily understood by children and in line with the overall cartoon style.
Menu Items	Four general items. Use rounded rectangle as the frame of drop-downs.
Images	Use royalty-free vector graphics
Final colours	Use high purity colours to attract children.
Layout	Make most use of pages to display images. e.g. Spread the entire page with a background picture or pure colour.
Images from the story	Garfield, Jon, Odie.



Three navigation bar:

Trying to find the drop-down column and figure out the brief of the website.

2.3.1.3 Outline what feedback get from the user

Comprehensive evaluation of website	
Navigation & Organisation	Do you have a fluent flow of surfing?
	Can you locate yourself in the website?
	Can you go back to the homepage immediately?
	Do you think the navigation system is enough to support your browsing behaviors?
	Can you recognize the site map clearly?
Interactivity & Functionality	Do you get enough interaction from the website?
	Do these interaction methods let you feel interesting?
	Can you give some suggestion about enhancing the Interactivity?
	Are there any redundant functions?
	Do you think any new functions should be added?
	Does additional colour support base colour?

	Can you get enough introduction before you are going to do the next activity?
	Do the buttons lead you to the right direction and make the process more efficient?
Aesthetics	Is the chosen colour scheme suitable for children?
	Can type face, type-family and font convey information clearly and efficiently?
	Does the page use too many images to replace text? Are they suitable for children?
	Can the appearance of the button attract you to click on it?

Verbal Review
Ideas used to correct misconceptions
Its strengths and weaknesses
What could be improved by offering solutions
How the critique is challenging you to think differently
Gather feedback (record them in sketchbook or notebook)

Reflect on criticism and re-evaluate your ideas in Design Report

User's task

Find exploration

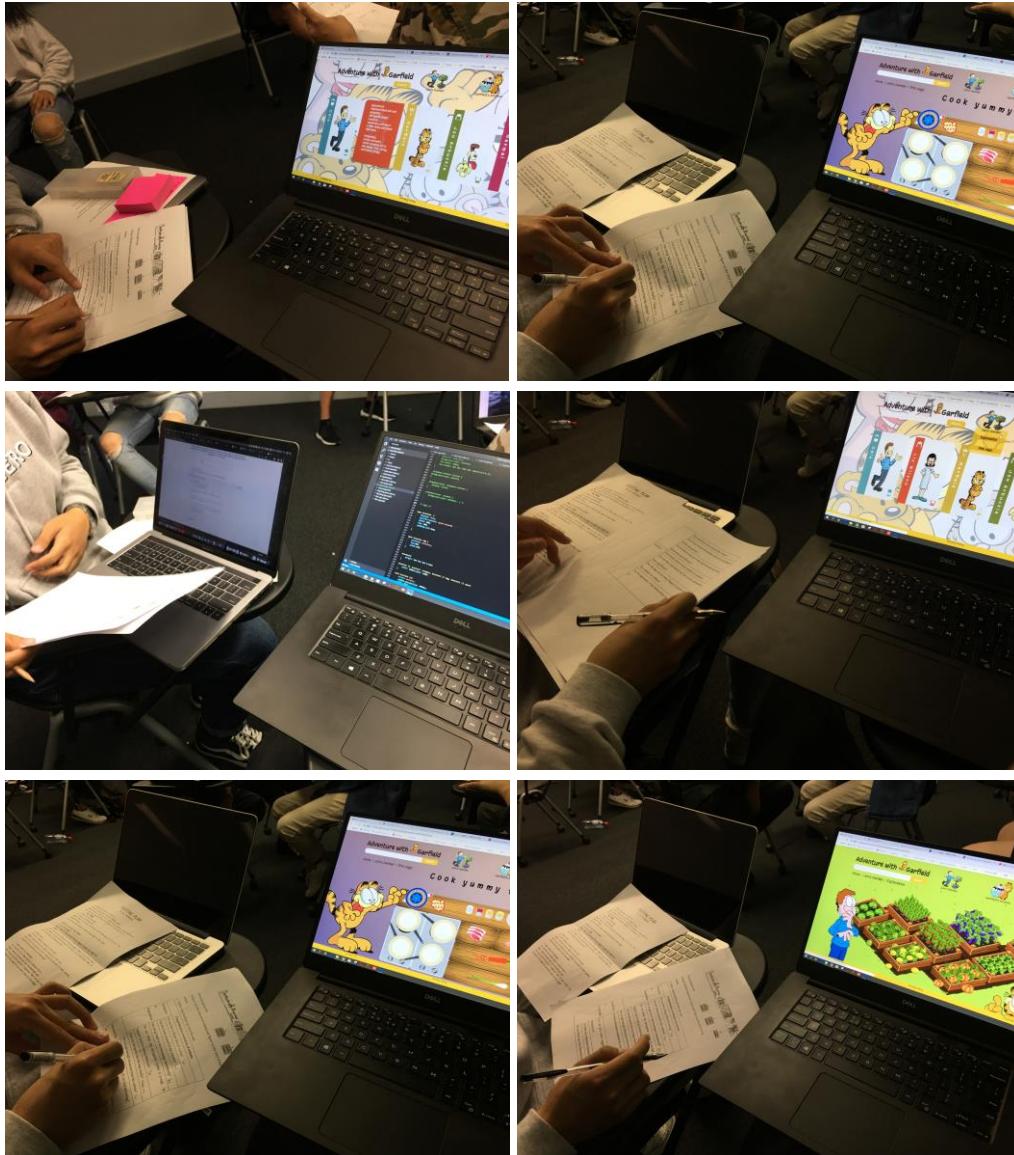
Experience “pick veggies”

Experience “cook food”

Experience “Matching game”

Submit feedback

2.3.2 A photo of the activity running



2.3.3 Feedback and Response

During this activity, I get some feedback about visualisation and functionality on three groups of users.

Feedback: In the home page, the front and back effects of the flip should be consistent and have common elements.

Response: Yes, I can enlarge the logo of the frontal character card as the background of the reverse side, and increase the uniformity of the color of the front sidebar as the main color of the back side.

Feedback: In the exploration, the mouse hover effect image sometimes hover error, it is recommended to import the image as a rectangle, add a rotate attribute in css.

Response: I will rotate each image and rotate it to a specific angle in css.

Feedback: The towel in the Wash hands should work. Think of it as an animated stop switch. Consider moving it to the attention of the user.

Response: Ok, I will add a link to the towel so that the user can jump to the next page at any time without waiting for the animation to end. I will add an effect to the animation effect, and it will be more natural with the hook as the axis.

Feedback: Cook food game can't go back to the main interface when I finish the game task

Response: Ok, this is a very serious problem. I will add a link to the pop-up image and add a text prompt to allow the user to quickly and easily return to the original interface.

Feedback: In the matching game, since the tips have been placed under the title, Garfield's mouse hover reminds me that the characters can be removed.

Response: Ok, I also think that the function is a bit repetitive and some grab the main position of the game.

3. Conclusion

3.1 summary

Prototype--Aesthetics—Final website



The purpose of my website is to urge children aged 5-8 to develop good eating habits. At this stage, a comprehensive diet is important for their healthy growth, whether it is vegetables or meat. So, I designed the activities of pic veggies to make kids love to eat and cook food to make children love meat.

In the process, through the knowledge gained from the lectures and the group discussion again and again, such as navigation, graceful degradation. I do design iterations again and again. From card-sorting to paper prototype In the aesthetic test, I made a lot of changes to the page from structure to detail.

I mentioned in the original idea that I wanted to design some interactive games. Now, although some elements are limited to the current programming technology, most of the

interactions have been made with the help of practical and lectures and the help of tutors and classmates. Realization, my level of programming has also made a breakthrough in this process. At this point, my website combines it with the educational content by extracting the elements of Garfield comics, and finally achieves the overall satisfaction of me.

3.2 Course reflection

At the beginning of this course, I was a bit afraid of programming because I had no foundation at all, but through the training of lecture, tutorial and practical, I gradually became familiar with programming. But when I finally started the website, I found that what I was going to was far from enough. I needed more knowledge, especially JavaScript, to help me design the interactive elements in the website. So, I will continue to learn about web design and eventually realize my ideas.

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Reference:

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Wang Yanqun, Zhang Bingchen, Song Lishu, Xie Shuxin. (2018). Interactive Children's Education Toy Design Based on Interest Guidance, *Packing Engineering*, 32(2), pp 119-123.