



Interactive Media Design

Aakifah Bahadur

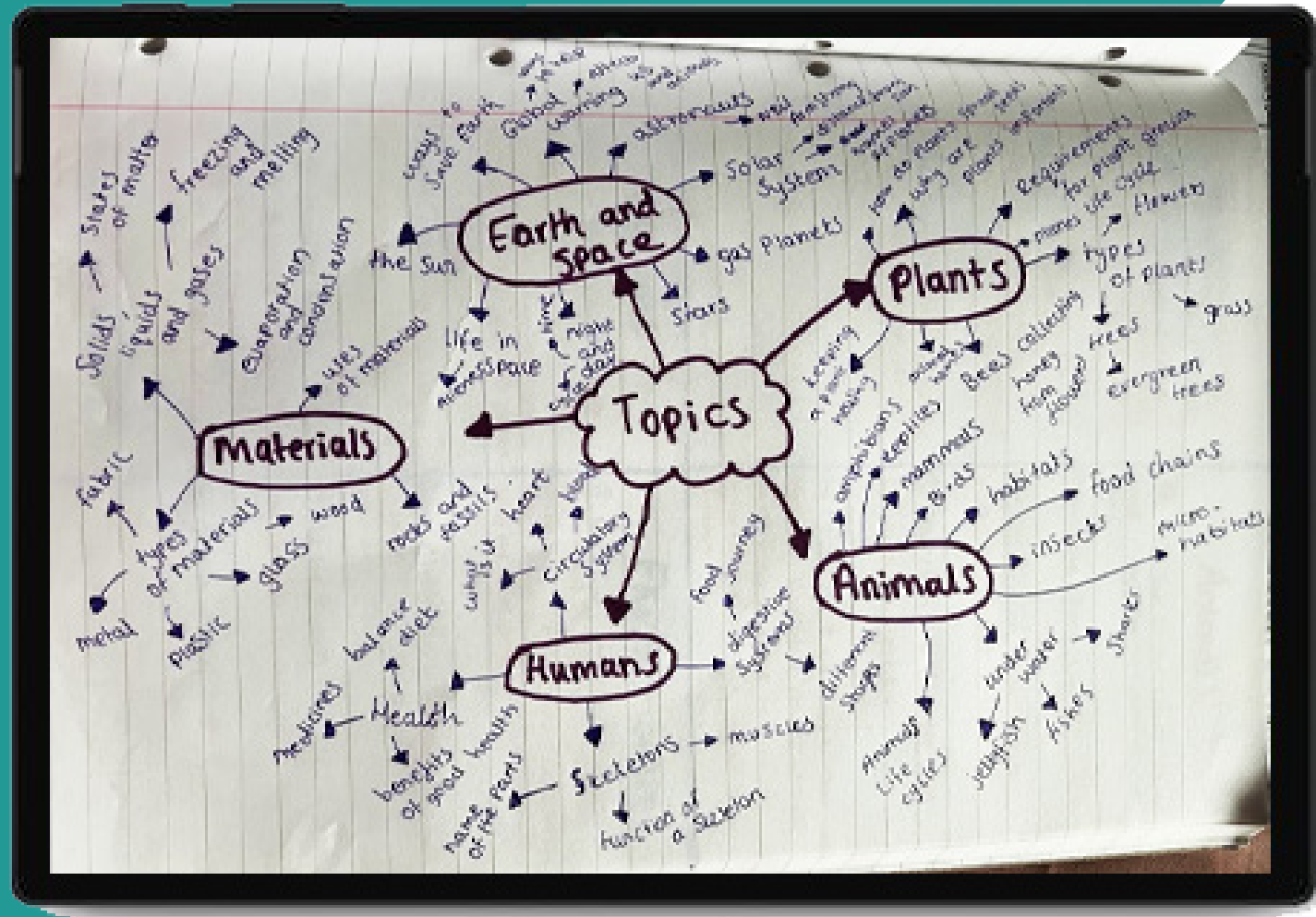
Overview Of The Brief

Education Leeds wishes to create a new campaign to revitalize the National Curriculum for children across the Key Stage 1-3 age groups in the subject of Science.

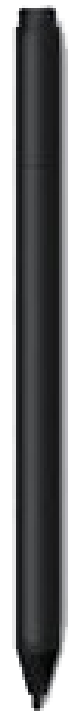
This commission is to create an interactive learning tool supporting a Science subject area in one of the Key Stage age groups. The interactive should work on a tablet device and also on the Education Leeds website. It will be the first in a series of resources which help students with their homework and preparation for Key Stage assessments.

We are keen for this interactive to be quick to launch, quick to navigate and most importantly, fun. We'd like to create an accessible learning experience and for it to be funny, light-hearted and engaging and are seeking something fresh

The first thing I did was research different science topics. I mainly used BBC Bitesize to gather this information. For each topic I branched out further in what is included in those topics and any possible early game ideas.



Topics Mindmap



Research Example 1

This is the first example I looked at. Its a multiple choice quiz on BBC Bitesize. I like the simple look. When using is the load time was fine. I didn't experience any glitches which makes this user friendly. BBC Bitesize has a lot of these quizzes on there website. Its a good and effective way to test knowledge without putting too much pressure on the child. Its also engaging and keeps learning fun.

Linking to Theory:

Jakob Nielsen and Don Norman have a similar view with visibility. Its very obvious by the design for the users needs to do understand what is going on. Also they mention the idea of feedback, which we get when we get a answer right or wrong by the tick or cross. Don Norman also talks about consistency. On each page of the quiz there is always 3 answers to chose from. Which makes it easier for the user to be familiar and navigate through out the quiz. In Gestalt law, it says that good shape is important. Our brain likes to compress information so its easy for our brains to take in what we are seeing. This game is an example of good shape. There is no complicated shape. Easy shape also allows us to remember easily. So if the user got a answer wrong and they read the write answer they are more likely to remember it due to the good shape used. Finally, Gestalts law also mentions experiences . Automatically we know to that clicking on the + will reveal more information. This is something we have learnt throughout our past. This multiple choice does this well.

How will I link this to my work:

With this I like how they its clear for the user to know if they have got the answer right or wrong. I will be using the idea of a tick and cross to show if you got the answer right or not. However, I will be doing this throughout the quiz not at the end of my quiz that I'm thinking of creating.



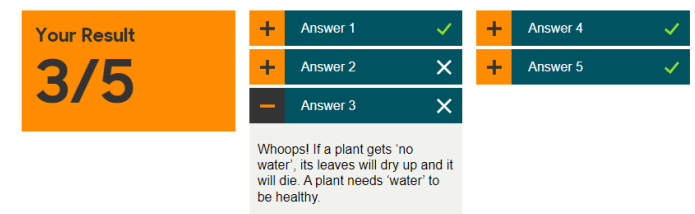
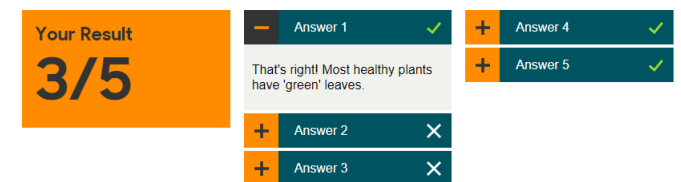
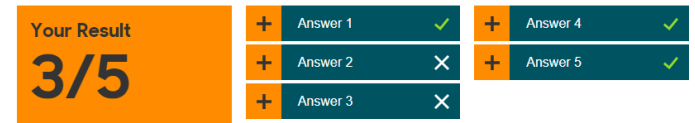
Question 1 of 5

Which colour leaves do most healthy plants have?

green

yellow

brown



Research Example 2

This is the next example I decided to look at. This game is a drag and drop game where the user sorts out the animals in the correct group. This game is also very user friendly, I had no issues working it. Everything ran smoothly even the dragging part. However, I could drop the animal chosen anywhere, even on the blue background. I think this is a down side. Once the animal is put in a box then the next animal should appear not before. This can make the child confused or accidentally click on the next animal. However beside that point, this game is very child friendly. The use of bright colours, imagery can really keep a child focus and stay alert. It looks fun and doesnt look like school work.

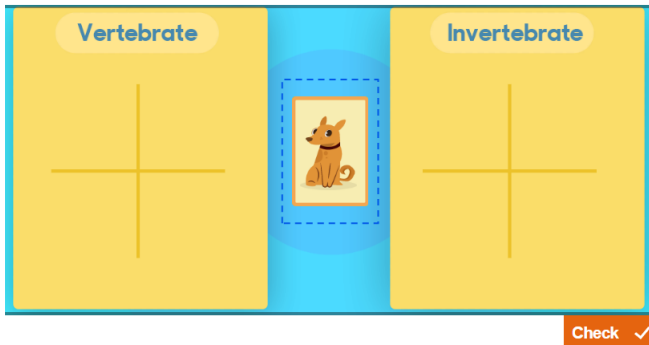
Linking to Theory:

Gestalt mentions proximity. This is when items are group together and link to one thing. The 2 boxes are items that are grouped together and have the same function. Even when all the animals are grouped that can be seen as proximity as they do a similar thing. Jacob Nielsen talks about letting the user aware when they are wrong and letting them try again. We can clearly see that the game does that. Even the character gets sad when you haven't got the answers right. Fittz law and Hicks Law has a similar concept of speed. The boxes are big so they can easily be dragged and the places they need to be dragged to are not very far which makes the process very quick and doesnt lose the attention of a child. Don Norman talks about affordance. We can .see the play button. As a user we know something is going to be played when we see that. And when we click it audio is played so the text is read out loud. The button is a strong visual clue of whats going to happen.

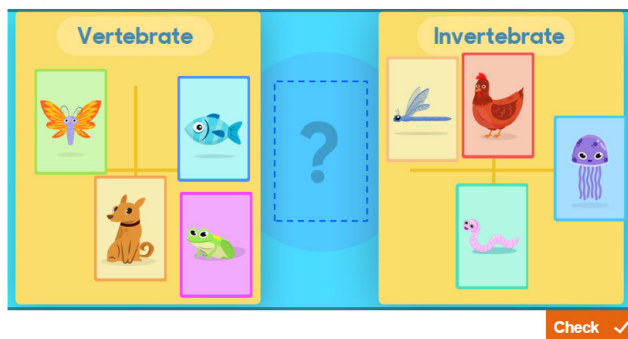
How will I link this to my work:

I like this form of a drag and drop game. Being able to sort items out. I also like how the character reacts to the progress. This is something I would like to do in my work. Its a simple but clean look. Its not a long game too which I also like so the user doesnt get bored.

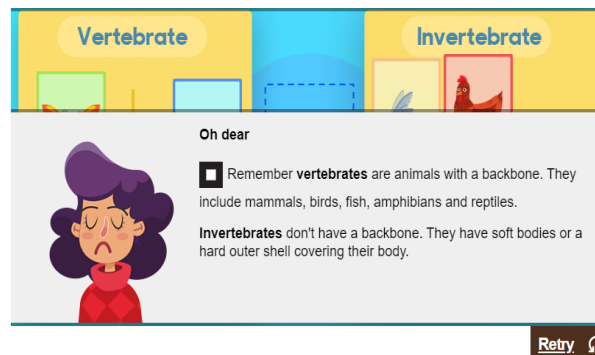
▶ Sort the animals into vertebrates and invertebrates.



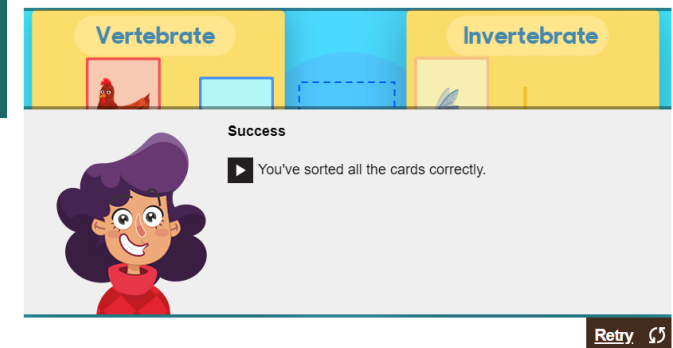
▶ Sort the animals into vertebrates and invertebrates.



▶ Sort the animals into vertebrates and invertebrates.



▶ Sort the animals into vertebrates and invertebrates.



More Examples

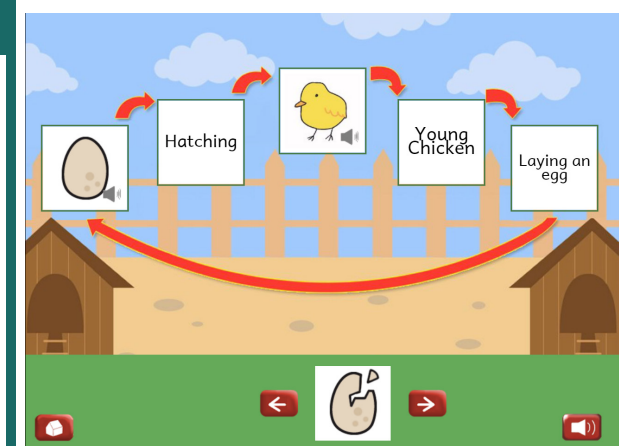
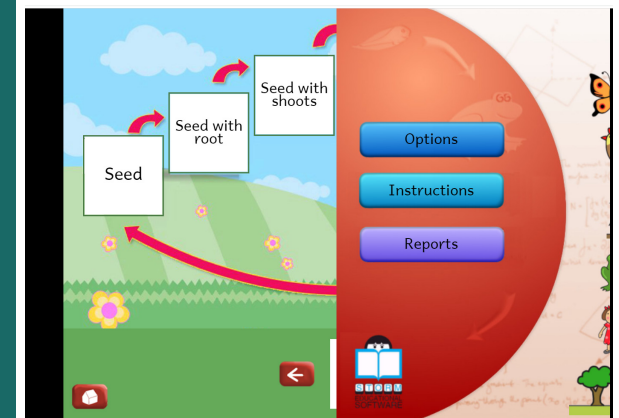
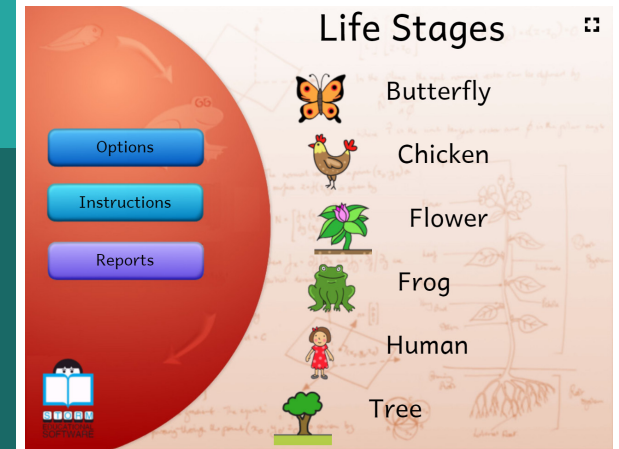
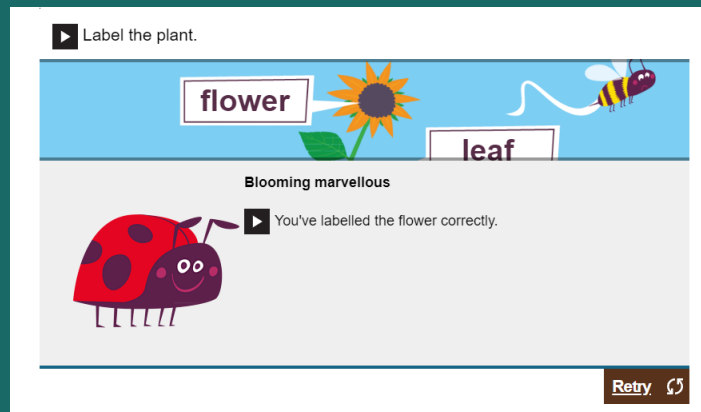
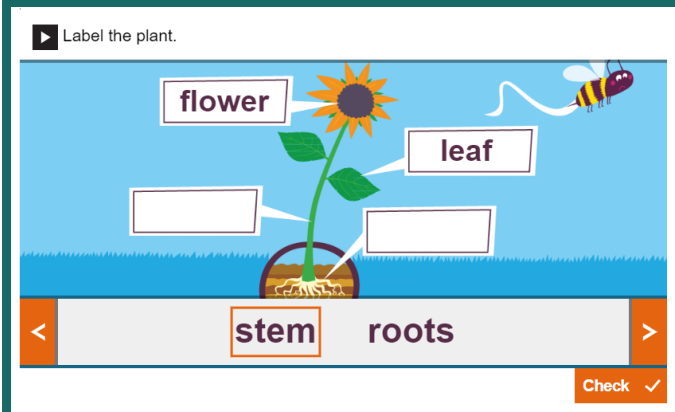
These examples are a very similar drag and drop game. The one on the right has nice imagery. That is what I was mainly inspired by. However as a game it has some downfalls. The first one being its very slow especially when you click on a category you want to play the transition after takes a while. This reduces user attention. Also, I feel like some people would get confused on what to click on the title page. The words written takes you to different games but this is not demonstrated well. The drag and dropping part is good and the sound used also keeps the attention on the game. The game below with matching the words to the flower is a lot better. Its very short and doesn't have much information but as a game it works better.

Linking to Theory:

Dom Norman and Jakob Nielsen have a similar view with visibility. These games look good they dont have a lot of words its very clear to the audience on the concept of the game. The game on the right uses Dom Norman's rule of affordance, in particular perceived affordance. They have made the buttons look like buttons by making them look 3D. Also, using Gestalt's law of experiences we know what the arrow keys cycle through different options that are available. This is what both games do.

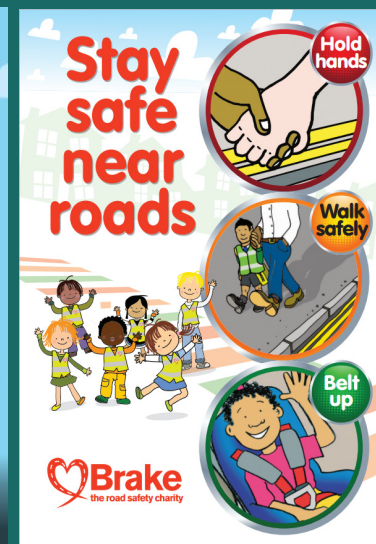
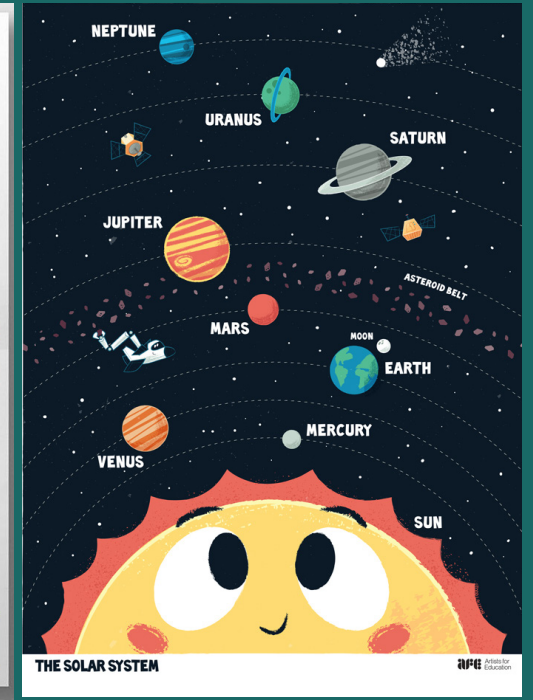
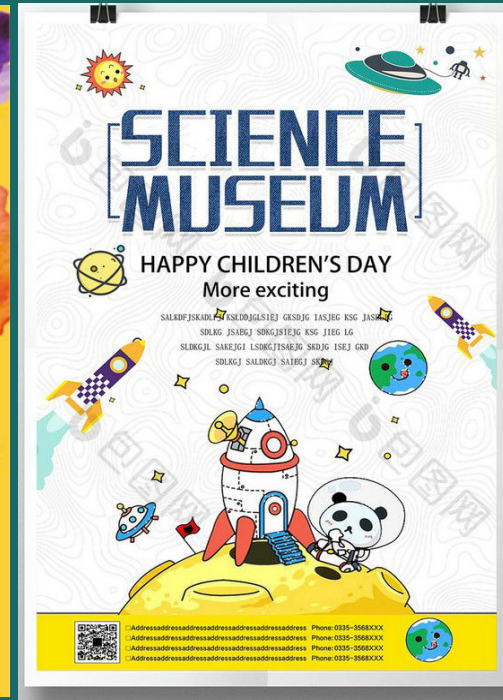
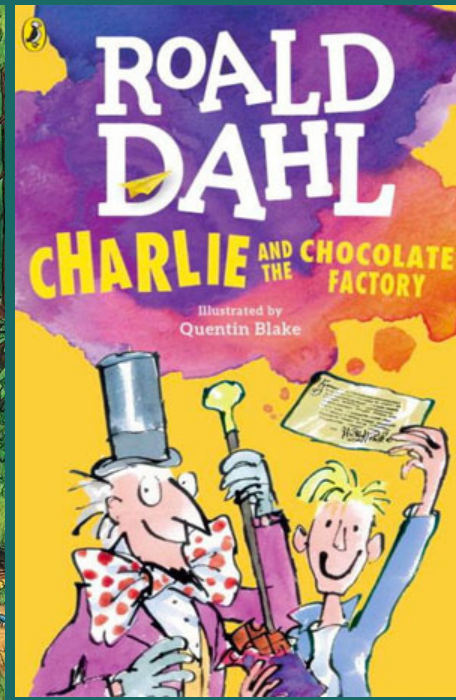
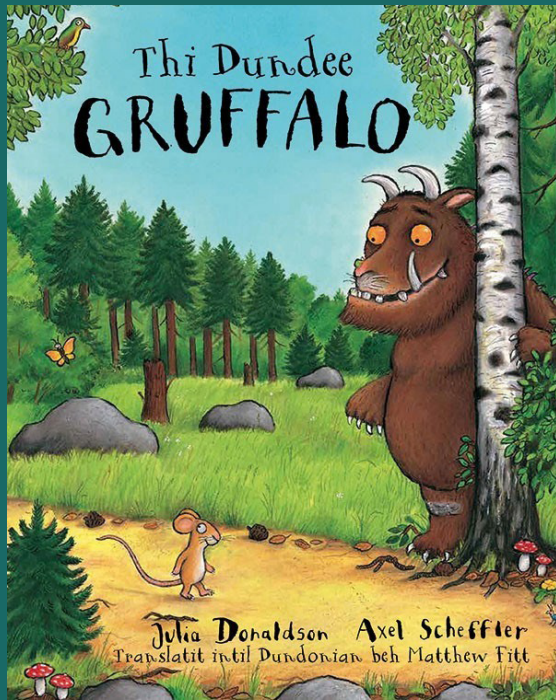
How will I link this to my work:

In my game I want to also make buttons look like buttons. So its easier for the user. Like these games I want to use a lot of imagery too. I think images are better to keep a child's attention then words.



Other Media Research...

With my research I also looked at other media for children designs inspiration



Dylan Jones Age 9



About.

Low class family.
Lives in Manchester Attends Claremont Primary School.
Only lives with his Mum.
Mum works in retail as a customer assistance.

Attitude To Technology.

Does not have a phone. Too young to have on.
School has given a laptop to use at home for work.
Devices are limited at home and all devices are shared between other people.
Mainly uses the internet at school. Internet at home can be slow.

Context of use.

Home- only to do school work.
School-Used in lessons for education purposes. Sometimes used at break to play games.

Key Drivers.

Dylan is a very active child and does not like sitting around.
So school often encourages to use a ipad to learn through online games and quizzes.

Key goals and needs.

Needs it to be fun and entraining
Has to be interactive to keep attention focus.
Can not feel like a chore

Pain Points.

Struggles to stay focus.
Can often gets distracted very easily.
Slow internet at home

Isla Smith Age 7



About.

Middle class family.

Lives in Brighton Attends Stanford Junior School.

One of her parent is a marketing manager and the other is a dentist.

Attitude To Technology.

Does not have a phone. Too young to have on.

Uses ipad for education purpose.

Uses ipad for entertainment only on the weekends and 1 hour during the school week.

Uses the internet often for school work and Youtube.

Context of use.

Technology is used at home and school both for learning

Can easily be accessed.

If adults are not around, can be seen playing games instead of doing school work.

Key Drivers.

For entertainment.

Plays games and watches videos.

It is fun.

Key goals and needs.

Needs it to be fun and entraining

Has to be interactive to keep attention focus.

Needs it to be easy to use can not be complicated.

Pain Points.

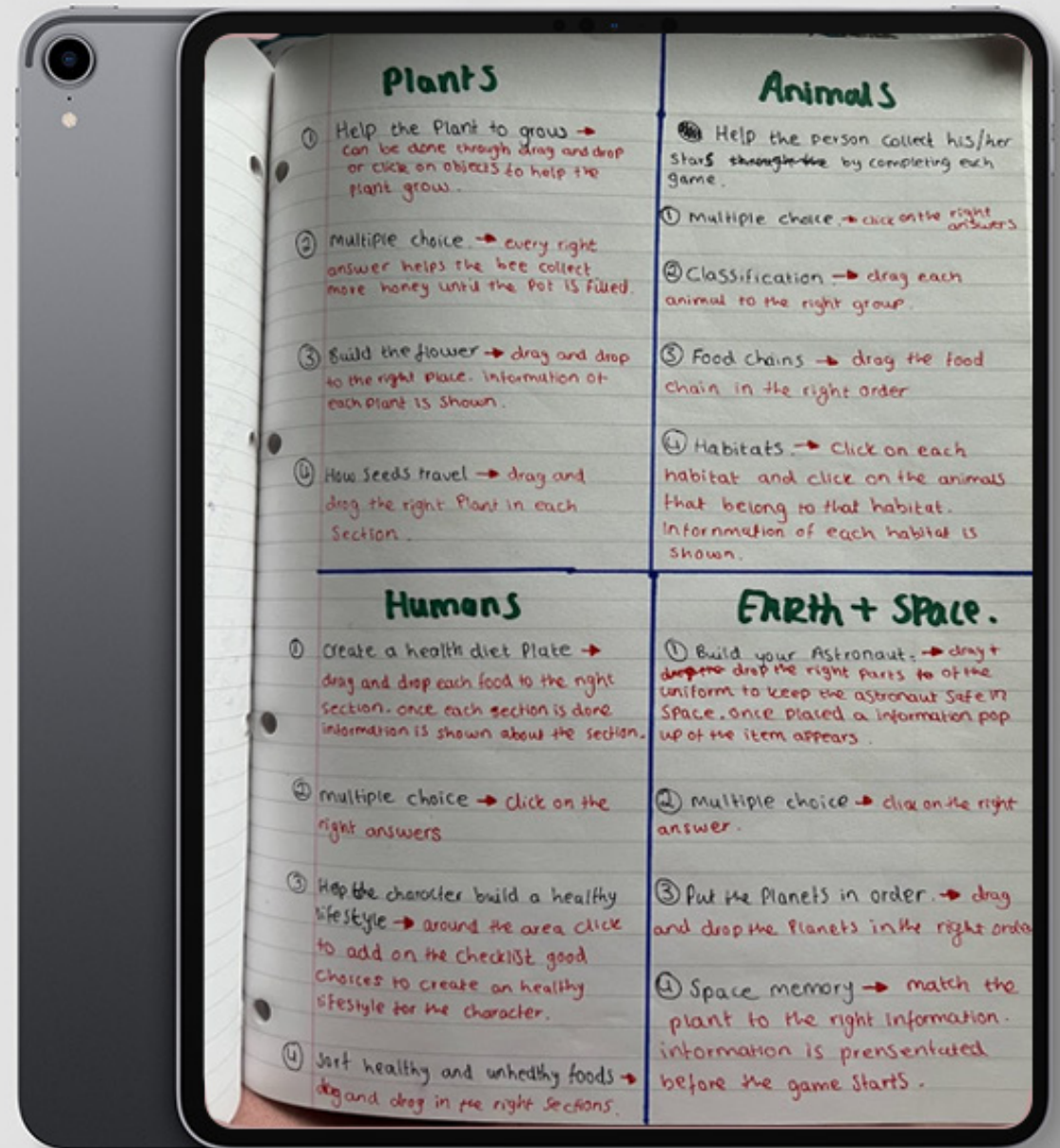
Has Dyslexia, might find some work difficult due to this.

Isla can frustrated when things are not working or if loading time is slow

After doing some research in current games. I came up with 4 different games I would create for each topic. I wrote down what type of game it would be for example a drag and drop or a multiple choice.

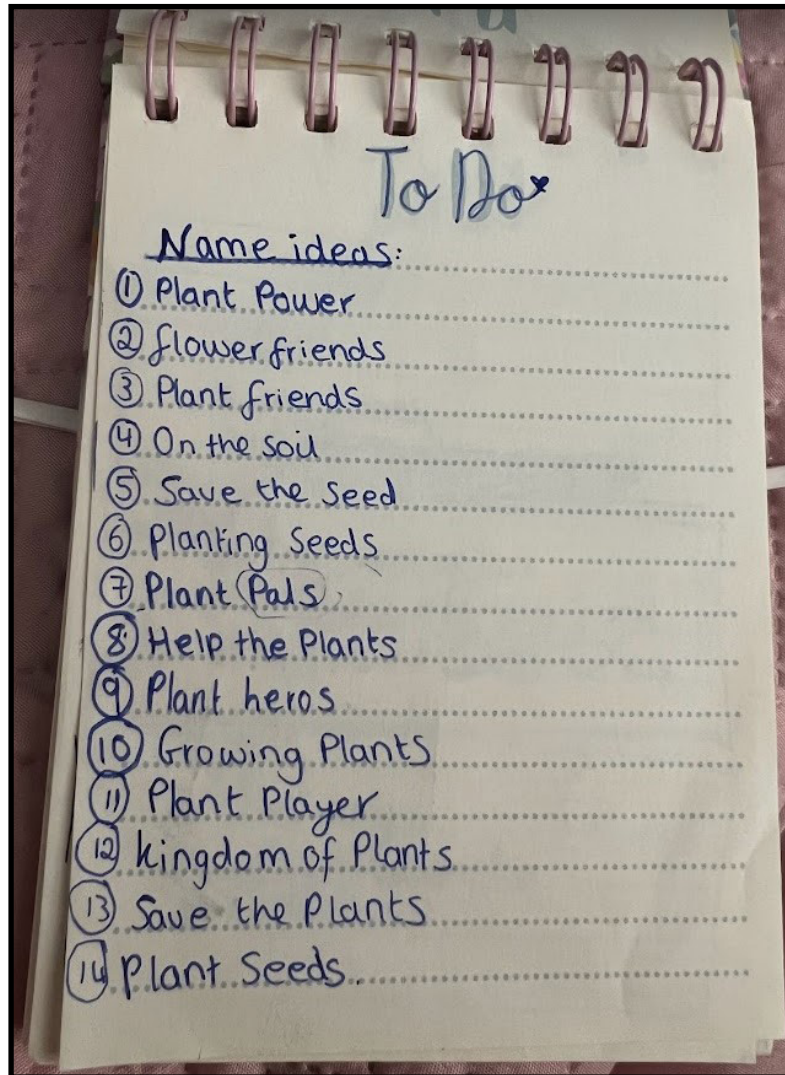
Having this written down I could then just pick a topic and the games within that topic to create. After looking into the current competitors I had a lot of ideas so doing this gave me a space to write all my ideas down whilst giving me a clear indication and plan for this assignment.

Game Ideas



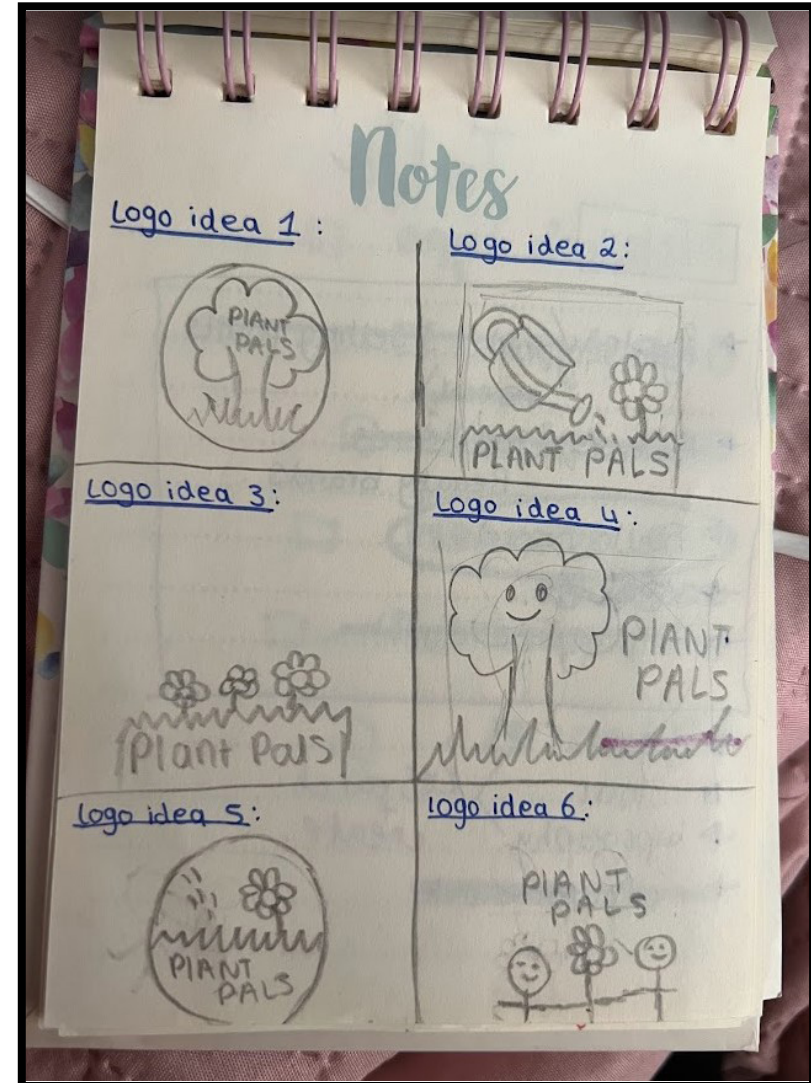
Name Ideas

Plant pals is the name I chose for many reasons. First being that it has an alliteration and for young children its quite easy to remember. Also, Pals is another word for friend. This gives the name a friendly touch. Again as my target audience is children this fits well. Finally, as I am doing the topic plants I did want to add that in the name, so the child/user knows clearly what they are clicking on.



Logo Sketches

Logo 5 is the design I would go for. I liked logo 2 but I thought the watering can might make it look too busy. Logo 5 is simple and has a lot of potential for me to experiment on with different colours, fonts and depth. I'm thinking of creating the main asserts in illustrator and the further developing thme in photoshop.



My Final Idea...

Topic
Plants

**Target
Audience**
Ks2 Students
(Age 7-8)

Name
Plant Pals

Help the plant grow

This game would be a drag and drop game. The child playing the game would drag the words to the right part of the plant. Some information of what each part does would be included.

Multiple Choice

The multiple choice game will have some story behind it. So, during the quiz the child will help the bee fill the hive by answer each question correctly.

Final 4 chosen Game ideas

How seeds travel?

This game would be a drag and drop. There would be different columns and the child would need to drag and drop the seeds of the plant in the right column by how it travels and spreads.

What a plant needs

In this game the child would click on the correct items to help the plant grow. Every right click will make the plant happy.

Logo Mindmap

This is a logo mood board I decided to create. I looked at a range of different children's logos. One thing I noticed that children's logos are very bright, full of colour. Also, there is always some sort of imagery within the logo. That's something that I would take forward when creating my logo.

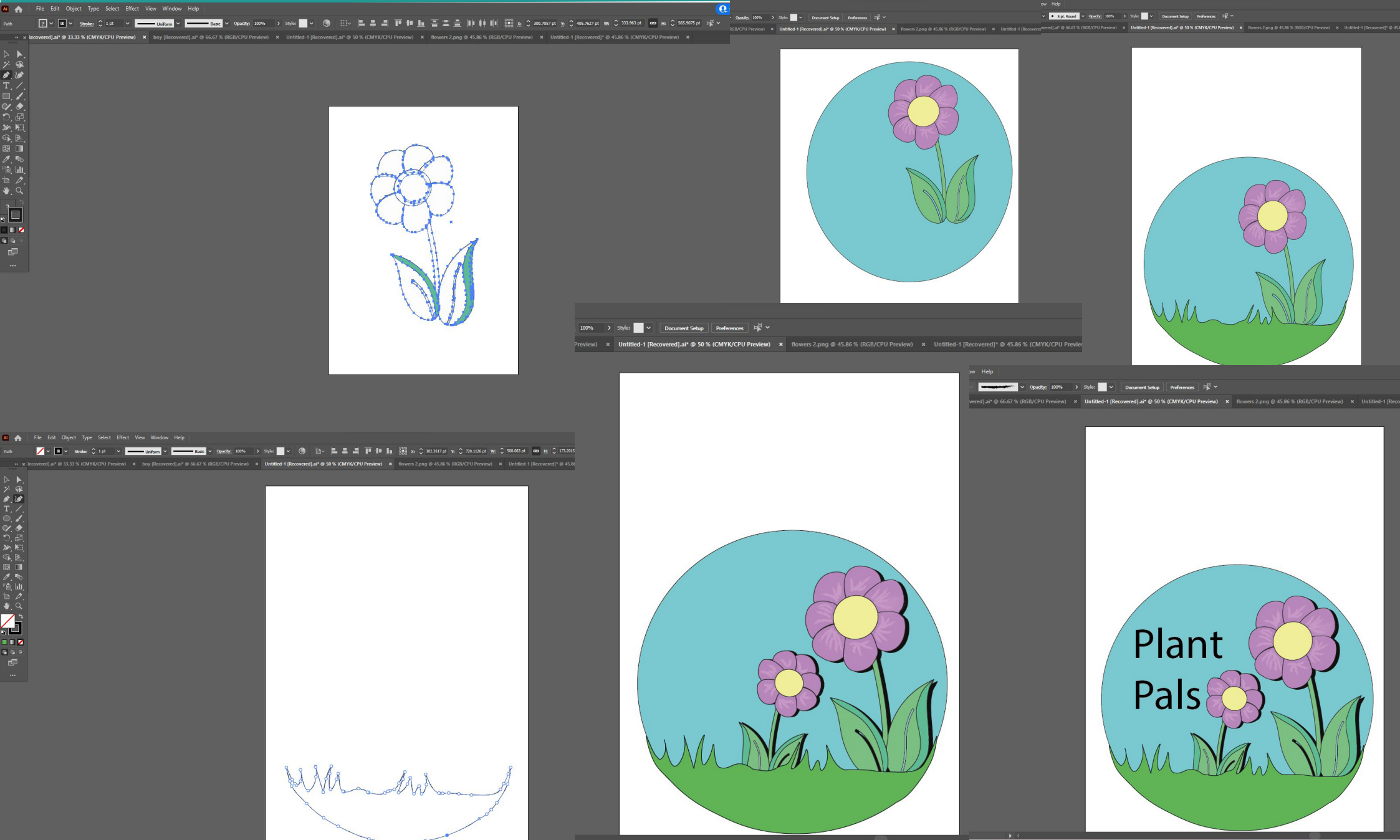
When creating my logo I want to keep it simple but make it bright. I will probably add some imagery to the logo.



Another logo I like on this page is the Cocomelon logo. The watermelon is in a shape of a TV which shows that this is a TV show. However, I feel like they have used a lot of colours on the logo, which is the only downfall.

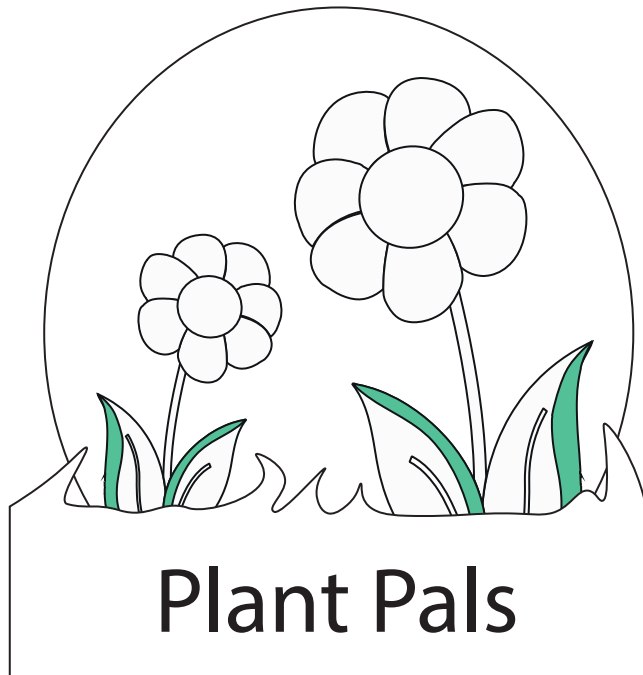
One of the logos that I really like is the Sesame Street logo. I like how they put the typography of the logo on the street sign, which links to the show and also the street word in the logo.

Logo Design

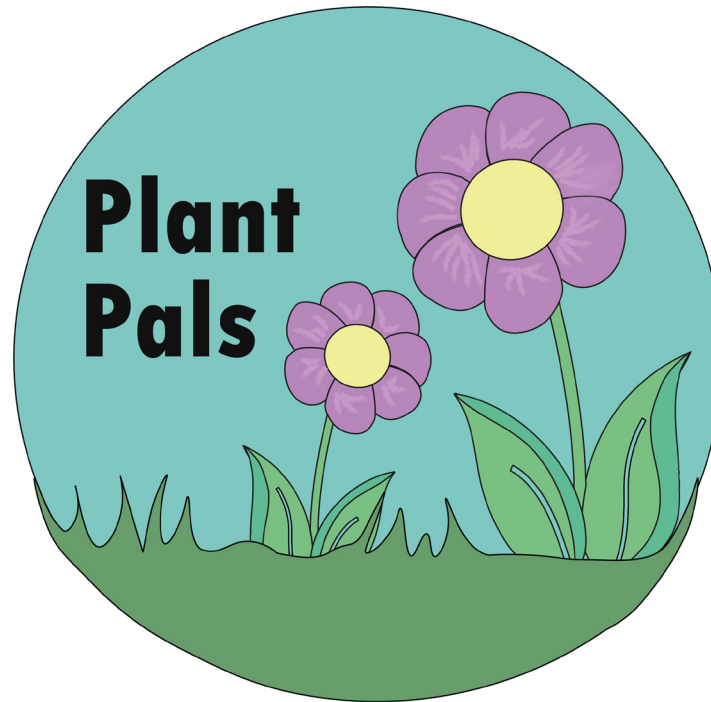


Logo steps

Sketch



Illustrator final design



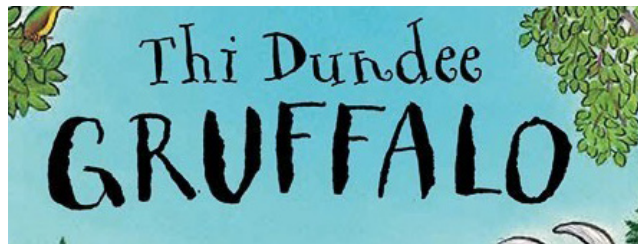
Final Logo



I used the curvature tool and pen tool to create a lot of these asserts. Even though this is for children I still didn't want to use too many colours. Having too many colours can make the logo look too busy. So, I kept it to 4 colours in the logo.

The logo above is my final design. I finish creating it in Photoshop. I brighten the colours and made the typography look interesting. On the lettering I added an outer glow,, drop shadow and some contouring.

Typography



I looked at a range of different typography. I noticed a lot the typography for children is normally quite a curvy font. Its not overly complicated. Some also have the handwritten look. However with an hand written font, no other imagery is added and I want to add imagery to my logo. This is why I would use a curvy bold font. I like the look of the Knickknack font. But I would add shading and depth like the Spongebob typography.

My Typography

Font

12840+
Font

©FONT-FRCE / TTF / OTF / U200F2
Free Web Fonts : <http://www.onlinewebfonts.com>

0	1	2	3	4	5	6	7	8	9
a	b	c	d	e	f	g	h	i	j
k	l	m	n	o	p	q	r	s	t
u	v	w	x	y	z	A	B	C	D
E	F	G	H	I	J	K	L	M	N
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Hobeaux is the font I chose.

Light

Plant Pals

Regular

Plant Pals

Semi-bold

Plant Pals

Bold

Plant Pals

Black

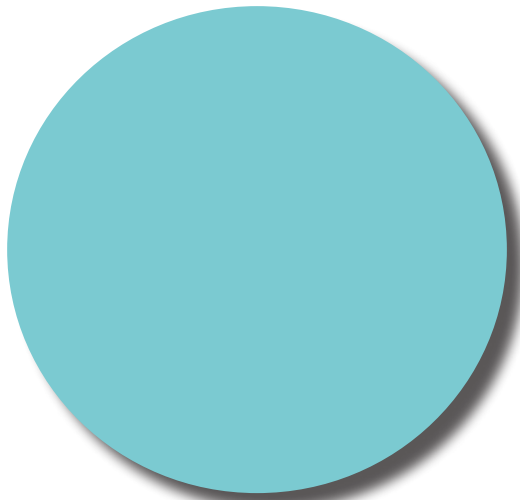
Plant Pals

Plant Pals

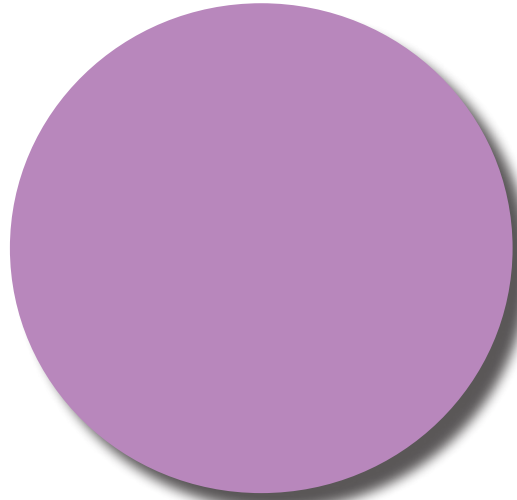
Font on logo



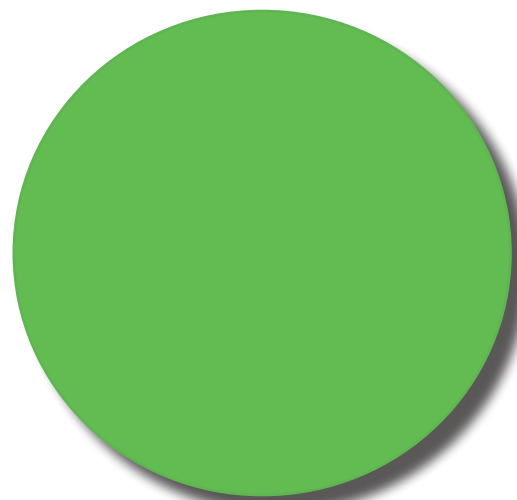
Colours



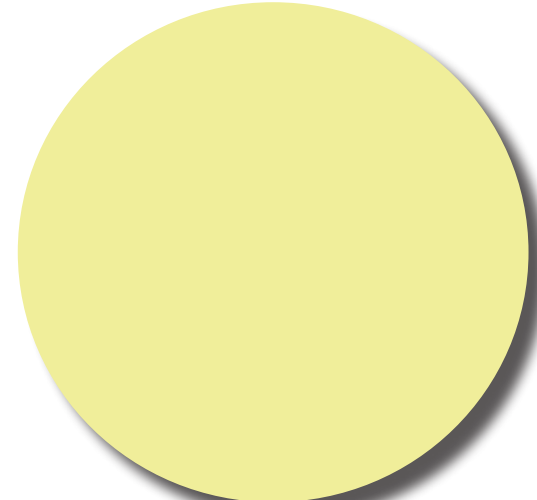
#7ac9d0



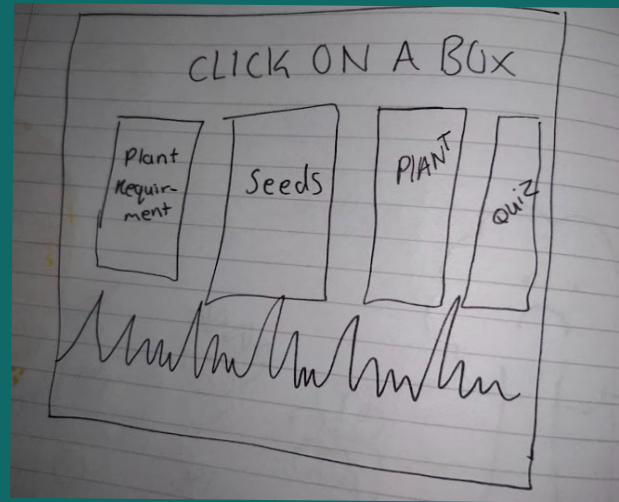
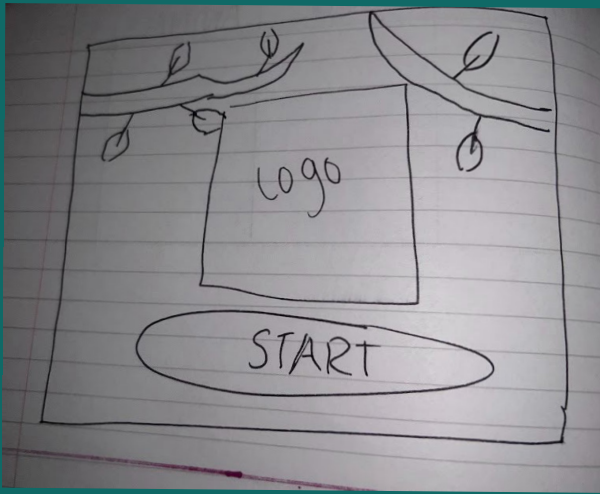
#b988bc



#60b453



#efee98



PROTOTYPE 1: Help the plant grow

How the game works?

This game is a drag and drop game. You drag the words to the right box.

Positive Comments:

The concept of the game is a good idea. Information is included so the child is learning. Its also pretty straight forward to know what to do. it has a simple easy to look at look. The ending well done tab is clear that the game has ended. Home button is big so its clear for the child to go back.

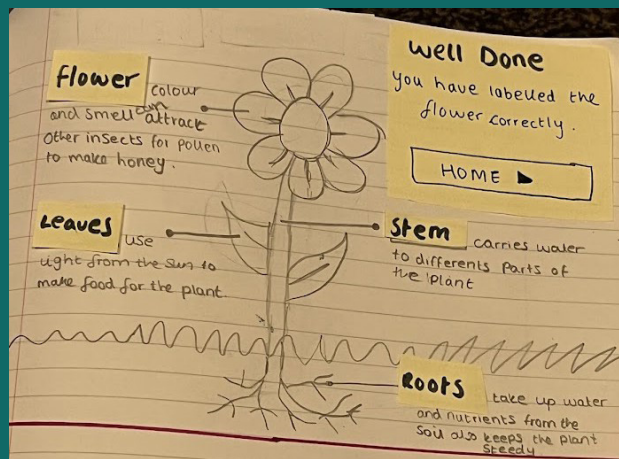
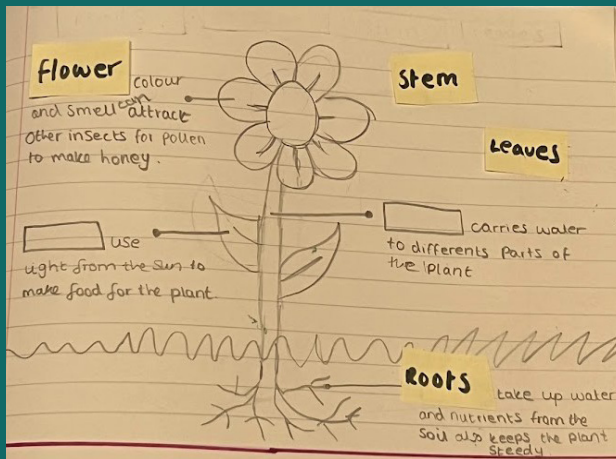
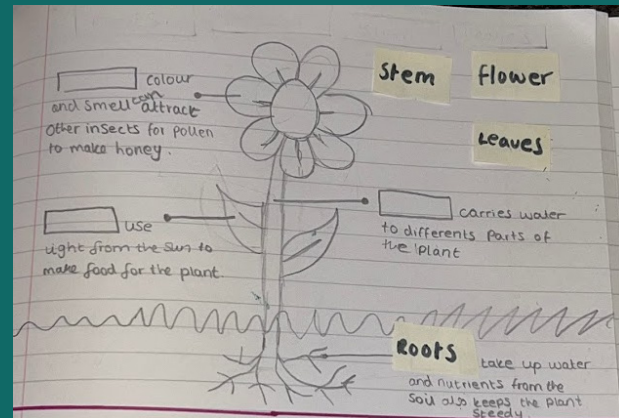
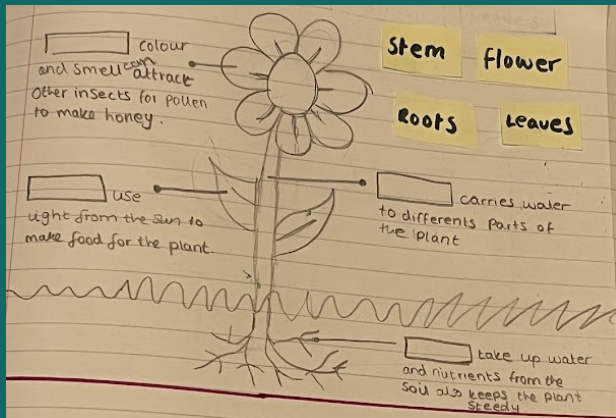
Improvement Comments:

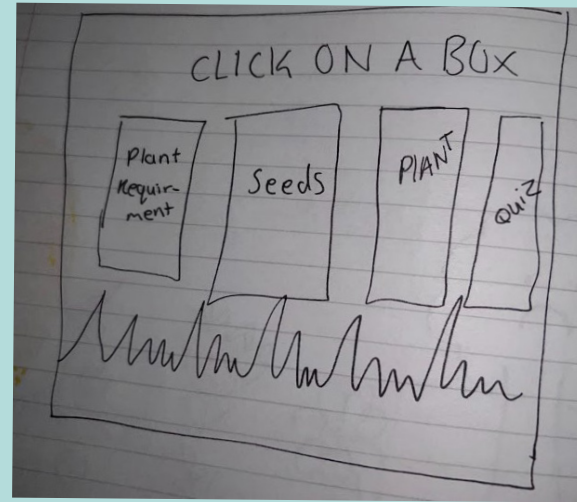
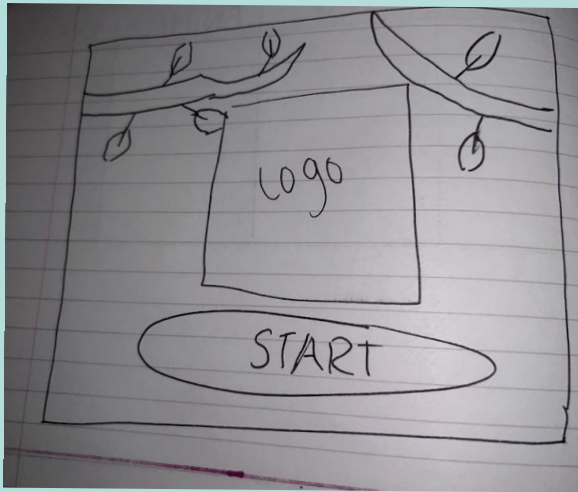
There is no title. It might be useful for the user to know what game they are playing.

No instructions at the start. Could be useful to include.

Some users might struggle to know what to do. There is no easy way to back to the home page. You have to complete the full game to return back.

Also, with the information some children might not read it. They might just look at the image of the plant. Maybe you could place the information in a different way, so tje child is also learning.





PROTOTYPE 2: Multiple Choice

How the game works?

This game is a multiple choice game. When you click on the right answer for each question the bee moves up the hive and the section turns yellow. Each section of the hive is a question.

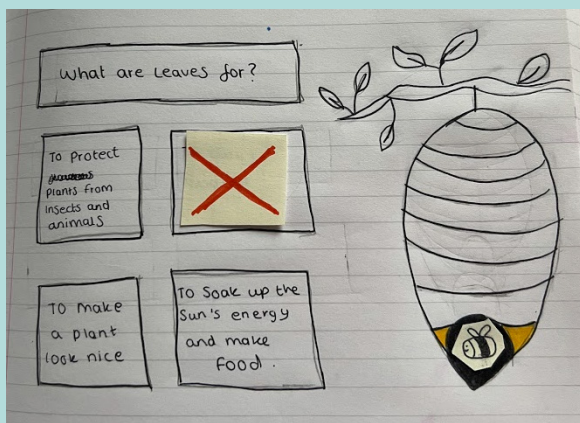
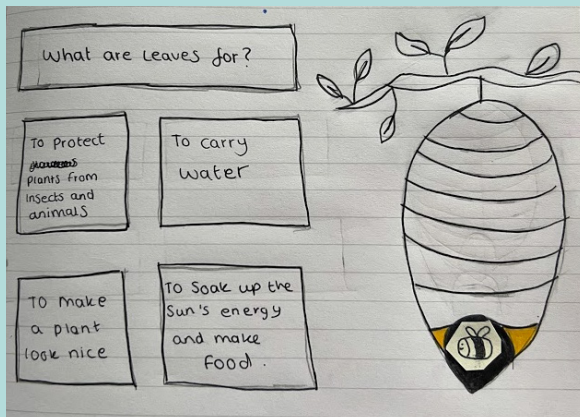
Positive Comments:

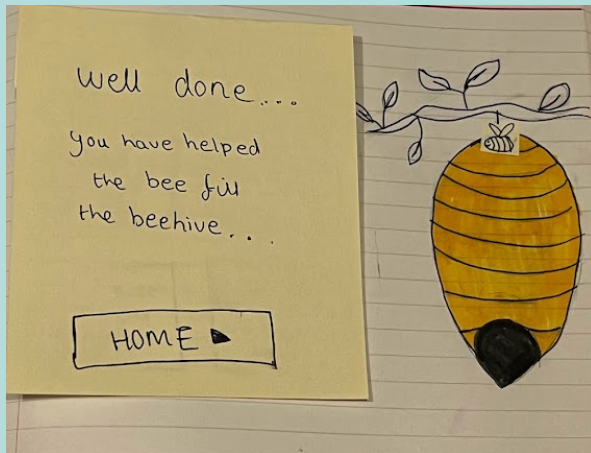
When I tested this prototype, I was told that the concept is a really good idea. It allows the child to have a visual representation of their process throughout the multiple choice question. The story of the bee makes it engaging for the child too. This is what I wanted. So I created a fun way for the child to test their knowledge. More feedback I got was that the user liked how it clearly showed that if the answer is right or wrong (can be seen in image 5 and 7). Also the user mentioned that they liked how it's again very clear to see how you move to the next question, the button is really big. (Can be seen in image 8).

Improvement Comments:

There is no title on the page or even a little description on what to do. Maybe a little pop saying "help the bee fill the hive by answering the questions correctly."

Another thing I was told is that if maybe the child wants to mid way leave the quiz and try something else there is no easy way. So maybe having a home button somewhere on the screen could be helpful.





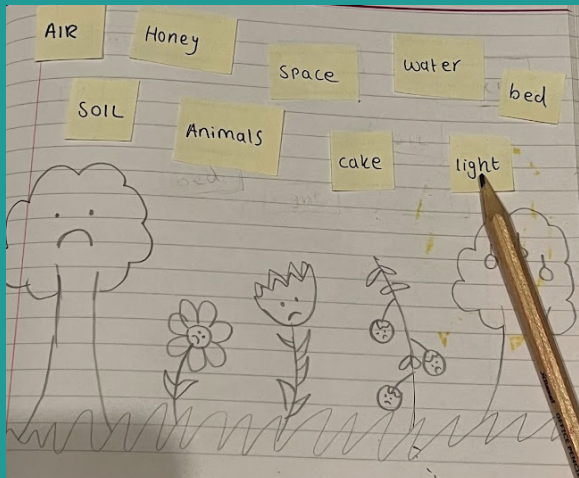
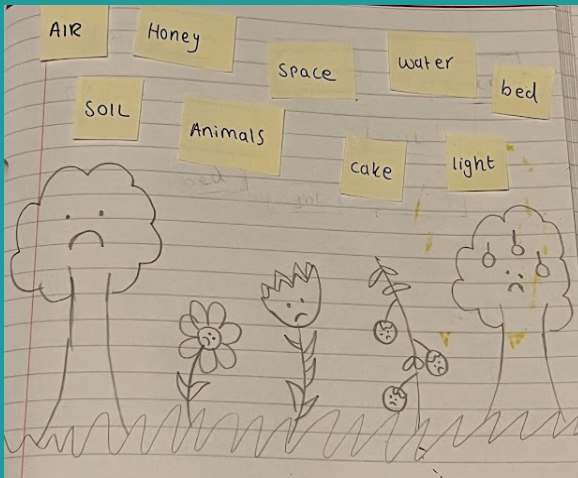
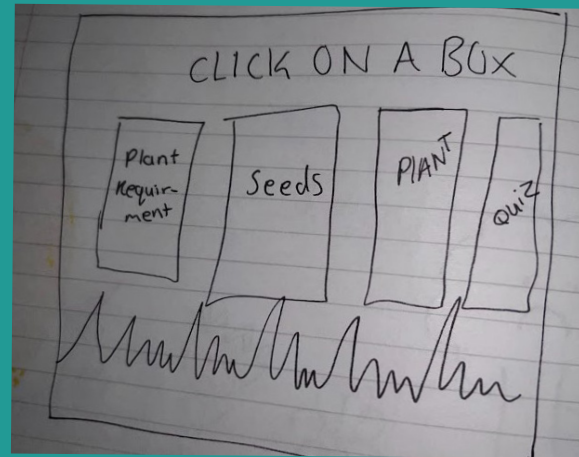
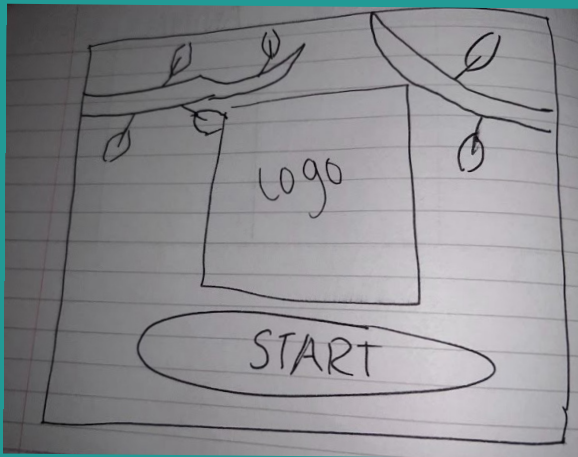
PROTOTYPE 2: Multiple Choice

Improvement Comment:

If a child gets an answer wrong there could be a try again button so the child knows what to do. Some might know what the X means. Some might think that there are multiple answers for the questions that they need to get it right.

I was told instead of covering the whole box with the tick I should find a way to show the correct information. This would allow the child to read back what the right answer is if they wanted to instead of taking the quiz again.

They suggested that maybe I could at the end have a review of all the questions and answers in case they wanted to see questions again.



PROTOTYPE 3: What a plant needs?

How this game works?

In this game, you would click on the right words that would help a plant grow successfully. When you click on the right answers the plants turn happy.

Positive Comments:

Some feedback I got back was that there is a lot of imagery. It shows all different plants not just one kind. Layout is simple but clear.

PROTOTYPE 3: What a plant needs?

Improvement Comments:

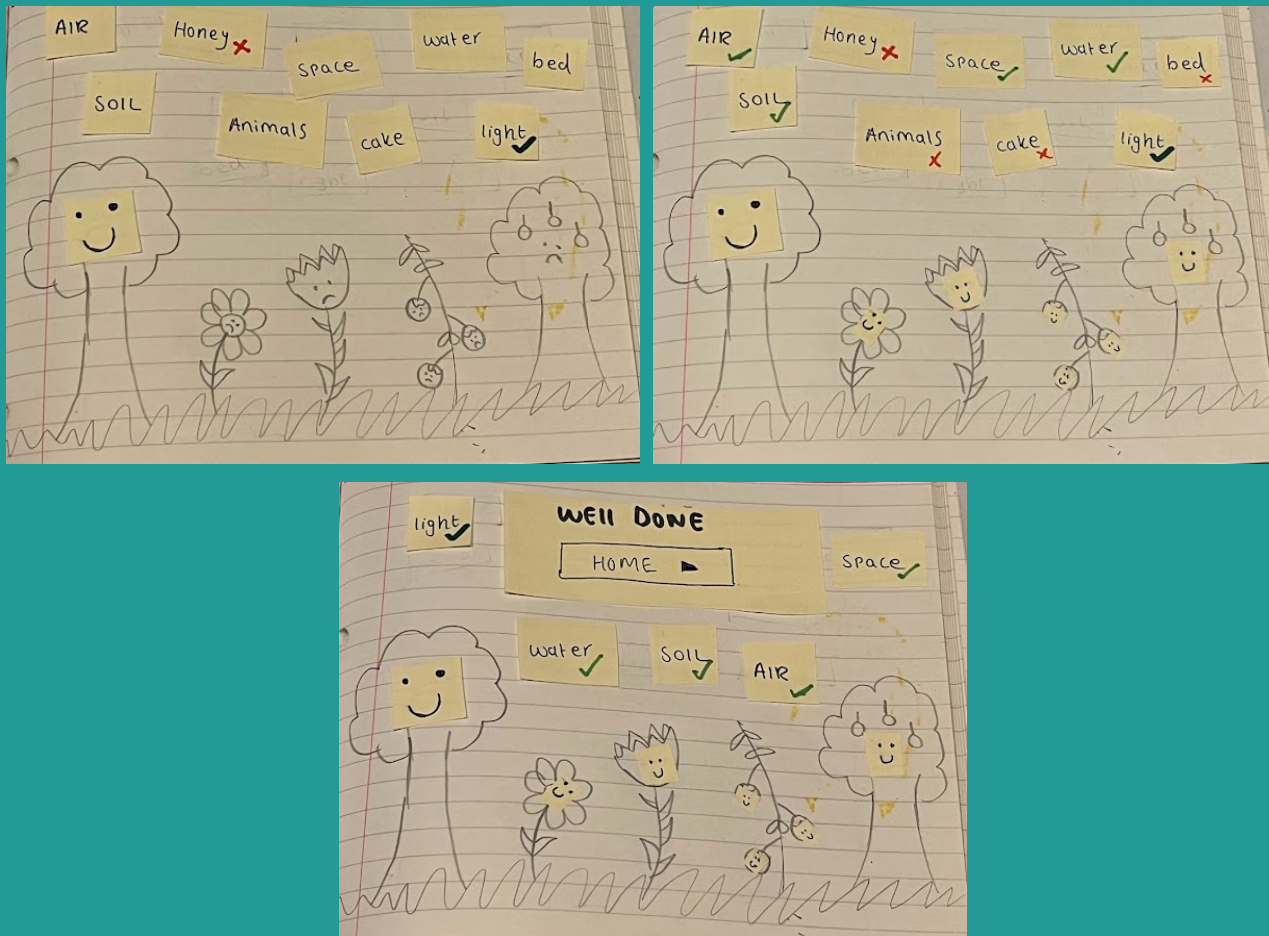
When the child/user clicks on the right answer there could a description of that word and how it helps the plant. An animation could be played so show this if it able to do. If not then a simple box with writing is enough to show how water or light helps the plant.

No title is on the page

Easier way to go back to the homepage is helpful

Play again button at the end could be something you could add so the child can play the game again.

A instruction page at the start, so the child knows what they are doing like for example "Each plant is looking sad, Click on things that the plants need to make them happy again"



PROTOTYPE 4: How seeds travel?

How the game works?

This game would be a drag and drop game. The game has 4 columns. Each column is different ways of seed dispersal. You need to drag the plant seed to the right column.

Positive Comments:

A lot of imagery which keeps the child interested.

Clearly divided

Image also includes words. Helps the child learn how to spell the words too.

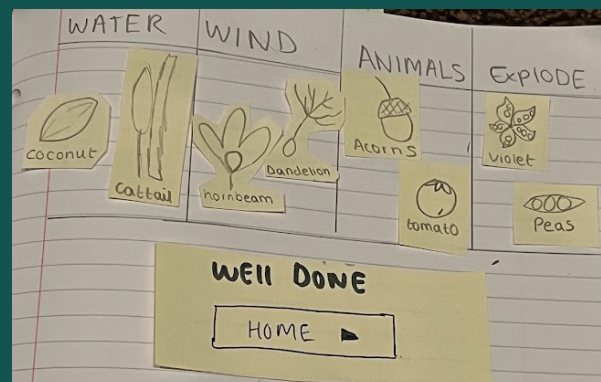
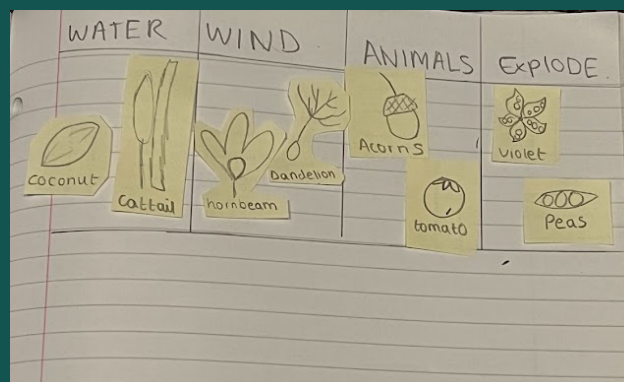
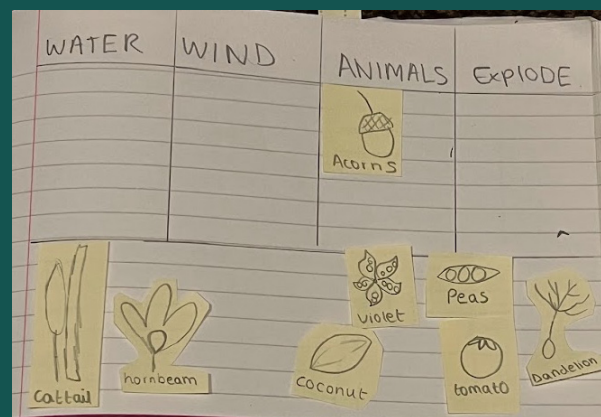
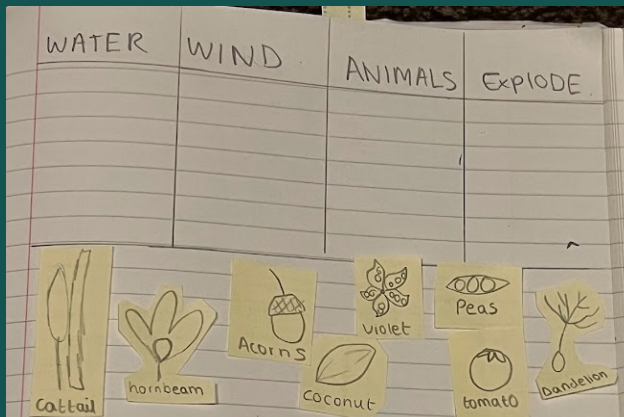
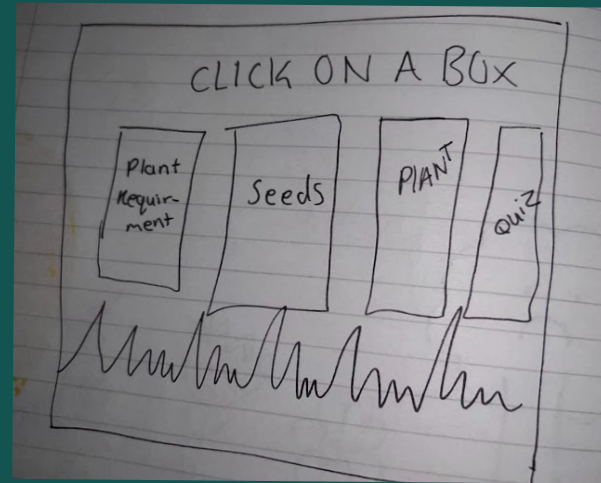
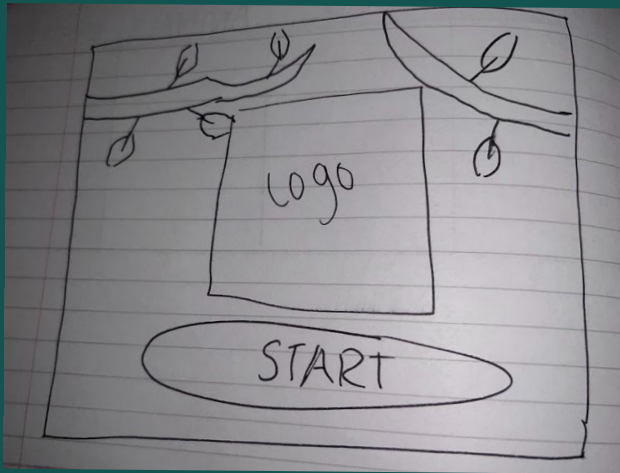
Improvement Comments:

The user pointed out that how do you know if you have dragged the seed to the right section. That part is a bit unclear.

No title or instructions page.

There is no home page button throughout the game it only appears at the end. The user might want to go back mid way.

A little description of each seed dispersal might be useful. For example you could click on the wind box and a pop up would appear explaining how seeds travel through wind.





Homepage

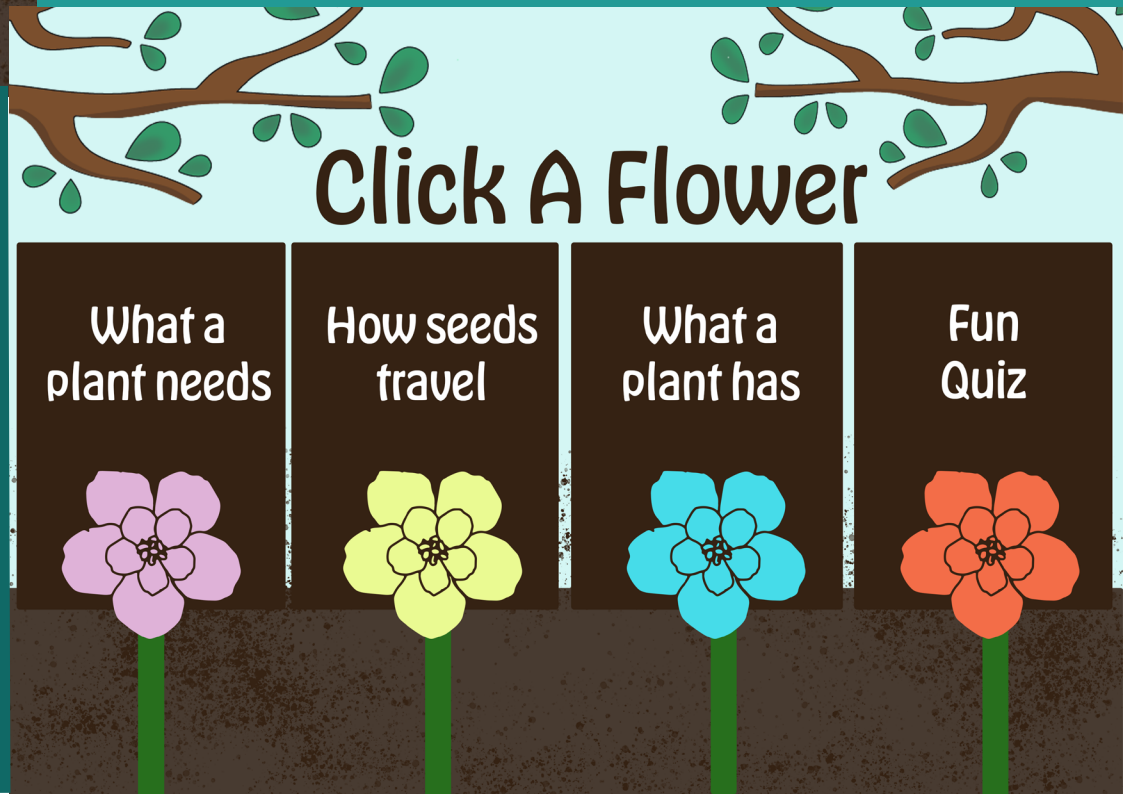
I added the logo in the middle to make it visible to the user so they can be familiar with it. In case in the future they come back to play my games again. I used the pen tool in Photoshop to create the dirt effect. The trees were created in Illustrator including the shading.

Fitts' Law. Start button is big. This helps with speed and how it reduces the distance to travel to the button.

Don Norman's law on affordance. The start button is displayed as a button as it has a glow around it encouraging you to click there. It also stands out on the page.

Menu page

Gestalt's mentions similarity. This is what I did. I kept the background the same as the homepage so the brain can focus on the writing and doesn't need to take in new background imagery. There is also another law used which is continuity. The flowers are all the same and they all have the same function. Some could say they are grouped in the same form which then could link to proximity.



Click A Flower

What a
plant needs



How seeds
travel



What a
plant has



Fun
Quiz



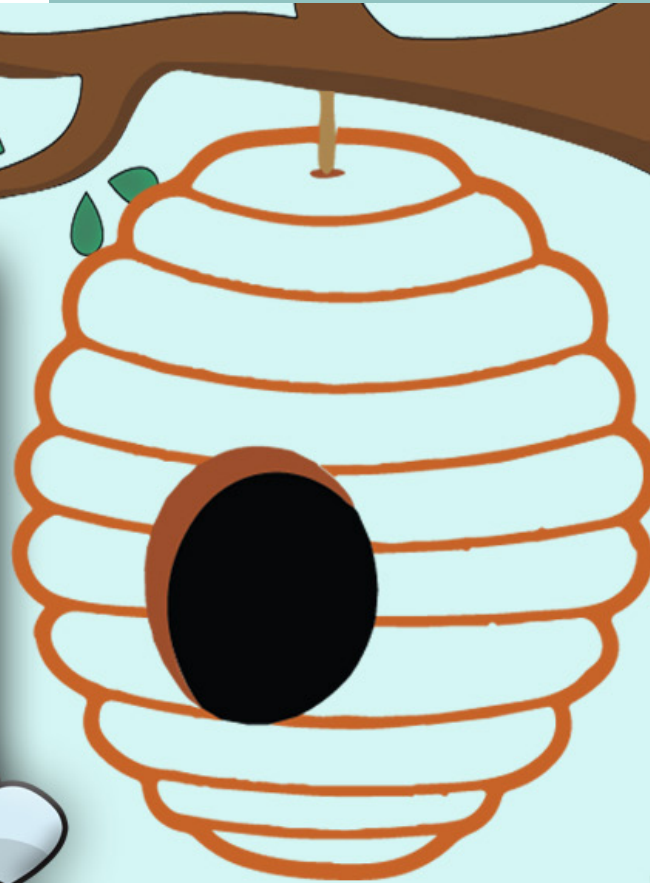
Instruction Page



Help the bee fill the
hive

Click on the right answer

Start



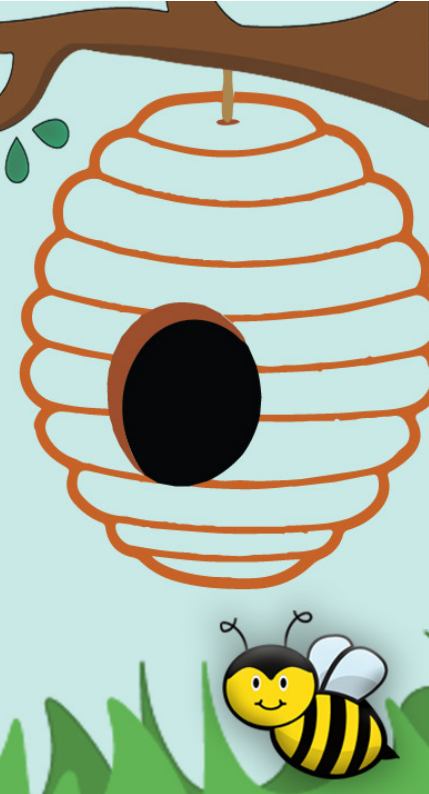
Dom Norman and Jakob Nielsen both talk about how visibility is the most important part. Problems can arise when we don't know what to do and this can lead mainly to visibility. I tried to make my game look as child friendly as possible with the use of colours and imagery. However I didn't want it to look complicated to use. I used circles and squares for any information as good shape is easier to understand like Gestalt's mentions.

All the assets were created in illustrator and then later put together on Photoshop to create the final design.



What are leaves for ?

- To protect plants from insects and animals
- To carry water
- To make a plant look nice
- To soak up the sun's energy and make food



Question 1 Page

The design is the same throughout the game. Again with visibility I didn't want the brain taking in new information as the most important thing is the content. The buttons in the left link to similar buttons that are already out there on other softwares. The symbol of the house links to the home page. The back arrow indicates if you want to back a page and the I button is to show the instruction again in case the user needs to know what to do again. I have used the consistency law and made the buttons remain in the same page throughout the game.

Wrong Answer Page

Jakob Nielsen mentions error. Its important to help the user recognise there mistakes so they can try again. This is what I have done with the red x next to the answer they have clicked. I even added a prompt at the bottom of what has happened. But even with out the prompt the user would know if I just added the X due to being familiar with a red cross being a wrong answer. The try again button is big because i want the user to try again and not quit. Having it there makes it easier for faster decision making.



What are leaves for ?

- To protect plants from insects and animals
- To carry water **X**
- To make a plant look nice
- To soak up the sun's energy and make food

Oh No.. Thats the wrong answer

Try Again





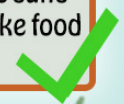
What are leaves for ?

To protect plants from insects and animals

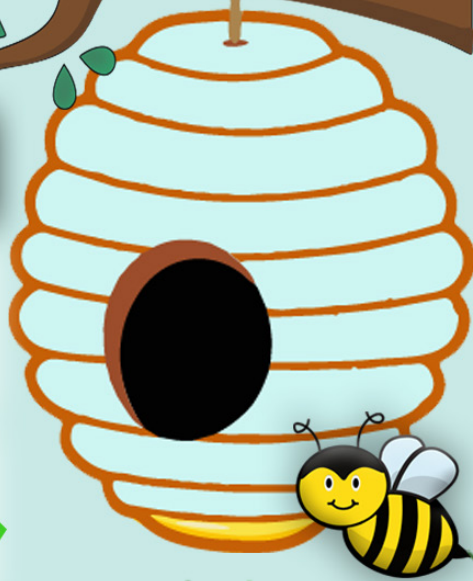
To carry water

To make a plant look nice

To soak up the sun's energy and make food



Next

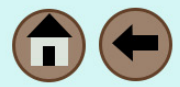


Right Answer Page

When you click on the right answer the user gets positive feedback. With a tick appearing on the screen. This can link to visibility. The vocabulary matches with my target audience which is 7-8 year olds.

Final Page

On this page I decided to use shapes that would be easy to look at. Especially when they having writing. All asserts were created in illustrator and finalised in Photoshop. The document was put together in Photoshop.



Well Done!

You have helped the bee fill the hive

Play Again

Review

Home



References

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