



DE0972/ DE0974
Design Document

Final Project/ PP02

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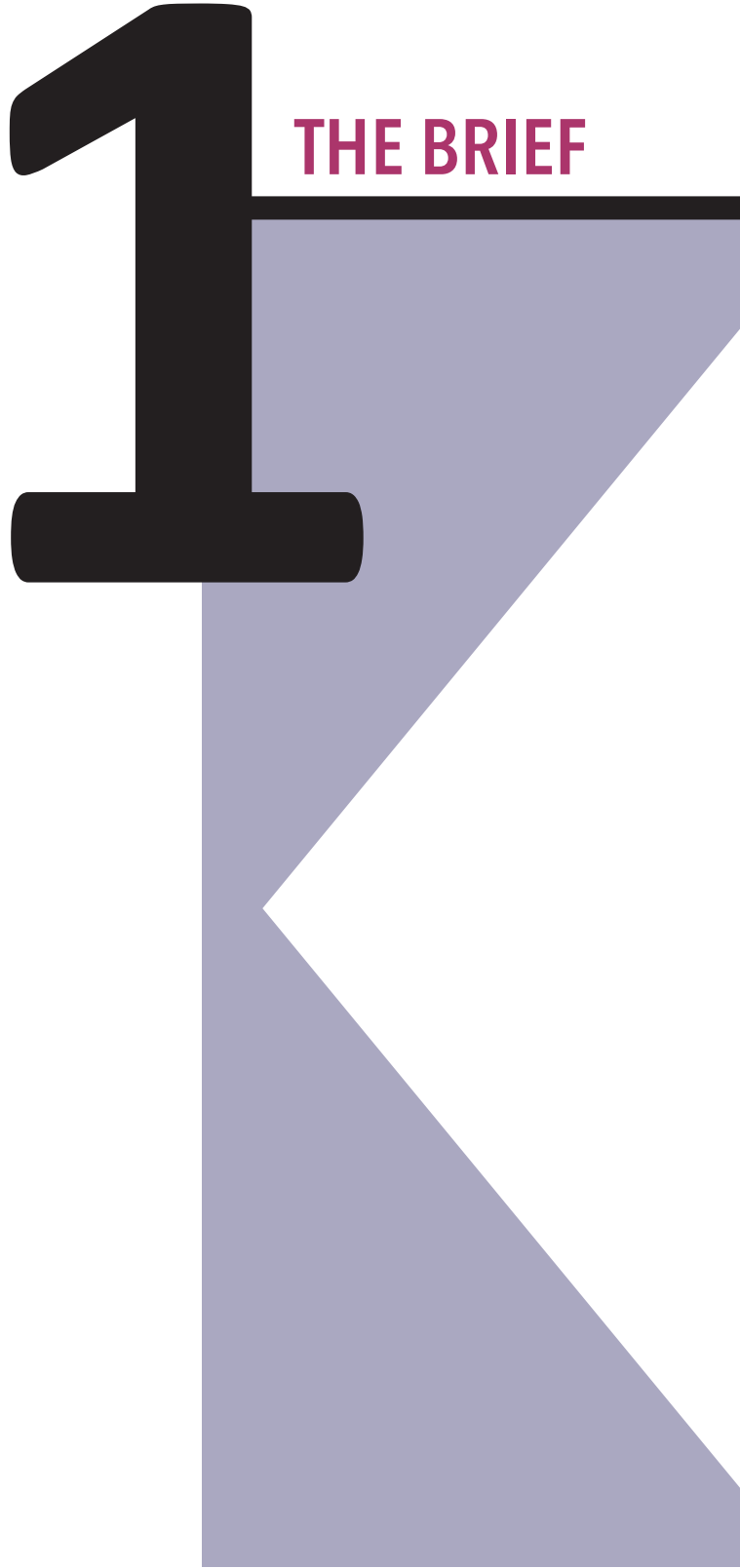
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The Brief

The brief that we have been given is an open one. We are able to choose any subject to do our project in. I am looking forward to this brief as in the past I have enjoyed the self brief.

I like how will open briefs everyones projects are different and because everyone has different interests the outcomes are always interesting to look at.

I am going to have a look at some previous projects to help me decide what my brief will be.

Previous Projects

To help me decide on what I want to do for this project I first looked back into the previous projects that I have done.

I have looked at ones that I have received good marks in or have really enjoyed.

Some of which include:

E-book: I enjoyed this project because not only was it interaction design but it was also artistic and creative. This is when I think I am mainly at my high. I would love to do a new project involving something like this.

Campaign- I enjoyed this project and got one of my best marks from it. I created a campaign on Male Breast Cancer.

I had a passion for what I was doing in these two projects and for my new project I want to have that passion again.

What is the Brief?

I have set myself a brief of creating a new device, which will help encourage and make reading more fun and immersive for children.

I am aiming to get the device fully functioning and ready to use.

Objectives :

- 1] Apply comprehensive analytical research to complex design issues and topics leading to holistic design.
- 2] Demonstrate the ability to research all relevant considerations for Interactive Media Design and make effective use of this research throughout a design process
- 3] Produce, Present and Communicate design solutions to a professional, highly creative standard to specialist and non specialist Audiences.
- 4] Reflect on, Evaluate and Respond to feedback in relation to own performance and identify personal strengths and needs and accept personal responsibility.



RESEARCH

What to Research?

To find out what I'm going to do for my interactive story I need to first research into these areas:

- What interactions exist?
- What already exists?
- Competitor Analysis
- Customer Analysis

I will also have to choose a story to which I will base my project around.

Interactive Print

I have always had an interest in reading and books. I also have an interest in interactive print, as it has modernised the way we see printed books.

With the technology and the knowledge that we have today we can expand the experience of reading in many ways.

One being able to choose different narrative paths to create a greater immersion for the user. Being able to take more then one with you where ever you go, through the use of E-books and Kindles.

Being able to see clear and colourful images that you are able to explore and enjoy.

The way I see Interactive print evolving is not by changing what it is but adding to what it is. I want to create a new way of enjoying and enhancing the way we read interactive stories.

Storytelling

Story telling is an art that has mental, social and educational benefits on children. People of all ages love stories. Children are great fans of stories and love to listen to them. Storytelling literally means reading out stories to them or just telling a story from the memory to them. It is becoming a lost art today as many parents find very little time to spend with kids as the hustle and bustle of life demands them to reserve more time for the needs of life.

Children are born into a media-soaked environment today. They have numerous television channels and entertainment programs to get them engaged with entertainment. Parents switch on cartoon channels and keep children before them for hours. But, many a times they forget the disadvantages, such fast-paced visual media bring onto kids. Television cartons and other entertainment programs block the mental development of kids to greater extends.

All the television programs are designed for elder people, not for kids. Children may lose thinking capacities and analyzing powers if they are exposed to television, several hours a day. Children are slow to grasp and slow to think; thus they need entertainments specially designed for them. Storytelling is an activity that can transfer emotions and feelings and also can boost thinking capacity.

I want to bring the two together, there is no way of getting children away from media and game play as this generation of children don't know any better. This is the way that I will be able to make storytelling a more fun experience by making it into a game like experience.

What Interactions Exist?

Before I decide on what sort of interactions I am wanting to expose I first need to know what they are. The first interactions are mainly related to the 4 of the 5 senses, which we use in everyday lives but take advantage of and forget that its there and that we are doing it.

Touch

We have all probably dealt with a touch interface either on our phones or tablets? It is a simple interaction between the finger and the device.

Although the surface of the object being touched can change the way it is interacted with. E.g. if the surface is furry the interaction tends to be stroking, if the surface is rough the interaction could be scratching etc.

Sight

There are more interactions now using sight through the use of augmented reality. This is where the user wears glasses and can see a new world or new information through the glasses and to navigate through the glasses they use the movement of their head and body.

Smell

Smellovision is a type of interaction where a smell is released and it is used to enhance what the user is seeing. For example If the user is sees a video of someone entering a candy shop which is full of chocolate then the device would release a smell of chocolate for the user to smell, thus making the experience more life like and real.

Sound

This interaction also uses the user as the controller. If the user makes a sound or depending on how loud it is will change what the user sees on the display or what the device will do.

Sound from the device itself can also change the users decisions and effect what they will do this is another form of interaction.



Fig.1



Fig.2



Fig.3

Monet

<http://www.monet2010.com/en>

This is a site that shows the work of the artist Monet. The person who has created has made it so there are interactions between each of the paintings and that some objects within the story effect the way the painting is seen.

I think the interactions on this site are beautiful from the way all the images flow and transform, but the speed of the transformation between picture to picture over time becomes sickly and makes me feel dizzy.

When doing my interaction I do want it to be as interesting as the Monet website but I don't want the interactions to interfere with the user themselves.



Fig. 4



Fig.5



Fig.6

Competitor Analysis: Monet

<http://www.monet2010.com/en>

What?

Monet2010.com is a website showcasing the work of the artist Claude Monet in an interactive and artistic way.

Features

On the site you are able to: - See the art of Monet

Interact with pieces

Review the pictures you have interacted with

Values and Targets

For people to appreciate the work of Monet and to appreciate Monet himself.

To showcase the work of Monet when his work was in Galleries Nationales, Grand Palais, Paris from September 2010 to January 2011

Analysis

My view on the site is that it well formed and the information is all there. What I think would be interesting though when going through the journey that information about the paintings would come up too just because if you aren't a Monet fan then you won't know anything about the pieces.

Strengths

The site is functional and fun. It is an interesting way to view art.

Weaknesses

This website uses some blurry images and although this is used for effect. I don't believe the effect works it makes the site look as if its whole and finished.

Virtual George

<http://www.overpass.co.uk/app/virtual-george-interactive-storybook/>

This is a virtual story. The user follows the story until they get to a stage where they have to go through different tasks.

Although I thought that the story was short and boring the theory behind the story was good. I think with more development that it could be something really interesting and fun.

When doing my story I want it to be involving and exciting like this story could be. I want to entice and intrigue the audience so they stay and enjoy the story and would like to continue or read it again.



Fig.7



Fig.8



Fig.9

Competitor Analysis: Virtual George

What?

Virtual George is an story about a little boy who plays on video games too much.

Features

In the story you can interact by

- Doing a memory game
- Playing a shooting game
- Play a platform game

Values and Targets

For people to enjoy a story whilst learning that always being on video games and not enjoying the outdoors isn't healthy.

Analysis

The game is fun in parts but it is boring until you get to he part of interaction. The interactions should be spread out. To make the whole story interesting.

Book of Spells

This game is all about the interaction between the user and the camera. The camera picks up the movement of the player and changes the visuals on the screen to match up to them. They use the controller as their wand and the book is a way to communicate what happens on the screen.

I enjoy playing this game with the family as we all like to try out different spells and tasks. It is fascinating how the camera picks up and translates the movement into visuals, and the visuals are really clear.

If I were to take something from this game into my project is to keep the story, imagery and concept clear and precise so people know what and when to do something. I would also take away the excitement of the game and how interesting it is to use.



Fig.10



Fig.11



Fig12

Competitor Analysis: Book of Spells

What?

Book of spells is a spin-off from the film Harry Potter. It enables you to learn and do spells just like Harry.

Features

On the game you are able to:

- Learn Spells
- Do spells
- Learn stories
- Interact with the stories and decide what happens.
- Interactive Images

Values and Targets

To bring the wizarding world of Harry Potter to life and able the user to be a wizard themselves.

Analysis

I enjoy playing this game, I found it fun and interesting. It for me brings the experience to life but it does have some kinks.

Strengths

This game appeals to all ages and when turned on everyone wants a go. The aesthetics of the game aren't too childish and simple that it appeals to adults. It has a playful but serious vibe which also brings to life the harry potterness of it all.

Weaknesses

The camera sometimes doesn't pick up what the user is doing and the game stops. This sometimes happens when the user or the book hasn't moved.

Research Analysis

Through my research I have found that adults are taking away from the children what is a natural thing. Adults are having less and less time to play and help their children and for peace of mind they stick them in front of a TV and hope that they stay there for hours, while they get some chores done.

What I have found is that Children and their parents could benefit from something that they can stick them in front of but something that is still stimulating the mind and still helping them to learn.

From my competitor analysis I have found that what I create needs to be visually appealing and flow well. I have found that it needs to be fun to play and stimulate the brain. Finally I have found that it shouldn't be too long as it needs to keep the user focused. As children do tend to have short attention spans.



My Concepts

In this section I will be talking about my initial concepts and how I think they will work. I will also show a small sketch of how I think the layout of the idea would work. I have had many concepts and many ideas, some of which have come from discussions with my class but these are the three that myself and the group preferred.

Concept One

My first Idea was to develop an experience chair, the chair would be used whilst reading a story and the chair would react to what ever the user is reading

E.g. "the earth shook" - if reading this then the chair would shake.

Pros

The pros of this idea would be it would enhance the experience of reading and bring the story to life. It would be a fun project to create and would help me develop my skills.

Cons

This idea could be too big. All aspects of the chair would have to work precisely. I would start off with just one aspect of getting the chair to work. Using the example from before, trying to get the chair to shake.

Also the idea of bringing the 4D experience to the story could interfere too much with the story itself.



Concept Two

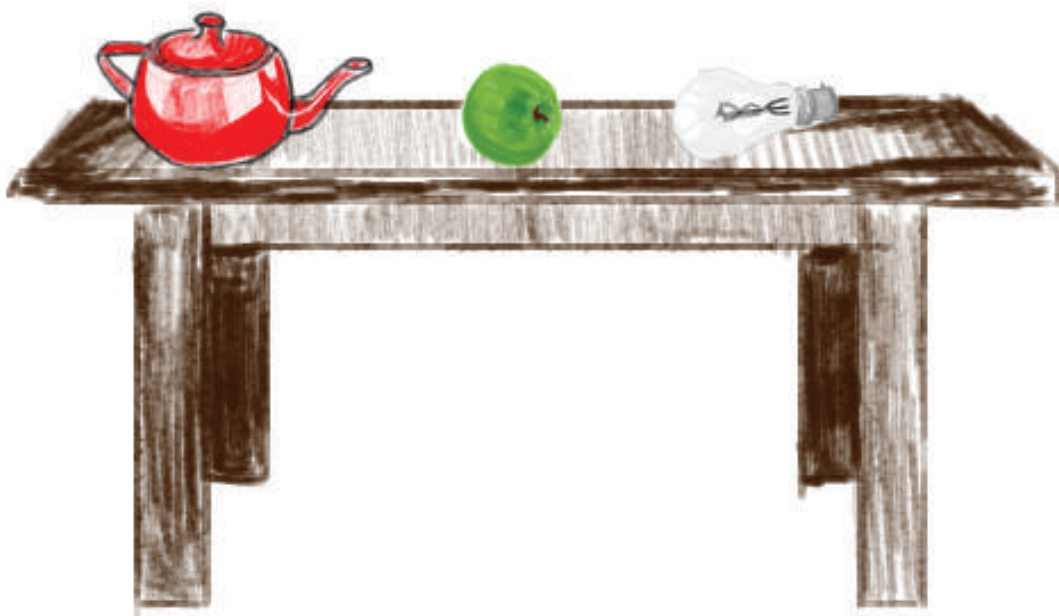
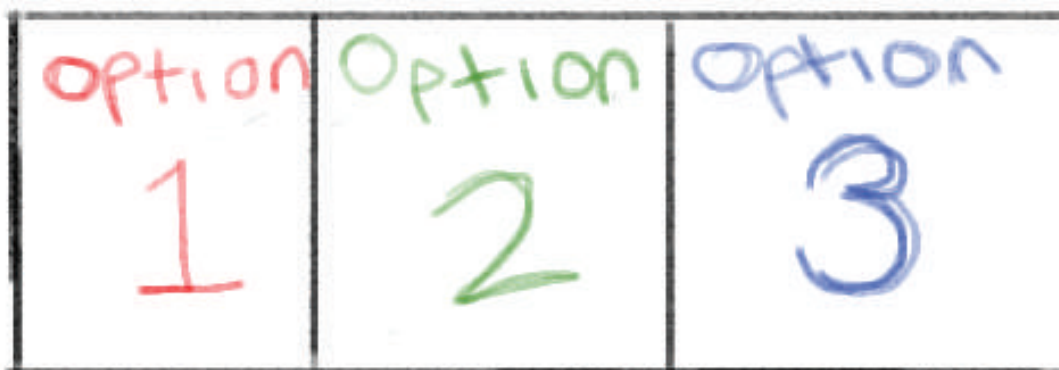
My second idea is to use Arduino and objects to add to the experience of reading a story. The user would read the story and during it certain aspects of the story will activate a message which will tell the user to pick up and object. The right object picked up will activate the rest of the story. If not the right object then the action would effect the story and it would change the outcome.

Pros

This idea is interesting, fun and keeps the audience focused on the story whilst still being immersive and interactive. It can also have a game aspect to it.

Cons

I will have to find a story that contains both objects that can be animated and a story that contains more then one turning points.



Concept Three

This idea involves the use of objects that are derived from the story chosen. The story would ask the user to pick up an object and this will determine if they were reading the story properly. If they pick up the wrong one then it would tell them. The more they get right the more points they win.

Pros

This idea is simple and effective. This idea works solely on the user's input and how they personally interact with the story.

Cons

This idea could be too plain and not entice the user reading the story. The actions could be too simple, and could result in being boring. It is just an on and off state it doesn't stimulate the brain and also could get too repetitive.



Who is it for?

Harry Maddison



Persona One

Age: 8 Years Old

School: King Edwards Primary

Lives: North Shields, Newcastle

Harry loves school and always does as he's told when he is there. He will read with his teachers and will read happily in front of the class.

Although when Harry gets home he likes to test his boundaries and he hates reading. He would much rather watch the TV or play on his video games. No matter how much his mother tries to make it interesting or fun, he doesn't want to do it, and will stop if he is forced too.

Harry would benefit from something that has game like qualities, that would get him interested in reading for himself and his mother.

Scenario

Harry has had a fun day at school and is walking home with his mum. Harry knows that when he gets in the house he will have to do his homework before he can play on his video games.

He gets home and does his homework as fast as he can, but today he forgot that part of his homework was reading.

Harry's parents try to make him read 5 pages at a time. Harry finds the reading boring and what should have taken him 10 minutes to read has taken half an hour because he was whining about how boring it is.

Harry's mum says that if he doesn't stop whining then she will take his video games off him and tell his teacher at school.

Harry would like reading to be more fun like his video games so it doesn't feel like homework.

Who is it for?

Amanda Blackburn



Persona Two

Age: 46 Years Old

Work: House Wife

Lives: Tynemouth, Newcastle

Although Amanda is a house wife she is still a busy women with cooking dinners and keeping the house clean. Amanda finds this difficult as she has two kids to look after as-well. One of 8 years and one of 6 years.

Amanda has no way of entertaining her kids other then putting the TV on while she does the housework, or she will let them play on their Video Games.

Scenario

Amanda wanted to take the children on a day out but the weather didn't agree with her. This meant that she would have to entertain them. Although the children were playing with their toy but they kept forgetting to put their toys away and She kept having to clean up after them.

Amanda was fed up with cleaning after them so she told them to go lay some video games, as they couldn't make any mess doing that. Amanda then leaves them too it and goes to make tea. She keeps checking on her children and they are quietly playing their games. With no mess.

Amanda then has a moment to herself and has a check up on Facebook to see what her friends are up to. She then comes across a article that says Video Games kill your brain cells. Amanda freaks out and immediately wants to take her children off the game but then they would go back to making messes. So Amanda leaves them. Reassuring her self that the Article was being dramatic.

Amanda would benefit from something that doesn't make a mess and also keeps her children entertained.

Final Concept

My Final Concept is to use Eduino and objects to add to the experience of reading a story.

The user would read the story and during it certain aspects of the story will activate a message which will tell the user to pick up an object. Then the object they have chosen will effect which route the story will take.

I want to create a story in which the user is taken on a journey and it is a matter of if they can survive until the end.



What Story?

I originally wanted to create my own story so the user would be given many objects and will follow their own journey. An example of how I wanted it to work would be:

“ James has been on a long journey and needs to take rest for the night. He finds a cave but it is too dark. What object can he use to light his way in the cave?

Options:

- Torch
- Sword
- Knife”

The right option would be the torch and if this was the object chosen then the story would continue until the next point of help. If the wrong option was chosen then the story would have consequences.

Although for the time we have to this project this option wouldn't be possible. So for the project I will use a story that has already been created and show how my idea could work if it was to be developed in the future.

I have researched into stories and what would be the best one to use. I have a check list of how I chose my story:

- Is it a well known story?
- Is it a fun story?
- Can the story have multiple endings?

The Frog Prince

Summary

In the tale, a spoiled princess reluctantly befriends a frog after dropping a gold ball into his pond. She follows through on the promises that she made to the frog after he had collected it for her. The outcome for her is rewarding. (In the end)

Pros

It is fun and teaches a lesson
It is unknown so could be played around with
The outcome could be inspired by the newer version of the film

Cons

Not a lot of turning points
Not a well enough known story for people to know what my vision might be.
People might not prefer this version of the story



Fig.13



Fig.14



Fig.15

Beauty and the Beast

Summary

Belle is a girl who is dissatisfied with life in a small provincial French town, constantly trying to fend off the misplaced "affections" of conceited Gaston. The Beast is a prince who was placed under a spell because he could not love. A wrong turn taken by Maurice, Belle's father, causes the two to meet.

Pros

- Well known story
- Plenty of objects to play with
- Lots of turning points

Cons

People might expect the vision to look a certain way because of the Disney version of the film.



Fig.16



Fig.17



Fig.18

Little Red Cap

Summary

A girl is distracted by a wolf on her way to her grandma's house. He learns her plans and goes to the grandma's house where he eats the grandma. When the girl arrives at the house, the wolf eats her also. A man passing by saves the grandma and her granddaughter from the wolf's belly.

Pros

Well known story
Hidden meaning and lesson

Cons

Story might not have as many outcomes as needed?
Alternatives of the story already exist, could I make one better?



Fig. 19



Fig.20



Fig.21

The Mouse, The Bird and the Sausage

Summary

A mouse, a bird, and a sausage live together. The sausage is in charge of the cooking, the bird is in charge of fetching wood, and the mouse is the head of fetching water, setting the table, and lighting the fire. In speaking with a fellow bird, the bird becomes convinced that his life is not as good as he once thought. The bird decides to change up duties with his house mates. In the end, they are all killed because of this change in duties.

Pros

Story is different and funny
It had a hidden meaning and lesson

Cons

Its not a well known story
Is it too different?
Does it have many changing points?



Fig.22



Fig.23



Fig.24

Final Story

I have decided to use the story Beauty and the Beast the reasoning for this is that it is a well known story. Because of it being a well known story when creating my concept people will be able to understand it.



Fig.25

4 BEAUTY & THE BEAST

What's going to happen?

As my idea is to enable to reader to decide how the story goes. I first need to know when in any story are the main points that are interchangeable.

I will be following the rules of the Heroes Journey and making the changes to the my story based on this.

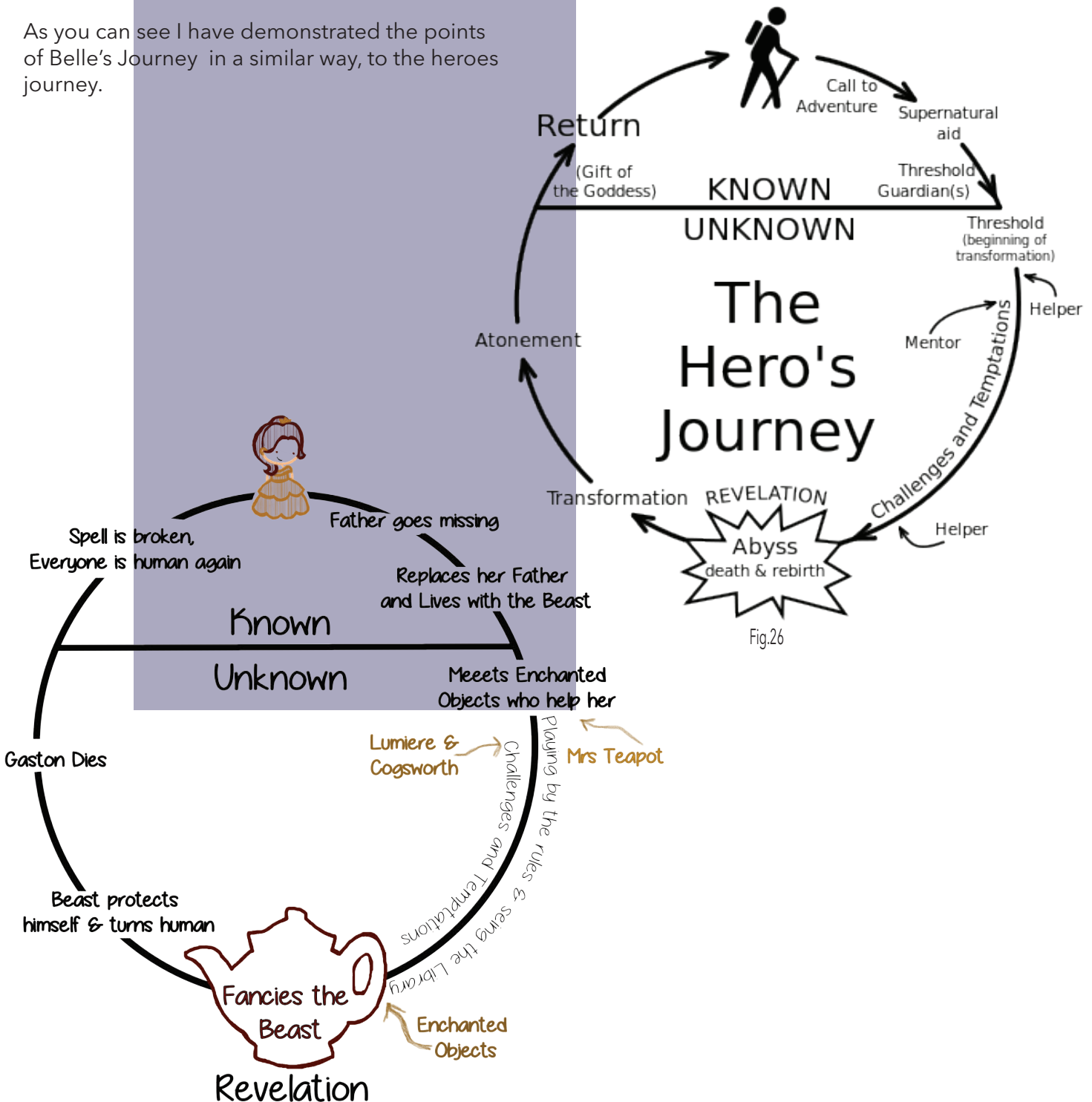
Heroes Journey

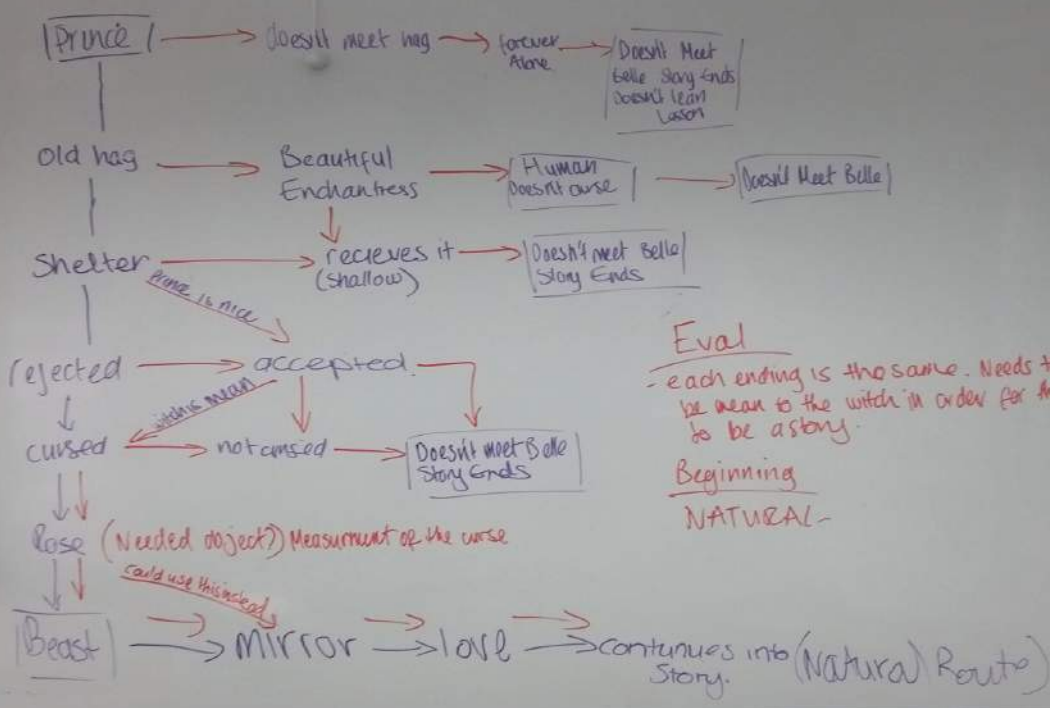
There are, according to the Heroes Journey by Vladimir Propp there are 8 main points in which most stories follow.

These points can make or break a story. These points that every bad guy would like to change because any slight change in these aspects could lean in their favor.

I have gone through Beauty and the Beast and I have also watched the film to see when the breaking points the story are.

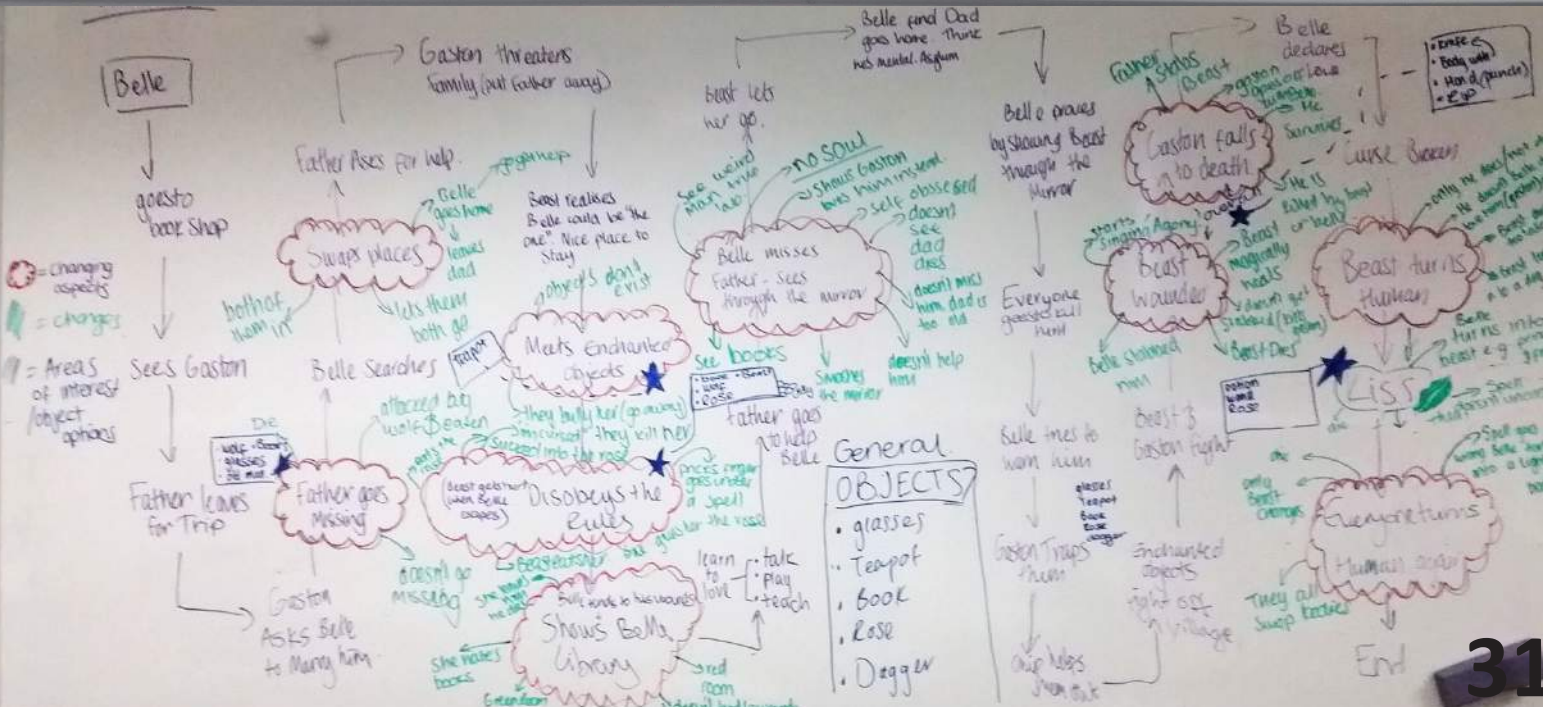
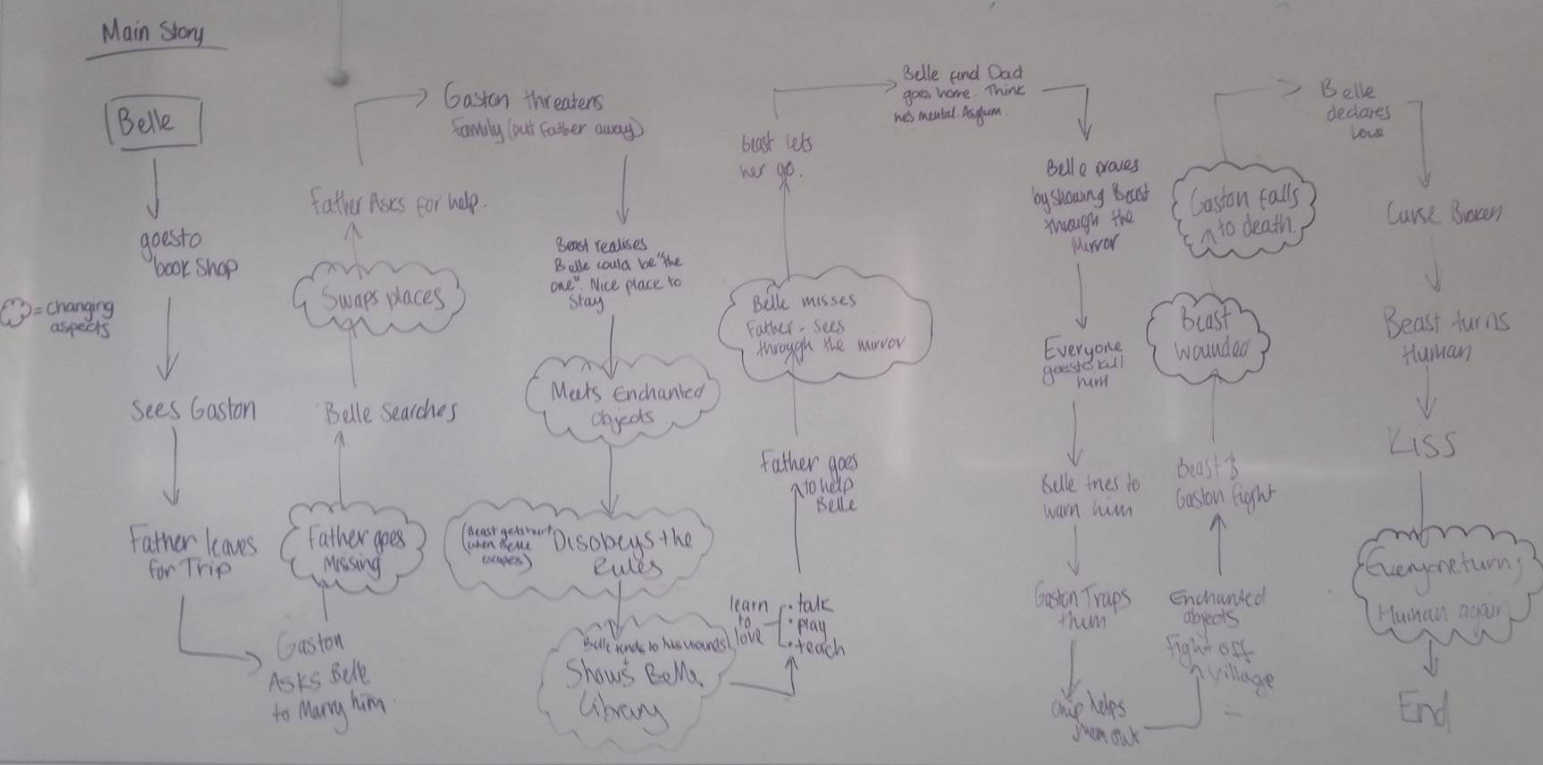
As you can see I have demonstrated the points of Belle's Journey in a similar way, to the heroes journey.





Eval
 - each ending is the same. Needs to be mean to the witch in order for their to be a story.

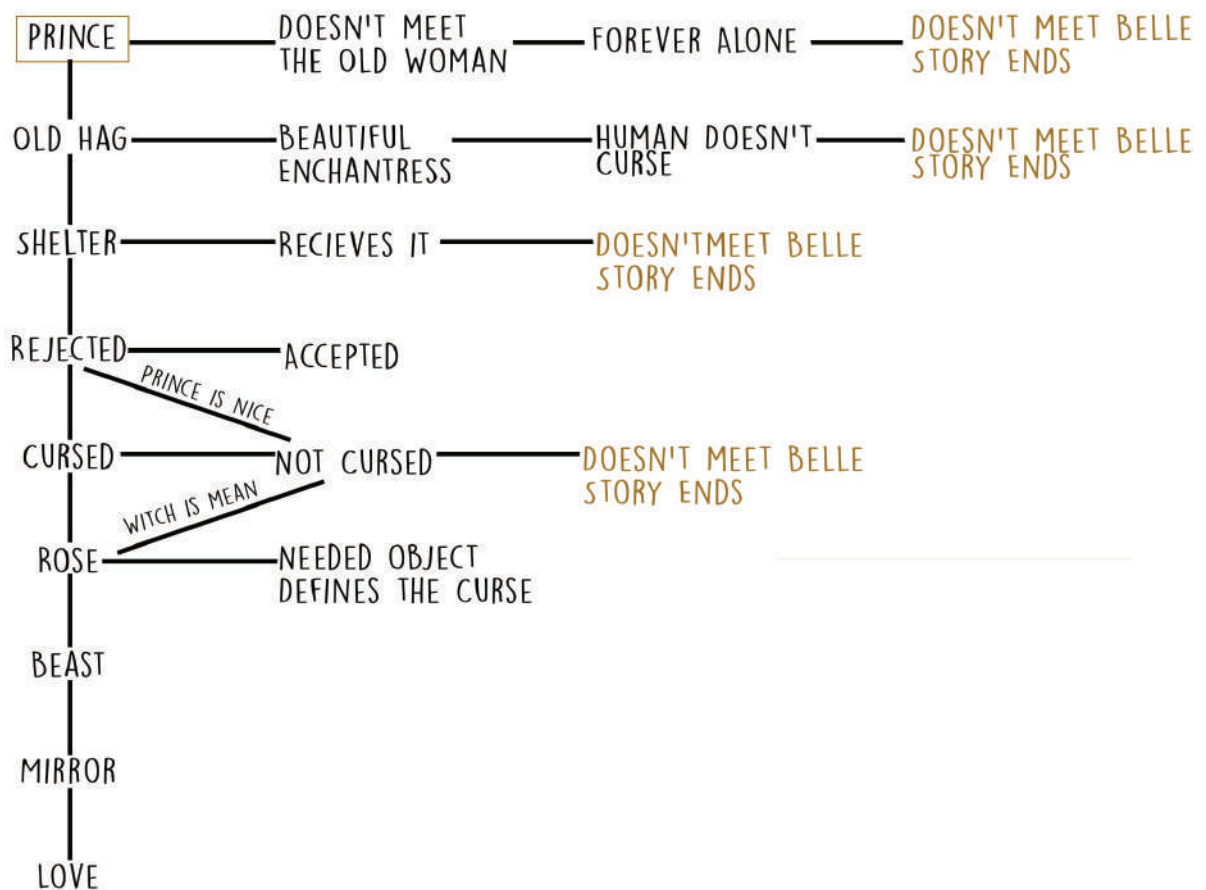
Beginning
 NATURAL-



My Story

I have planned how my story is going to turn out. I have decided that the beginning of the story, where the Prince gets magically turned into a Beast, can't be changed as anything that happens in this part of the story would lead to the Beast and Belle not meeting which is cutting the story short.

This means that the story will be interactive when the Beast and Belle meet. I have plotted the changes out on a white-board as previously shown and then I have digitalised them.



Story Board

To know how I would plan out the story I first wrote out what was going to happen. As I have already decided how my story will look, I've created some basic watercolour drawings to go along with the text.

After a discussion with my peers and my lecturer they felt that some of my decisions for how the story could end were good but could be happier, and less doom and gloom. I then changed some of the endings. These are shown on the next page.

An example of this would be that, I thought of one ending where Maurice (Belle's father) goes on his trip to the invention convention and he gets lost. When Belle goes to find him she finds that Maurice died. As she brings her father back for the funeral, she mourns and doesn't want to be alone. Because of this she gets engaged to Gaston, but at the time of the wedding Belle gets cold feet and runs away, and finds herself lost at the Beast's castle. This ending allows the story to continue as it would originally go. Although as Maurice has died, the story would continue but with someone else in Maurice's place.

The Script

When I wrote the script I first wrote out the whole story of Beauty and the Beast. After this I then went through and partitioned it all into sections. These sections would be where the user has the option to choose, the story would go off into a different story or where it will continue.

The story was then too long to animate so I went through each section and got rid of any parts that were unnecessary, although, left it so it still made sense.

I then used this script to refer back to when I was creating the videos.

ANIMATION



The Animation

I will be researching into what my animation will look like and what effects each scene will have. In this section I will be:

- Why I have chosen to do Animation?
- Researching into what already exists?
- Looking into what Style I would like to take forward
- I will be creating a Mood-board
- What programmes I have used
- What problems I have faced?

What is Animation?

Animation is a simulation of movement created by displaying a series of pictures, or frames. Cartoons on television is one example of animation.

Why choose to do Animation?

I decided to do animation for part of my project because I think it is a powerful medium. I enjoy watching animations and cartoons in TV and film. I find that there is more to work with in the animated world. Simplicity and minimalism can work just as well as CGI and special effects, whereas I feel that in film and TV it doesn't have the same effect as animation does.

What am I expecting?

I hope that the end product will take the form of something similar to a Disney Short. I enjoy these mini films and think they are very effective.

Movie Shorts

I imagine my animation to work like Movie Shorts, examples of this would be from the likes of Disney, Pixar etc. I want my animation to look similar to these but I don't want my end animation to look as digital as those.

I would like the physics of the video to look similar to the parts in Shrek when they are telling a story.

I follow a user on Instagram called @TRICIAKIBLER, She is an artist. Her artwork consists of art that is made up from Ink. She uses ink and the way it spreads and splats to her advantage in her work. I would like to do something similar in my work but I would like to use watercolours instead this I feel will make the colours more pastel and I feel that this goes along with the story that I have chosen to do.

To round this off I want to make the characters and the scenes have the effect of watercolour but the way the story is being told will reflect similarly to the ones in Shrek and the overall view of the Animation will be like a Movie Short.

Competitor Analysis: The Duet

<https://www.youtube.com/watch?v=GuX52wk-CIJA&spfreload=10>

The Duet is a Short that was created by Glen Keane. The story is about two babies, a boy and a girl, and how they grow up.

What I like about the way it has been created is the fact that it is simple. It follows the same style all the way through. The story has a emotional connection with the audience. The way that the characters come across and how we see them grow up and the decision they make turn the animation from a story into an experience.

I also like the way that the video is all in one colour. The lighting and shadows of the colour blue make this video even more effective. Blue is the color of the sky and sea. It is often associated with depth and stability. It symbolizes trust, loyalty, wisdom, confidence, intelligence, faith, truth, and heaven. Blue is considered beneficial to the mind and body. The meaning of Blue added to the storyline is extremely effective as the two match. They both show courage, trust and loyalty.

I am not a animator and I don't expect my animation to look like this at the end, especially with the amount of time that I have but I hope that I have the same feelings that I have watching this video that I do with mine.



Fig.27



Fig.28



Fig.29



Fig.30

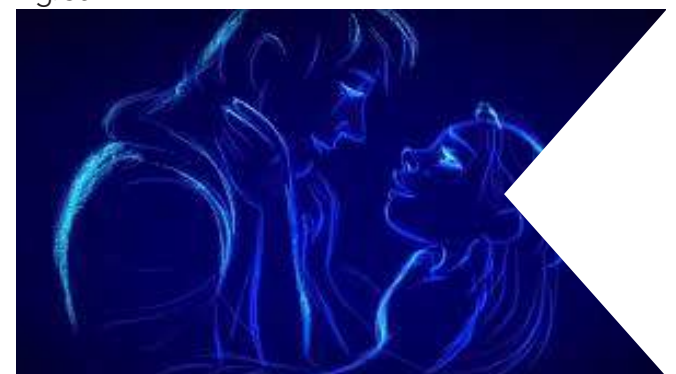


Fig.31

Competitor Analysis: Broken Wand

<https://www.youtube.com/watch?v=Zn3KCceR-vfU>

Broken wand is a short by Anne Yang & Michael Altman. It is a story about a Grandson and his Grandad. The Grandad has lost touch with his Grandson because all he is interested in is playing with his gameboy. The Grandad loves magic and tries to spend time with his grandson through this. Although his grandson isn't interested, the Grandad keeps on trying. When an attempt to get the Grandsons attention goes wrong the man seems sad and like all hope is lost, but then the grandson feels sorry for his grandad and plays a magic trick on him. Afterwards they have fun and it ends where they both have their picture taken and placed on the wall.

I like this animation because it is solid and clean. The Duet flowed more and had an artistic flair where as this animation is clear and more realistic. I like the storyline and how it is modern as I can imagine most families in this day and age are likes this, as it seems technology is taking over. We don't spend as much time talking in person or spending time with each other anymore.

I also like the emotion of the short and how we feel sorry for the Grandad. Although what I don't like about this animation is the music, it doesn't feel old, modern or magical. It just sounds dated and I don't think it relates to what is happening in the video.

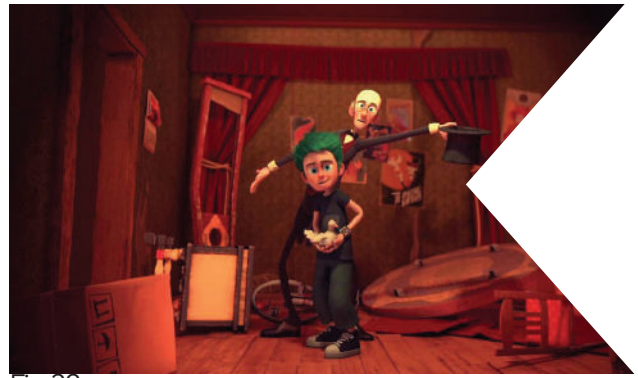


Fig.32

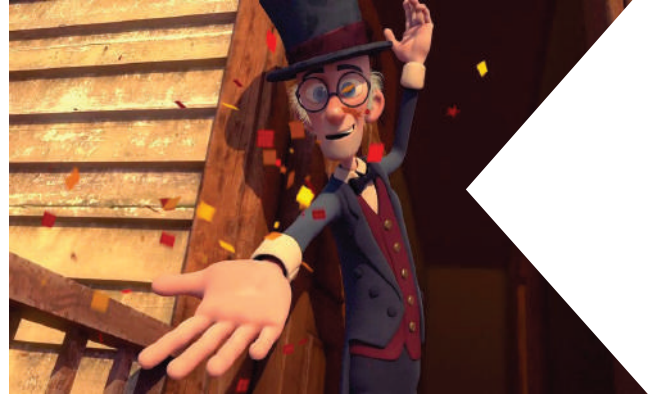


Fig.33



Fig.34

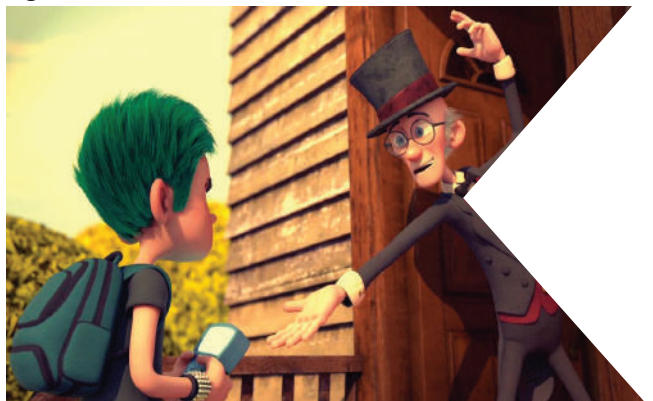


Fig.35

Competitor Analysis: Me and My Moulton

<https://www.youtube.com/watch?v=RdHyCw-PvppI>

Me and my Moulton is about a family, which is made up of three sisters, a mum and a dad. It is about how their family isn't like the other families out there. It's about the acceptance of how their family is and being proud of it. They do this through the want for a bike. Although when they get one off their parents, it isn't what they expected, but they are still appreciative of what their parents got them.

I like this animation because it is different to the other short movies. I like how minimal it is. The other shorts were graphic and had a lot of movement. Where as this short it sketchy as if it has been drawn by a child. When watching it i feel sorry for the middle child and her stomach aches, but it is something all children get. Embarassment from their Parents. This short is easy to relate too. I enjoyed watching it.



Fig.36



Fig.37

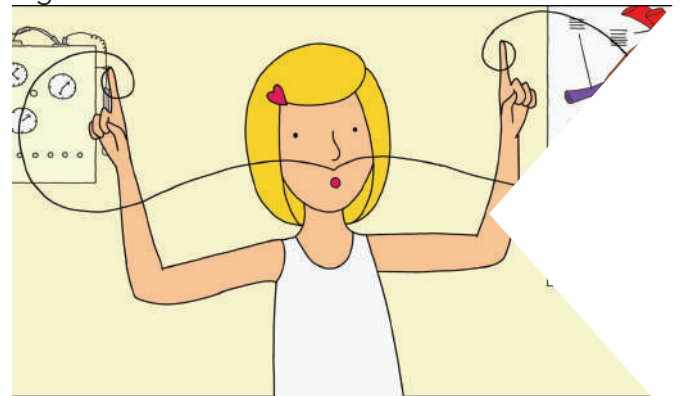


Fig.38



Fig.39

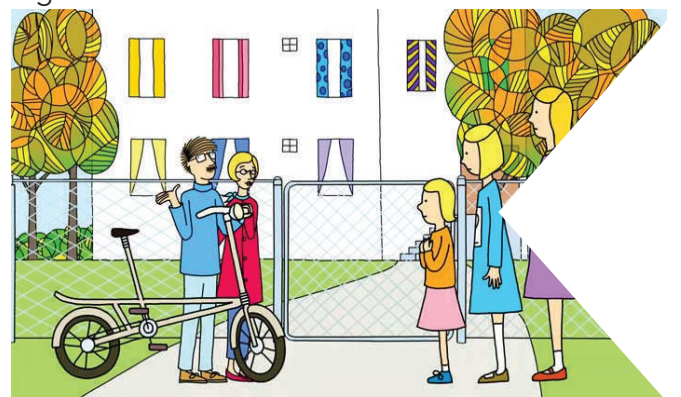


Fig.40

Research Analysis

What I have found from my competitor research is that my animation needs to be simple and minimal. Minimalism is the thing that I seemed to have liked out of all of the short animated films.

What has inspired me from these shorts are the artistic side of them. What I feel from the film and the story of beauty and the beast is that it is a journey for each and everyone of the characters. From this I think the visuals should follow this journey and I think the best way to do this which I have found from my research is that the artistic route is the best way to do it.

@triciakibler

When I think artistic, I think of paintings and traditional art. One person that comes to my mind when I think of this type of stuff is @triciakibler who is an artist that I follow on Instagram. All her artwork is created with watercolours and the effects it leaves on all of her pieces looks so beautiful. I would like to go down this route for my animation. From my research and my competitor analysis then

Although this isn't the only route I want my animation to take. What I have also found really effective is the parts in the Shrek, where they tell the stories and flick through the books. I think this with the watercolour will work really well. I am looking forward to creating it.



My Animation

To start my animation I first had to draw all of the images I wanted for each pages of the story. This took awhile and I overall created 50 pictures, some of which I didn't use.

I then scanned all the images in and edited them on photoshop, this was to make sure the images were clean and any messes that I have made were erased.

After doing this I then organised them into sections. These sections were applied due to which video they would be going into.

This organisation helped me when it came to my animation.

When this was all finished I then created the animation in After Effects. I used after effects because I think it is the best programme to use for what I wanted to do.

How it worked?

When It came to the animation everything was working fine. All the videos were coming together nicely although I had initial problems with the timing of everything.

As the device would be used by children I at first didn't know what the average speed of a child reading was. So I asked my 8 year old brother to read the story for me and I timed how fast/slow he was at reading them. I got him to do this a few time so I could average out the time he took to read it all.

Afterwards I then put these times in and the animation started to come together more.

I then was debating with myself and my lecturer about putting a voice over on the animation of myself reading it but I think this defeated the point of the child reading it, as I would be reading it for them. I then decided not to put a voice over on.

Another debate I had when it came to the animation was that I was going to put music on it. I found through looking at 'Alive Inside' by Michael Rossato-Bennett that music can really effect people and stimulate the brain. But through user testing using my family as a reference (mum 47, step dad 44, Brother 24, Brother 8) that the music was distracting when they were trying to read. After this testing I then decided not to put music on my videos.

Brown Vs Black

When it came to the background of the Animation I had mixed reviews on it. I originally had a brown paper background to show through the theme of the storytime experience but some people felt it didn't work and that the images didn't show through properly.

Some people thought a white background would work with a regal styled border or frame and other thought the same effect would work but with a black background.

I took this under consideration and tried each of the options out. I thought that the criticism was right because when I tried the other backgrounds it immediately looked better. I preferred the black background. I think the colours show better on black, the type is easier to read and black makes the whole thing seem more child like which is the look I am going for.

Rendering

When it came to rendering my project I had many issues. As I made many changes throughout the video.

At first I was rendering my videos and It was taking along time and then it would crash. I was unsure to why this problem was occuring.

When I was asking a friend if they knew what my problem was they found out that I was rendering it at such a high quality and it wasn't compressing the file that my laptop couldn't handle it.

They helped me figure out what I was doing wrong and was able to help me with my project. Everything after this went swimmingly.



Final Visuals

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What Tech will I be using?

In previous projects that I have done, we have done a lot of application design which meant the prototype for the device would usually be in the form of a video or using proto io to show a semi working app.

In this project as I am going to try and make a fully functional prototype. To do this I want to use arduino. I will be researching which would be the best way for me to create a way for the user to be able to decide what happens to the story.

What I am using?

Technology isn't my strong suit so I didn't know what I wanted to use for my project. There are many aspects which I could have gone down as there are many new technologies that are out in the world.

There is Augmented Reality and iBeacons, both of which could have worked for my project.

I wanted to have a working prototype at the end of the project and I think the best way to do that is to go down the route of Arduino. The technology and the help is there. This is when I decided that this is the route for me.

When thinking about Arduino I was unsure to how the visuals would come in to it, until I heard about Processing and how that works in a similar way, and how the two programmes go hand in hand.

Piezo Sensors

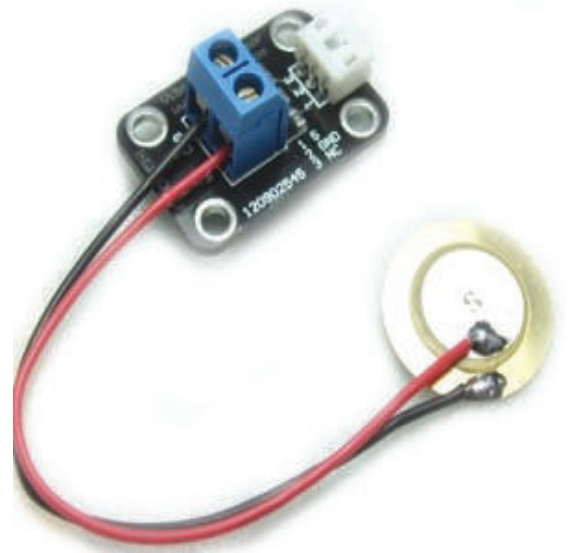
At first I was told to use Piezo Sensors.

A piezo is an electronic device that generates a voltage when it's physically deformed by a vibration, sound wave, or mechanical strain. Similarly, when you put a voltage across a piezo, it vibrates and creates a tone. Piezos can be used both to play tones and to detect tones.

Officially a Piezo Sensor is like an on and off switch. It will detect when something is there (on switch) and will react to this and when something isn't there (off switch).

This would work for my project if I wanted my device to play when the object is there and stop playing if it wasn't. Unfortunately this isn't what I want my arduino to do. I want my device to be able to detect what object is being placed and react in a specific way to that object.

To confirm that this wasn't the right route for me to go down, I decided to email Alister to get his opinion on the matter. He then replied and told me that for what I wanted to do that RFID tags would be the best option for me.



RFID TAGS

There are multiple reasons why someone would want to use RFID tags:

- Use RFID if you want to wirelessly identify something without line of sight.
- Use RFID if you want a simple wireless means to store a small amount of information on things, and even better: change the information dynamically.
- Use RFID if you want a computing device but not humans to see the ID.
- Use UHF RFID if you want a computing device to see an object from far away.
- Use UHF RFID if you want to enable the "Internet of Things"



How will it work?

How I want the RFID tags to work is, when the user picks an object, depending on which one they choose will define what will happen to the storyline.

I am hoping that when I get the animation and the arduino finished, that I will be able to create an attractive case for the arduino to go in. I want the experience to seem as natural as possible so I don't want the user accidentally pulling out wires or knocking things over. This is my main theory for creating a case. Although it would make my stand look more attractive and neater.

Code

When working with one of my lecturers, he said that this was the best code to start off with. As I have never done Arduino before, I found it hard to understand and comprehend at first. I had one problem with the code. It kept coming up with an error code, because I have no knowledge of coding and Arduino I was unsure what the error meant. After googling, I found that my port was in the wrong setting after changing this I was able to connect the code to the computer. This is the beginning of me and my coding.



File Edit Sketch Tools Help



B_and_B_2\$

```
void setup() {  
    Serial.begin(9600);           // Initialize serial comm  
    while (!Serial);           // Do nothing if no seria  
    SPI.begin();                // Init SPI bus  
    mfrc522.PCD_Init();        // Init MFRC522  
}
```

```
String lastCommand = "";
```

```
void sendCommand() {  
    String currentCommand = "";  
  
    // fob = D0 13 43 63  
    if (mfrc522.uid.uidByte[1]==0x13) {  
        currentCommand = "f";  
    }  
    // card = 34 39 07 57  
    else if (mfrc522.uid.uidByte[1]==0x39) {  
        currentCommand = "c";  
    }  
  
    if (currentCommand!=lastCommand) {  
        Serial.println(currentCommand);  
        lastCommand = currentCommand;  
    }  
}
```

<

Connecting to Processing

At first I was unsure how you connect Arduino to Processing I thought it was some kind of code or that you have to sync them or if it just worked naturally.

What I found when using Processing is that It connected without my need of doing anything. It detected what port was being used and then it connected to that port because the Arduino was connected to the port and it detected it this is how I believe it to have connected between the two programmes.



Processing_B_and_B

```
void setup() {
  size(displayWidth, displayHeight);
  background(0);
  // Open the serial port
  String portName = Serial.list()[0];
  myPort = new Serial(this, portName, 9600);
  // Load and play the video in a loop
  loadVideo("videol.mov");
}

void loadVideo(String filename) {
  movie = new Movie(this, filename);
  movie.jump(0);
  movie.play();
}

void movieEvent(Movie m) {
  m.read();
}

boolean sketchFullScreen() {
  return true;
}

void draw() {
  if (myPort.available() > 0) { // If data is available,
    val = myPort.read();        // read it and store it in val
  }
}
```

<

Development

As I have never done Arduino or processing before I didn't know where to start but it was amazing to me how after the project I was able to put my arduino together without looking and I understood the code and where to look when there was a mistake.

I came across one mistake that made me feel a little bit stupid because it was there right in front of me the whole time.

Everything was working perfectly the arduino was connecting to processing and processing was saying that it was displaying the right video, but it was actually playing the same Video over and over again. What I had found is that in my code I had wrote when It opens play the first video which was correct but afterwards I had wrote that when the loop comes back around to see if anything was detected it would pick it up and then play video 1 again. I had wrote

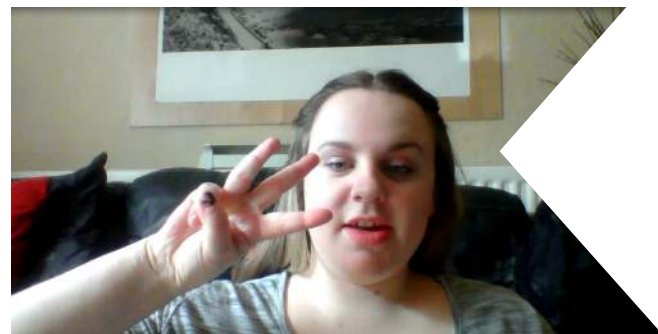
```
Void loadVideo (string filename) {  
  movie = new Movie (this, video1.mp4;  
  movie.jump (0);  
  movie.play();  
}
```

This code was telling it everytime to play Video1 I then changed this as soon as i noticed it to 'filename' and everything started to work.

```
void loadVideo(String filename) {  
  movie = new Movie(this, filename);  
  movie.jump(0);  
  movie.play();  
}
```

Initial Testing

I first did my testing with video of myself talking through each video. This test was to make sure that I had coded everything right and that it was going through each video like I wanted it too. I had 11 videos all together and everything worked perfectly. It was a thrill to see that it was all working and that something that I have created was working.



User Testing

I carried out some user testing once I knew that everything was working. Here is some of the feedback that I received:

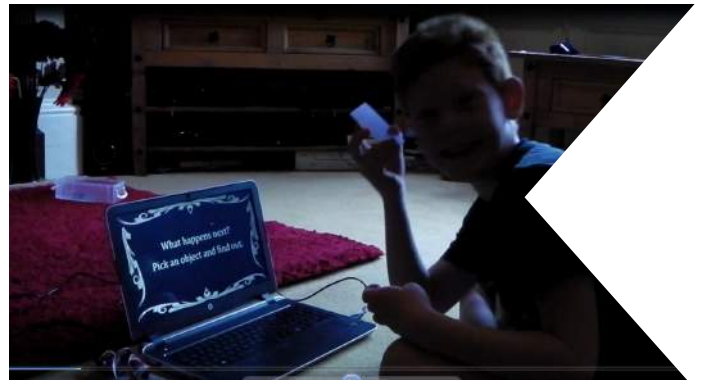
"Why don't the characters have eyes? It's creepy, I like it"

"Why don't the characters have eyes? It's creepy, I don't like it"

"The type was moving too slow/fast for my reading pace"

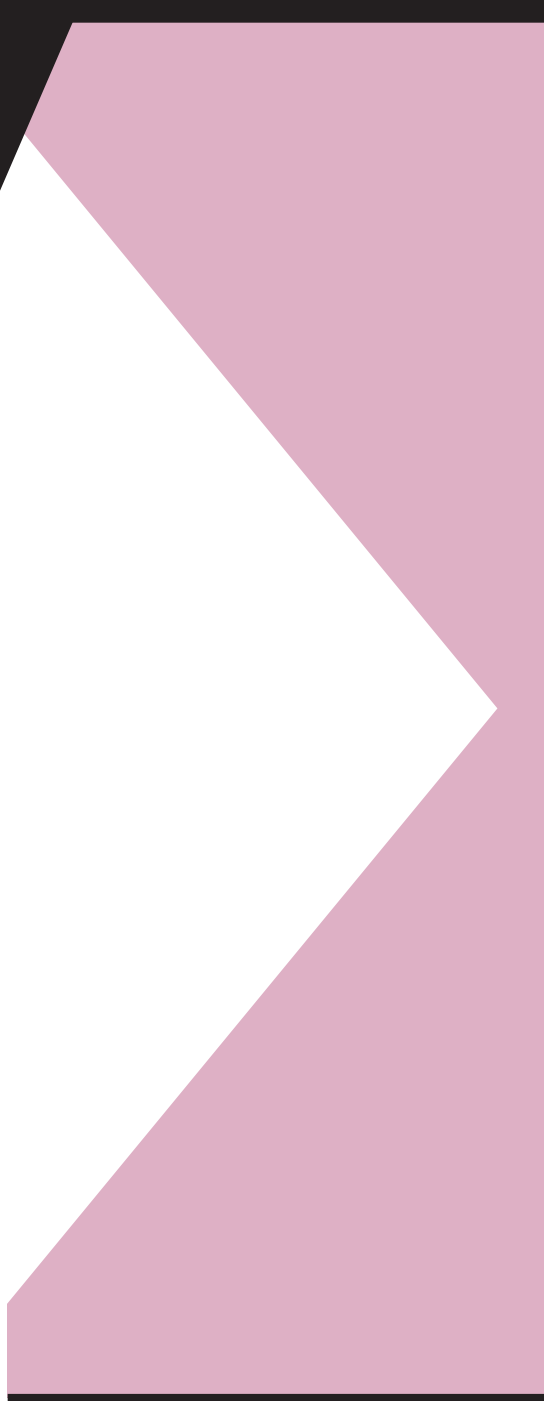
These are the two main points that I received off multiple people. I have taken their feedback on board and tried my best to cater to their needs. I did explain to some of the people about the speed of the text that if I were to create the actual device then you would be able to cater the speed to your needs.

About the eyes that was a decision I made in the design development, I decided this because I was inspired by @triciakibler and also because Beauty and the Beast is a dark story and it's all about seeing true beauty and not judging people by what you see. So behind it all there is a hidden message.



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Final Visuals



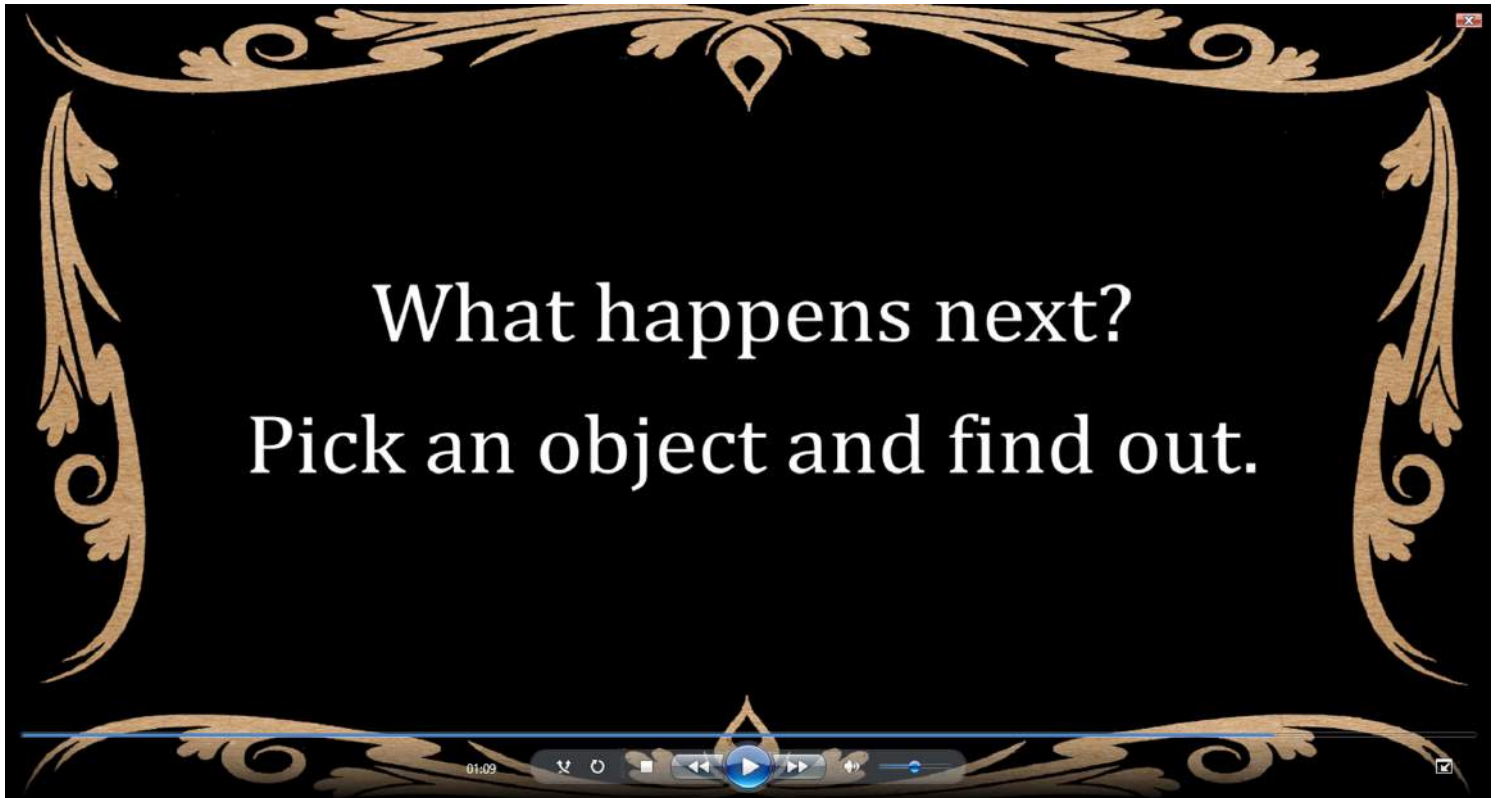
Black Background

Here are some visuals of how the animation looks with the new black background. I am happy with the results of the animation it looks how I imagined.



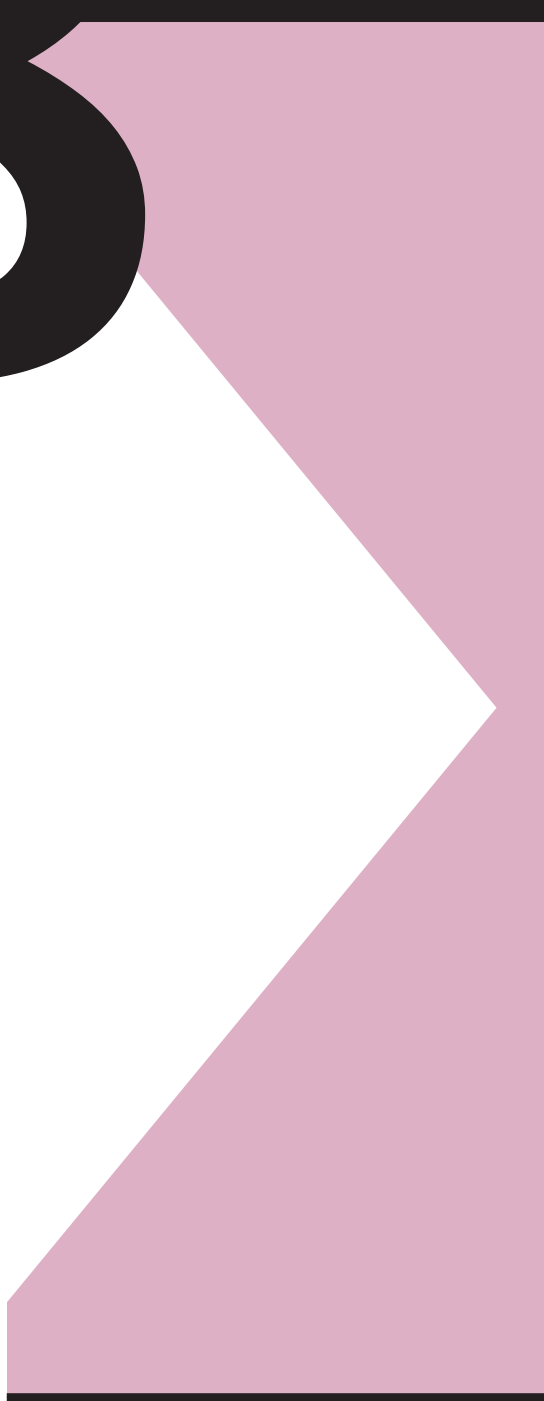
Make a Choice Page

Before, people wanted me to put a frame around the images in the animation but it covered too much of the page and there wasn't enough room for the rest of the information.



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End Project



Evaluation

I have fully enjoyed doing this project. I believe the reasoning behind it is because it was a self brief. I enjoyed this project because I did it about something that I am passionate about.

Aspects of my project that I think went well were the parts that I didn't expect. One was the Arduino, I haven't done arduino before and wasn't expecting to understand or enjoy it but when it was all working a feeling of poudness and happiness came over me. I also got this feeling when I completed my animation. Because I had some problems with my laptop during the project I wasn't sure that I was going to have a working prototype in the end but when It all came together I felt a sigh of relief and happiness.

Aspects of my project that I didn't enjoy was rendering all the videos and trying to overcome coding issues. Although the end of it all working was a happy time the parts before and during were difficult and time consuming.

Aspects of my project that I would do again if I could would be three things. One would be changing the story I chose. In the beginning I thought it was a good idea to go with Beauty and the Beast but at the end of the project it got slightly boring. I did decide to choose a story that most people have heard of, but because I knew the story it started to get dull. Because of the story change I would also like to have done more experimenting when it came to deciding the style of my animation. I think this would have been a fun way to develop my idea into something better then what it was.

The other aspect of my project if I were to do it again would be to go deeper in my research. Maybe go to a school and get permission to watch the kids read and to get the input of the kids during the project. This could also work on the teachers, and trying to help them with story time in school.

=

Overall I have enjoyed this project and would do it all over again, if given the chance.

Future Considerations

Where I see my project in the future is what originally had planned for it. I would like to develop the idea of having my own story line and characters and the user being able to decide what happens in the story but depending on what options they choose will determine how long they will last.

Although I am happy and proud that I used Arduino I think after doing the project I think it would've worked better with buttons. It makes the interaction simpler but still has the same fun effect with the story.

If I were to say what is my vision of the project it would be children playing it in their homes and teachers using it in schools, making reading a more enjoyable and fun experience.

Also in the future of the project I would like to add more options to the table. Although I chose to do two options, just to show the prototype working in the time that I had, I would like to see how the reading would work with more objects and to whether or not it would benefit from that.



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Fig.2 - https://www.myhealthvet.va.gov/mhv-portal-web/anonymous.portal?_nfpb=true&_nfto=false&_pageLabel=spotlightArchive&contentPage=spotlight/06112012_HearingAid_SlideShow.html

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