

YOUR NAME: Carla Alverina Lee

STUDENT ID: 0333767

FOUNDATION: (FID) | FIA | FIS | FNBE

TUTORIAL LECTURERS: MR CHARLES | MR CHOY CHUN WEI

| (MS FU YEN HUEI)

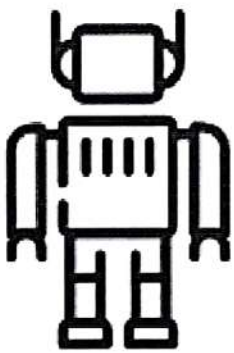

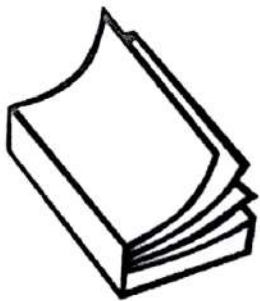
PRODUCT NAME: Flashrunning DC city

GROUP NAME & MEMBERS NAME ( IF GROUP WORK):

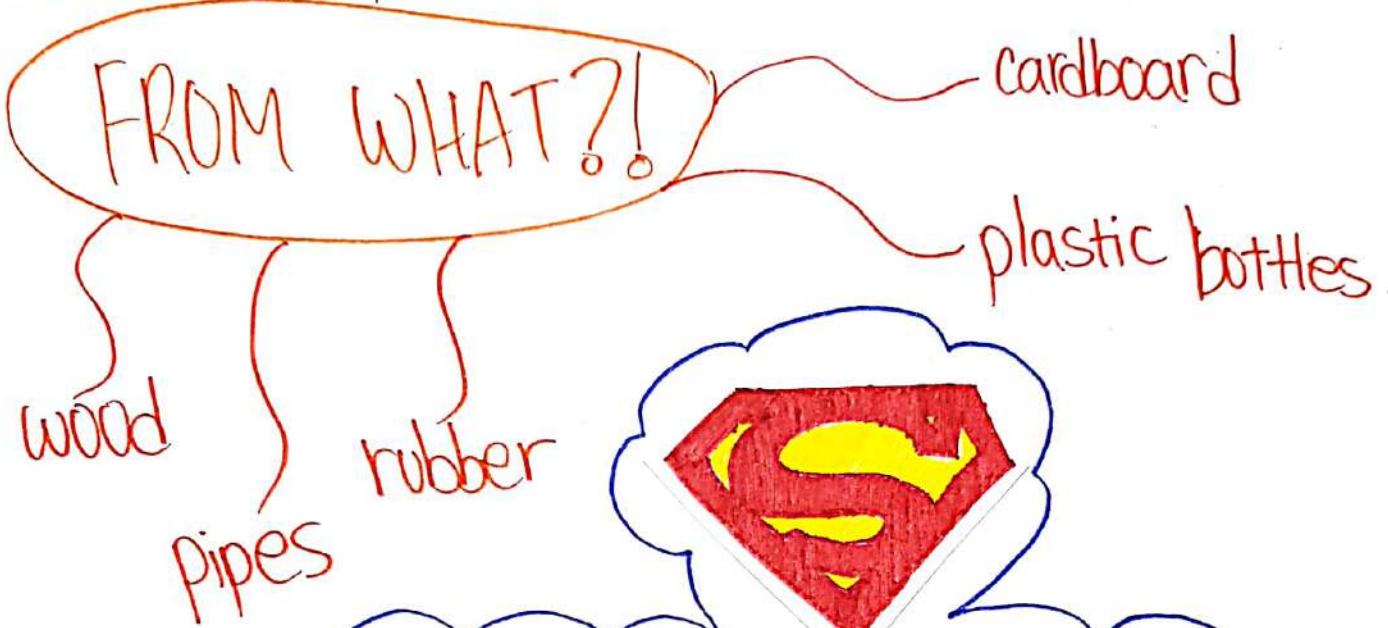
1. Arissa Alyna Shah  
4. Hanan AS-AP

2. Khiirtuna Devarajan  
5. Mathaath Ibrahim Sujau

3. Carla Alverina Lee

I	L	
		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

01. Ask! What are you supposed to make?



DC SUPERHEROES

THEME



80'S POPSTAR

TOY CATEGORY??

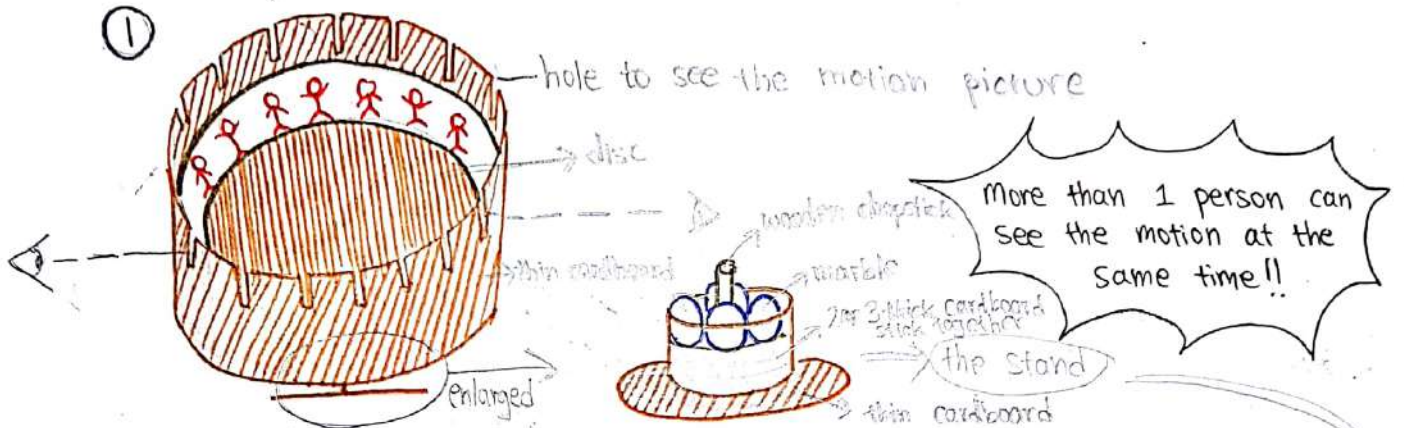
- Spinning tops
- Gliders
- Wheeled racer
- Projectile toys



02

Examples of ideas and related info that inspire you and relatable to the assignments.

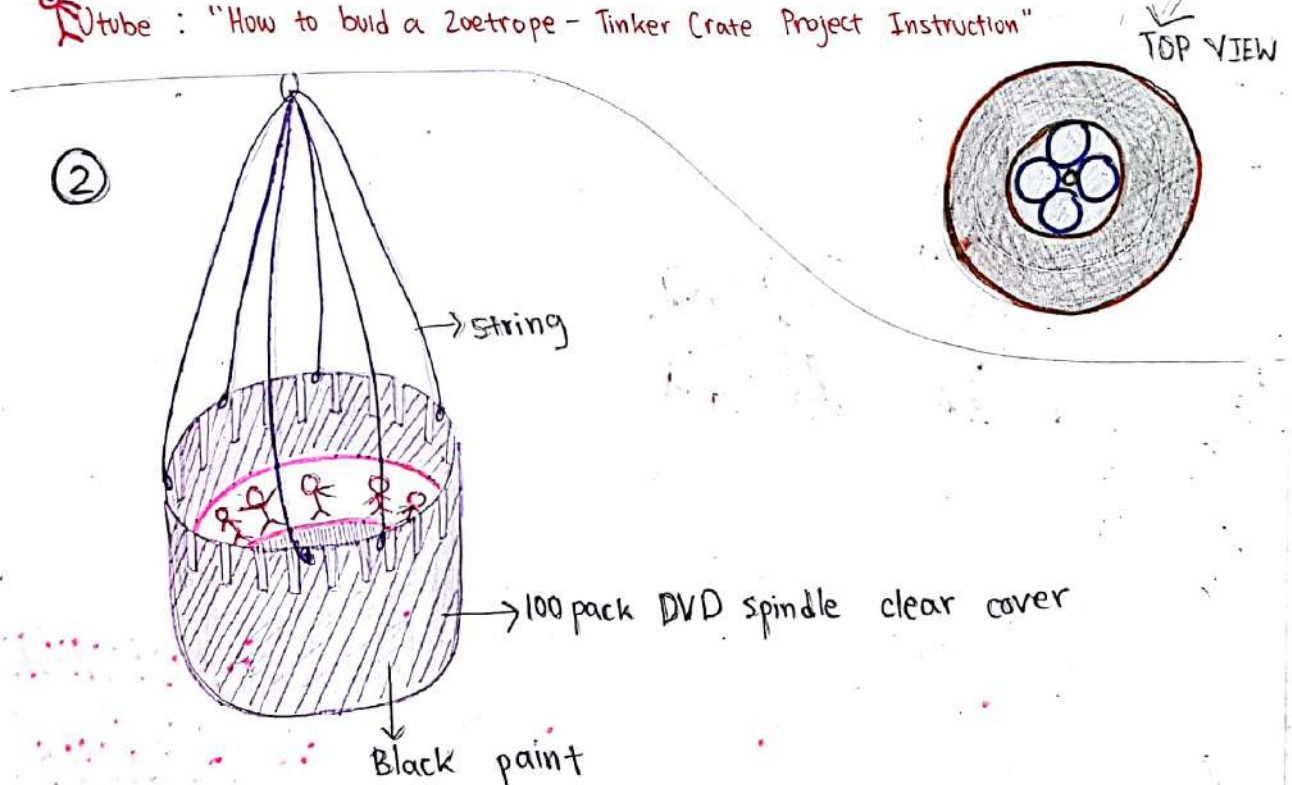
## "Zoetrope" or "Wheel of life"



Zoetrope is a 19<sup>th</sup>-century optical toy consisting of a cylinder with a series of pictures on the inner surface that when viewed through slits with the cylinder rotating, give an impression of continuous motion

Remind people how illusion of motion was created in the past!  
BEFORE computers exist!

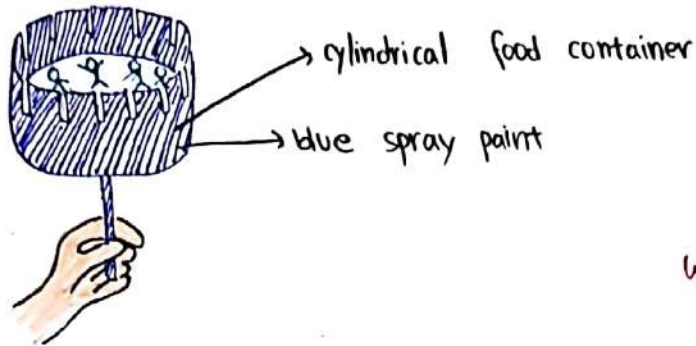
Utube : "How to build a Zoetrope - Tinker Crate Project Instruction"



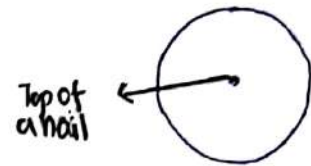
[tahnee.org/wordpress/2010/01/06/make-your-own-hanging-zoetrope/](http://tahnee.org/wordpress/2010/01/06/make-your-own-hanging-zoetrope/)

miniature zoetrope

③



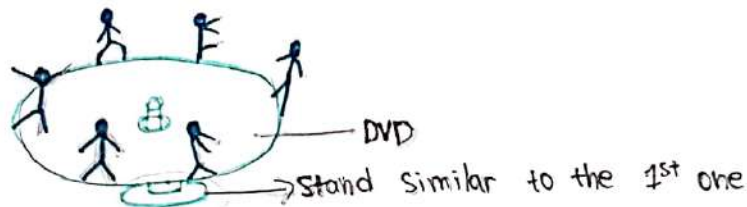
TOP VIEW



why & what: - easy to carry  
cause its small

[www.cutoutfoldup.com/108-zoetrope.php](http://www.cutoutfoldup.com/108-zoetrope.php)

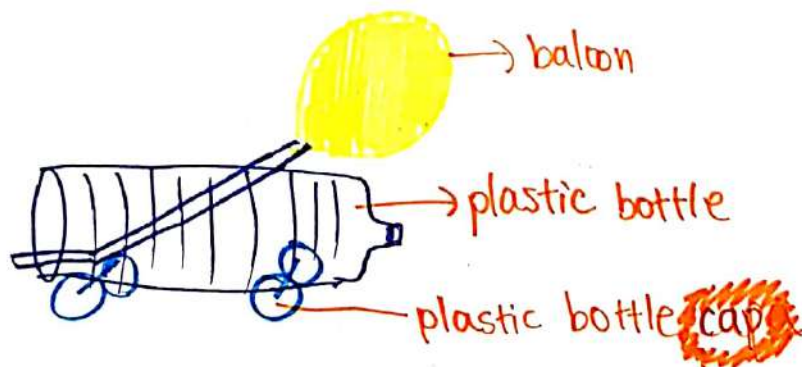
④



[latestarduinoprojects.blogspot.my/2014/09/stroboscope-zoetrope-using-arduino-and.htm](http://latestarduinoprojects.blogspot.my/2014/09/stroboscope-zoetrope-using-arduino-and.htm)

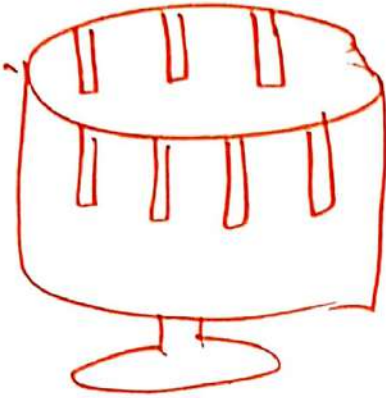
why & what: - allow players to cut out their own animation and paste it! (can change anytime they want)

⑤



03

1<sup>st</sup>



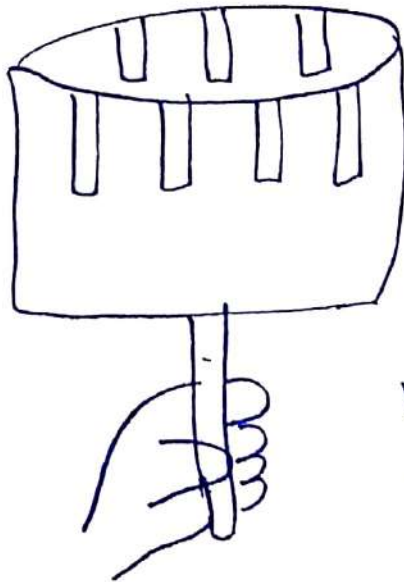
Why?

convenient

easy to store

can put on  
the table

2<sup>nd</sup>



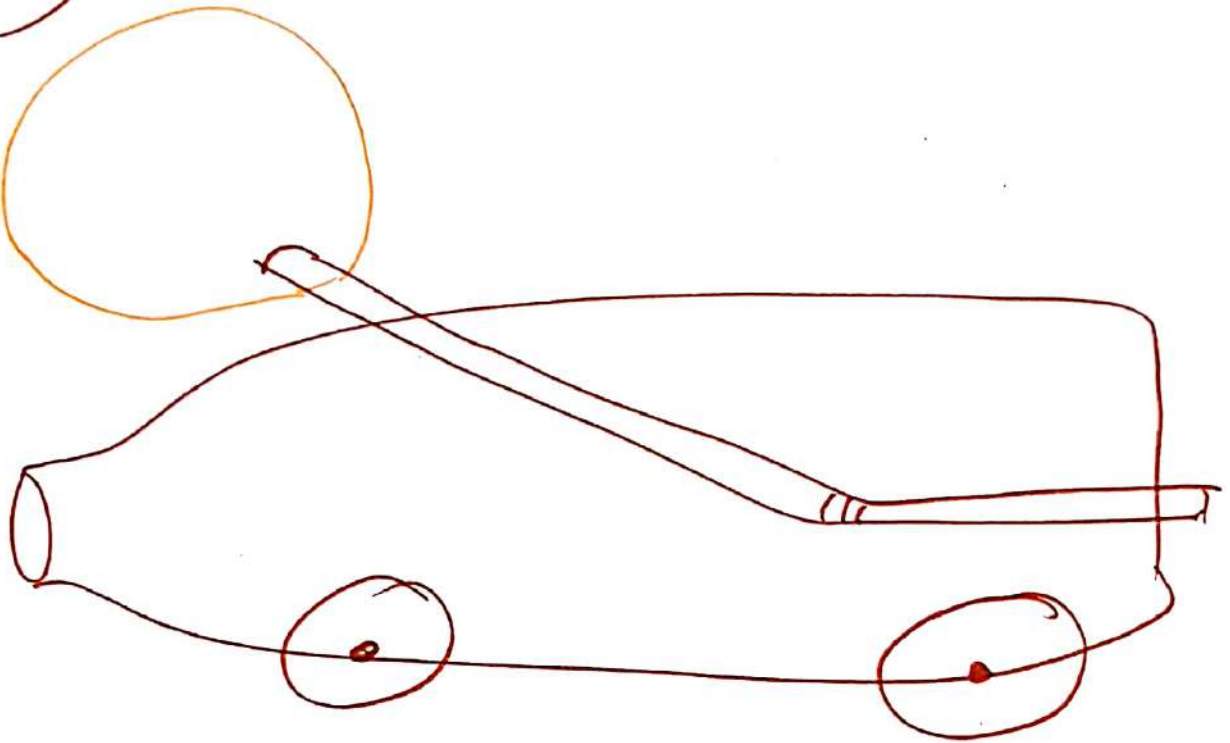
Why?

easy to carry

not easy  
to break!

cause made out  
of food container

3<sup>rd</sup>



Why?

educational

easy to make



kids can learn how air  
can make an object  
moves

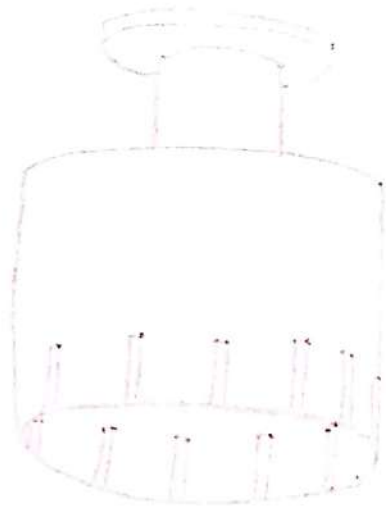


04.

CAN  
THE

YOU SPOT

DIFFERENCE



HOM



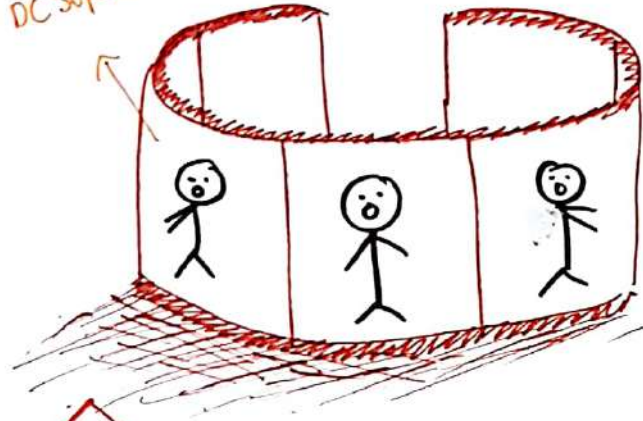
674

04.

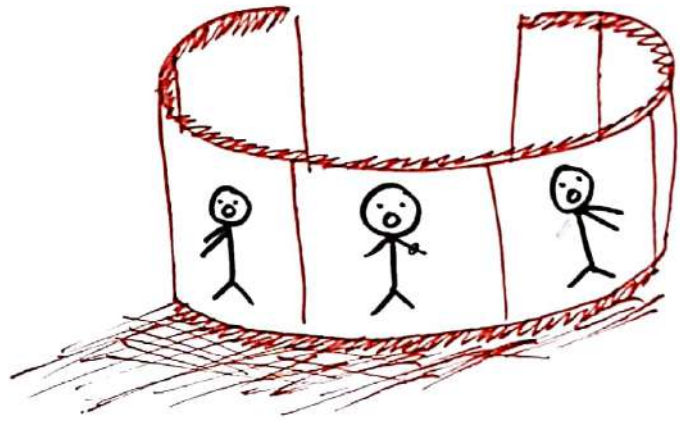
# CAN YOU SPOT THE DIFFERENCE

(A)

DC Superhero



(B)



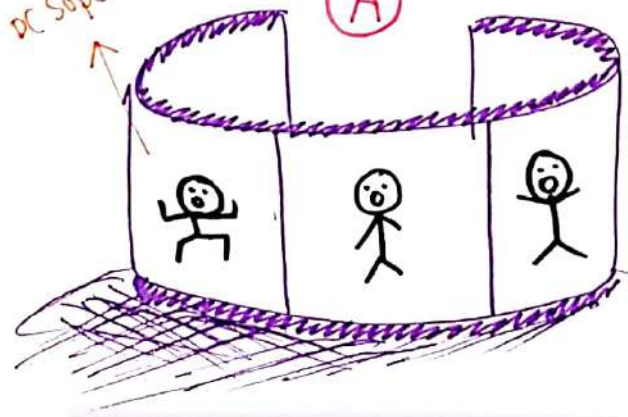
1st  
example

## Strip Pair

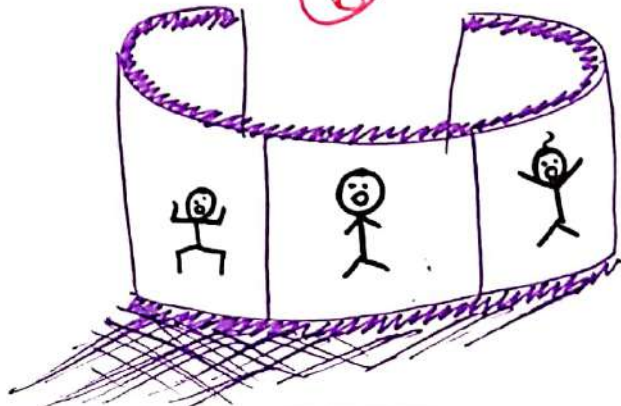
2nd  
example

(A)

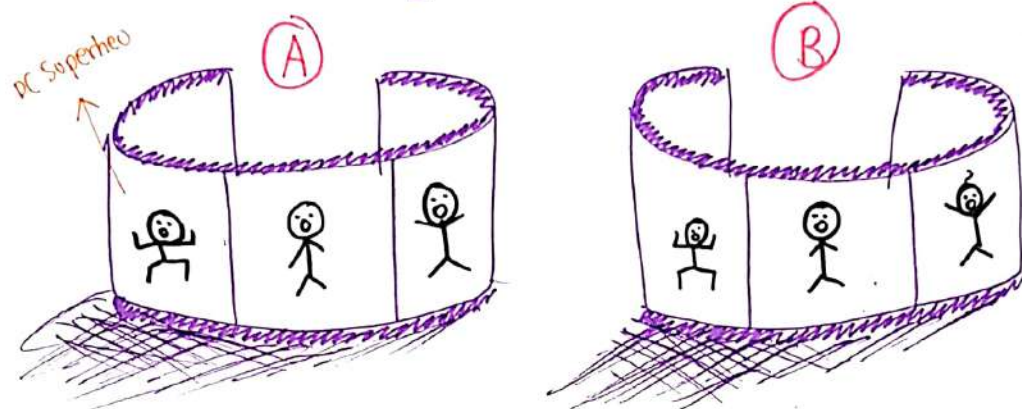
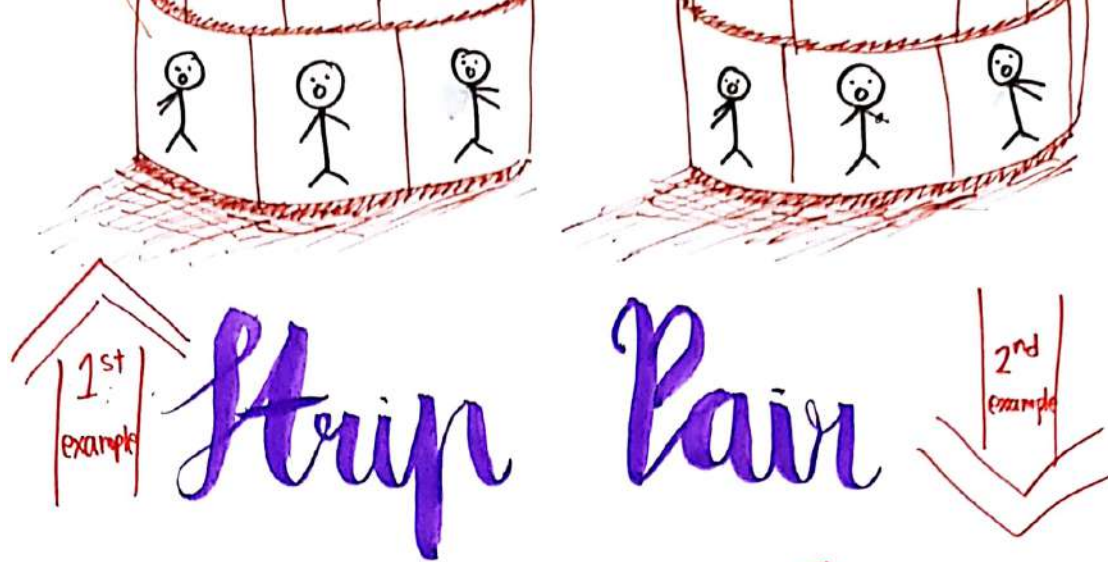
DC Superhero



(B)

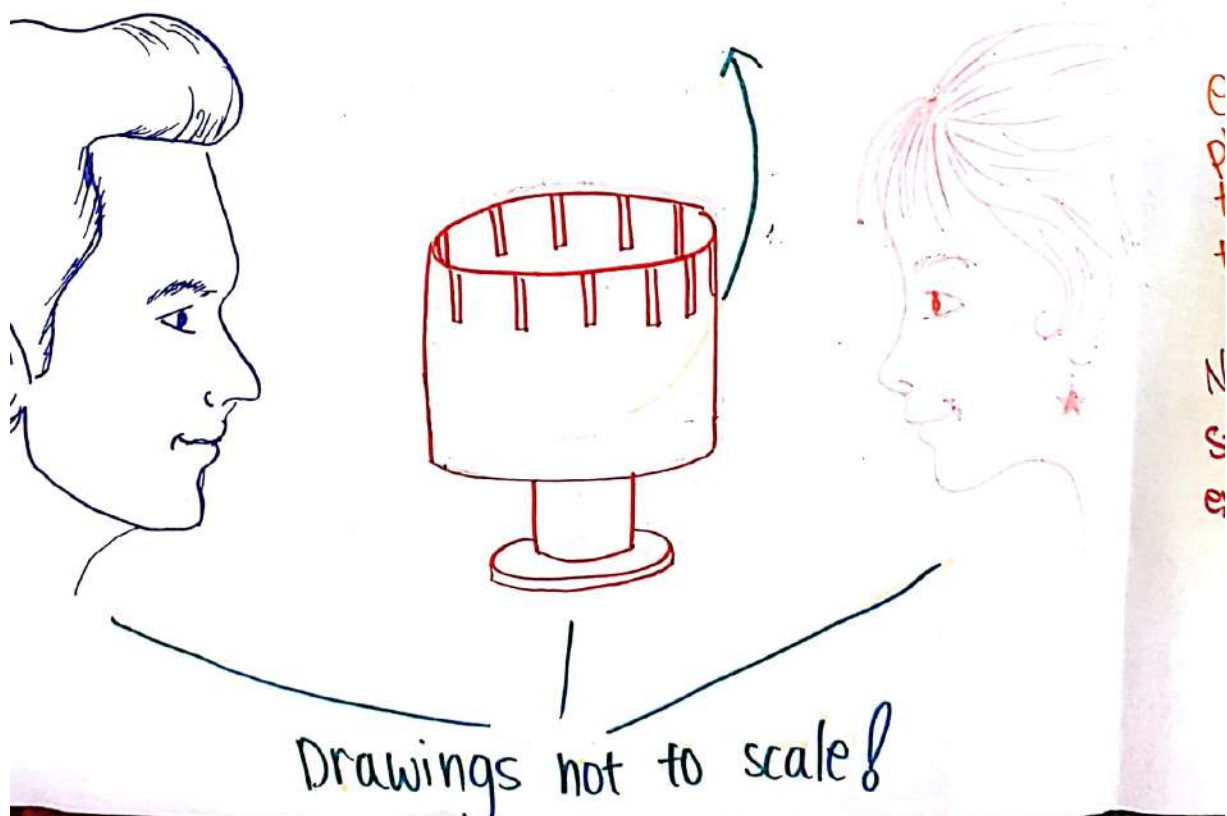






## HOW TO PLAY

Inside is 1st example (A)



Spin the zoetrope  
with "1st example (A)"

Each one of the  
player has 10 sec  
to look at  
the animation

Rules?

Now, change the  
strip into "1st  
example (B)"

Spin  
or  
Turn the zoetrope  
again for 10 sec.  
The player(s) must  
find out what's  
different in the  
animation

Winner?  
↓  
the one who  
can  
guess  
the  
RIGHT  
answer  
first

Why this ?

⇒ can test players' memorizing skills

⇒ can also test their concentration

why is this interesting for me?

⇒ cause its not just a usual zoetrope,  
people can play a game with it

## AEM? OBJECTIVES?

1) Bring back history!!

⇒ remind people how people back then  
make an animation (moving illustration)

2) Test their skills

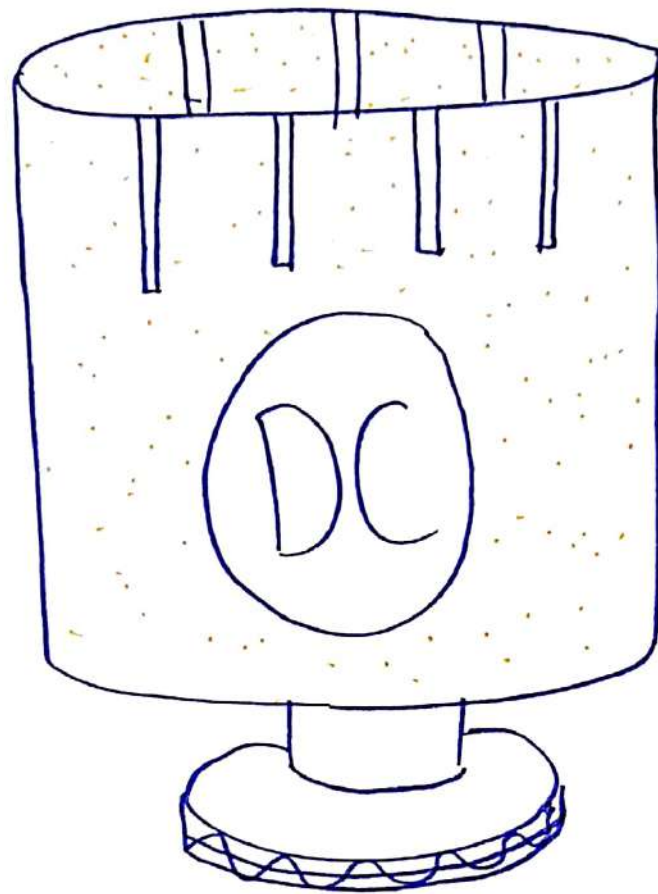
⇒ are they paying attention?

⇒ do they remember what they  
see before?

3) Increase their creativity

⇒ they can make their own strip  
with any paper they have from  
home





Everything  
from  
recycled  
material!

Except for:  
Black paint  
🎨

So this is the final work! This can be played  
by 2 or more players! Actually... you can play this  
by yourself too but its not as fun as playing with  
someone else 🎮

YOUR NAME: ARISSA ALYNA SHAH BT. AZLAN SHAH

STUDENT ID: 0333681

FOUNDATION: FID | FIA | FIS | FNBE

TUTORIAL LECTURERS: MR CHARLES | MR CHOY CHUN WEI

MS FU YEN HUE

PRODUCT NAME: Zoetrope

GROUP NAME & MEMBERS NAME ( IF GROUP WORK):

1. Hanan

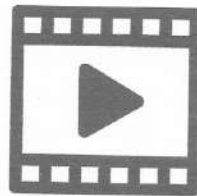
2. mathu

3. Arissa

4. Khirtana

5. carla

## IDEA JOURNAL 1 / 2 / 3

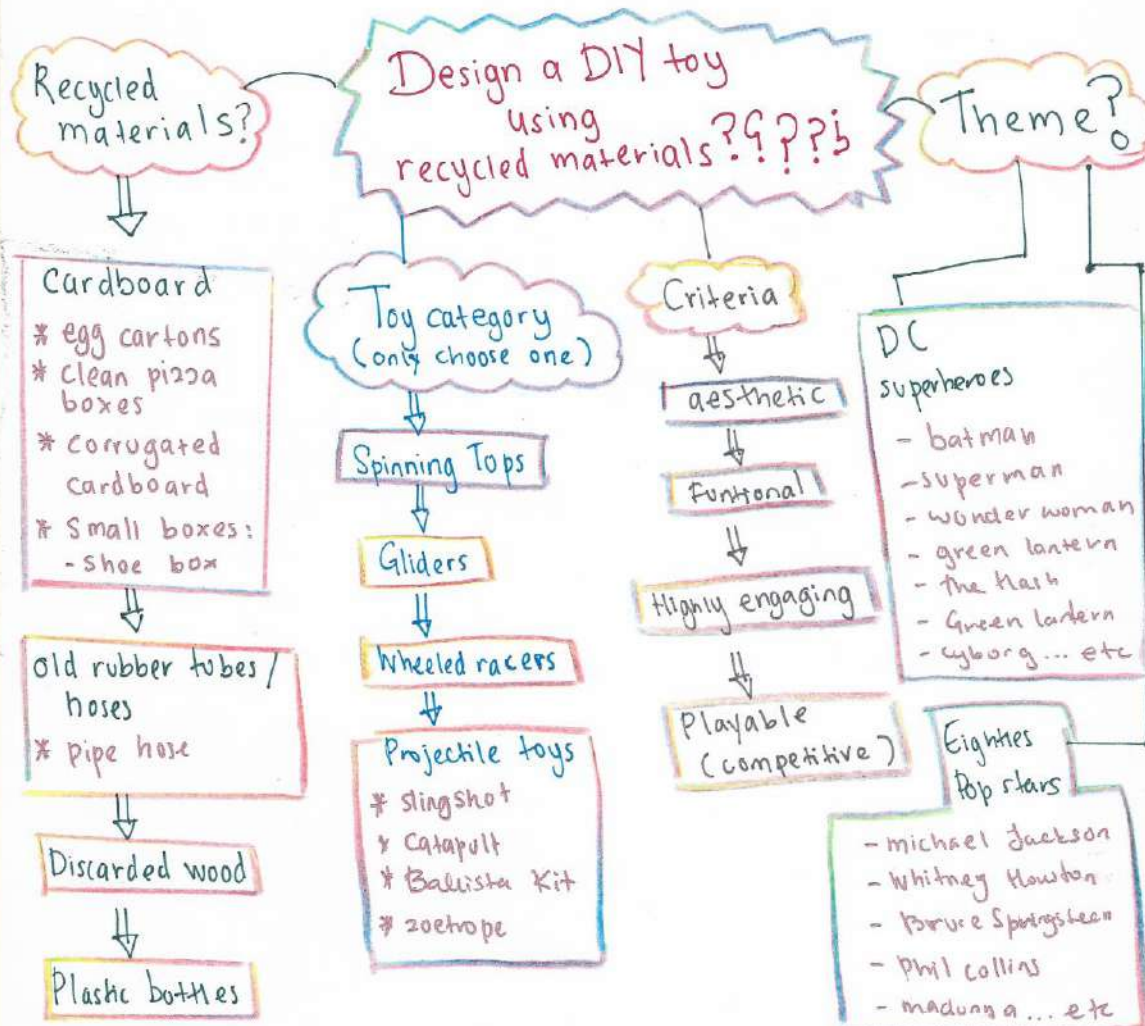


# 01. ASK! What are you supposed to make?

(Do ask questions and find the answers. Make mind maps and categories your findings. 1-3 pages. Hand drawn and write but may include some digital images)

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+ THINK





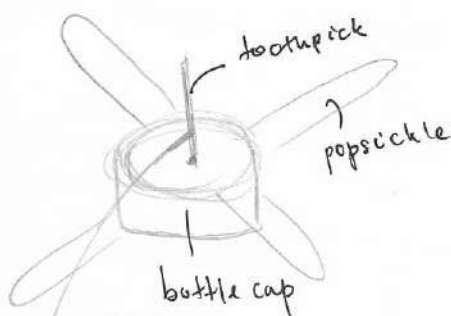
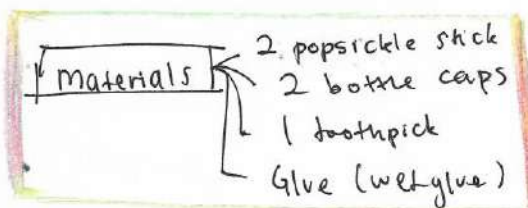
02. Examples of ideas and related info that inspire you and relate to the assignments. (Why & how these examples inspire you? Justify and elaborate on each example. Identify the interesting components. Give a conclusion for each of the examples – why and what makes it interesting – and how it could help your final product. 1-3 pages \*provide images" or links

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ASK + LEARN + OBSERVE  
+ THINK



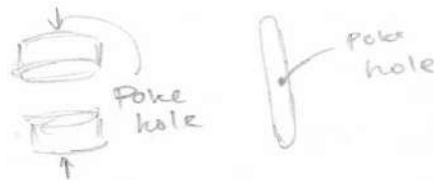
## ① Spinning Top



Can even use lollipop stick  
any stick

How to make?

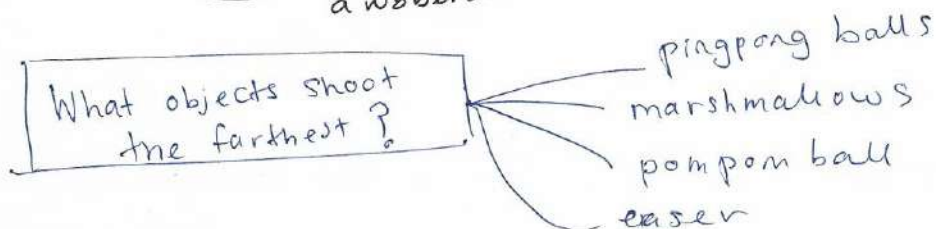
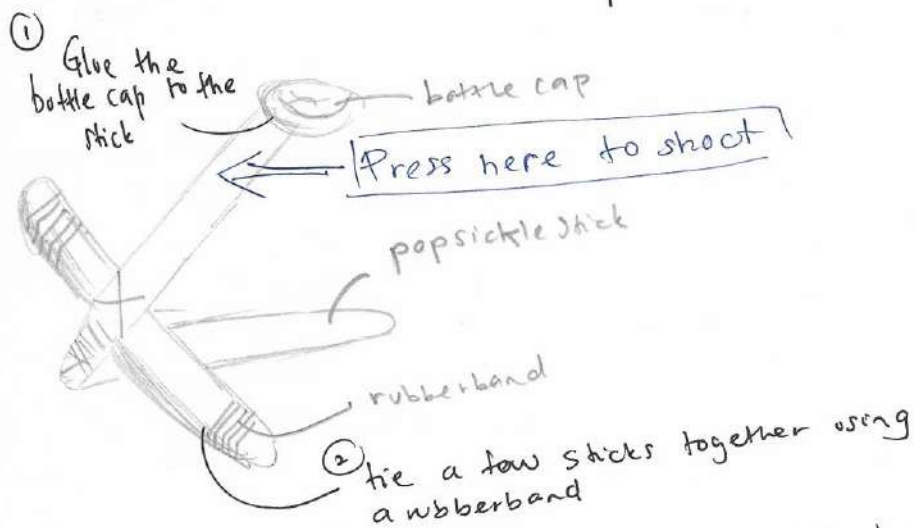
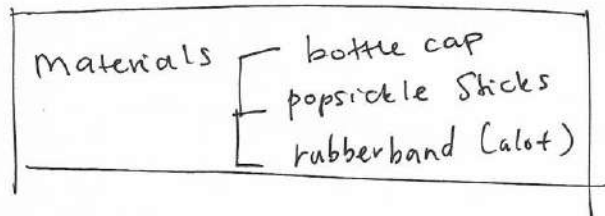
- ① Poke a hole through the bottle caps & in the middle of the stick



- ② Glue the popsicle sticks in between the bottle caps then stick the toothpick in.

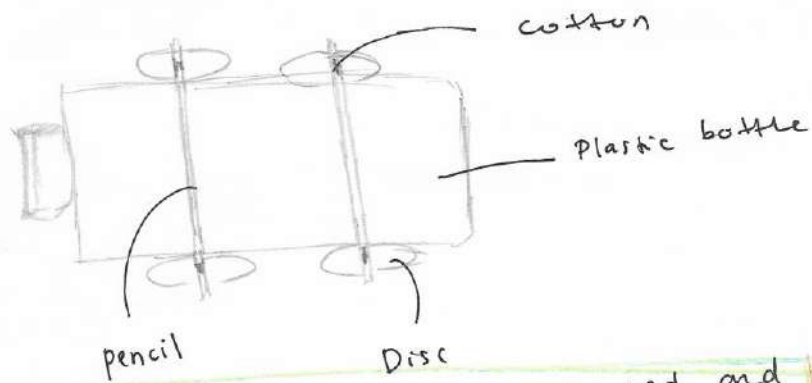
\* Spinning Tops comes in all shapes and sizes but this is the quick & easy way to create!

## ② Popsicle Stick Catapult



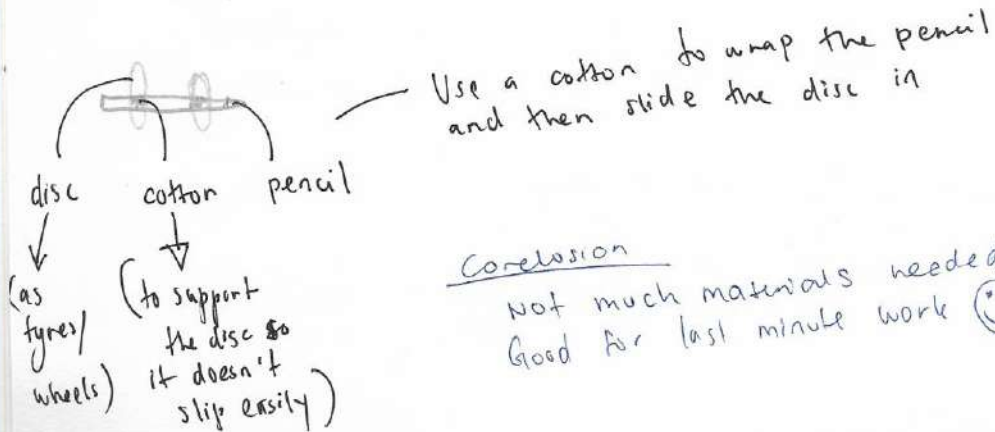
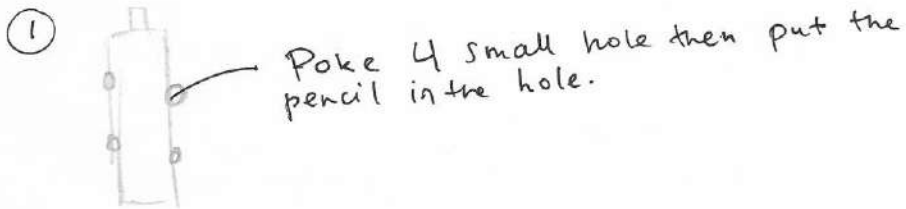
To make it fun, add a target or a competitive goal and now you have a game.

### ③ Toy Car



This is how "waste" can be re-used and made into toys like this plastic bottle toys.

#### Steps

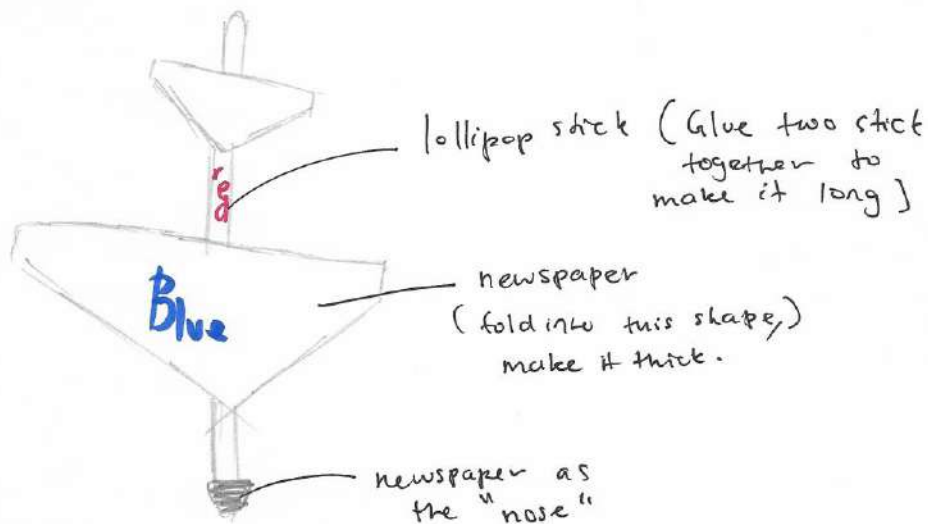
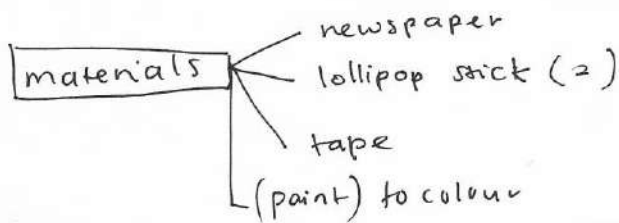


#### Conclusion

Not much materials needed,  
Good for last minute work 😊



## ④ Paper Glider



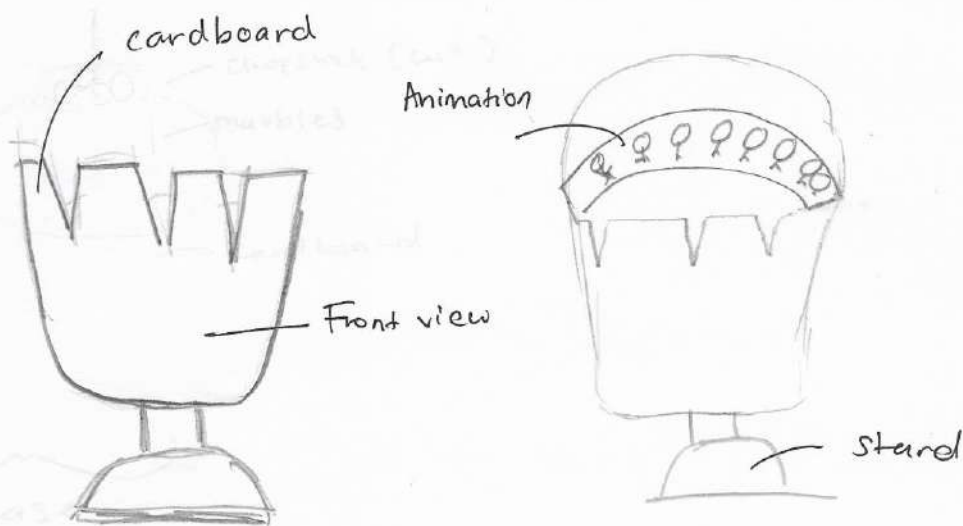
Paper Glider?

easy to ~~plane~~ build  
plane that flies  
high

Fun Fact

Easy but functional  
structure! this method  
is one of the  
best.

## ⑤ Zoetrope



Zoetrope? Animated series of images when spun.

WHEEL OF LIFE

It creates illusion

It creates an interesting story in a line when it spins. It was created since 1830's.

(best idea) ~~this~~ this could most probably help me get marks.

materials needed



Cardboard, paint,  
paper, marbles,  
Chopstick / toothpick,  
Playdoh / used tictacs  
many more recycled  
items to decorate, wet  
glue, dry glue

6

## Mini Paper bow

### Materials

newspaper

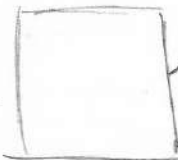
tape

string

chopstick (bullet)

### Steps

- ① cut the newspaper into a square shape then roll it.



the bigger paper the better

roll from the corner

- ② Tape the middle part



Secure by taping the middle part.

- ③ bent the paper a little bit till it becomes like this → the tie the string on both corners



ready to play

- ④ Use the chopstick to shoot

can shoot lizards too!



chopstick



03. What are the 3-5 ideas that interest you most?

Describe and elaborate your ideas here.

(Make mind maps on each ideas that came up. Consider and elaborate on each ideas. 1-5 pages. Hand drawn and write but may include some digital images)

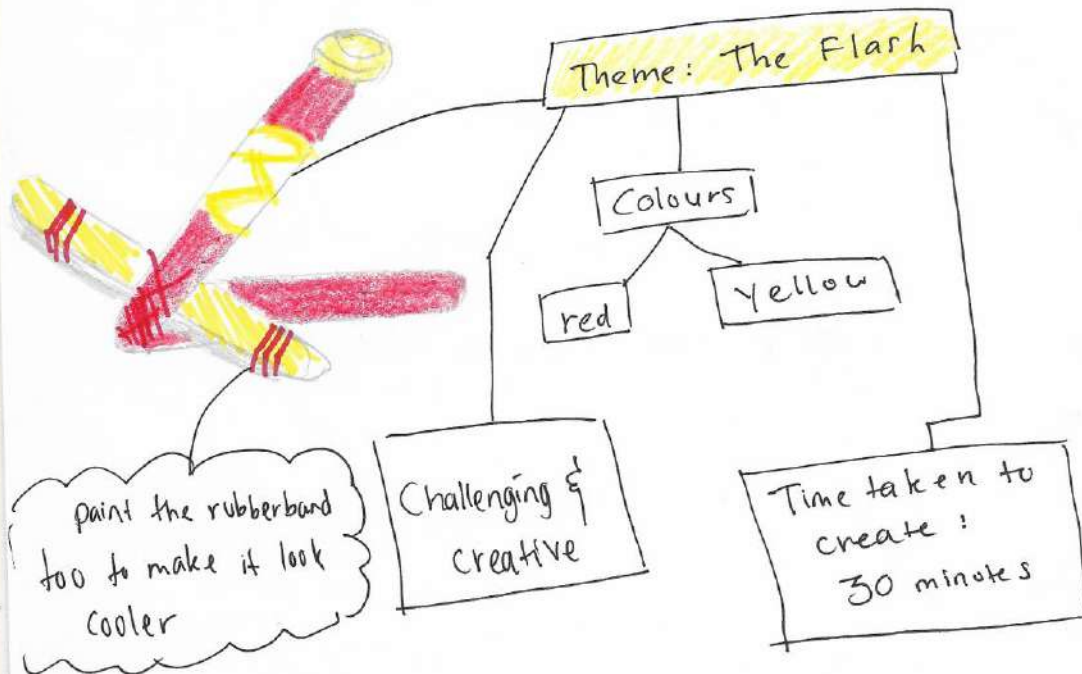
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+ THINK



①

## POPSICKLE STICK CATAPULT



### The Flash Catapult

Can shoot & aim the food into kids mouth to make it fun.

Type of food:  
marshmallow,  
chocolate,  
gummy bears,  
bubble gum balls

## ② Paper Glider

Paper Glider  
Theme:  
Superman

Colour needed:

Blue : Paint the newspaper  
blue (the wings) & the nose

Red, Yellow, black : The logo

Red : The lollipop stick

Time taken to create:  
20 mins + + +

How to play:

Shoot the plane  
into the air

Will most probably  
last ~~10~~<sup>5</sup> seconds  
in the air



Nose weight

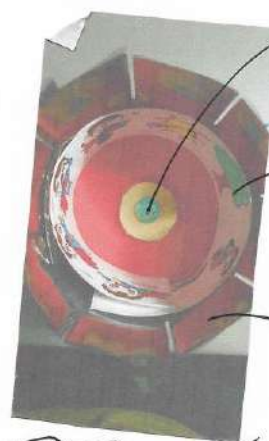
# ③ Zoetrope



chopstick  
marbles  
cardboard

the base

we add the marbles  
to make it strong and  
to spin easily



To hold  
the zoetrope

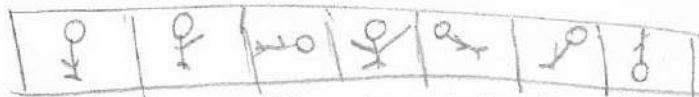
animation

The wall

Inside view

draw 7 images

(6.5cm H, 4.7cm L)



(different movement)



wall : DC CITY

Animation : Batman, Superman



04. Refine your selected final ideas. Explain how you make your final decisions etc.

(Sketch up the final product. Write why you choose to make what you are making. What are the "DETAILS" that makes it interesting or working. What is/are you main consideration or aim of your final product ideas. 1-3 pages)

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+ THINK



# The Zoetrope



I choose to make the zoetrope because I think its the coolest. Even my group member agreed on making it together. It is a very interesting toy because it creates the illusion of moving object when you spin it. It is basically like a story depending on the animation. It is like a "magical" toy because of the illusion.

Aim of final product :- Illusion is obvious,

- Strong base (when spin)
- not to dull
- Turn it into a story in a line

05. In less than 100 words describe your final product and the briefly about the idea development CTS | JAN 2018 | IDJ:

Zoetrope is known as a vintage toy. A zoetrope is an invention that creates the appearance of a moving picture. It has seven different image on the paper that creates an illusion when it spins. It is also known as "wheel of life". We decorated the zoetrope wall with DC buildings. For the animation, we did different type of heroes to see which is the best.

Provide a picture / sketch of the final product:



CTS JAN 2018 | IDEA JOURNAL | CCFU

YOUR NAME: MARIYAM HANAN AS-AD

STUDENT ID: 0333738

FOUNDATION: FID | FIA | FIS | FNBE

TUTORIAL LECTURERS: MR CHARLES | MR CHOY CHUN WEI

MS FU YEN HUEI

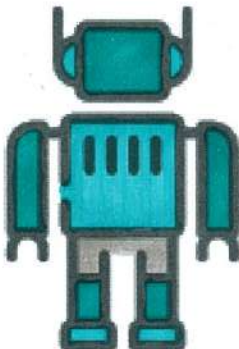


PRODUCT NAME:

GROUP NAME & MEMBERS NAME ( IF GROUP WORK):

1. CARLA  
4. HANAN

2. MATHAATH  
5. KHIIRTANA

3. ARISSA

I	L	
		
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# 01. ASK! What are you supposed to make?

*(Do ask questions and find the answers. Make mind maps and categories your findings. 1-3 pages. Hand drawn and write but may include some digital images)*

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+ THINK**



## What do we have to do?

Design a toy



Recyclable materials

## What are the categories?

1. Spinning tops



2. Gliders



3. Wheeled racers



4. Projectile toys



## What is the theme?

1. Dc superheroes



2. Popular  
pop stars



## **ASSIGNMENT ONE - THE BRIEF**

## What materials can you use?

1. Old rubber tubes/hoses

↳ water hose, rubber wrapping, rubber tires,...

2. Discarded wood

↳ old furniture, popsicle sticks, old pallets,...

3. Plastic bottles

↳ different types of water & drink bottles,...

4. Cardboard

↳ old books, old boxes,...

## What is being assessed?

1. Selective combination of materials.

2. How they were used to fulfil the theme & brief

## Remember:

to hand in the IDJ as well!

## What is the criteria?

1. Playability (competitive)

2. Highly ENGAGING

3. **FUNCTIONAL**

4. *Aesthetic*

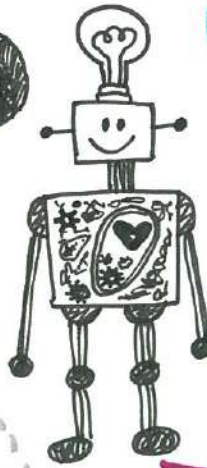
## When is the deadline?

**14<sup>th</sup>** FEB. 18, Wed.



DEVELOPS  
**intellectual ability**

- Helps promote cognitive development
- Should stimulate sensors
- Help solve problems
  - ↳ Solving problems in play → applying to real life situations → better thinker



**aesthetically PLEASING**

- Grabs people's attention  
↓
- Makes them want to play with it
- Aesthetics → colour  
texture → size  
design

**age APPROPRIATE**

- Suitable for the one playing [in terms of age]



**What makes a toy interesting / good?**

**IS safe**

- SAFETY IS A PRIORITY
- Should not be dangerous
- Should have  sign or  labelled when necessary

SPARKS

**imagination**

AND MAKES YOU THINK OF

**alternative ways**

TO PLAY WITH IT

- Ignites creativity  
↓
- More idea generation (ideation)  
↓
- Figuring out other ways to play with toy  
↳ different from what the producers intended you to use it as.

**HIGHLY engaging**

- Keeps you occupied  
↓
- attention not diverted



**Designing a toy:**

**What to think of**



Which theme should I choose?

→ MY CHOICE

Reasons?

Action related



FOR:

- Kids more familiar with superheroes
- Easier to relate to toys
- Comic style ~~is~~ has a more fun look
- Kids more fascinated by superheroes/kids look up to superheroes more



Superheroes:

- |                |                 |
|----------------|-----------------|
| • The Flash    | • Green Lantern |
| • Batman       | • Artemis       |
| • Robin        | • Supergirl     |
| • Superman     | • Aquaman       |
| • Kid Flash    | • Beastboy      |
| • Superboy     | • Starfire      |
| • Cyborg       | • Blue Beetle   |
| • Batgirl      | • Wonder Girl   |
| • Miss Martian |                 |

AGAINST:

- Superheroes may be unsuitable for kids  
↓  
Not suitable for all ages
- violence, not child-friendly costumes
- Style limited to comic style

FOR:

- Wider variety of people to choose from
- Can use more diverse styles

Music related

POPULAR

80s popstars

Against:

- Younger generation less aware of the ~~80s~~ → NOT suitable for all ages
- Harder to relate to toys  
↓  
Not much of a connection between pop~~80s~~ & toys
- Harder to hand draw  
↓ because realistic & detailed } TAKES TOO MUCH TIME TO DRAW

POP STARS

- |                   |                  |
|-------------------|------------------|
| • Madonna         | • AC/DC          |
| • Bryan Adams     | • Dire Straits   |
| • Annie Lennox    | • U2             |
| • Michael Jackson | • George Michael |
| • The Police      |                  |
| • Tina Turner     |                  |
| • Whitney Houston |                  |
| • Diana Ross      |                  |
| • Lionel Richie   |                  |



# Which toy category

should I choose?



**02. Examples of ideas and related info that inspire you and relatable to the assignments.** *(Why & how these examples inspire you? Justify and elaborate on each examples. Identify the interesting components. Give a conclusion for each of the examples – why and what makes it interesting – and how it could help your final product. 1-3 pages \*provide images” or links*

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+ THINK**





# IDEAS

THAT inspire & ARE related ...

## ① Spinning top



↓  
Makes use of simple materials  
Can be made in a short space of time  
Easy to make  
You just have to make a whole in the materials, slot them down the screw & secure the layers

→ Highly functional  
→ Can be easily modified to match brief requirements

↓  
Change material of discs  
Modification materials are generally easy to source

→ Highly competitive  
→ Basic main idea  
↳ can be used as final idea  
→ Includes several layers of discs

→ Spins fast  
→ Easy to play  
→ People of all ages can enjoy  
→ Highly engaging

### HOW CAN I MODIFY IT:

• Layers → CD  
→ Wood (shaped into disc)  
→ Cardboard  
→ Cardboard covered in rubber  
→ Popsicle stick  
• Instead of bolt → secure using rubberbands tied together

} Selective combination of materials

## ② Projectile toy



→ Simple structure

→ Can modify materials easily to match requirement

↳ cover one popsicle stick using a rubber hose & replace one popsicle stick with cardboard

→ Makes use of recycled items

discarded wood:  
→ popsicle stick  
→ bottle cap

→ Can use a wide range of objects as a substitute for the felt balls

→ Projectile motion can be seen easily

People are free to choose the object they place in the bottle cap

Mechanism not difficult to understand by the ones playing

→ Suitable for all ages

→ Can be used to play for fun

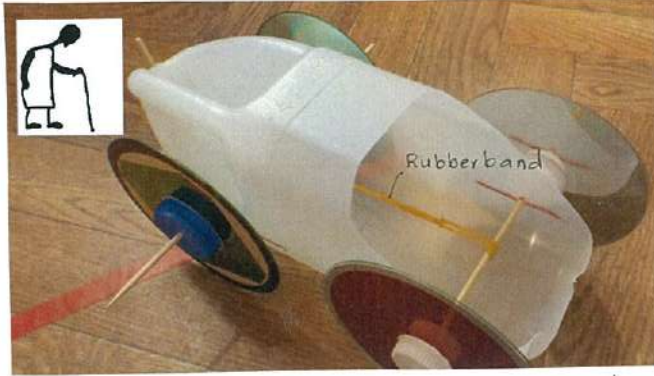
→ Can be used as an educational toy

↳ to study projectile motion

↳ to study about the conversion & storage of energy



### ③ Wheeled racer



↳ People of many ages can play

↳ Simple structure

- Makes use of recycled materials
  - ↳ Skewers (discarded wood), ~~galton~~ of milk ~~can~~ bottle (plastic bottle), bottle caps & CDs.
- Can be modified to match requirements more
  - ↳ Eg: wrap bottle in rubber hose pieces of different colours (decoration) & replace CDs with wooden discs (made of discarded wood)
- Can cut skewers a bit & use hot glue plastic beads to secure ends

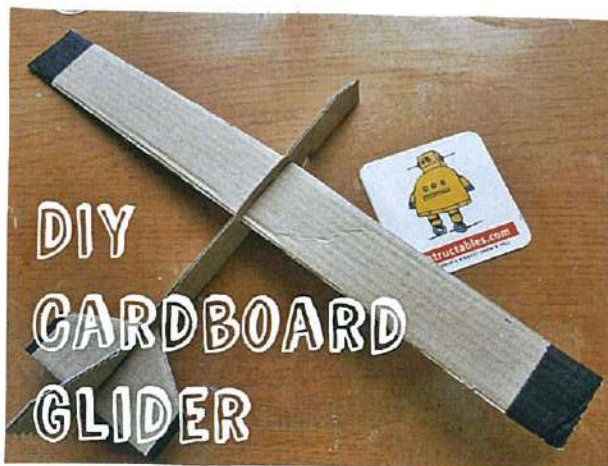
### ④ Spinning top



ZOETROPE ..

- Unique
- Not seen or known by most people
- Makes use of animation
- Can modify easily
  - ↳ Substitute materials to match requirements (Eg: make outer ring using cardboard).
- Suitable for all ages
  - ↳ Can use selective combination of materials
- Highly engaging
- Working mechanism easy to understand & assemble
- Can use a wide range of animation strips
  - ↳ Can change character (subject) & movements as well.
- Will grab people's attention easily
  - ↳ Uncommon combination of spinning toy & animation
- Is safe
- Selected theme can be applied easily
- Can be used as final product with materials modified

### ⑤ Glider



Can be played outdoors & indoors

Easy to carry around

- Simple structure
- Makes use of cardboard (recyclable material)
- Can substitute some ~~card~~ of the cardboard to achieve selective combination of materials
  - ↳ Eg: replace body with light wood.
- Suitable for all ages
- Safe
- Theme can be applied easily
- Keeps people engaged
- Can keep people active instead of just sitting in one place.
- Can be used to play for fun
- Can be used as an educational toy (Eg: to teach about air friction)



## ⑥ Glider



↳ Can be played for fun

↳ Very simple

↳ Suitable for all ages

↳ Can be played indoors & outdoors

↳ Keeps you engaged

↳ Can use recyclable materials

↳ Eg: wooden dowel for body, cardboard for wings & strips of plastic (from a bottle) for decoration.

↳ Can apply theme through colours & drawings / symbols on the wings

↳ Can be used as an educational toy (for Physics)

## ⑦ Projectile toy

↳ Hoola hoop bow & arrows



↳ Unique

↳ Uncommon

↳ Can be made using recyclable materials

↳ Eg: arrow can be made using discarded wood

↳ Can be made to look like Green Arrow's or Artemis' bow & arrow → easily relatable to theme

↳ Can be played outdoors

↳ Highly engaging

↳ Keeps you active

↳ Highly competitive

↳ Can be used to study projectile motion

↳ Can be used to study conversion & storage of energy

↳ Fun to play with

} Educational toy

## ⑧ Spinning top

Spinning top constructed using Lego



↳ Proves that a spinning top doesn't necessarily have to be round

Makes you think outside of the box

↳ Different

↳ Uses a round piece of plastic as a base

↳ can use bottle cap (make ↑ size of top)

↳ Keeps you engaged

↳ Suitable for all ages

↳ Can modify design by varying colour of blocks

↳ can use colours related to theme

↳ Colourful

↳ Creative

↳ Can be played for fun

↳ Can be used as an educational toy

Eg: • studying air resistance / friction

• studying circular motion



## ⑨ Wheeled racer



↳ Can play indoors & outdoors

- Wagon decorated as car
- Different
- Creative
- Can use a wide range of materials
- Can use all the item materials mentioned in the brief → Selective combination of materials
- Design → easily customised
  - ↳ easily related to theme
- Easy to construct
  - ↳ no complicated mechanisms
- Toy big enough to be ridden by
- Thinking outside the box
- Highly engaging (highly playable)

## ⑩ Projectile toy

Projectile gun



↳ Can be played with for fun

↳ Educational toy  
used to study Physics

→ Can apply mechanism for final toy, if you are choosing to make a projectile toy

- Interesting
- Highly functional
- Aesthetics can easily be customised to match the brief requirements
- Can use ~~or~~ substitute some materials for selective combination of materials
- Highly engaging
- People ~~to~~ Grabs people's attention
  - ↳ due to size structure

↳ Can use cardboard from a tissue roll, covered with rubber from an old hose, discarded wood sticks to hold the structure & bottle caps as ammunition

## ⑪ Spinning top



↳ Use of different colours makes aesthetics nice when it spins

→ Easy to construct

- Makes use of recyclable materials
- Suitable for many ages
- Materials needed to construct can be obtained easily & are cheap
- Simple to play with
- Has a competitive element to it
- Many can play together
- Keeps you engaged
- Can be made in a short span of time.

### 03. What are the 3- 5 ideas that interest you most?

**Describe and elaborate your ideas here.**

*(Make mind maps on each ideas that came up. Consider and elaborate on each ideas. 1-5 pages. Hand drawn and write but may include some digital images)*

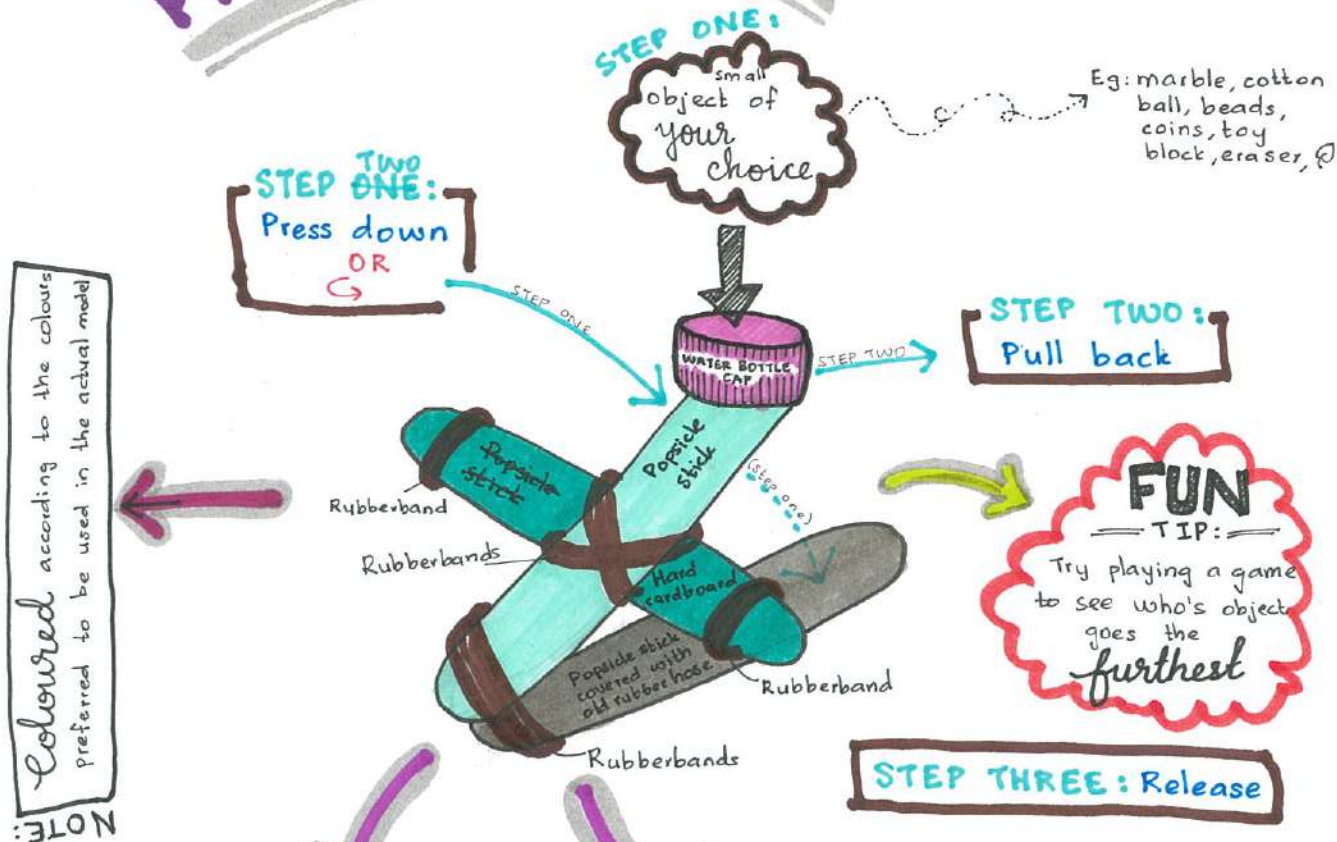
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**ASK + LEARN + OBSERVE  
+ THINK**





# PROJECTILE TOY



## ADVANTAGES

- Easily assembled.
- Friendly.
- Educational
  - projectile motion to study
  - energy storage & conversion
- Suitable for all ages
- Easy to carry around
  - light
  - small
  - can play in many places
- Many people can play together.
  - Can be played as the game mentioned above
- Experimenting around with objects → keeps you highly engaged.

## DISADVANTAGES

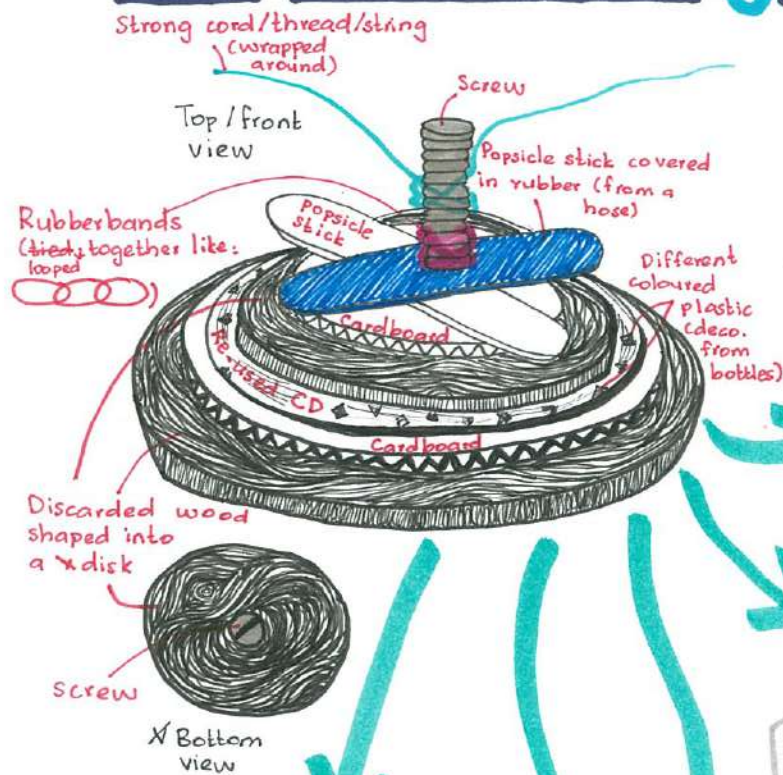
- PG → use of small parts.
- Only small items fit into
- If not careful, toy can break easily.
- Can get hurt when catapult recoils.
- Can get **LOST** easily, coz the toy is small.

Therefore, it is not worthy as the final product

# CATAPULT toy



# Spinning Top



## How to play:

1. Wrap the piece of cord around the top part of the screw.
2. Release

## ADVANTAGES:

- Highly engaging
- People of all ages can enjoy
- Highly competitive
- Many people can play together
- Easy to construct
- Can be assembled in a short space of time
- Eco-friendly
- ~~Set~~ Can be played indoors & outdoors

## DISADVANTAGES:

- You need a flat surface to spin the top on
- If you touch ~~to~~ while it's spinning, you will get hurt
- Young children can only play under **PG**

## Considerations:

- Use strong cardboard that does not bend ~~as~~ easily  
↳ makes structure stronger
- Use a suitable & strong glue to stick plastic onto CD  
↳ Otherwise the decoration will come off ~~to~~ once you start playing.
- Use a strong cord (Eq: Kevlar cord) that does not fray easily  
↳ Stronger grip = faster spin
- Use lightweight wood  
↳ Heavy wood = heavy structure  
↓  
Slow spin

What if you couldn't get lightweight wood?

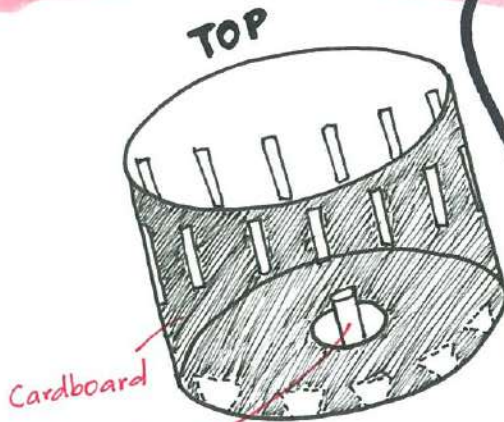
- Replace the wooden disk layers with a lightweight material / object.

Plastic sheets      CD      Light metal disk      Regiform



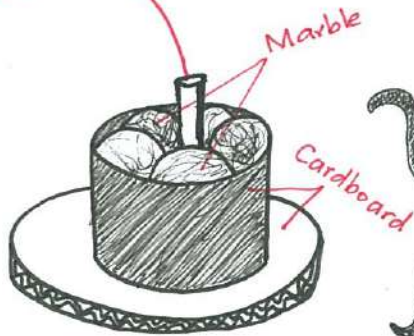
# ZOETROPE

→ Spinning top



Cardboard

Re-used wooden dowell

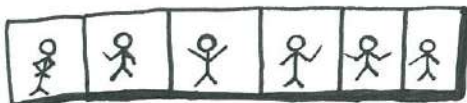


BASE

Marble

Cardboard

BASIC BALL-BEARING SYSTEM




ANIMATION STRIP

(Placed in the inside wall of the Zoetrope)

## How to play?

- Spin the Zoetrope & view the animation through the gaps.

## Considerations

- Make sure the  shines directly onto the film strips
  - ↳ Allows you to see animation more clearly.
- To make the movement of the ball-bearing system more fluid, apply some hair oil onto the marbles.
  - ↳ Allows you to see animation more clearly.
- To make animation more clear, use a side view or an angle while drawing figures.
  - ↳ Front view animations are sometimes not that effective.

## Selective combination OF MATERIALS

- Re-used cardboard for ring
  - ↓
  - old cardboard box I have
- Wooden dowell as support pillar
  - Used dowell from Mr. Choy's class
- ~~Marbles for ball-bearing~~
  - Plastic bottle? How?
- Rubber
  - How?

## Bad lighting = less visible animation

↳ HOW TO FIX...?

- Place tea light in center?
  - ↳ blocks animation
- Use phone lighting?
  - ↳ Impractical

## 04. Refine your selected final ideas. Explain how you make your final decisions etc.

*(Sketch up the final product. Write why you choose to make what you are making. What are the "DETAILS" that makes it interesting or working. What is/are you main consideration or aim of your final product ideas. 1-3 pages)*

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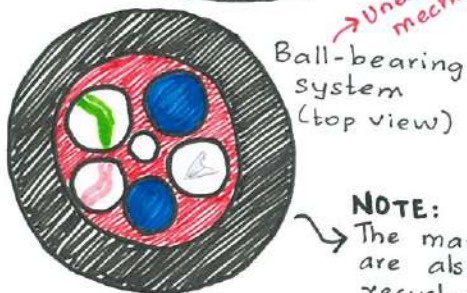
ASK + LEARN + OBSERVE  
+ THINK



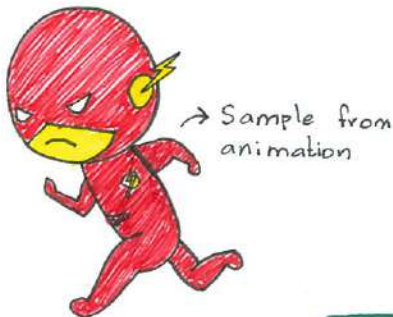


# FINAL IDEA: *Zoetrope*

Front view



**NOTE:**  
The marbles are also recycled.



Everyone can enjoy

Suitable for all ages

Safe

No harmful parts like sharp edges

## CONSIDERATIONS

Unexpected (main consideration)

Unique

It's different

When you say 'spinning top', a zoetrope is not exactly the first thing that comes to mind. So, we wanted to think outside the box & surprise everyone!

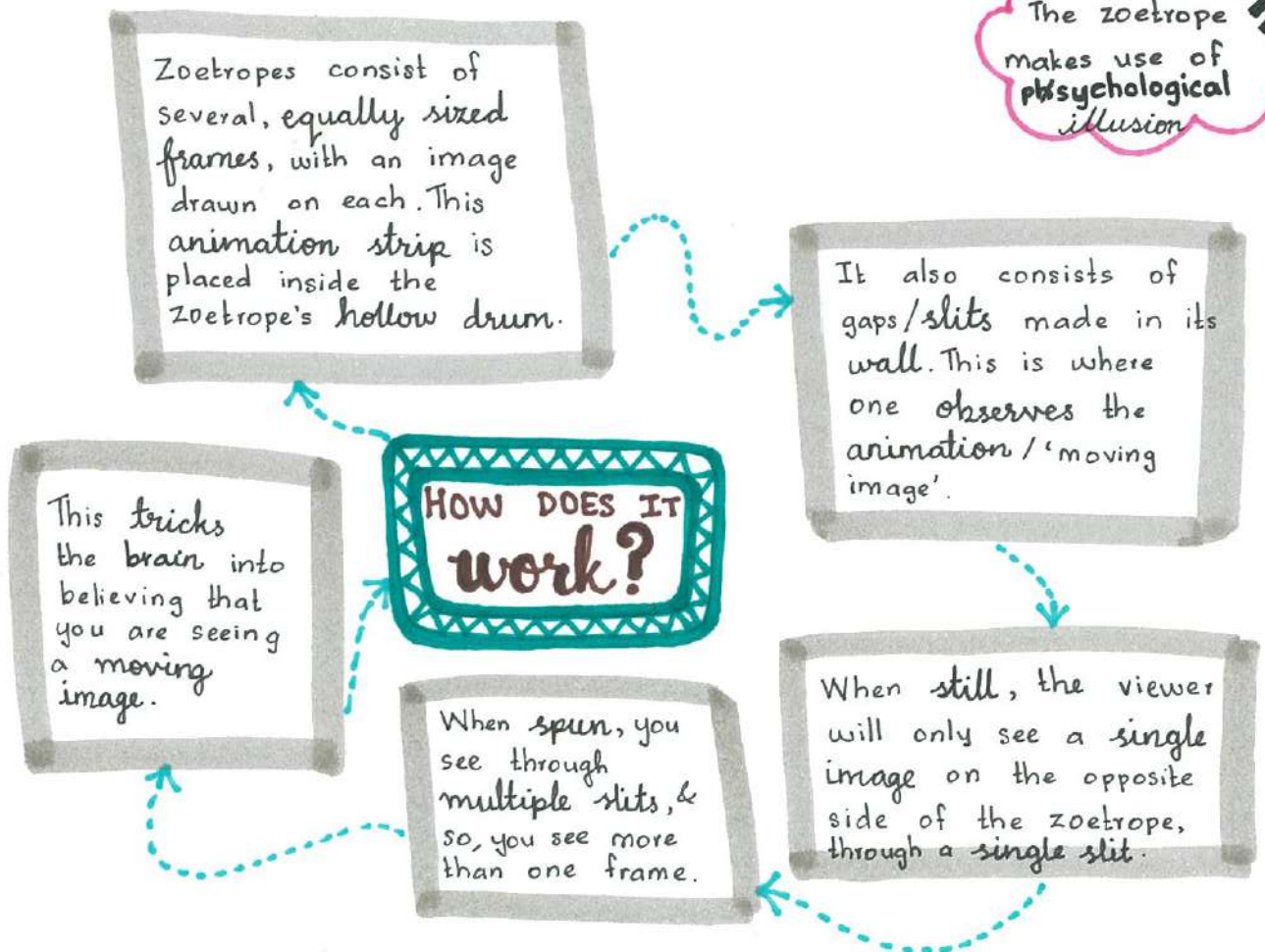
The animation makes it extra interesting.

## WHY CHOOSE THE ZOETROPE?

- Made up recycled materials
- Unique
- Out of ordinary
  - ↳ Not what is expected for a spinning top
- Not many people know of it
- Selective combination of materials
  - ↳ Discarded wood (wooden dowell)
  - ↳ Cardboard (for structure)
- Involves something extra & unexpected
  - ↳ Animation
- Highly engaging
  - ↳ Curious to see what the animation is about
  - ↳ Spot the difference game that comes along with it makes it more fun
- Interactive
- High playability
  - ↳ Easy to play
  - ↳ And the spot the difference game even adds a little competition. (EXPLAINED ON THE NEXT PAGE)
- Highly functional
  - ↳ Functions as a spinning top & an animation toy

# HOW DOES THE ZOETROPE WORK?

**NOTE:**  
The zoetrope makes use of **psychological illusion**.



## What is the SpOT the DifferenCE gAME?

★To ↑ the competitive element of our zoetrope, we created a game where:

- 2 viewers will view a strip of animation simultaneously.
- Next, another person will change the strip of animation (The animation strips come in pairs, each with a slight difference).
- Then, the 2 viewers will have to view the <sup>new</sup> animation strip again & the first one to spot the difference between the two **Wins!**



05. In less than 100 words describe your final product and the briefly about the idea development

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Provide a picture / sketch of the final product:





# Brief description of: The final product & the idea development

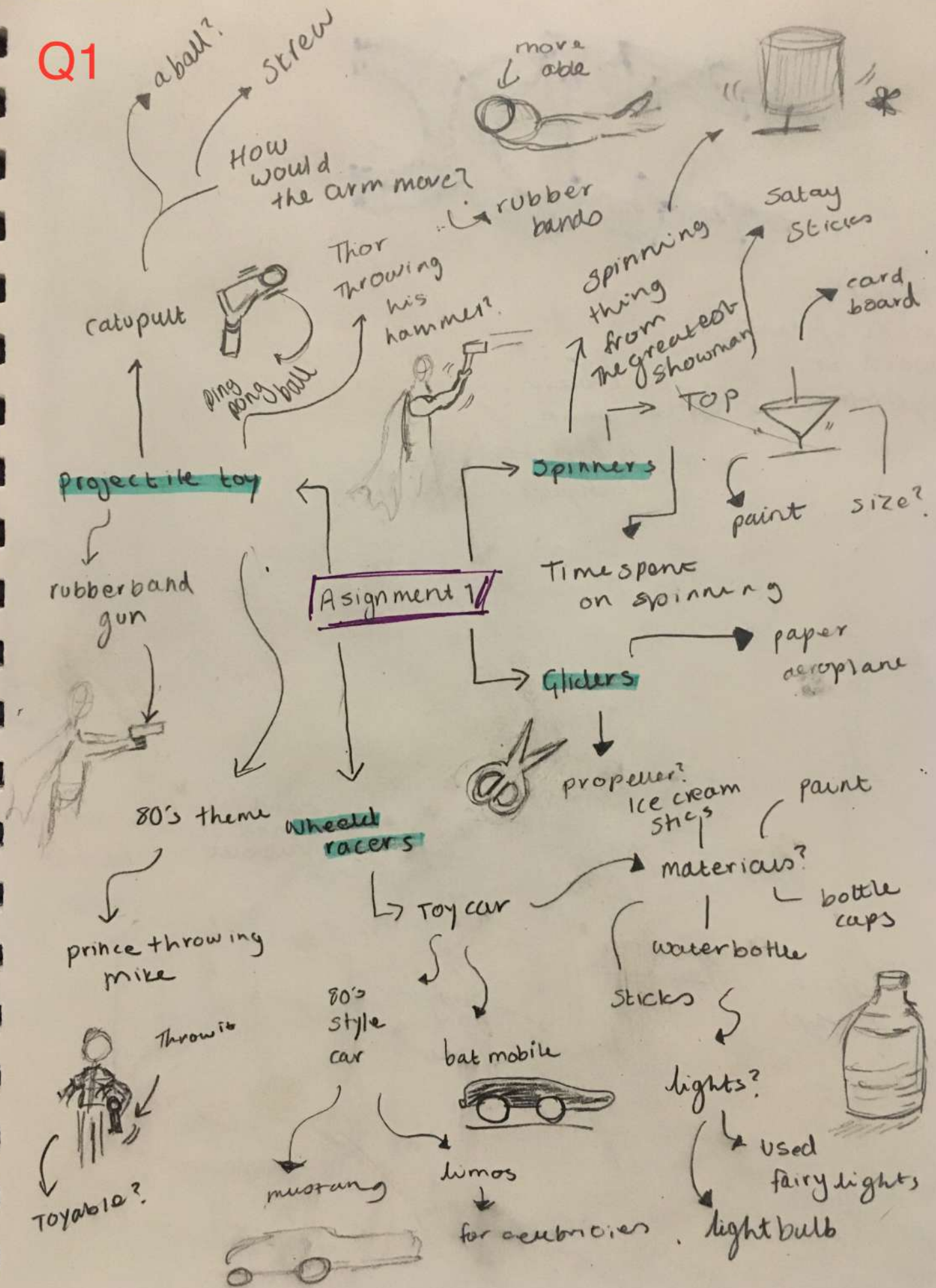
The DC <sup>Comic</sup> themed "zoetrope" is a unique spinning top that utilizes psychological illusions to trick your brain into believing that you are seeing a moving image. The initial idea was generated by Carla, who had seen a zoetrope as a child. We developed the initial idea through group discussions & getting feedback from our lecturer & tutor. To ~~integrate~~ Furthermore, to integrate the DC theme into our toy, we made use of iconic DC <sup>Comic</sup> infrastructure & DC character based animation strips. All in all, we believe that our ~~toy~~ <sup>both</sup> is a unique spinning top ~~that~~ will surprise the examiners and viewers.

[98 words]





Q1







COMICS

Figurine  
made of card-  
board or  
polystyrene.

Rubber  
band  
shooters  
(catapult)

Rubberband  
Guns

Toy car  
(Batmobile)



spinner



card  
board  
cut out

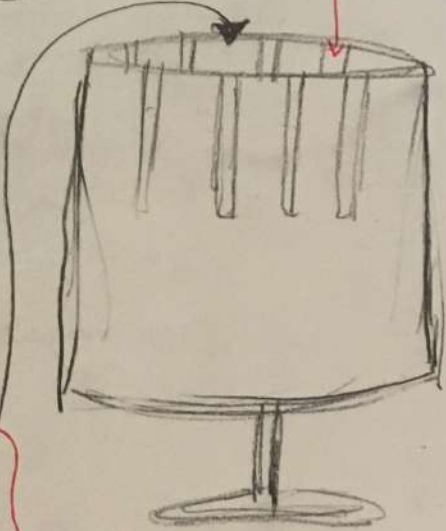
look through  
the hole.

stick  
(skewer)

card  
board  
spinner

nail

zootrope



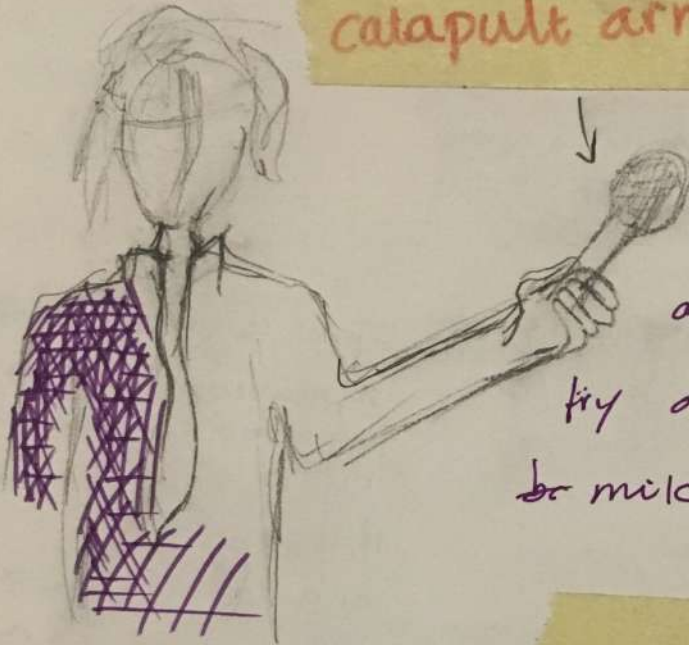
Animation  
strip



# 80's

popstars

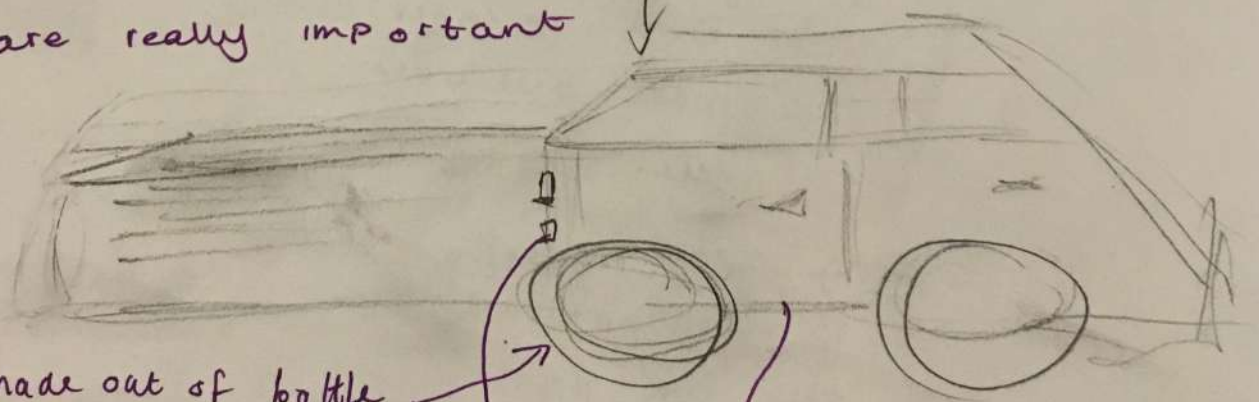
## catapult arm



The figure  
Throws the mic  
into a box  
of fans. So the aim  
at the game is to  
try and get shoot one  
or mic in the box

## 80's car.

made out of cardboard  
because it's easier to  
decorate and aesthetics  
are really important



made out of bottle  
caps

hinges on  
the doors so they  
open

doors that can  
open



Q2



This inspires me because of its simplicity it is so simple yet it moves so fast. This shows me how to keep the toy simplistic and not too complex that it doesn't become fun anymore.



This is a zoe trope. It makes pictures into moving animations. Which I think is really cool and a really out of the box idea. It still also relates to the spinning there.

This is another spinning top however the shape is different which really interests me and is a reminder to make our own unique.

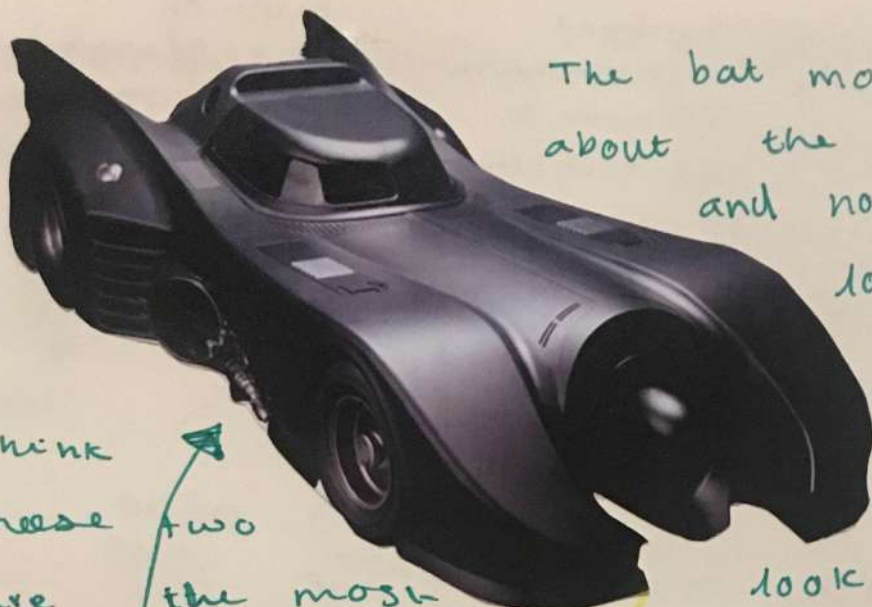


The Thor figurine is ~~and~~ not really the fun part

the fun part is to make the hammers fly so there is some sort of catapult-ment. (Havent really figured out how to do it tho)

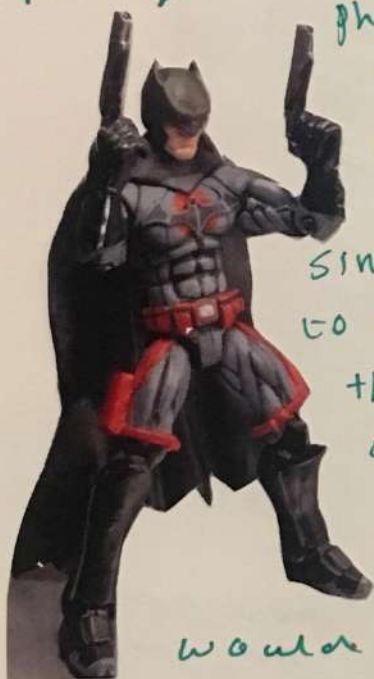
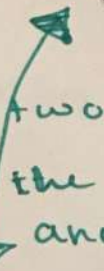






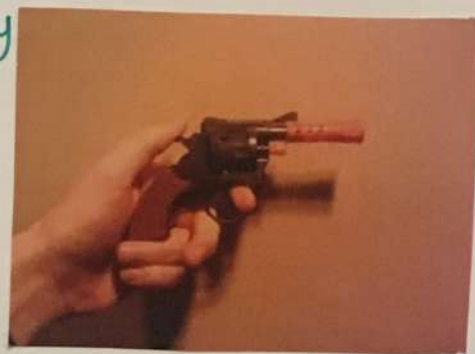
The bat mobile is all about the aesthetics and how cool it looks this inspires me to make our toy look visually pleasing and they have to want to play with it when they see it.

I think these two are helpful



I thought a similar thing to the thor idea,

this could shoot rubber band guns like so this would be a



projectile boy and they could have targets



This is for the glider part I thought that maybe we could like make a military type plane but doesn't really fit the theme :)



# Top Ideas

Q3

- Batmobile
- 80's car
- Rubber band gun
- Zoetrope

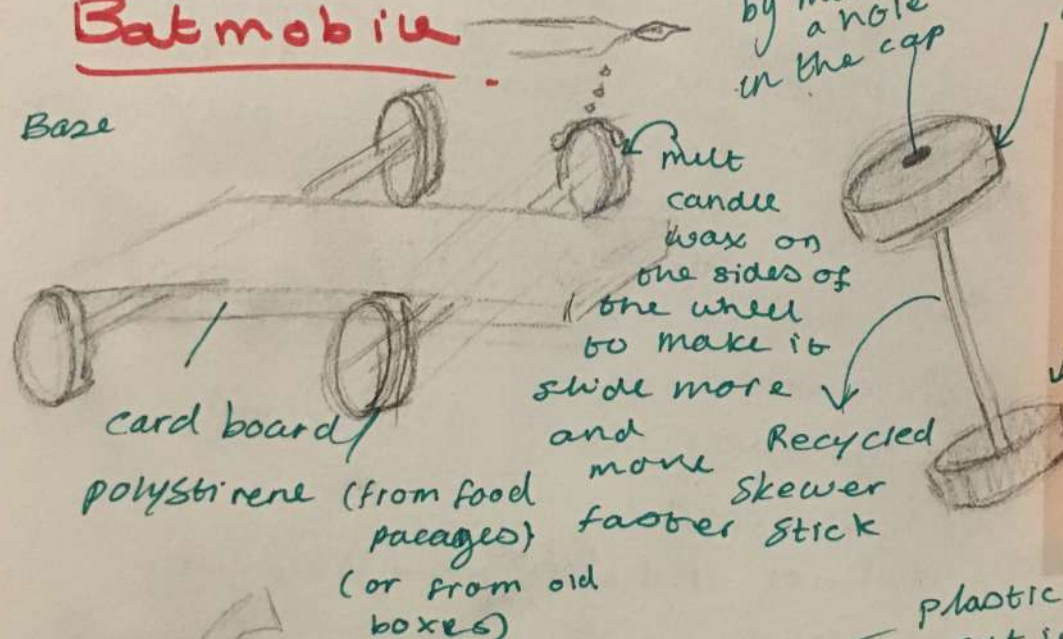
wrapped  
in aluminium  
to have a  
reflective

made of  
plastre from  
recycle  
bottle

metallic finish  
to make it  
look cooler

## Batmobile

Base



The 80's car  
would be  
made the  
same except  
the paint  
would be  
different  
and it  
wouldn't  
have wings

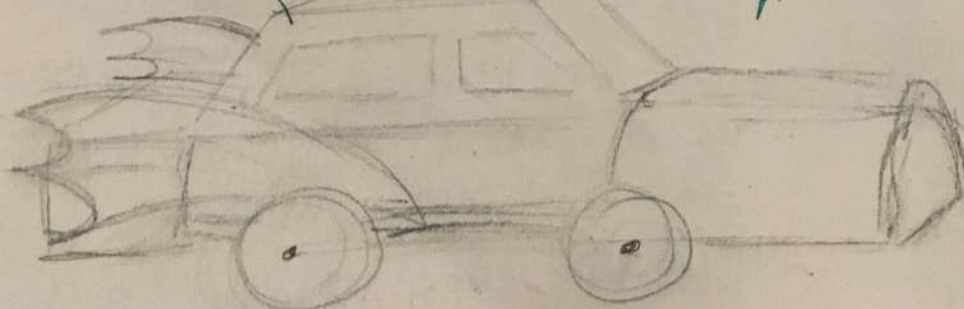
plastic bottle  
cut in half

front part of  
the car

stick together  
with glue

Remaining  
pieces of  
plastic bottle

paint a  
cool design  
on it to  
make it  
look  
like  
a batmobile

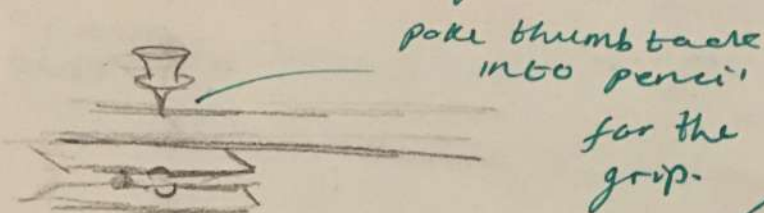
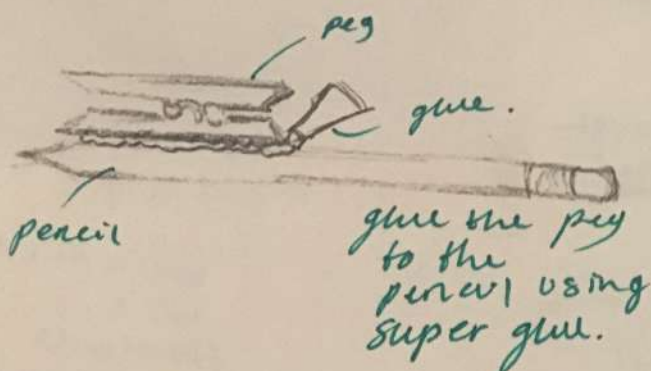




# Rubber band gun

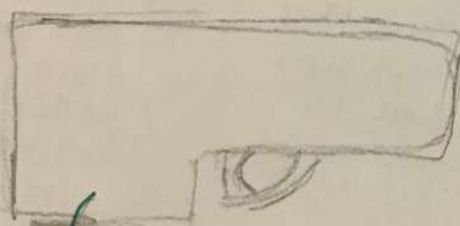
Things to use:

- Pencil
- Thumbtack
- Superglue
- clothes peg
- rubber band



rubberband is in the peg and the other end is put around the rubber band part and release this to shoot

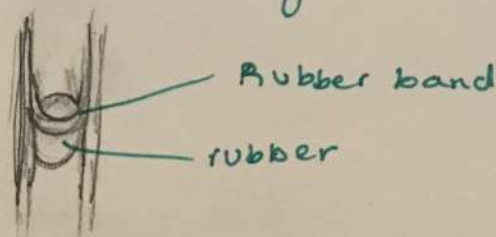
To disguise the gun ....



make 2 of these and stick it on both sides of the pencil to make it look fully like a gun

paint it like bat man's guns so that it relates back to the DC topic.

Front view of the gun



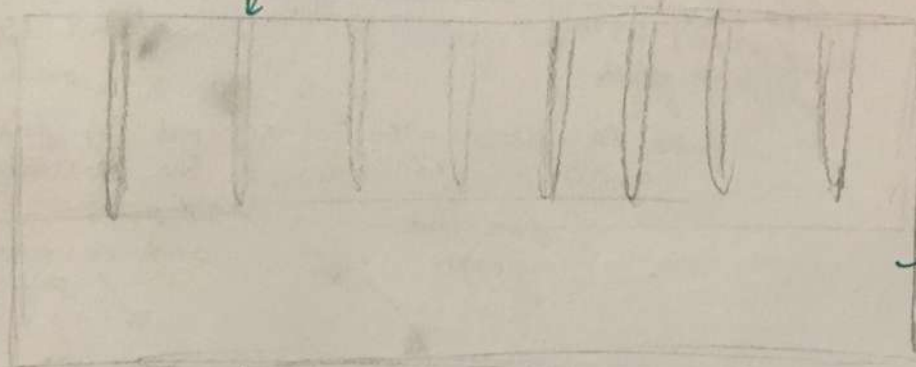
I think this idea is so far the best because it uses all compleatly recycled materials and it really relates to the topic and I think would score high in the scoring rubrick. This would go under the projectile section as it shoots rubber bands at things. we could also make this a game by shooting down objects using the gun.



# zoe trope

The animation interell would be related to DC comics or 80's pop stars  
We could relate it to both.

This was another group member's idea so I decided to explore it a bit more



We could use flexible card for this

This will be glued around the edges of this

base of the top part

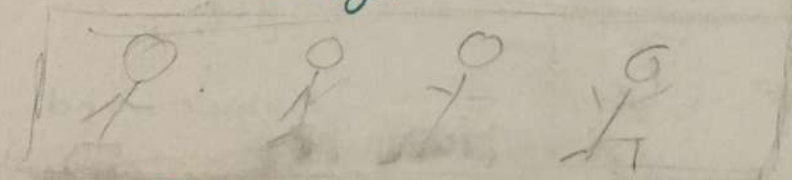
topperware cover.

There would be a hole here for the polystyrene bowl. stick to come through

We will glue this using super glue to make sure it holds

skewer stick

might have to put something under to hold it in place

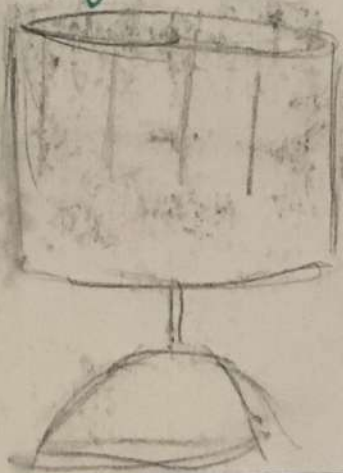


animation to put inside

This would ground the spinning cabog-ory.

This is how I think you make a zoe-trope out of recycled materials but over all I don't think it will be sturdy and will fall apart really fast.

final look





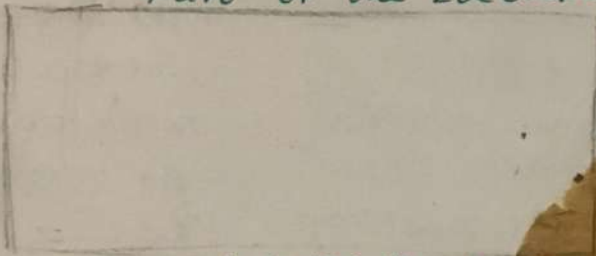
### Materials used:

- Taylors hostel folder
- black paint
- cardboard
- marble
- blueback
- stick
- CD

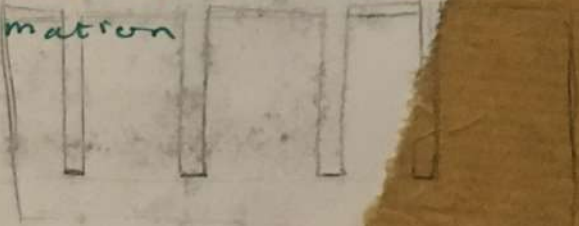
Q4

we decided as a group to go with the zoetrope as we all found it really interesting and wanted to see how it turned out we also thought it was really creative and different from what everyone else was doing.

we used a Taylors hostel folder for the cylinder part of the zoetrope



After that we cut holes on the card to look through and see the animation because it is more sturdy than normal recycled paper. It made a really good base compared to the paper prototype that I made.



The prototype that I made earlier was completely wrong so a member of our group found a youtube video which was where we based how we made our zoetrope.

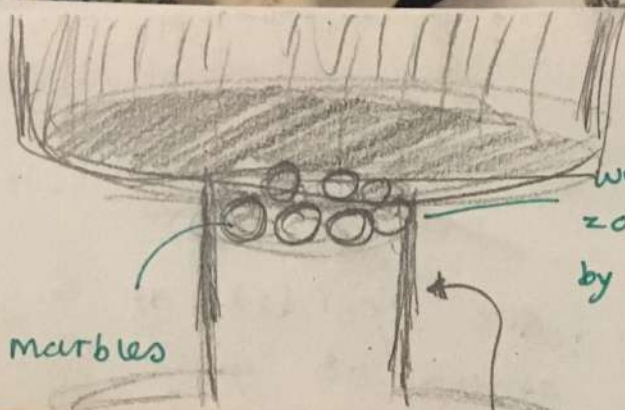


a hole where the stick goes through to connect the top of the base.

we used a recycled CD as our base for the zoetrope

we painted the whole thing black so we had a neutral base to start on.

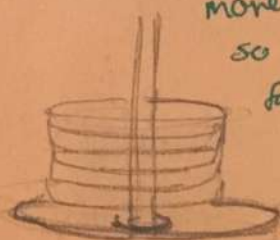




marbles

we made  
zoetrope  
by using

All The parts of  
the zoetrope  
were painted  
seperately so  
there was a better  
finnished look.



more stable  
so it doesn't  
fall apart

The botom part of the  
stick is glued down  
to the base of the  
zoetrope to make it

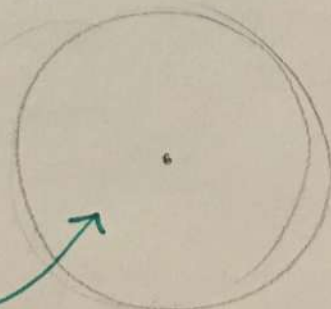
the same material  
to make the  
of the zoetrope



holds the  
whole thing  
up is stacked  
up card  
board  
with holes  
in the middle  
for the  
stick to  
go through

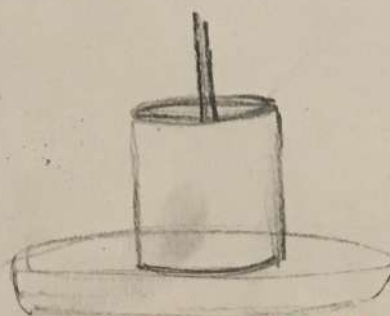


(Journals hostel folder) is  
used to wrap around the  
post. it also slightly longer  
to give space for the marbles



We then glued  
this piece to the  
base of the whole  
zoetrope.

so if the base didn't  
stay in place, the whole  
zoetrope would be ruined.



This is what it looks  
like before the  
placed on the glue we used

was very strong  
thats why our  
base is really  
strong.



# Final Product.

We made the tops more irregular so it would be more creative

The Final product was supposed to look like this but then we faced a few problems

Problems  
should have a light inside so you don't have to shine the phone light.

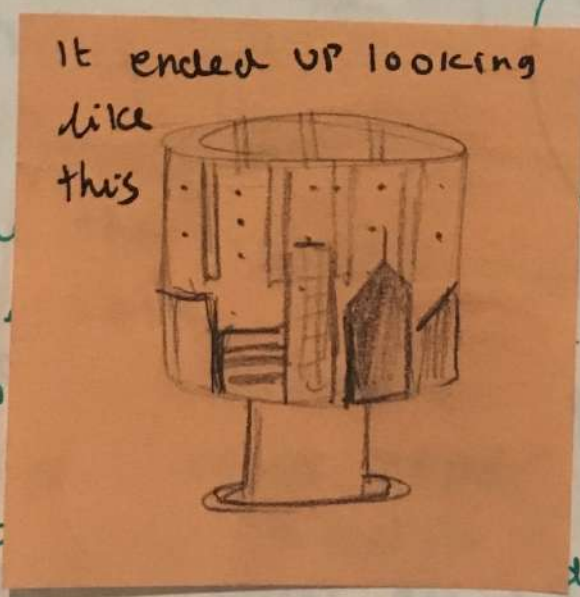
The animation would be here

we stuck DC comic buildings on the outside of the zoetrope

It ended up looking like this

we made zoetrope buildings to give vibe to the theme more.

we found difficulty in setting a light so we just decided to use our phone lights





Q5

One of our group members introduced us to the idea of a zoetrope and we started to develop from there.

We also tried to satisfy everyone by incorporating all of our ideas into our zoetrope. Initially we all agreed on what to do but later on we had some conflict because we didn't know if the zoetrope would score high on the scoring rubric. But we managed to resolve the conflict. We ended up turning our zoetrope into a game where we have to pairs of animation strips where we have to spot the difference between each animation.





YOUR NAME: Mathaath ibrahim sujau

STUDENT ID: 0333964

FOUNDATION: (FID) | FIA | FIS | FNBE

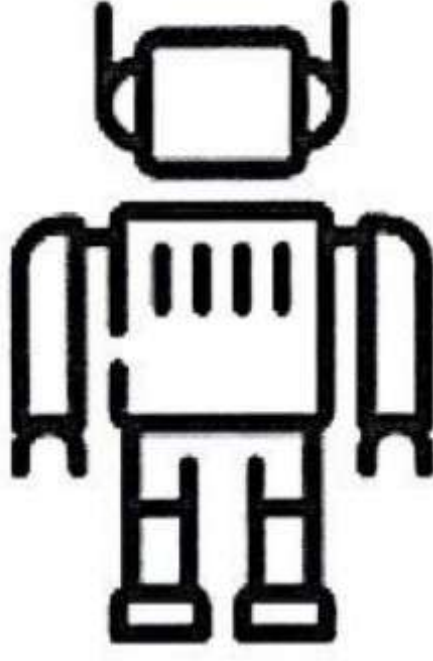

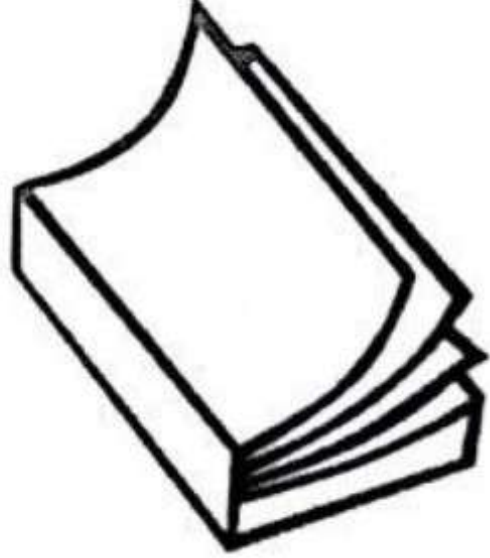
TUTORIAL LECTURERS: MR CHARLES | MR CHOY CHUN WEI

| (MS FU YEN HUEI)

PRODUCT NAME: Flashrunning DC city

GROUP NAME & MEMBERS NAME ( IF GROUP WORK):

- |                      |                           |                       |
|----------------------|---------------------------|-----------------------|
| 1. Arissa Alyna Shah | 2. Khiirtana Devarajan    | 3. Carla Alverina Lee |
| 4. Hanan AS-AD       | 5. Mathaath Ibrahim Sujau |                       |

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<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

01. ASK! What are you supposed to make? (Do ask questions & find the answers. Make mind maps & categories your findings. 1-3 pages. Hand drawn & write but may include some digital images.)





OR. Examples of ideas & related info that inspire you & relatable to the assignments. (Why & how these examples inspire you? Justify & elaborate on each examples. Identify the interesting components. Give a conclusion for each the examples - why & what makes it interesting - & how it could help your final product.

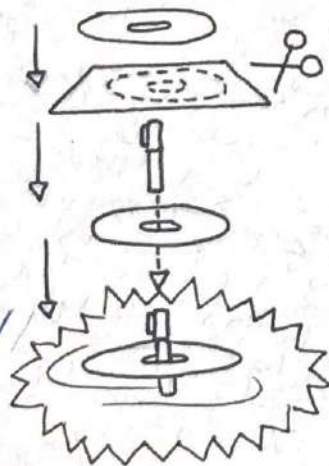
## ① Spinning Top

### Materials

- Ø Old CD
- Ø Card board
- Ø Scissors
- Ø Old markers/Pens

### Directions

- ① Trace old CD on cardboard
- ② Cut it out
- ③ Can decorate using markers
- ④ Stick a marker/pen



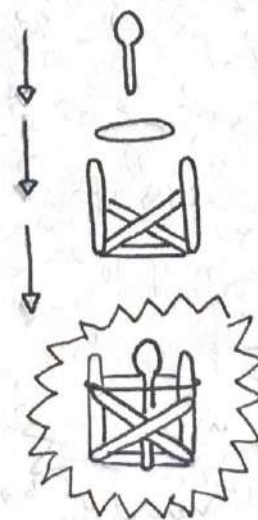
## ② Slingshot

### Materials

- Ø Plastic spoon
- Ø Rubber band
- Ø Hot glue
- Ø Popsicle sticks

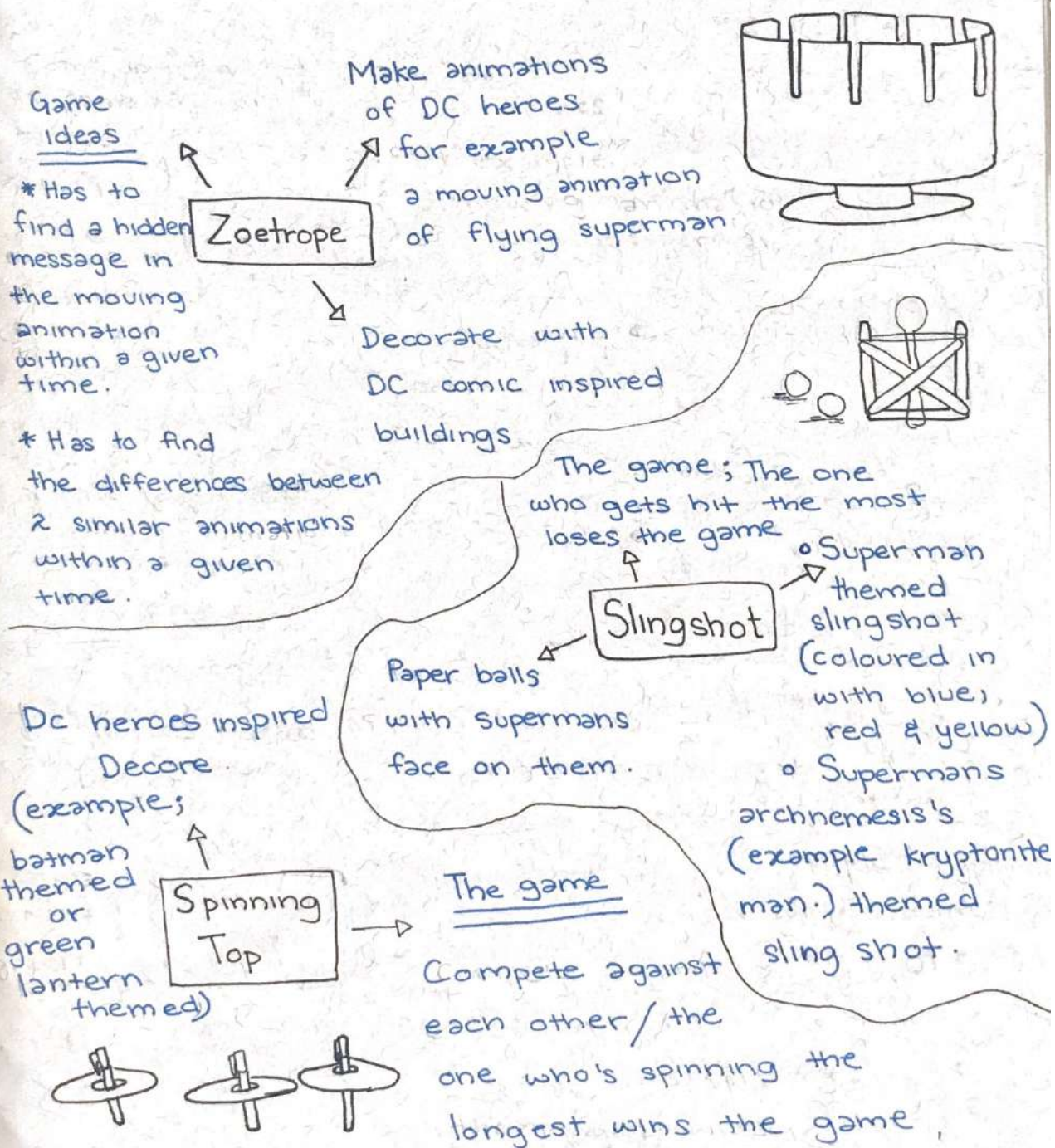
### Directions

- ① Stick popsicle sticks with hot glue
- ② Use rubber band as sling
- ③ Place plastic spoon



03. What are the 3-5 ideas that interest you most?

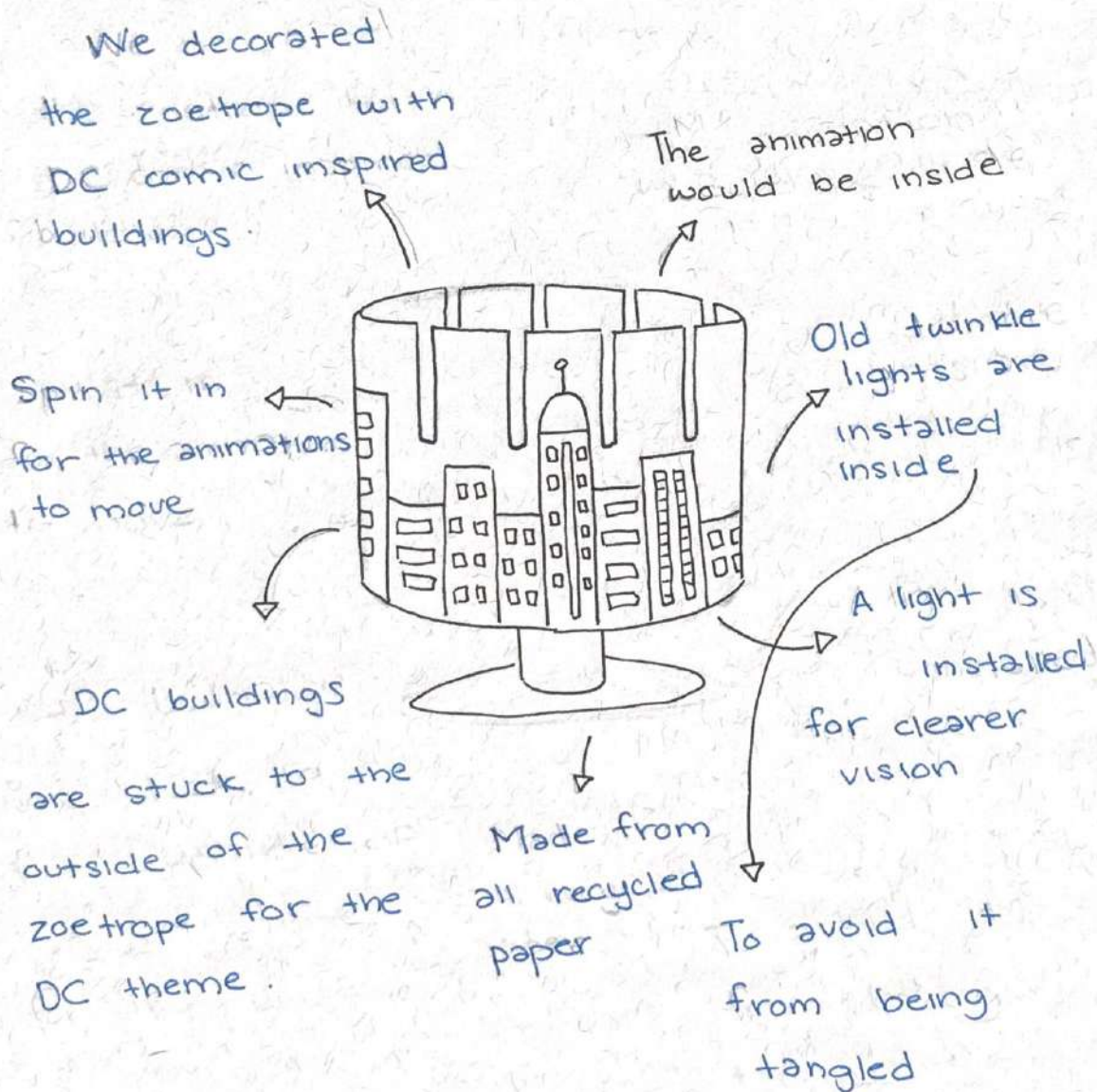
Describe & elaborate your ideas here. (Make mind maps on each ideas that came up. Consider & elaborate on each ideas. 1-5 pgs.)





04. Refine your selected final ideas. Explain how much you make your ~~final~~ final decisions etc. (Sketch up the final product. Write why you choose to make what you are making. What are the "Details" that make it interesting or working.)

## FINAL PRODUCT



05. In less than 100 words describe your final product & the briefly about the idea development.

The zoetrope is made from all recycled paper, and lights. <sup>When you</sup> ~~The animation~~ spin the zoetrope the animation inside will start to move, and it would seem like a really short cartoon. It's DC themed, so it'll have animations of DC super heroes. Lights would be installed so that the moving animation could be seen more clearly. The zoetrope was inspired by the spinning top.