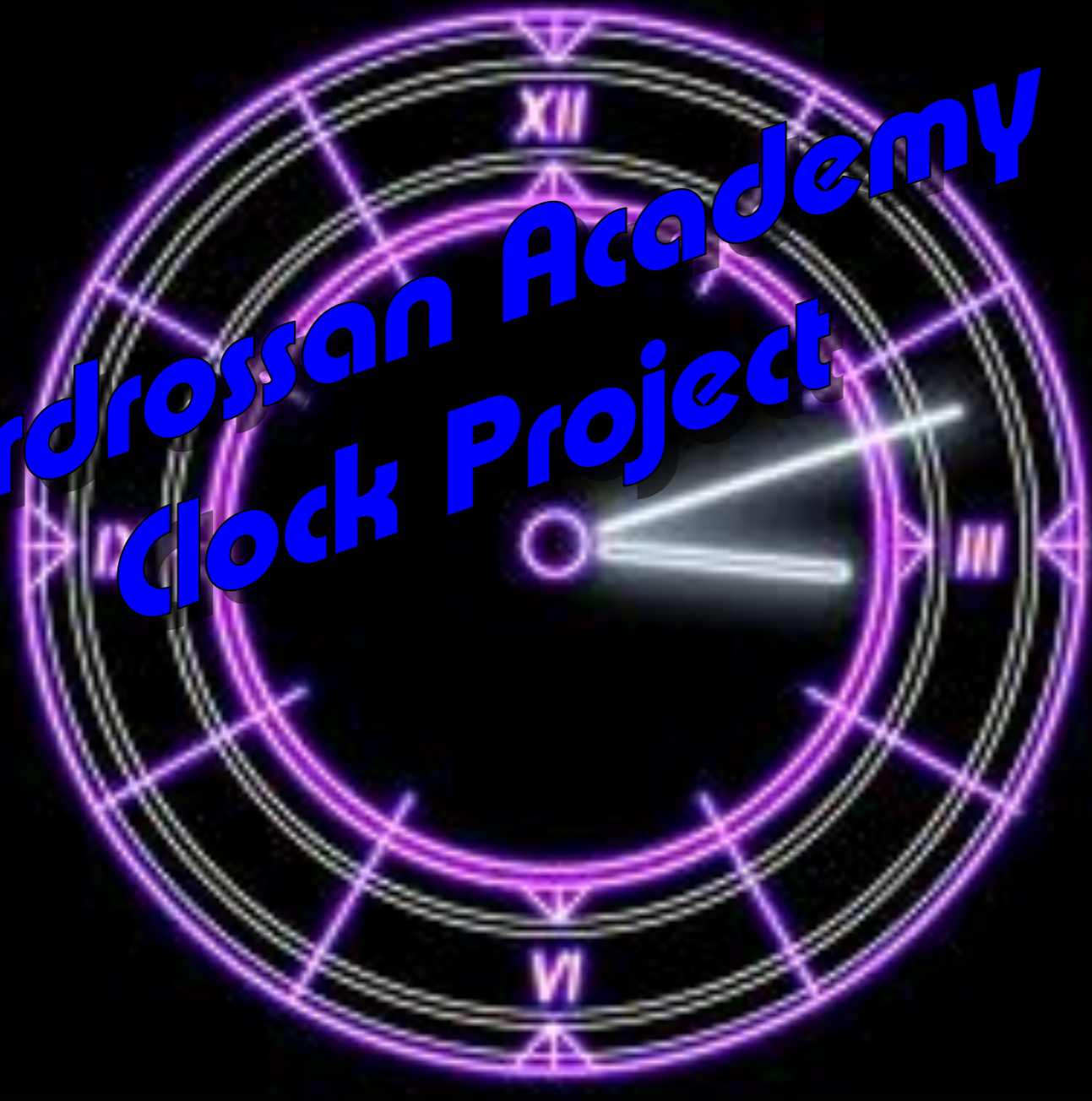


# Ardrossan Academy Clock Project



Chantelle Nixon

3E

Craft and Design



# Design Brief

**Target User** ~ - my clock will be suited for young professional males and females aged between twenty and thirty who like modern objects and have a nice home.

**Context** ~ my clock will be designed to be used in a modern looking sitting or dining room. It's two main purposes will be to give the time and to decorate the wall or area where it is.

**Theme** ~ the main theme of my clock will reflect the young professional's lifestyle and home, being modern and contemporary.

**Client** ~ our client is John Lewis hardware other department stores and high end retailers will also sell the clock.

# Specifications

**Materials** ~ my clock will mainly be made of either acrylic, polycarbonate or polystyrene. I will be able to use two other materials as well, such as metals and woods. I will use a mechanism that is 60mm by 60mm.

**Form** ~ my clock will be a modern shape to suit the young professional market. It will either be able to hang on a wall or sit on a table.

**Safety** ~ there will be no sharp or rough edges or corners on my clock to make sure that nothing gets caught on it. It will meet British Safety Standards.

**Function** ~ my clock will be analogue and used to tell the time easily. I may be able to incorporate digital aspects into it but the mechanism will be analogue. It will also be used to decorate the area where it is and to look nice.

**Maintenance** ~ the mechanism of my clock will be easily accessible so that it's easy to change the battery or time but it will not be obvious at all if you were looking at the clock from the front. It will be easy to hang up on the wall.



# Investigation of Materials-Plastics

*(from four refined crude oil)*  
**What is plastic?** Plastics are a man-made material made from polymers. A molecule in plastic can have up to 1000 strands, this is the biggest difference between it and other materials which only have about 300. There are two types of plastics, thermoplastics and thermosetting plastics. Thermoplastics become soft when heated and can be changed into various shapes over and over. Thermosetting plastics can only be moulded into their original shape.

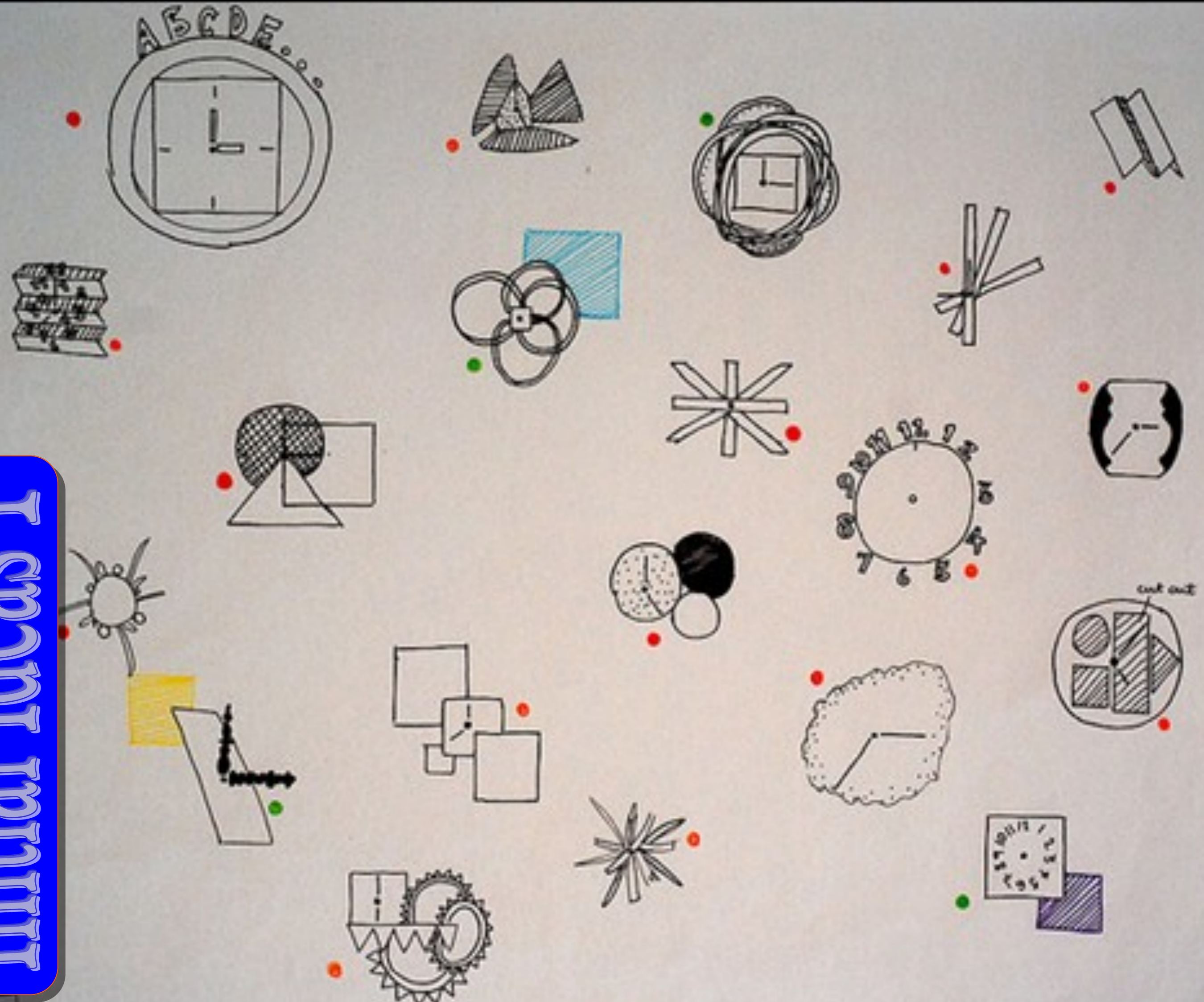
**History -** Compared to other materials plastic is very modern. They were first used about 100 years ago but since the 1950's they have really taken off and are now used on almost every object. And their use is going up by 4% every year. Because plastic are so new no one really knows if they will have any negative impact on humans because they are used so much.

**Uses ~** Because there are so many plastics, each with different properties, they can be used for almost anything. One of the most common things that plastic is used in is plastic drinks bottles. In America 2 million of these are used every 5 minutes! Packaging is also a major use.

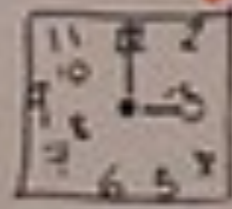
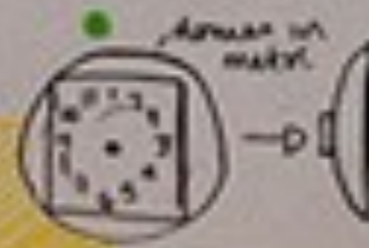
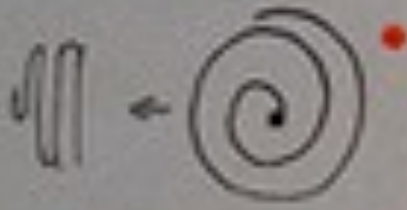
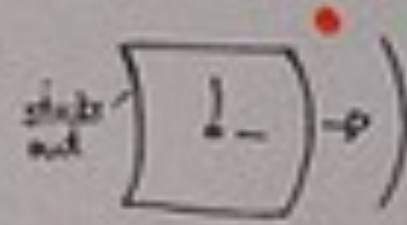
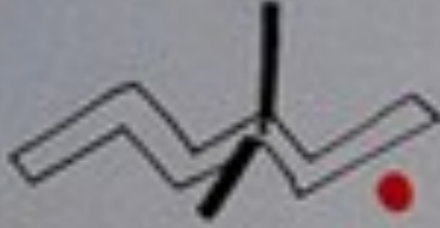
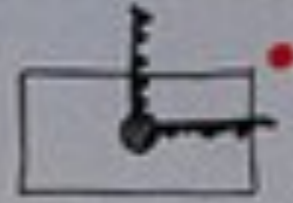
**Disposal ~** Although most thermoplastics and others are able to be recycled, currently only about 10% of all plastics are. The rest end up in landfill or in the seas and oceans. This can be very harmful for sea life as they can mistake bottle lids etc for food and eat them. This can also be bad for humans because eventually, they could be eating the fish with plastic in their stomachs.

**Recycling ~** Almost every plastic can be recycled. Thermoplastics (acrylic, polypropylene, polystyrene) can be melted down and used for another objects and thermosetting plastics can be crushed and used for insulation etc. Each plastic has a resin identification code and this is to help identify the type of polymer that the plastic is made of to enable easy recycling. In my class I would like to use either recycled plastic or plastic that is very easy to be recycled.

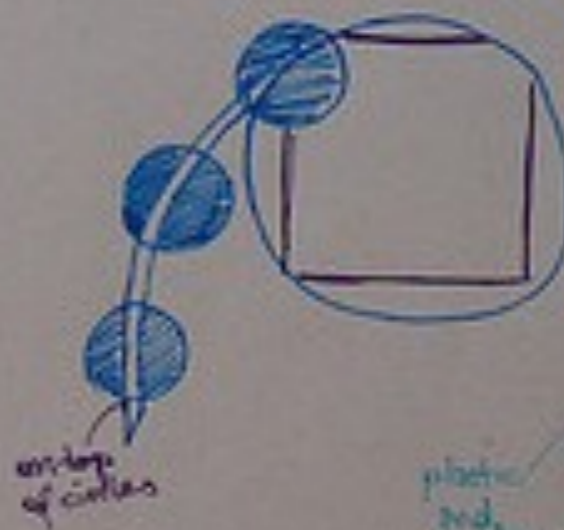
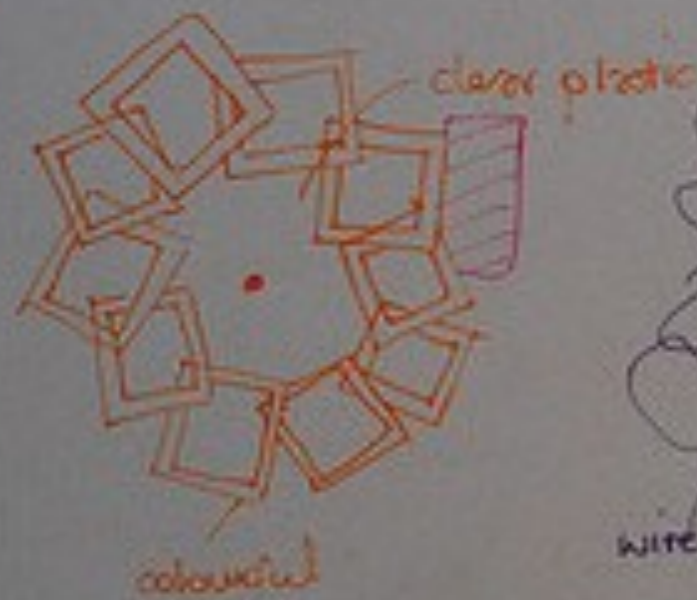
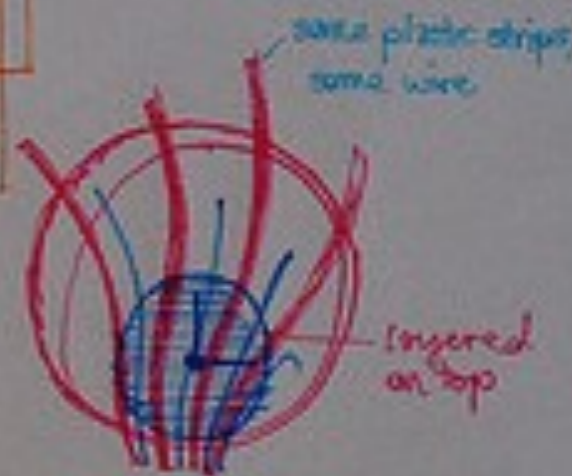
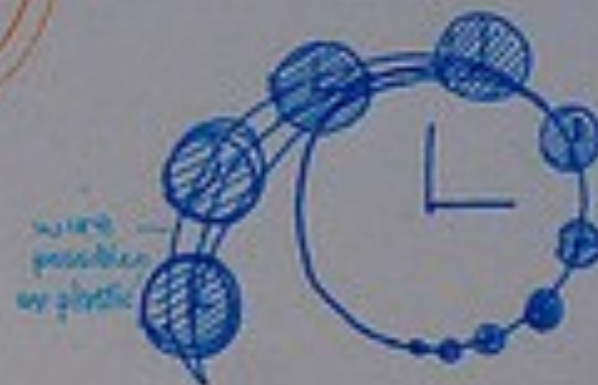
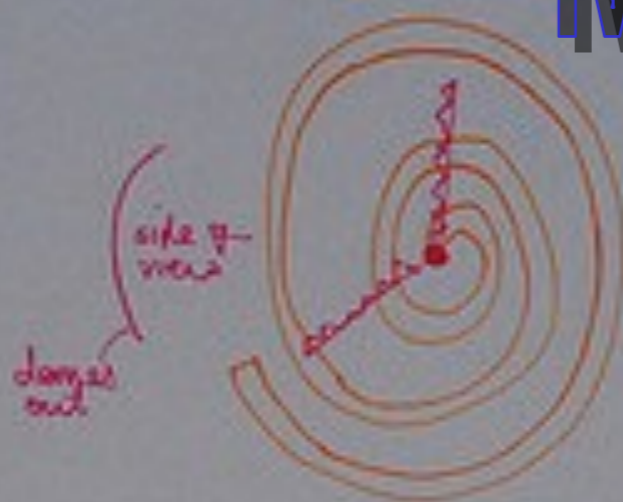
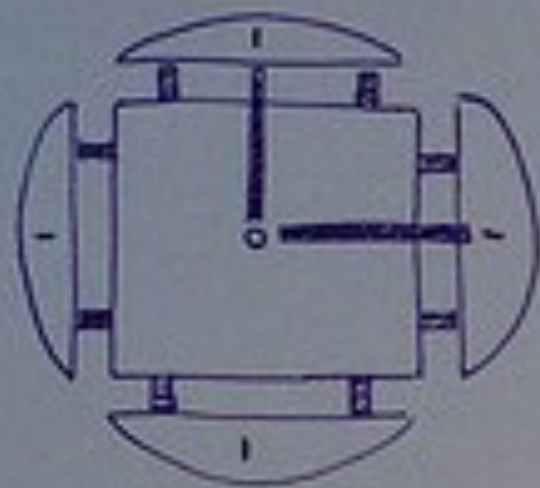
# Initial Ideas 1



# Initial Ideas 2



# More Ideas

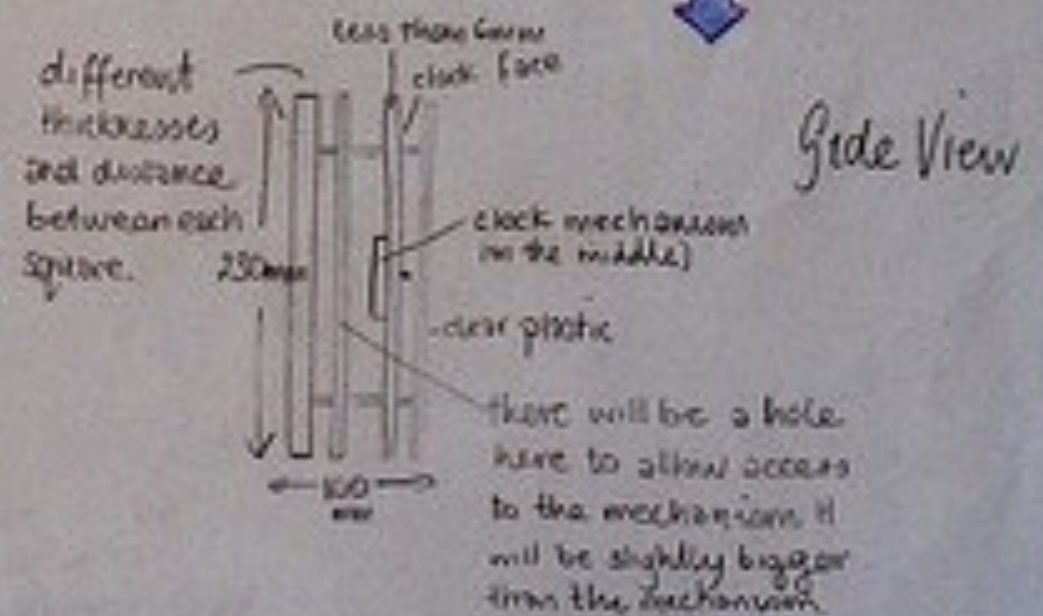
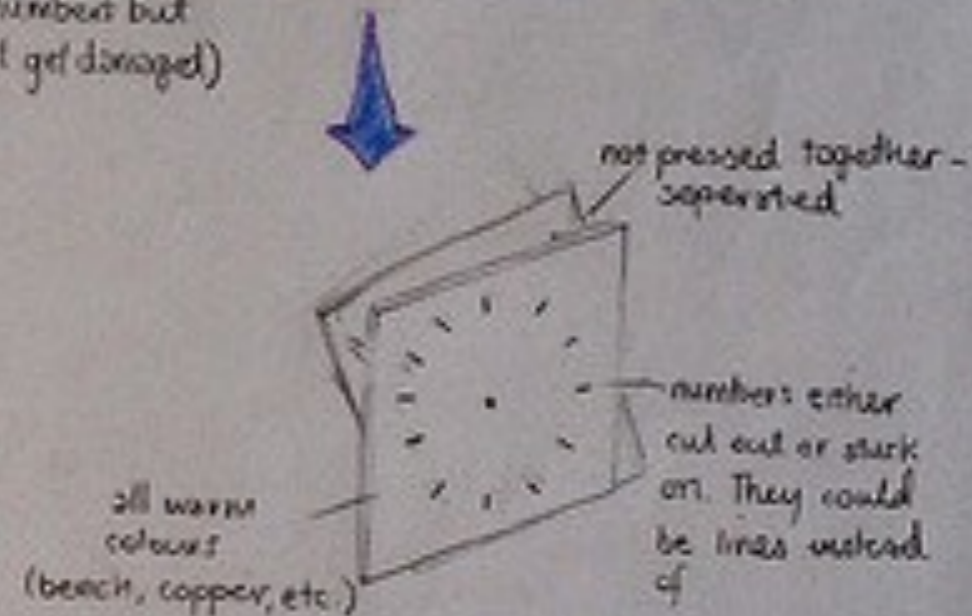
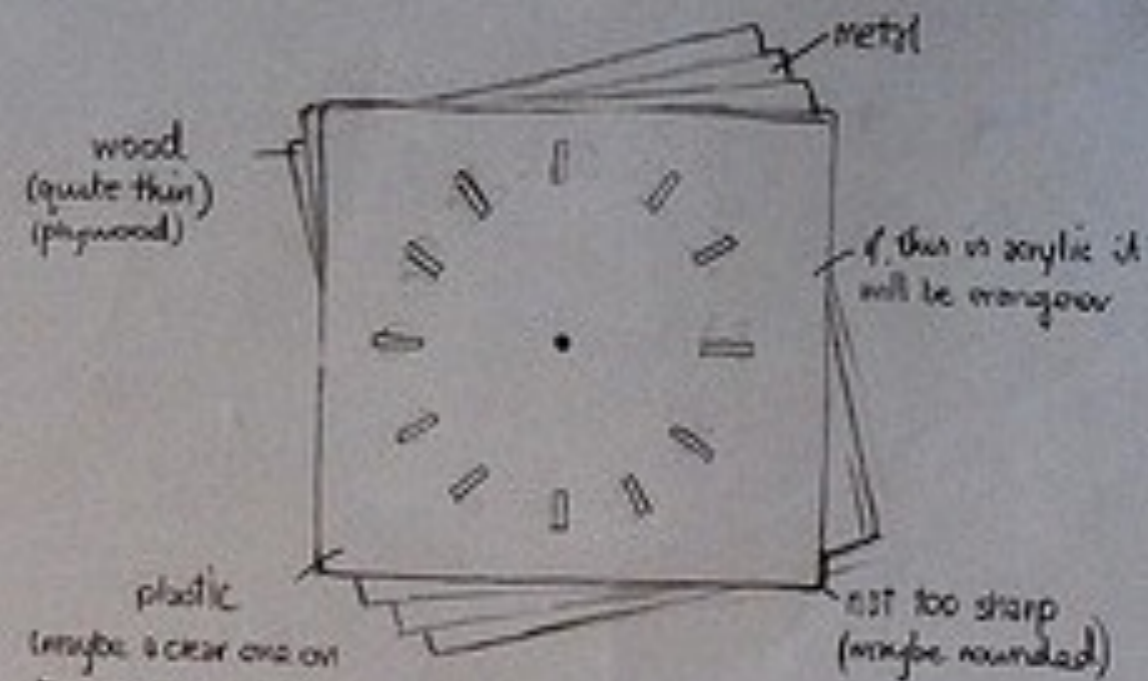
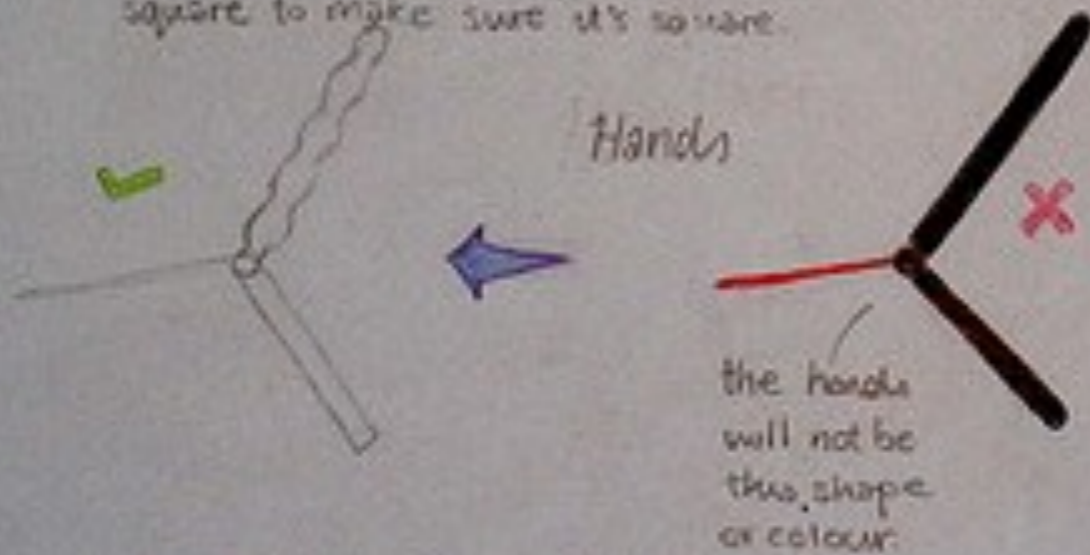


plastic and wooden beads

**Materials** ~ The square with the clock face on it will either be wood with a clear plastic over it, or acrylic. The other squares will be made of metal, wood and all three types of plastic. The hands will have a thin metal or plastic (polypropylene) over them that will be in an interesting shape to make them look better.

**Joining** ~ To hold all the squares together I will use a metal rod with nuts on either side of the squares or a perspex one with glue on the squares. It will go in an area that metal it will go through all the squares. At the front it will either not come through or be hidden by a number or something if it is metal or be seen if it is perspex.

**Tools** ~ I will use a band saw to cut the plastic square, a panel or tenon saw to cut the wood and plyers to cut the metal square. I will use a file to smooth the plastic and metal edges to make them safe and sandpaper or a plane for the wood. I will use a try square to make sure it's square.



1  
idea

Sharing! - Internet Explorer provided by Dell

andtechnologydepartment/3973182560/in/set-72157622372510899/

Search | More >>

Search | Cards & Logins

Facebook | YouTube | Games | TV | Hotm... | ABC ...

WEB SEARCH | Find Software

Education Community | YouTube - Switch Audio ... | YouTube - Autodesk Inve...

← Prev | Next →

The hands... will either be made of turned wood cut to make it flat or metal sheet cut with plyers into the right shape. They will be the main feature of this clock. Depending on which one I use the background will be the other material. There will be another sheet behind that one which will be made of plastic I haven't decided yet if this will be separated or attached to the front one.\*

I will use a metal rod or something to keep the sheets separate but attached. I will have to have a square hole at the back so that you can get the battery in and out etc. I will use some sort of glue to stick the shaped hands onto the back ones if they are metal. I will have to scratch the back.

I will either use a wood turner or plyers to cut out the hands and a file or sandpaper to make them safe. I will use a hand saw to cut out the faces.

metal or wood

metal or wood

all cool colours (chromium etc.)

there will be no numbers on this clock so that the hands are the main feature.

plastic

hole to allow screws to battery etc.

this would have to be less than 6mm so I think I will separate the two sheets.

this will make the clock stronger because the sheet will be thicker.

Side View





