

10/19/2012

DESIGN
TECHNOLOGY 8S2

PHASE 2; DESIGN

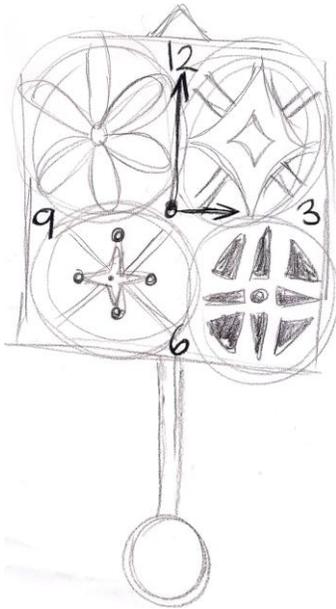
Alia Ragab



DESIGN ONE

This is my first design, it is based on an eye, and it's quite simple. There are 3 different colours used to create it, green, blue, and black. The material I will be using to create it is foam board, and I will use paint and markers to draw it. This design represents observation, and beauty. There will be no pendulum in this clock, and it will have a diameter of 70mm by 100mm. There will only be 4 numbers on it, 12, 3, 6 and 9. The colours in the pupil are going to be blue and green mixed together, as those are some of the colours that

my client likes. The clock will have an hour, minute, and a second hand, and they will all be functioning depending on battery power. It will have an estimated weight of 150 grams, due to the foam board. It will have a handle in order for my client to be able to hang it, and the handle will be made out of string, and it will not show, as it will be on the back of the clock, it will be placed 10mm from the top of the clock. The clock will be mobile because of that hanger. The material will not be laminated, to allow maximum visibility from all angles. The numbers on the clock will be obvious to see, and they will be small, but bold, and clear. I will not be using roman numerals on this clock.



DESIGN TWO

This is my second design, and it is based on an Egyptian jewelry designer named Azza Fahmy's interpretation of the four elements, earth, air, fire and water. I will be using very simple colours for this design, in order to keep the beauty of simplicity. I will use gold and black, and a hint of silver in certain areas of the design. The material I will be using to create this will be wood, so I can engrave certain parts of the design into it. I will be using tools such as chisels to engrave some of the simple patterns. I will use black as the outline, and add the gold and the silver to certain areas of the clock. I will be using paint, and some sorts of permanent markers for this design. I will use wood that is not thick, so that the clock isn't heavy. The estimated weight of my clock is 300 grams, and the size will be 200mm by 200mm, a square. The clock will have an hour, minute, and a second hand, and they will all be functioning depending on battery power.

There will only be 4 numbers on the clock, 12, 3, 6, and 9, in order not to take away attention and space from the design. The numbers will be bold, and again I will not be using roman numerals. I will be having a pendulum in this design, and it isn't going to exceed the length of 200mm. I will have a hanger on it made out of metal on it, and it will be visible, and triangular.

DESIGN THREE



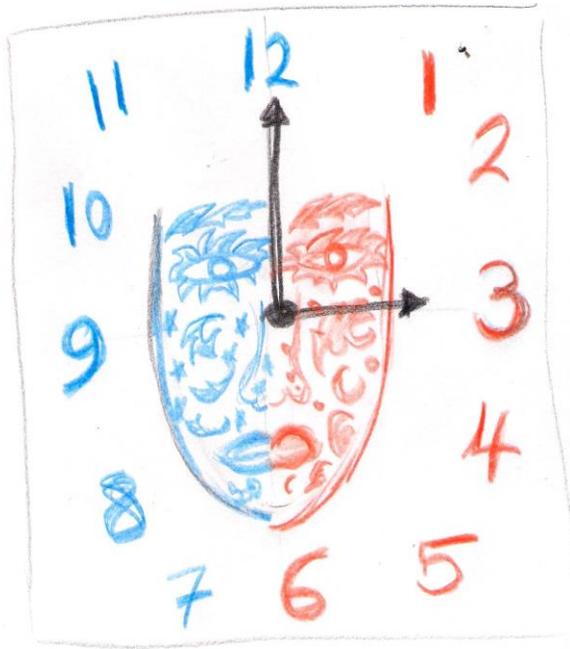
This is my third design, and it is an Arabic word, which means faith, it is a simple design, but it has a deeper meaning to it. I will be using the colours gold, and black for this design, which are simple, but they will add to the meaning. This design is going to have a pendulum on it, and I will be using the material wood for this design. I am going to chisel some of the design into the wood, and I will pick a type of wood that isn't too thick, and it a bit soft to create this design. The diameter of the clock is going to be 200mm, as it is a circle. I will have a hanger on the back of the clock, 10mm from the top, made out of string, and it is not going to show. That hanger will enable the clock to be mobile, and get moved around easily if the client wants to. This clock will only have two numbers on it, and they wont be numbers, they will just be dots. One dot there the 12 is, and one where the 6 is. The estimated weight of my clock is 400 grams, and the clock will have an hour, minute, and a second hand, and they will all be functioning depending on battery power.

DESIGN FOUR



This is my fourth design; it is an abstract drawing of a city on fire, which symbolizes discarding everything that everyone thinks is wrong and doing what makes you happy. This clock has a meaning to it, which is what my client asked for. It uses some bright colours, and also some dark colours, like black, grey, and dark green, and red, yellow orange and white. I will use paint to paint on this design, and I will pick the material high-density foam board to create this clock, and it is going to have 4 numbers on it, 12, 3, 6 and 9, using a green colour. I will not be using roman numerals for this. This clock will be running on battery power, and it will not have a pendulum. The clock will have an hour, minute, and a second hand. The size of this clock is going to be 200mm

by 200mm, and it will have a hanger on the back, 10mm from the top, made of string. The hanger will not be seen from the outside, and it will enable the clock to be mobile, and move from room to room. The estimated weight of the clock will not exceed 200 grams, as it is going to be very light.



DESIGN FIVE

This is my fifth design, and it is a face, which symbolizes day and night, light and dark, or, sad and happy. This clock includes two simple colours, blue and orange, and it has two sides to it. It is fully numbered, from 1 to 12, and their colour will depend on which side of the clock they are on. In this clock, there will be a second, minute, and hour hand. I will use normal numbers, and no roman numerals while making this clock. I will paint the drawing onto it, and the I will use high-density foam board while making it. The clock will be running on battery power, and there will be no pendulum. The numbers will be big and clear, and they will be a little bit bubbly. The clock's predicted weight is around 200 grams, and the size will be 200mm by 15mm. I will have a hanger on it, and it

will be made of string. The hanger will be hidden behind the clock, and it will enable the clock to be more mobile.



DESIGN SIX

This is my sixth, and final design, and it is of pepsi cola, a classic old version of the drink known as Pepsi. This design represents one of my client's favorite drinks, while adding a classical, old twist to it. This clock includes a small variety of colour, black, blue, and red. The numbers will run through 1, all the way to 12, and they will be drawn in black. In this clock, there will be a second, minute, and hour hand. I will use normal numbers, and no roman numerals while making this clock. I will paint the drawing onto it, and the I will use high-density foam board while making it. This clock is a little bit of an irregular shape, because it has spike like sides. This design is going to run on battery power, and it will be an estimated weight of around 150 grams. This clock is going to run on battery

power, and it will have a hanger on it, made out of string, and it will be hidden behind the clock. The diameter of the clock will be 150mm.

Specification	Weighting
Budget and Cost	2/2
Aesthetic Appearance	2/2
Ergonomics	2/2
Functions	2/2
Weight	2/2
Life Span***	1/2
Time Scale +Planning***	1/2
Tools and Equipment ***	1/2
Mobility	1/2
Maintenance Requirements***	1/2
Quality assurance***	1/2
Quality Control***	1/2
Safety precautions***	2/2

*** = These specifications are not applicable to be tested at this phase in the design process, as they're not related to the designing of the product. They will *not* be mentioned in the rating/testing about the specifications below.

Design One:

Specification	Weighting	Score	Reason
Budget and Cost	2/2	2/2	This design fits well with this specification, because according to the materials that I have planned to be using, and the amounts of those materials, I think that I will not exceed the budget for this clock, which is a maximum of 100TL. The ideal amount of money that should be spent is 80tl, and I think that that budget could also be met.
Aesthetic Appearance	2/2	1/2	This clock is colourful like my specification requested, but it isn't squared, and it is an irregular shape, which is the opposite of what the specification wanted. The numbers on the clock are not big, but they are bold and they can show.
Ergonomics	2/2	1/2	The maximum size of the clock is a lot bigger than my clock's current size, so I have met this specification perfectly. The client can still see the clock from far away, so his specification has been met by this design.
Functions	2/2	2/2	This clock is going to have the hands, and the clock machine, and I will be inserting batteries into it, so the clock will be functioning as an actual clock, due to it having these clock features.

Weight	2/2	2/2	The weight of this clock is very light, and it is less than 500 grams (it is 150 grams), which is the clock's maximum weight. I think that this design's materials fit perfectly for this specification, because they directly meet them.
Mobility	1/2	2/2	This design proved to be very mobile, because I have a hanger on it, and the fact that the clock is very light will make it even easier for it to be moved from room to room. I think that this design fits this specification very well.
Score /12: 10			

Design Two:

Specification	Weighting	Score	Reason
Budget and Cost	2/2	2/2	The budget for this project is a minimum of 80TL, and a maximum of 100TL. I think that this clock will be within the budget, because it does not require any materials, or tools that cannot be cheaply found. I also think that this clock will meet the 80tl budget, because it is needs simple materials, and that is why I gave it a 2/2.
Aesthetic Appearance	2/2	1/2	This design meets half of this specification, because it does not include any of the bright colours that my specification stated, but the clocks shape is a square, which is why only a fraction of the specification has been met. I awarded this design 1/2 because it met half of the criteria.
Ergonomics	2/2	2/2	I think that this clock's size is perfect, because it does not increase the limit, but it is a big enough size for it to be visible. The limit is 300mm by 300mm, and this clock is 200mm by 200mm. this clock is a great size for the client to be able to see it from far away.
Functions	2/2	2/2	This clock is going to have the hands, and the clock machine, and I will be inserting batteries into it, so the clock will be functioning as an actual clock, due to it having these clock features.
Weight	2/2	2/2	The clocks weight is ideal, but it could be considered a little too close to the maximum weight allowed, which is 500 grams, but it does not meet that weight, which makes it get 2/2 points in the score section. The weight ideal, it is not a problem.

Mobility	1/2	2/2	This clock is going to be very mobile, because it has a hanger on the back of it, and it can be moved from room to room using that hanger. It is also fairly light to carry, so it can easily be moved from room to room, with no difficulty. This is why I gave it full ratings.
Score /12: 11			

Design Three:

Specification	Weighting	Score	Reason
Budget and Cost	2/2	2/2	This design meets the budget for this specification, because it is really simple, and it would not require many materials to get it done. The budget for this project is a maximum of 100tl, and I think that this clock design would cost a substantially small amount of money. The paint and materials required will be very affordable, and I think that this design perfectly meets this specification.
Aesthetic Appearance	2/2	0/2	The aesthetic appearance of this design will get a 0/2 because it does not include all of the bright and cheerful colours that were listed in the specifications such as orange, brown, or purple, and it is also not shaped like a square, so this design will fail both aspects of this specification.
Ergonomics	2/2	1/2	The ergonomics of this design is good, but it isn't ideal because this clock is going to have a diameter of 200mm, and that fact that it is a circle will take away some of the space in the clock, making it a little bit too small. I awarded this clock a 1/2, because it doesn't completely fail the requirements, but it still does not succeed.
Functions	2/2	2/2	This clock is going to have the hands, and the clock machine, and I will be inserting batteries into it, so the clock will be functioning as an actual clock, due to it having these clock features.
Weight	2/2	1/2	This clock is going to be a little bit too heavy, because the maximum weight allowed is 500 grams, and this clock is an estimated weight is 400 grams. This is 100 grams less than the maximum weight, therefore it is not ideal, but it is still not over weight. I awarded it half marks for those reasons.
Mobility	1/2	1/2	This design might not be very mobile, because it is heavy, which will make it heavy to carry around

			from one hook to another. But either way, this clock will have a hanger on it, which will allow it to be moved around from one area of the house to another.
Score /12: 7			

Design Four:

Specification	Weighting	Score	Reason
Budget and Cost	2/2	1/2	I think that this design is going to be fairly expensive, because of the amount of paint that I would need to achieve all of the different colours, and to pain it all correctly. Other than that, I think that it would meet the budget, because the materials aren't expensive. I gave this a 1/2 because of the paint requirements
Aesthetic Appearance	2/2	1/2	I gave this design a 1/2 because its colours did not match the bright colours that were described in this specification, and the only colours that's there is yellow, but this design is squared shaped, which is an ideal shape according to the specification.
Ergonomics	2/2	2/2	I think that this clock's size is perfect, because it does not increase the limit, but it is a big enough size for it to be visible. The limit is 300mm by 300mm, and this clock is 200mm by 200mm. this clock is a great size for the client to be able to see it from far away.
Functions	2/2	2/2	This clock is going to have the hands, and the clock machine, and I will be inserting batteries into it, so the clock will be functioning as an actual clock, due to it having these clock features.
Weight	2/2	2/2	This designs weight is ideal for the specification, because it is under the maximum weight allowed, which is 500 grams. This design is estimated to weigh around 200 grams, which is an ideal weight. That is why this design scored 2/2 for this specification.
Mobility	1/2	2/2	This design proved to be very mobile, because I have a hanger on it, and the fact that the clock is very light will make it even easier for it to be moved from room to room. I think that this design fits this specification very well, and that is why it scored a 2/2.

Score /12: 10

Design Five:

Specification	Weighting	Score	Reason
Budget and Cost	2/2	1/2	This design is going to be a little bit expensive, because of all of the paint that is going to be used to create it. I think that it might get near the budget a little bit, but it isn't going to exceed it, which is why I gave it a 1/2, because it would increase the 80tl limit, but not the 100tl limit.
Aesthetic Appearance	2/2	1/2	This design meets half of this specification, because it does not include any of the bright colours that my specification stated, but the clocks shape is a square, which is why only a fraction of the specification has been met. I awarded this design 1/2 because it met half of the criteria.
Ergonomics	2/2	1/2	
Functions	2/2	2/2	This clock is going to have the hands, and the clock machine, and I will be inserting batteries into it, so the clock will be functioning as an actual clock, due to it having these clock features.
Weight	2/2	2/2	
Mobility	1/2	2/2	This design proved to be very mobile, because I have a hanger on it, and the fact that the clock is very light will make it even easier for it to be moved from room to room. I think that this design fits this specification very well.
Score /12: 7			

Design Six:

Specification	Weighting	Score	Reason
Budget and Cost	2/2	2/2	This design fits well with this specification, because according to the materials that I have planned to be using, and the amounts of those materials, I think that I will not exceed the budget for this clock, which is a maximum of 100TL. The ideal amount of money that should be spent is 80tl, and I think that that budget could also be met.
Aesthetic Appearance	2/2	0/2	The aesthetic appearance of this design will get a 0/2 because it does not include all of the bright and

			cheerful colours that were listed in the specifications such as orange, brown, or purple, and it is also not shaped like a square, so this design will fail both aspects of this specification.
Ergonomics	2/2	1/2	I think that this design is too small, because it is half of the maximum size requirements, which makes the clock too small. The clock gets a 1/2 in this specification, because it can still be seen from a distance, but it is too small, either way.
Functions	2/2	2/2	This clock is going to have the hands, and the clock machine, and I will be inserting batteries into it, so the clock will be functioning as an actual clock, due to it having these clock features.
Weight	2/2	2/2	The weight of this clock is very light, and it is less than 500 grams but this clock is 150 grams, which is much less than the clock's maximum weight. I think that this design's materials fit perfectly for this specification, because they directly meet them.
Mobility	1/2	2/2	This clock is going to be very mobile, because it has a hanger on the back of it, and it can be moved from room to room using that hanger. It is also fairly light to carry, so it can easily be moved from room to room, with no difficulty. This is why I gave it full ratings.
Score /12: 9			

Client Feedback

Design One:

Pros: To be honest, there are not many pros when it comes to this design, but there are a few things I like about this clock, such as the usage of colours in this design, and the material is ideally what I am asking for, and the clock will function as a clock, so that is good. I also like the creativity in this design, and the fact that it is very mobile.

Cons: The design's shape is too irregular, and I do not like the fact that it is not a square or a circle. The size of the clock is also too small for my liking, and I would rather the clock become much bigger, and the size of the numerals isn't going to be visible from a far away distance. Overall, this design is way too simple, and I wouldn't be able to sleep with a large eye in my bedroom.

Conclusion: In conclusion I think that the cons outweigh the pros, and I will probably not be considering this clock at all for my final choice. This clock's size is way too small, and the shape

is way too irregular. This design is eliminated from the choices, in order to narrow down the choices.

Design Two:

Pros: this design has a lot of pros, and I think that is my favorite out of all of the ones that I've seen. I love the design, and how it symbolizes the 4 elements. The shape of the design also exactly fits how I want it to look like, and I like how all of the colours contrast together very well. The pendulum also adds to the beauty of this design, and I think that it is very mobile, which will help me if I ever want to move it around.

Cons: the only cons that I can find when it comes to this design, is that it might be a little too heavy, but that is not really a huge problem when it comes to my clock. Another thing that might need improving is the clearness of the clock numbers, but other than that I cannot find any other cons.

Conclusion: this is by far my favorite design out of all that I have seen, and I would love to see a clock that looks like this. I am very interested to see how it could look as a clock, and I think that the pros defiantly outweigh the cons, in this design.

Design Three:

Pros: I love the meaning behind this clock! The Arabic letters really fascinate me, and the design is very interesting to me. I also like the way that the colours contrast, and how it's mobile. I think that this design is very interesting, and the idea is very creative, and the handwriting is amazing!

Cons: I think that there are a lot of cons when it comes to this clock, the first one being that it is way too simple, even though the design is cool. I think another problem with this clock is the fact that there are not any proper numbers, and that the clock is a little too heavy. I wouldn't be able to tell the time from a distance, and the fact that it is very heavy is another problem.

Conclusion: overall, I don't think that this design is fit to be in my bedroom, as my clock. I do like the design, but all of the cons are a lot more important than that one expectation that this design meets. This is not going to be considered an option, in attempt to cut down on the design options.

Design four:

Pros: I love the symbolism behind this design, and what it stands for is a real inspiration for me, and I think that the design is very nice. I like the weight, and the mobility of this clock, and the numbers are very clear. I think that this clock's size is great, and that it is very appropriate for my room. I love the intensity of the colours, and the powerful message behind the design. The shape of the design is also excellent.

Cons: I think some of the negative parts of this design would be that the clock doesn't have a pendulum, and that the numbers aren't very big. I don't like the colour of the numbers, and I don't think that I like the way the number style and the design don't match.

Conclusion: I think that this design is my second favorite, but right now, the pros in the other design outweigh the pros in this design, but this design is considered an option for creating my clock, because I think that all the pros would defiantly outweigh all of the cons.

Design Five:

Pros: this design is very creative, and I love the 2 opposite things that can be viewed. You can really let your imagination get carried away with this design. I really like the shape of this design, and the size that it will be if it turns into a clock. The mobility that can come out of this design is very good, and the weight of the clock is ideal.

Cons: there are a little more cons than pros when it comes to this design. I don't like the colours involved in this design, because it looks a little but too rushed. The colours aren't bright or happy, and they are very dull. I think that these two points are major when it comes to the clock design. This clock also doesn't include a pendulum, which is very negative in my opinion.

Conclusion: in conclusion, I think that this design will probably be my 3rd choice when it comes to creating the clock, but I don't like this design very much. Although it is very creative, I don't think the idea was able to be transferred into a design, and I will not be able to use this design in my clock.

Design Six:

Pros: there are a few pros when it comes to this design, and most of them come from the fact that I absolutely love the classic Pepsi design, and I absolutely love the drink itself. I really like the design itself, and it is my favorite drink. The colours in this design are also okay. This design is very light, which makes it very mobile, and I think that is one of the major pros, that make this design likable. The numbers are big and bold, and that is a positive aspect, as well.

Cons: Although the colours are okay, I don't really like them that much, because they are actually quite dull and boring. The shape of this design is not the shape I wanted at all, and it had these spikes that I did not like on a clock at all! This design doesn't include a pendulum, and the size of this design is too small for my liking, as I don't think I will be able to see it from a distance.

Conclusion: Although this design is really nice, I don't think it is one of my preferences when it comes to having it on a clock. The shape is a major con, and I don't think that this design can be considered at all when it comes to my final design choice.

Final Design Chosen and Why:

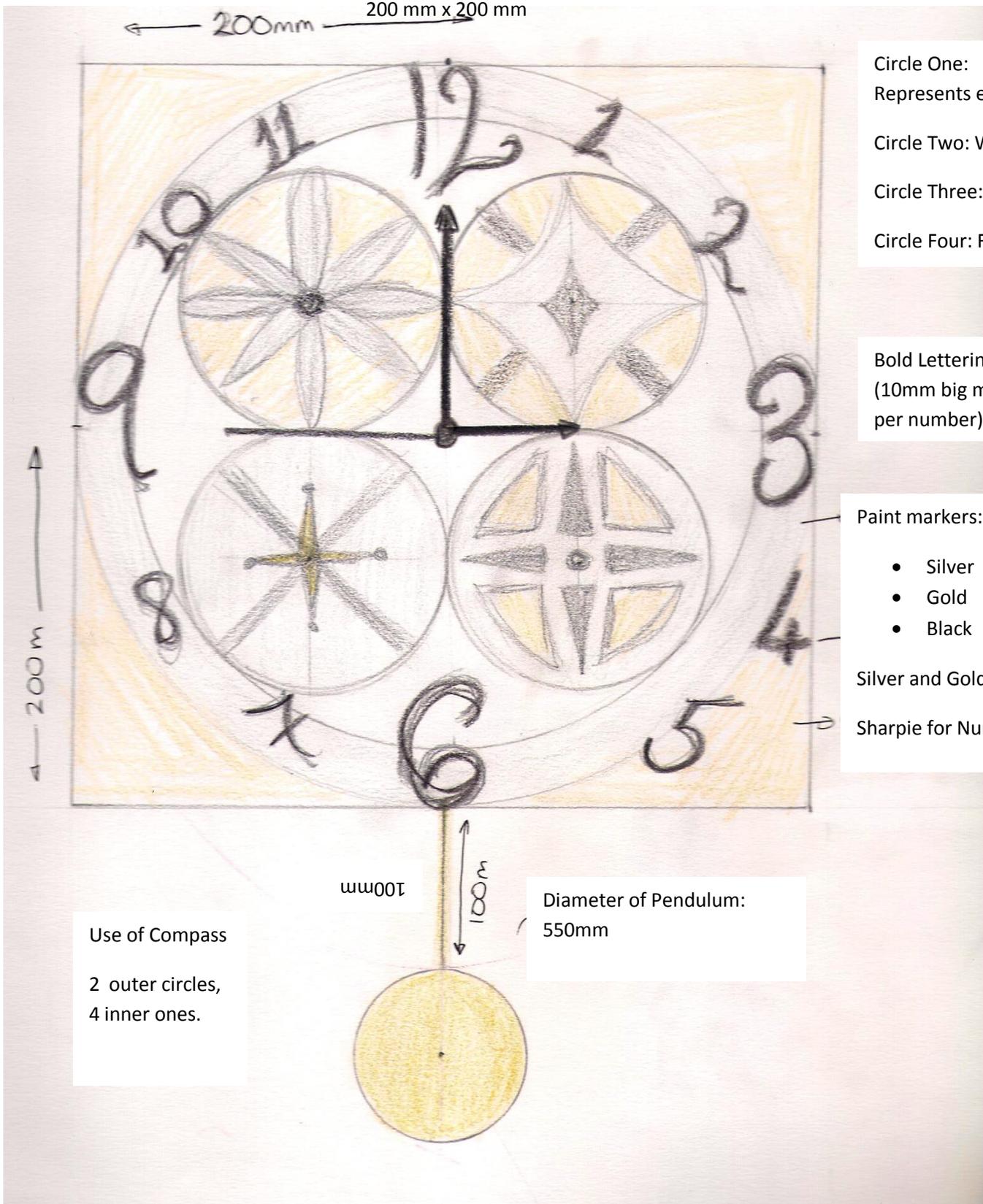
I chose my second design as my final design because it was the one that I received the most positive comments in, when it came to interviewing the client. I think that this design had a meaning to it. The design's aesthetic appearance was very appealing to me, and to the client as well. I think that it could match in her room perfectly. I felt as though the idea of the 4 elements on a clock would be a success, and it would look very aesthetically pleasing when I designed it with the correct colours and patterns.

This clock was also the perfect shape, and it had a combination of really well put together shapes, which made it look proportionate, and pleasing. The client is very happy with the shape of the clock, and the size and positioning of the numbers is suitable for this clock, because all of the numbers can be seen from a very far away point in the room. This design is also a very appropriate size, because it is neither too big, nor too small, which makes it the perfect size for the client. The other clocks were lacking all of these qualities at the same time, for example, design one's shape was too irregular, and it was too small, so it could not be seen from a distance.

My second design also has a lot of positive points, such as the fact that it is very light, and very mobile, which makes it have an ability to move from one room to another very easily. Unlike all the other designs, this design has a metal hook, which will make it stronger when it comes to hanging it up again, and it living for the longest time period possible. This is different to the other clocks because all of the other clocks are made out of string hooks, and that is probably not going to be very strong. Another thing that is great about this design is that it is made out of wood, which will give it maximum strength, and it will make the clock not fragile. The material that I will be using is very easy to paint on, which again, adds the positive aspects of this design. The other clocks, which are made out of high-density foam board, or regular foam board will be a little hard to paint on, due to their surface being made of plastic.

In addition to all of the other positive points, this design also includes a pendulum, which was one of the key things that my client was looking for in a clock, which some of the other designs, such as design one, design four, design five, and design six lacked. This design's pendulum also matches with the paint colours, which was a great bonus when it came to the appearance of the design. The clock's hands are proportionate with the clock's size, which is something that didn't feature in design one, or five.

In conclusion, I think that this design overall, received the most positive feedback from my client, compared to any other designs. All of this design's pros really outweighed the cons, and I think that my client and me have made an excellent choice picking the second design to actually build as a clock. This clock design had the most effort put into creating it, and it was a very creative, and new idea.



Circle One:
Represents earth

Circle Two: Water

Circle Three: Air

Circle Four: Fire

Bold Lettering
(10mm big minim
per number)

Paint markers:

- Silver
- Gold
- Black

Silver and Gold paint

Sharpie for Numbers

Use of Compass
2 outer circles,
4 inner ones.

Diameter of Pendulum:
550mm

Evaluation of Final Design Against Specifications

The budget for this project is a minimum of 80TL, and a maximum of 100TL. This design fits this specification very well, because I have estimated that this clock is going to be within the budget, because there aren't a lot of materials that will need to be purchased. I think that this clock is going to meet the 80tl budget, and it is not even going to reach it, because of the availability of all of the tools and the equipment. This design has fully met this specification, and has fit it completely.

While testing this design to the aesthetic appearance specification, I realized that I hadn't met the whole specification, only half of it. I did not use any of the bright and happy colours that my specification said I should use, like brown, yellow, and purple, and instead I used dark colours such as black, silver and gold. However, I have met the other half of this specification because it states that the design/clock should be squared, and it is. This design only meets half of this specification, but that isn't a problem for the client.

This clocks ergonomics is very good, because the clocks size is a perfect square, and it is 200mm by 200mm, which is a really good size for a clock. The limit of the size of the clock is 300mm by 300mm, but this clock doesn't reach the limit, while it is also big enough for the client to see from a far away distance, and it is also big enough to have big numbers drawn on it, which is another thing that my client requested me to do.

This clock is going to have the hands, and the clock machine, and I will be inserting batteries into it, so the clock will be functioning as an actual clock, due to it having these clock features, this clock rates really well in terms of this specification, because the clock will be able to function, and the clocks pendulum will be able to function as well.

When it comes to the weight specification, I think that this clocks weight is ideal, but it could be considered a little too close to the maximum weight allowed, which is 500 grams, but it does not meet that weight, which makes this weight very good for the design that we are planning out. This clock is estimated to weigh around 300 grams, which isn't too heavy. The weight is ideal, and the closeness to the limit is not an issue.

The final specification that I can test my clock against is the mobility specification. This clock is going to be very mobile, because it has a hanger on the back of it, and it can be moved from room to room using that hanger. This hanger is very strong, as it is made of metal, which will help the customer handle it without treating the clock as though it is fragile. It is also fairly light to carry, so it can easily be moved from room to room, with no difficulty.