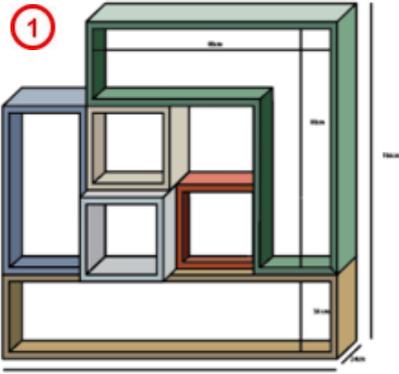
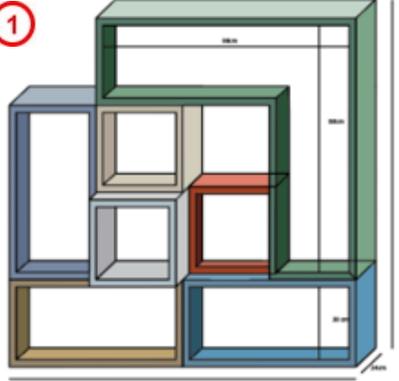
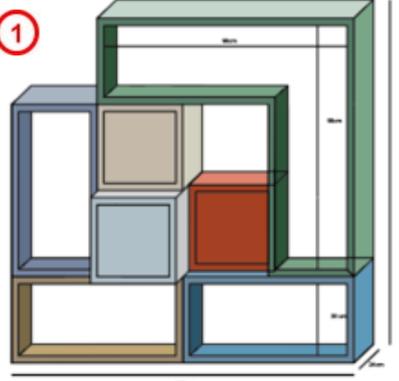


**Student 3: Low Merit**  
Intended for teacher use only

<p>7</p> 	<p>2</p> <p>Taking this design from my initial ideas I gave it measurements which would fit the size needed in the environment, my sister's bedroom. The middle three shelving areas are each at different depths with the one sticking out being 26cm deep, the one flush with all other pieces remaining 24cm and the one intruding being 22cm. This design choice was to create a cool and different design while being able to hold many books which was the main problems of the old bookshelf. After showed my stakeholder and the feedback was that the bottom piece looks too weak to hold the mass that is above it. So, in future designs of this concept, it must be changed so it is more secure and won't bend, bow, or break with the weight on top of it.</p> <p>5</p>
<p>1</p> 	<p>7</p> <p>This development adds much needed support to the lowest section of the bookshelf by splitting then into two pieces and making them share the weight for the rest of the pieces on top of them. It was at this point where I was happy with the basic structure of the bookshelf but to make it suit the room it needs more advanced design elements to make it really stand out. I thought of the idea to make it be able to come apart easily and then be put back together in a different design using the same 7 main pieces of the shelf. So, I went to XXXXXX (expert stakeholder) to see if he had any ideas on how this could be possible, and he said that I could have some predrilled holes in some areas and some dowels sticking out of others so it could be taken apart. I went back to my sister who said "Also maybe you could maybe make a couple of cupboard things mixed in with the shelves to hold books that I am planning to read or even hold special belongings. This was when I came up with the idea to design some flush push latch cupboards into the middle square areas.</p> <p>5</p> <p>2</p>
<p>1</p> 	<p>2</p> <p>These cupboards would have around 5mm gap so it can open and close with it looking decent. The cupboards I found made the design look like it was flowing around the central cupboards which I really liked (reminding me of the chrome logo). I did some research and found that there are couple different latches I could use to make this possible.</p>

**RESEARCH** - on push to open latches I researched and found out about 2 main types out latches, the first type was a mechanical hook based latch, the second was a ball and socket design and the third was a magnetic spring loaded one. After further research I talked to my dad's friend who has had experience with all three types of latches with his professional furniture making. They were often used in kitchens for seamless and minimalistic cupboard designs. He explained that the most effective and reliable latch was latch 3, the magnetic push latch. This was due to less mechanical pieces, less things that can break, and ease of installation, the end of it can be twisted so it can sit perfectly flush. This is the latch I will use in my final conceptual design.

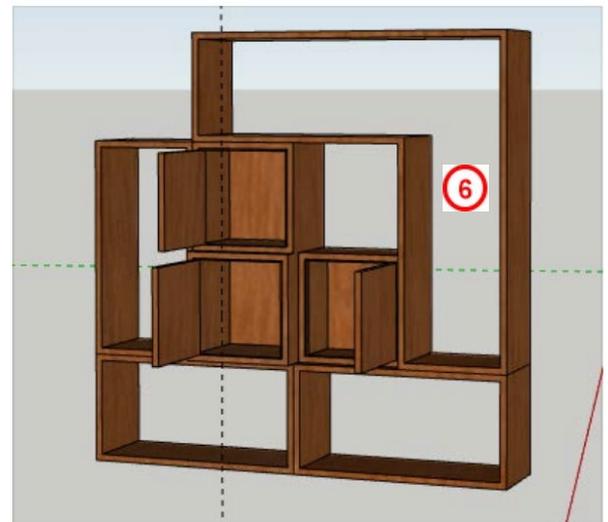




After trialing the biscuit joint I have decided that this is a good joint to use as I found it fairly fast to construct and with the use of glue and clamps this will make the joint very strong.



Cupboard is open position showing the magnetic push latch. Once the front of the cupboard is pushed inwards the latch will pop the door open (shown) and once it is pushed back into place it will hold there with the magnet in the matching position on the door.



This model shows what the cupboards look like when they are in the open position.

**Fitness for Purpose Evaluation:** I believe this design should meet the requirements of my brief as it states that it must be sturdy and not go out of fashion, must be able to hold many more books than the current small bookshelf, it must fit in her room as a direct replacement for her old bookshelf. This final conceptual design meets all the above criteria as design changes have been made to increase the structures stability and strength, it has been made over 1 metre larger than her old shelf and it has 7 different shelves and cupboards which can store many extra books, the measurements have been visualised in her room to make sure the design isn't too big for her room and lastly my research has led to include 3 cupboards in the design with magnetic latch. The colour will be a natural timber wood, probably recycled timber and that will no go out of fashion. (6)

**Feedback:** My final feedback is client feedback, I felt this was most important because this area is regarding the client and her bedroom. "I think that the design for the bookshelf is very good for the storage of my books (7)

as it has much more space than my old, small one. Also, I really like the looks of it as it is interesting to look at. I believe this is a reasonably good size for my room as it meets the requirements to solve the issue and isn't too big for the space. I think I could use the vertical shelf space to stack books horizontally on top of one another, maybe biggest to smallest would look good. (5)  
Overall, this looks like it would be a great solution to my 'too many books' problem."

