Research 1

The rack that the weights sit on are leaning inwards on an angle. This design has been put onto this device so the weights don't fall off and damage something or someone. I should consider adding a design that also decreases the chance of weights falling and damaging other objects.

This weights rack is designed not only to hold weights, but also can cater for the bench press bar, squatting bar, and dumbbells. This is a design that I like and am going to consider applying to my design.

This design has been made to store weights up off the ground so that when you need to access the weights you don't need to bend down and strain your back. This will be a good idea to incorporate into my design because it will help to minimize injury.

Research 2!

It is in the shape of a triangle. This is a shape that is said to be one of the strongest. I think that I should also make my storage product in the

This rack is designed to be a space saver because it is small and compact which is what storage is all about. I am going to try and incorporate this design into my rack somehow.

The negatives about this device are as follows. You must be able to access both sides which means it can’t be by a wall which makes it very space consuming. You also have a few different materials on this rack which look hard to join together. These are negatives that I will try to avoid.

Research 3

This device is built to sit very low on the ground which means that people using the weights need to bend down to access the weights. This can lead to the person getting injury or damage to their back.

This design has been made to hold certain weights. It can’t hold lots of different types of weights. Also it can’t hold very many weights because it is so small. These are a few faults that I will try avoid.
The results of my internet research on different shapes made me understand that a triangle shape would be good. It would give the strength I wanted. Research 1 picture gave me the best start to my own design. I modified it so it wasn’t so big and space consuming.

I used the footing idea from Research 2 so that my rack will be stable. I also made sure my bars were angled so the weights won’t fall off. I made the bars shorter after my stakeholder telling me this would make them stronger.

Research 3 gave me the idea to put hooks on the back for my bench press bar. It (as well as Research 1) made me realise I only wanted access from one side—so it could go up against a wall and take up less space. This kept dad happy.

I included the compactness of Research 4. I designed mine so you didn’t have to bend like in Research 4. Also so that it can be flexible in what weights can be stored.

I got some polystyrene and used a hot wire to get bits that were the same thickness as my weights. I then cut out circles the same diameter as my weights. I placed these on my model to make sure the bars were spaced out right so that all my weights would fit. They did.

I wanted to make sure the rack would fit in the area it was intended for. I took it home and placed it in the corner of the shed.

I found that it fits there well and doesn’t stick out so no one will get hurt, it sits stable on the floor, I can reach the top rack ok, I can easily get the weights off. And dad said its OK sitting there in his shed.