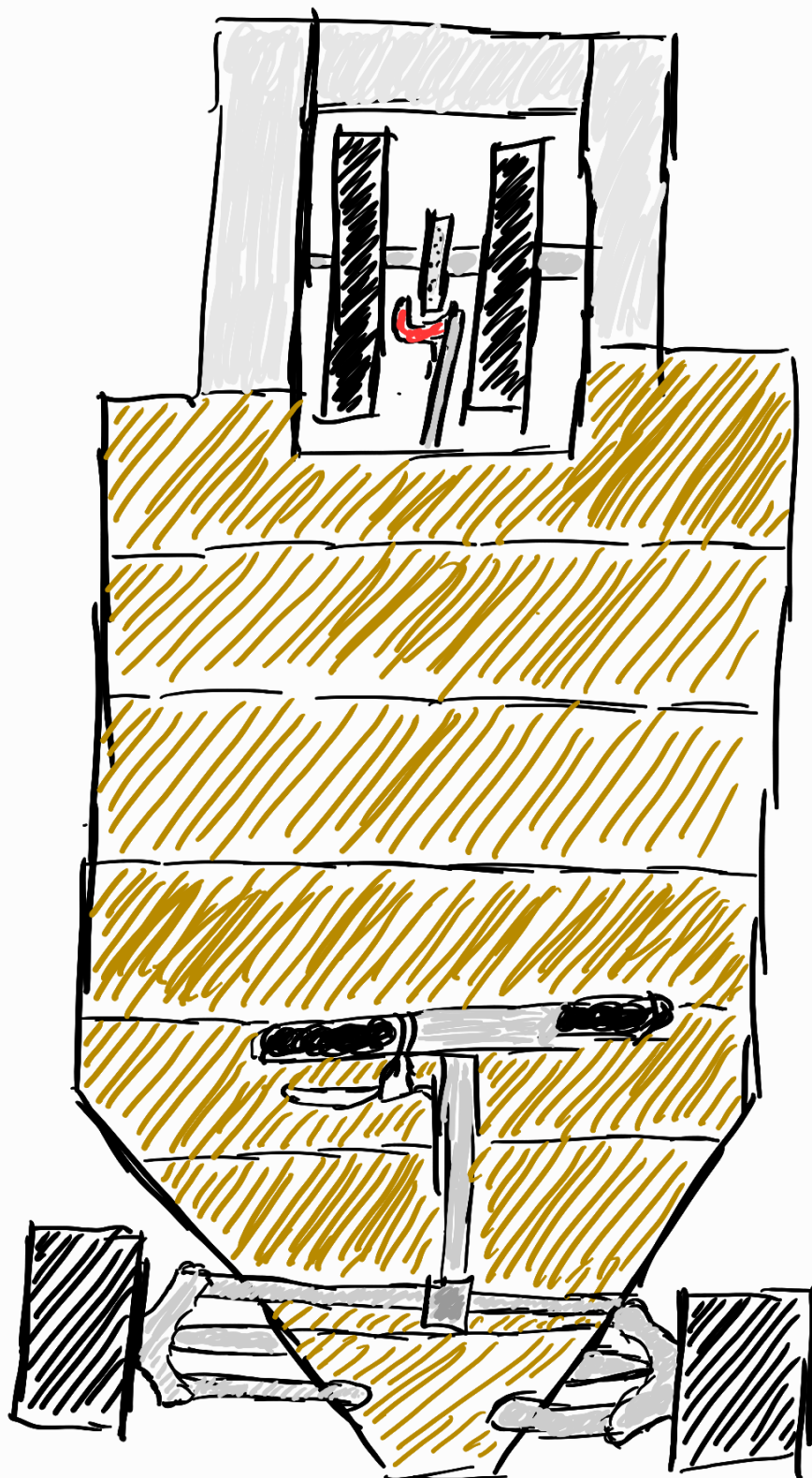


Top down



PU

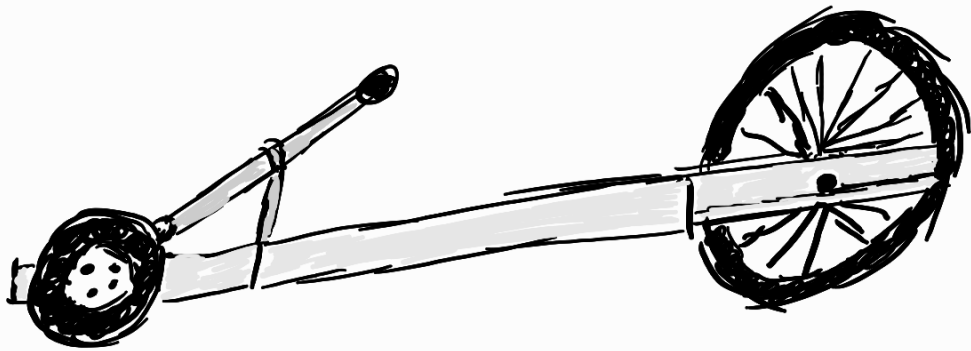
N

h

-  Rubber
-  Braking material
-  Metal
-  Wood
-  Caliper
-  Steering box

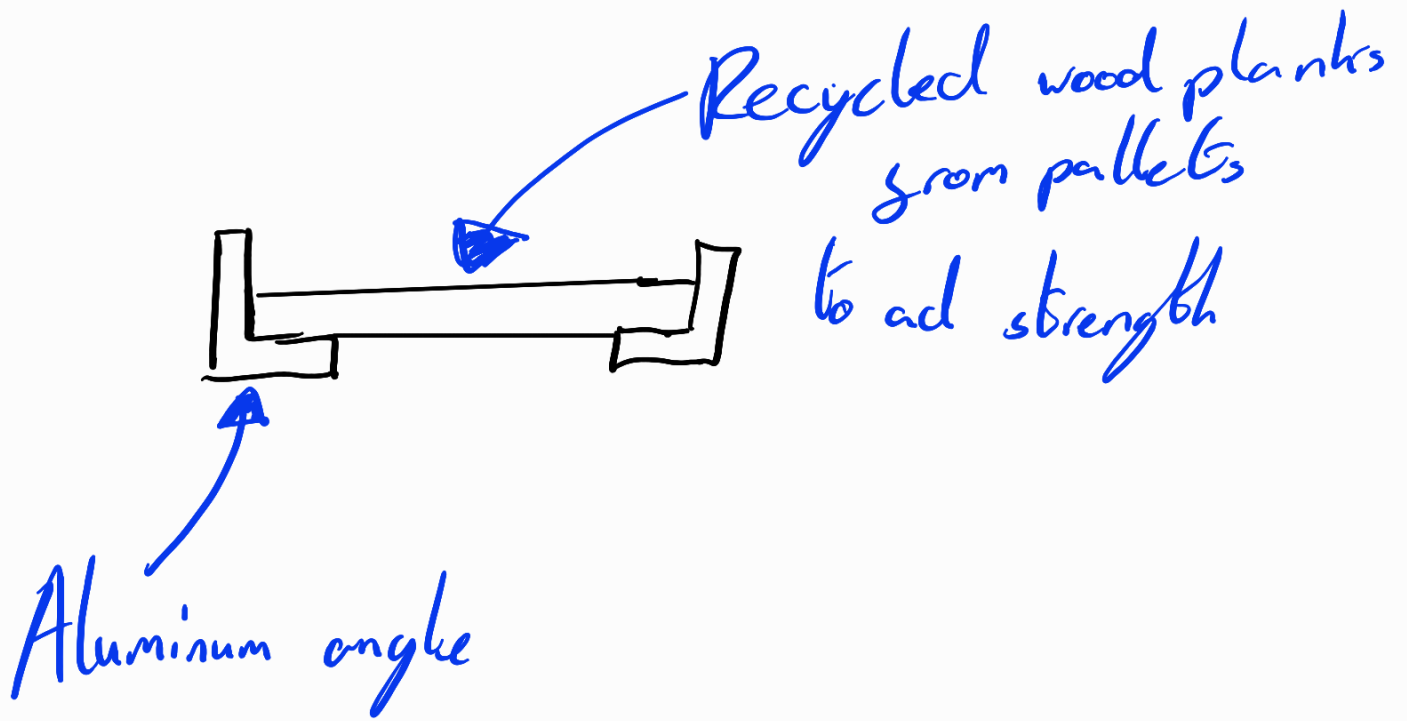
 Aluminum Angle

Side view



-  Metal bars
-  Aluminum Angle
-  Rubber

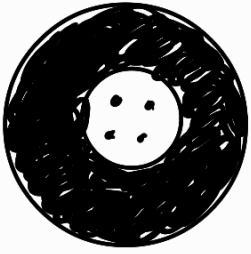
Chassis design



- Cheap
- Light weight
- Strong when used with the wood for extra support.

Wheel choice

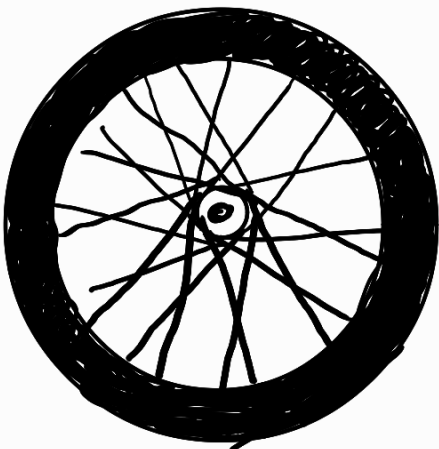
Front wheels



Go-kart wheels

- Large sidewall tyres which helps with suspension
- Good grip to turn into corners at a higher speed.
- Easy to get hold of at a good price
 - £25 each

Rear wheels



BMX wheels

- Made to take hits from a jump.
- Good grip from little amount of bread.
- Easy to get hold of from a scrapped bike.
- Add a good aggressive rake to the fork adding more grip for turning easier.

Brakes

As a team we have decided

that we would use cable activated disc brakes from a push bike as they are good performance at a cheap cost

The cable would be located from the caliper on the rear axle, mounted under the chassis and up the steering column to the brake lever on the handle bars

Having the brake located on the rear axle help with the weight transfer throughout the course as it wouldn't pitch the nose of the kart making turning through the corner smoother. Also with the jumps on a standard soap-box car track

the brake on the rear would make it easier to keep the heart level

Steering

For the steering on this design the decision was made to go with an ackerman design as it is simple and reliable as it is used on a range of similar vehicles.

Cost

The main goal with this design is to try and get good performance at a lower cost. Perzembly under £300

Prices

Go-kart wheels - £50

BMX wheels - £20

Wooden planks - Free

Scrap bike - £10

- Caliper
- Disc brake
- Handle bars
- Brake lever
- Brake cable

Go-kart wheel hubs - £80

Aluminum angle - £45

Rear axle & bearings - £20

Bars for steering assembly - £32

Bolts - £25

Total = £282

