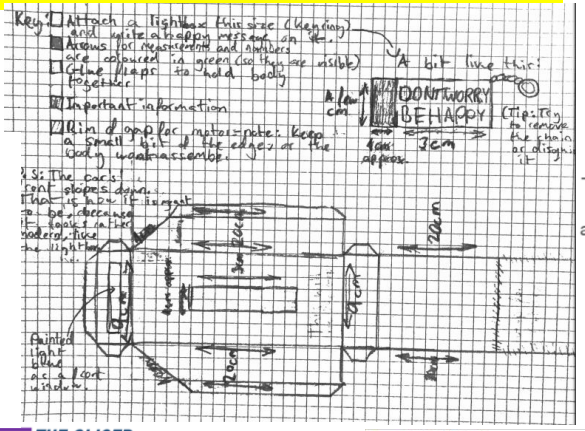
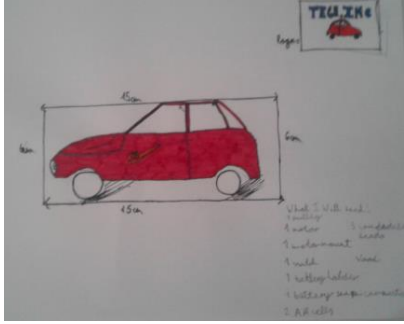
Home learning week 1.6.20

Many of the Year 6 children have returned to school this week. They have also been spending time at home learning about William Morris, designing cars and creating a song cover for a song we have been learning in school called 'Electricity' from the Billy Elliot musical



Flash

The shell of my car is going to be made from pure carbon fibre so it is extra light.



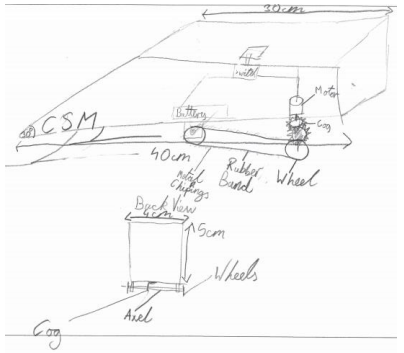
The shape and colour

The shape of Flash is like a wind tunnel.It is extremely aerodynamic and can reach to 800 horsepower.

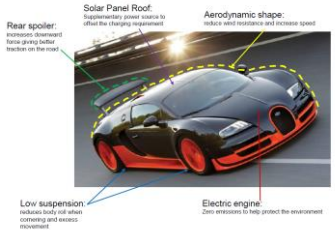
The colour of my car is going to be red and yellow because those are colours I think of when I talk about speed.

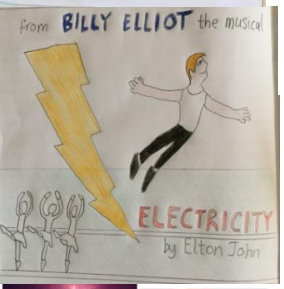
Materials for Flash

- Green highland spring water bottle, for the body and it is aerodynamic so it will have less resistance from the wind.
- Axles: wooden sticks inserted into straws.
- Wheels: bottle caps
- Pulley: the size of the pulley is very important because the smaller one goes further and faster but the bigger one requires ould choose the smaller one.



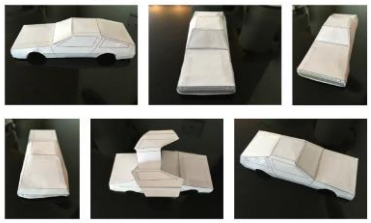
Key Design Features





THE SLICER

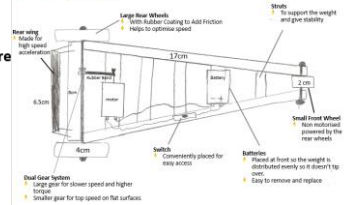
Paper Prototype Model



The Slicer is built for speed and durability. It feature

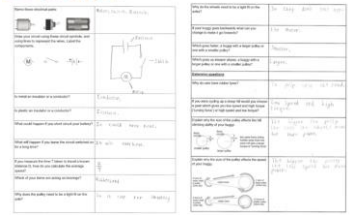
- Streamlined build to slice through the air
- Unique dual gear system
- Three wheel design to reduce weight
- Aerodynamic shape to reduce drag
- Sturdy construction to withstand collisions
- Large rear wheels to help acceleration

THE SLICER



THE SLICER

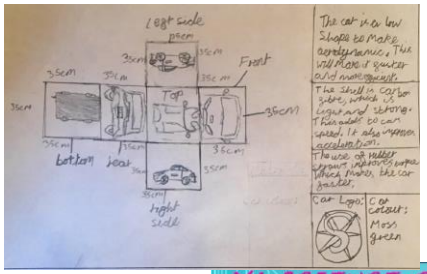
Tech Specs

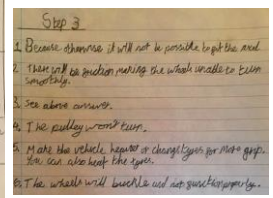


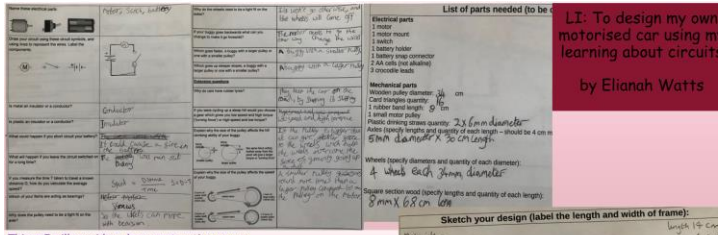
THE SLICER

Pitfalls and Solutions

- You need to fit the rubber band onto the pulley before you attach your driven axle so the rubber band is attached properly.
- If your driven pulley is touching the frame the motor may get stuck.
- If your straws are jammed up hard against the pulley the wheels wont turn.
- If your wheels slip on the ground you can increase friction by wrapping a rubber band around the wheel.
- If your driven axle is able to slide sideways it may come undone.







LI: To design my own motorised car using m learning about circuits

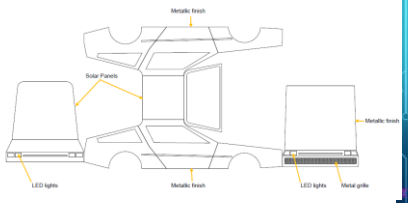
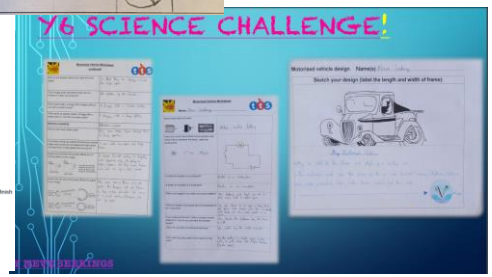
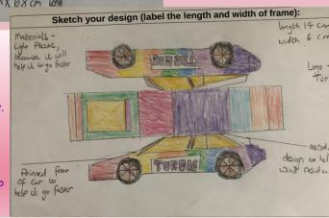
by Elianah Watts

Things I will consider when constructing my car.

I must make sure that the driven pulley is not touching the frame because if it is it won't be able to move freely, slowing down the car.

I need to make sure the straws are not jammed up hard against the pulley because if they are, they will slow down the pulley, making the car go slowly.

If my wheels slip on the ground, I could increase the friction by putting balloon rubber on the wheels, it will act like rubber tyres.

I must make sure that my driven axle is not able to slide sideways, for example if my straws are not glued to the axle holders, or there is a big gap between the straw and pulley, otherwise It will pull the elastic band too hard and might break it.

Concept Development