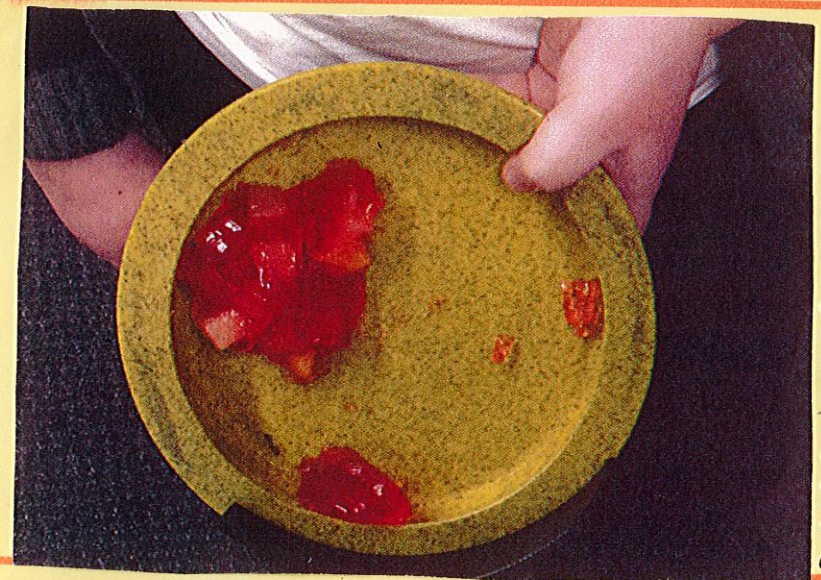


The problem



We looked at the design's problems, we have, within our school. We are a special school and have several pupils with physical difficulties. In particular we have pupils that have the use of only one hand or arm. We noticed that this was a problem, every lunch-time. We realised that we needed to look at a design of plates on the market that are available, which can be used. We decided that there was a need to solve the problem by designing a non spilled fun plate that can be used with one hand.

the solution



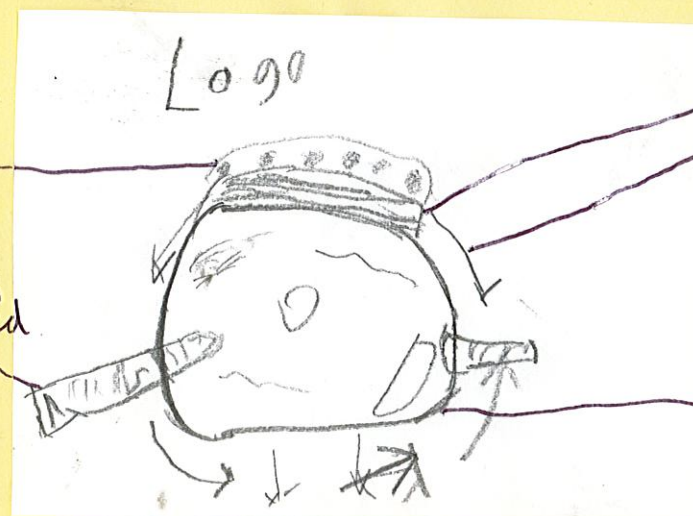
We've made a plate that can not fall off the plate, the food. By putting a guard onto the plate by having a rivet connected to the bottom of the plate, so that the food don't fall off when the guard spins round to stop the food coming off.

research



The problem of the research plate guards is that they are onto a plate and don't move. All of the plates we've looked at were ugly and boring and looked like they were from a hospital. They were no fun and not nice to look at.

Initial Ideas and drawings



Ball bearings

a guard
It spins around

Thumb mould

Plate

Prototype 1

Our original idea was for guard to spin around on ball bearings. We made a wooden disk and blue-tacked and ball bearings to give us an idea of

how the plate might work



Prototype 2

We drew around plates on MDF board. We cut the discs shapes out. We made a groove with a file and added ball bearings and a guard. We used a rivet to attach the guard. It worked!



Prototype 3 was turned into a CAD drawing and made into a model on a 3D printer. We have tested and evaluated it. We decided to make the guard longer and have thumb moulds.

