



Highly Commended

Models & Inventions

Year 3-4

Ben Cameron
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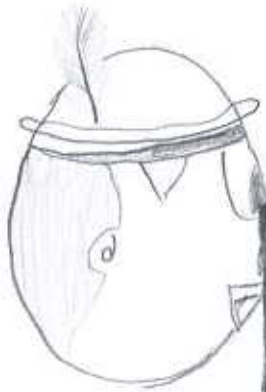
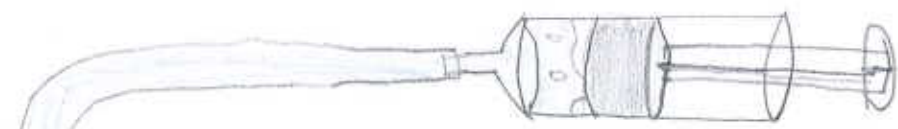
Williamstown Primary School



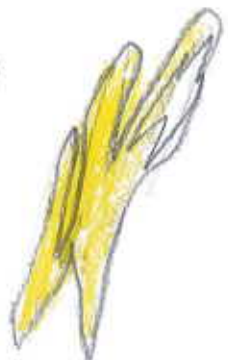
Government
of South Australia

Department for Education



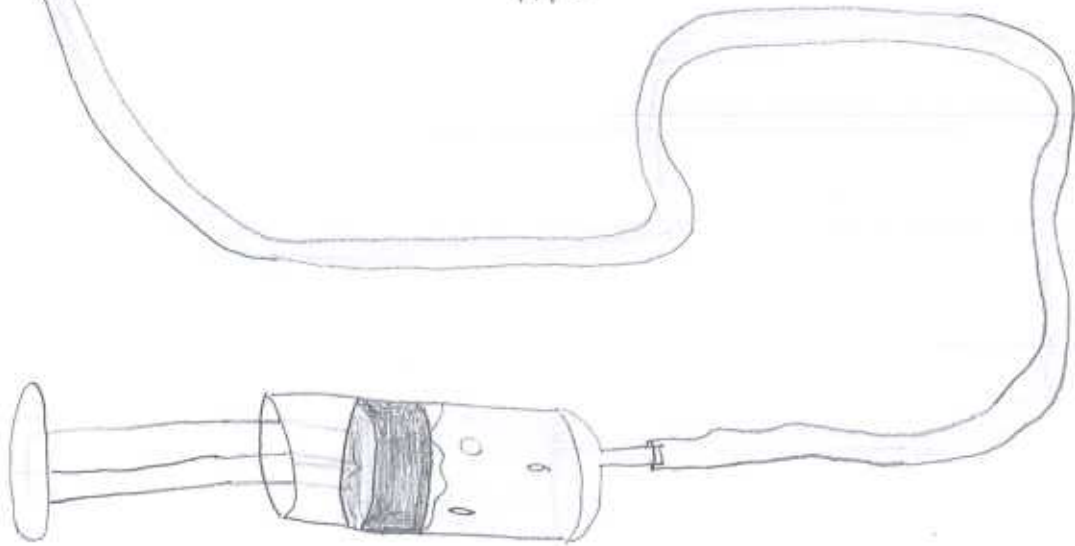


Pinocchio



2020 Oliphant Science Awards
Student Work - DO NOT COPY

Manual
and
instructions

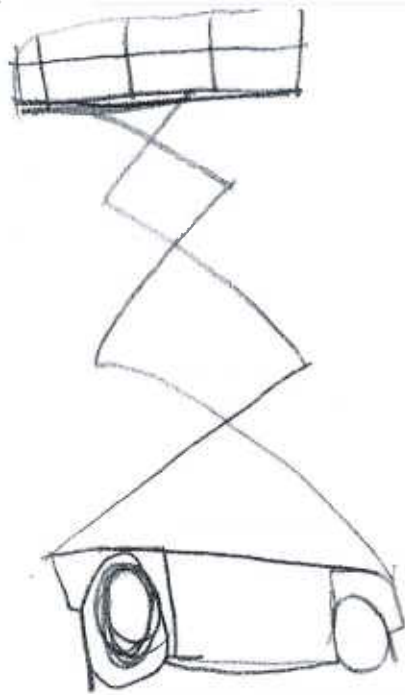


Pneumatics = gas

Hydraulics = fluid

Pneumatics is weaker because you can only compress air. It is also cleaner.

Hydraulics is stronger because you cannot compress liquid.



To make and operate a simple hydraulic system you will need...

2 syringes, 1 tube, and water.

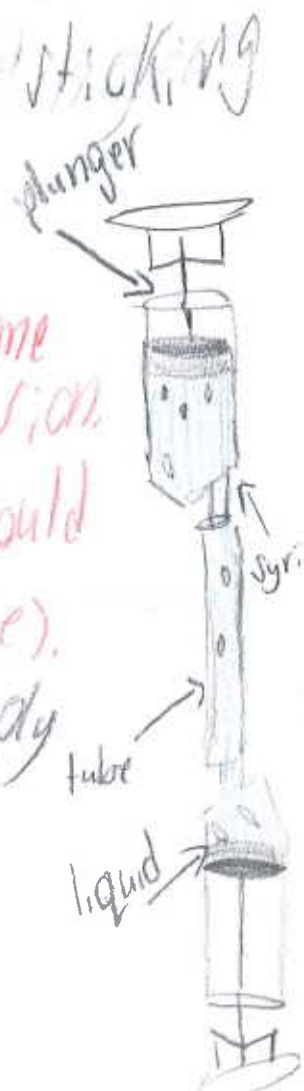
Step 1 - attach one syringe to the tube and fill water.

Step 2 - attach another syringe (with plunger pushed in) to the opposite side of the tube.

Step 3 - exert force onto the plunger sticking outwards (by pressing it).

Warning - If the plungers are in the same position you might create a watery explosion, preferably do this outside unless you would like a wet room/lab/slippery surface.

for a pneumatic system simply don't add the water.

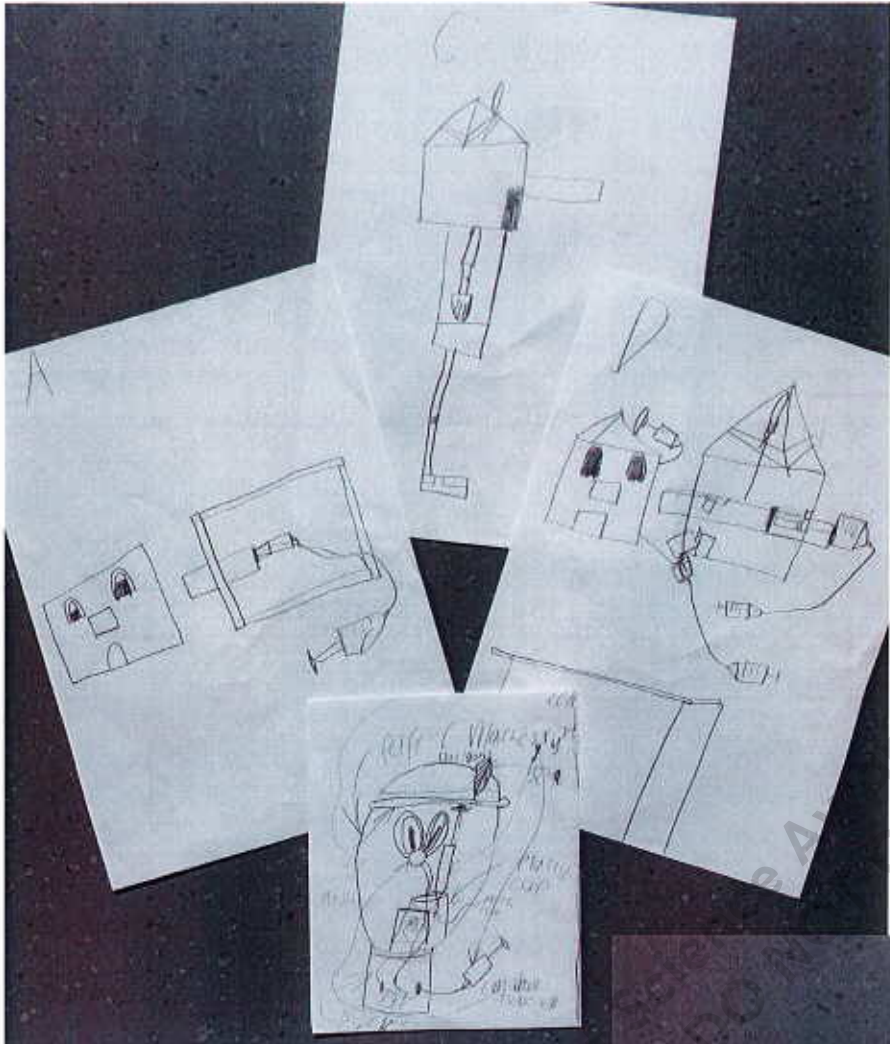


How We Made our Model

We started by fiddling around with mini hydraulic syringe machines that we had in the science room and then we came up with the idea of a pinocchio cookie jar. We made pinocchio at lunch times and sometimes Friday afternoons for many weeks. Mr Hanley gave us time and Mrs Nuttall helped us with the hard bits & (stapling, drilling, etc.) our ideas for inspiration and helping our ideas together. We also got help from our class mates to paper mache the balloon.

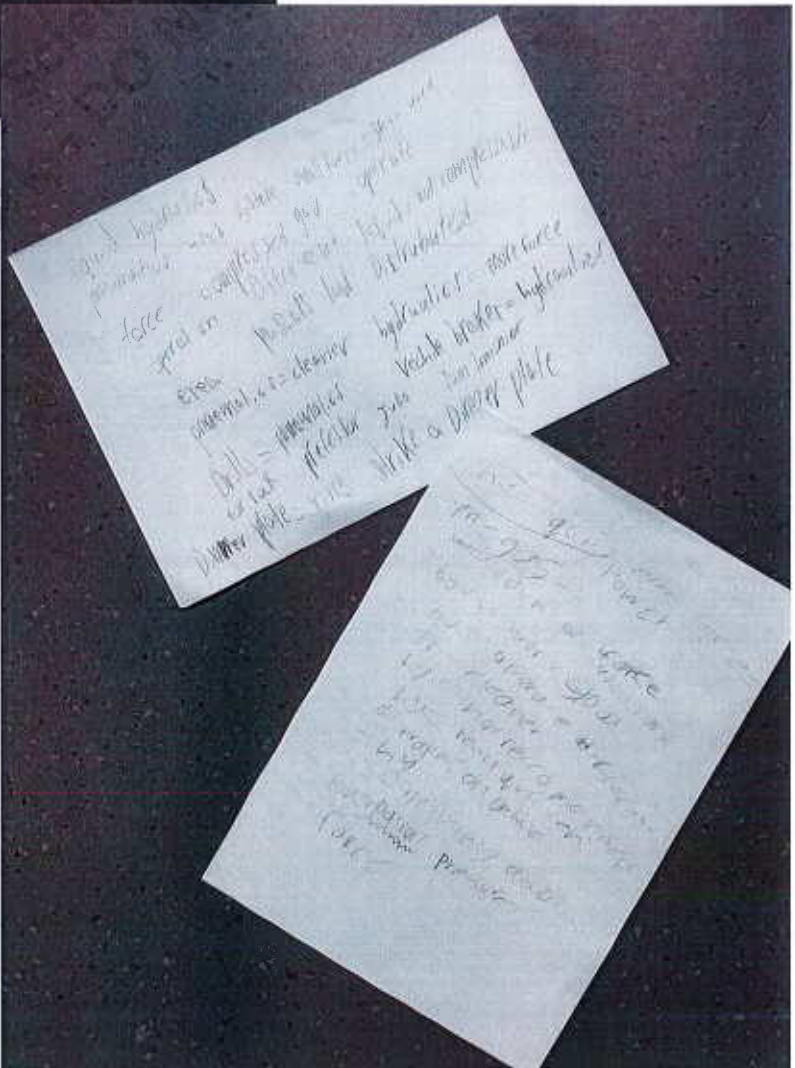


We came up with so many problems. The tube was the wrong shape, the card neck was wanky, and the frictions increased when we added the mouth. In the end we created a victory dance for every problem we achieved. U



We drew
diagrams

And we
watched
videos
and wrote
down the
key words.



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