

About our team: **BotBuilders**

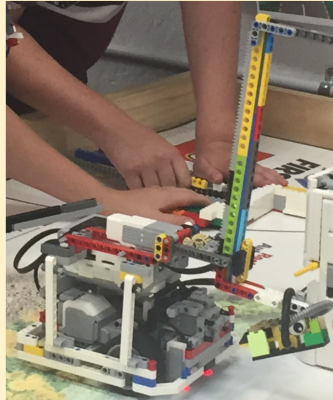
We are the BotBuilders!

Ranging from 9 – 14 years old our team members consist of: Katelyn, Kosha, Jack, Jackson, William, Lachie and Corey.

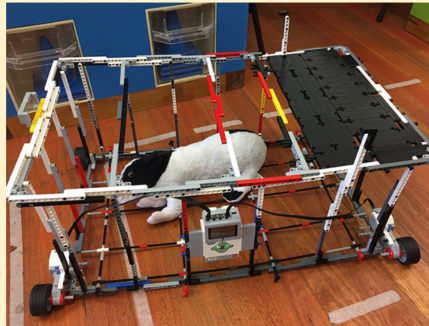
This is our first year of competing in F.I.R.S.T LEGO League and we have enjoyed every minute of it.

Only a few us of knew each other prior to joining this team and some of us started this journey with no experience with LEGO Mindstorms at all.

And now we can't wait for next year to do it all again!



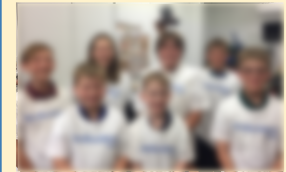
The GuineapigSTORM 5000



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Building Block Studio  
proudly presents:

BotBuilders Robotics team



Our 2016 FLL journey of discovery



## Our Team Research Project

Right from the start we wanted to research guinea-pigs because a few of our team mates have these cute little animals as pets.

We identified two obvious problems that could exist everyday:

- 1) Can you imagine walking on wire every day of your life? Well that's how most outside pet guinea-pigs spend their day; walking on the wire at the bottom of their cage! We say, 'NO WAY'.
- 2) Guinea-pigs need access to fresh grass every day which means their cage needs to be moved several times a day. This means that guinea-pig owners could stub their toe, get a splinter or worse; hurt their back while moving the cage.

We wanted to solve this problem for both pet and owner. So after conducting some research we interviewed a professional guinea-pig carer, named Reon, from the Cavy Cottage through Skype. He is also studying to become a vet.

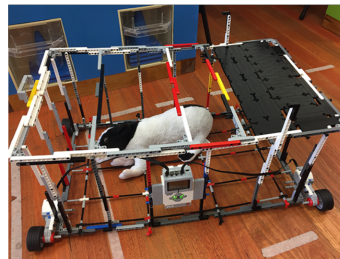
He mentioned about a condition called 'Bumblefoot' and confirmed with us that wire at the bottom of guinea-pig cages is not very good for these small animals. This aligned well with the research we'd already done.



We also talked with him about how often cages need to be moved and how it can be done safely for guinea-pigs and for people.

We told him our idea of an automated cage that very slowly and carefully can move itself onto fresh grass throughout the day. He said it sounds like a great idea and that many guinea-pig owners would love it.

So, we decided to make a prototype out of LEGO Technic.



## Our Team Values

As a team we have a set of values which we believe align with the FLL core values. Our values consist of:

- 1) we always work as a team and share our ideas and experiences with others;
- 2) don't quit;
- 3) resilience is key;
- 4) it's impossible to know everything so we learn things with our coaches along the way;
- 5) learning is the most important thing;
- 6) commitment at all times; and
- 7) happiness helps

## Our Team Robot

We built a box shape robot so that we could align it to walls and to also protect the wheels and sensors but it also made it easy to put any removable attachments onto the front of the robot. The mighty ladder was involved in half of our missions.

