Open Day 2020

STEM Challenge: Build a bridge with lego for a Beebot to cross

Term 2 Science and Technology STEM Unit

KA

NSW GOVERNMENT Education

Melrose Park Public School

Learning and Growing together

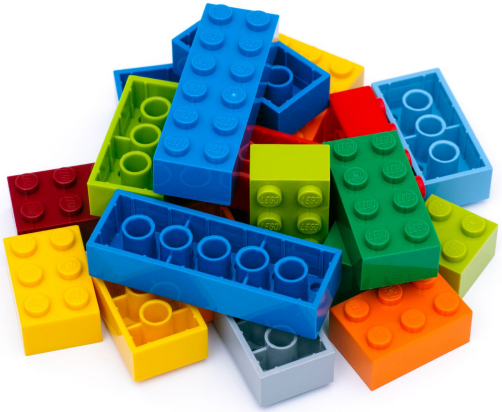
KA STEM Build a bridge with lego for a Beebot to cross

Challenge

Can you work with your team to build a bridge for a Beebot to cross using the following?

Materials

Lego pieces, Beebots



Challenge Instructions

1: Design a bridge to go between 2 parts of land (desks).

2: Build the bridge between the desks.

3: Modify the bridge for a Beebot to cross.

4: Program the Beebot to cross the bridge and test it out.

Step 1 Design a bridge to go between 2 parts of land.

KA started our process by discussing bridges and their purpose. We spoke about famous bridges and looked at images of bridges around the world. We then discussed the designs of bridges to decide which parts were functional and which parts were aesthetic.

Here is what we discovered about bridges and their design...

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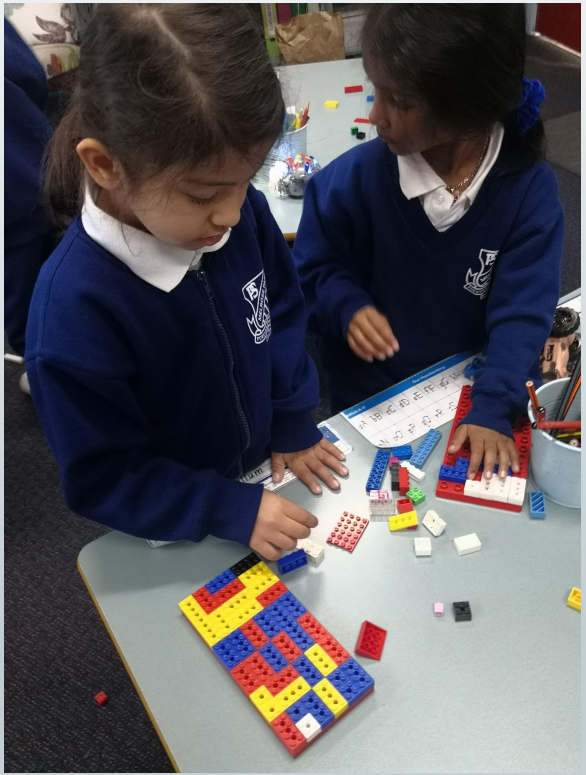
Step 2 Build the bridge between the desks.

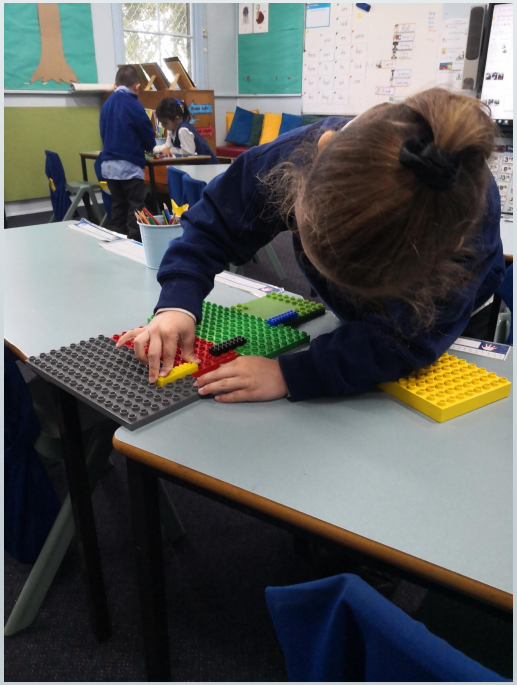
Using what we know about bridges, we switched on our engineer brains and began to build bridges between two pieces of land.

Road left
Road right
Road here

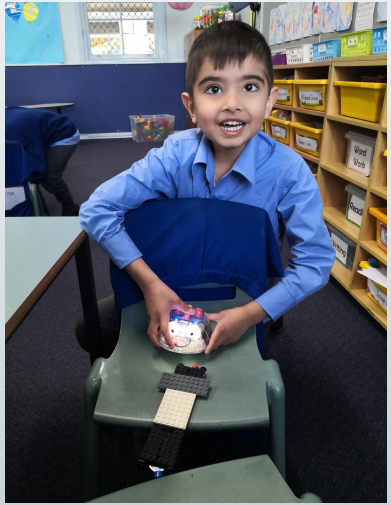
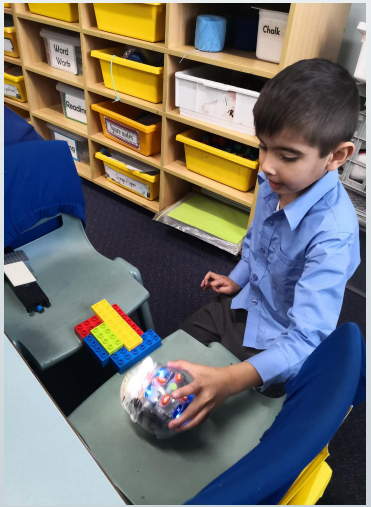


Step 3 Modify the bridge for a Beebot to cross.
Now we have to think about our design and work out what it needs for a Beebot to go over it.

Here are some of our modifications.



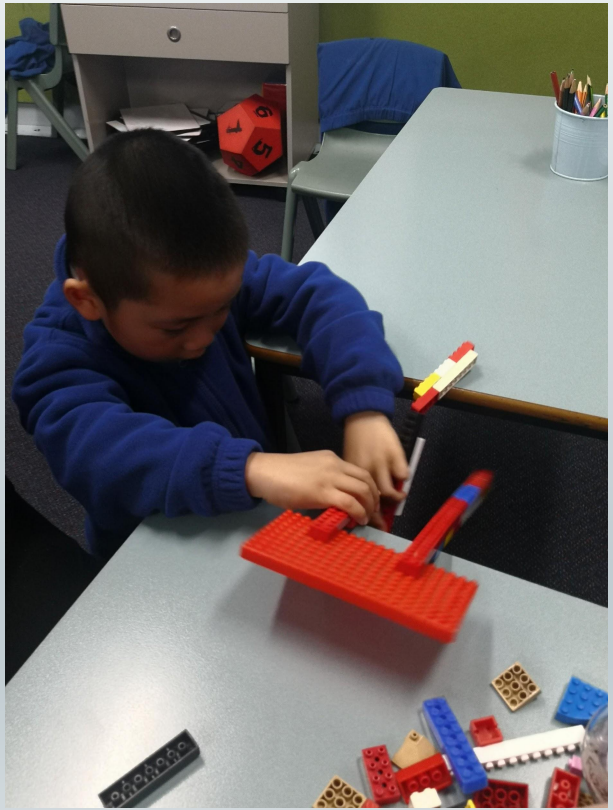
“I saw my first bridge was too skinny so I put more blocks to make it wider.
My wide bridge fell down so I added lego on the side to connect them.”

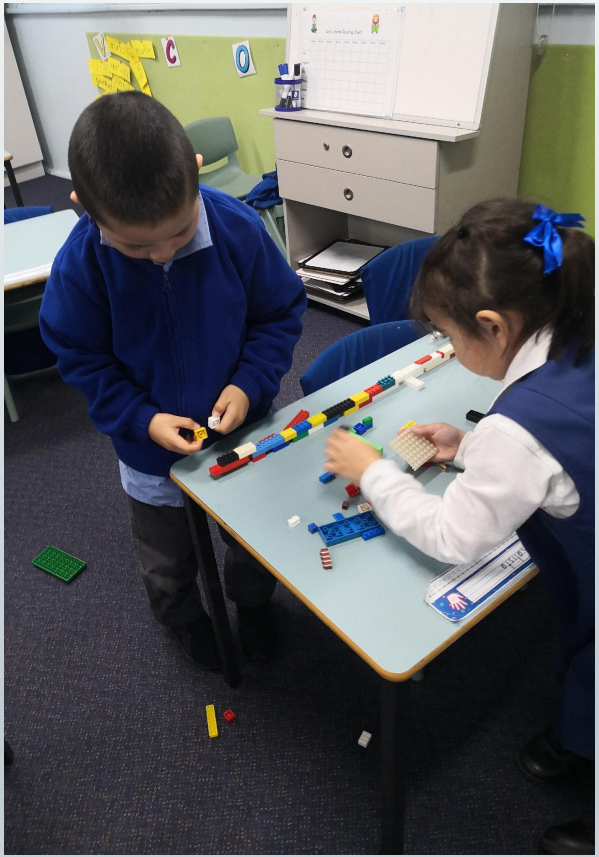



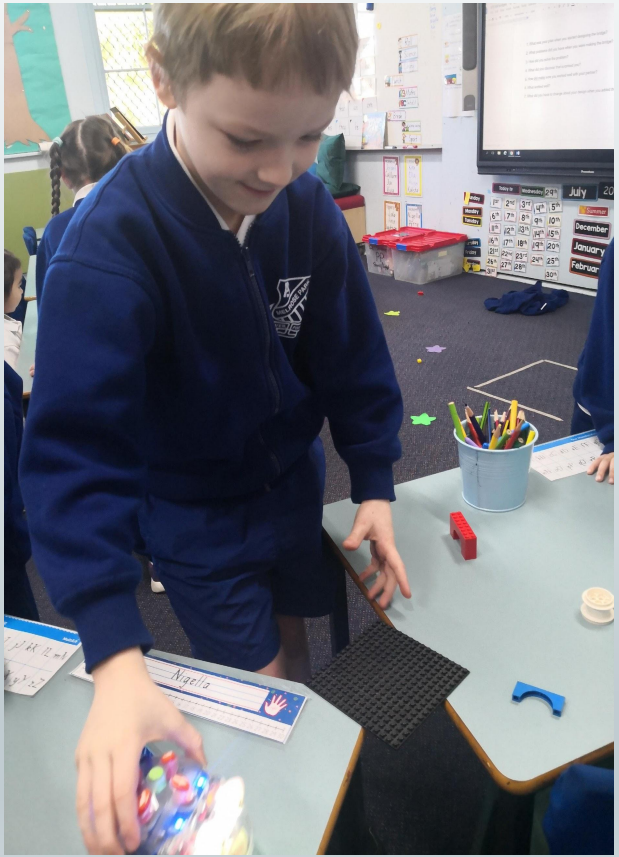
“First my bridge wasn’t wide to I made it wider. Then it was too bumpy so I used different blocks. Then my new bridge wasn’t wide again so I added more blocks to make it wide.”

Step 4 Program the Beebot to cross the bridge and test it out.

Once we made our modifications it was time to test the Beebots on our bridge.






Nigella

What worked well…

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Challenges we had…

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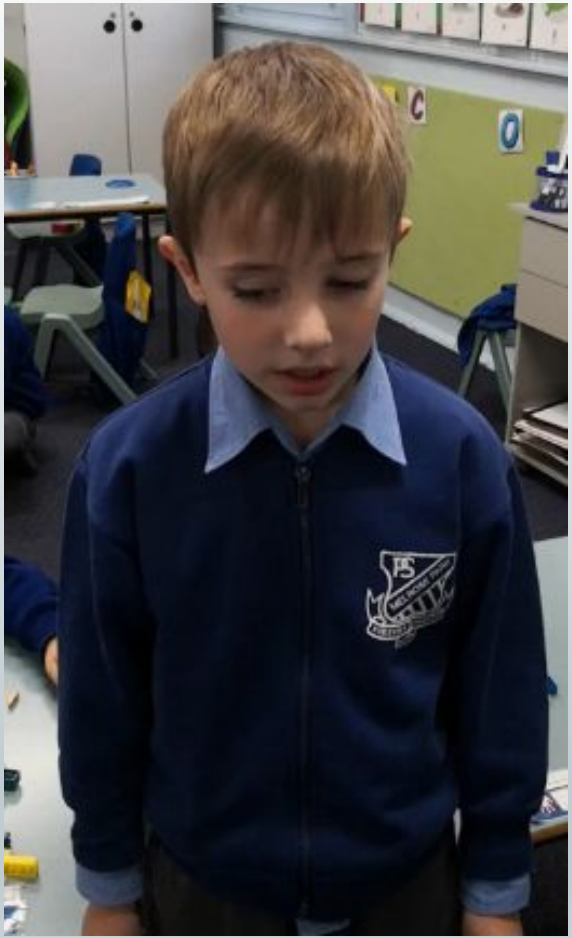
How we worked collaboratively…



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Thank you for sharing our STEM project with us!