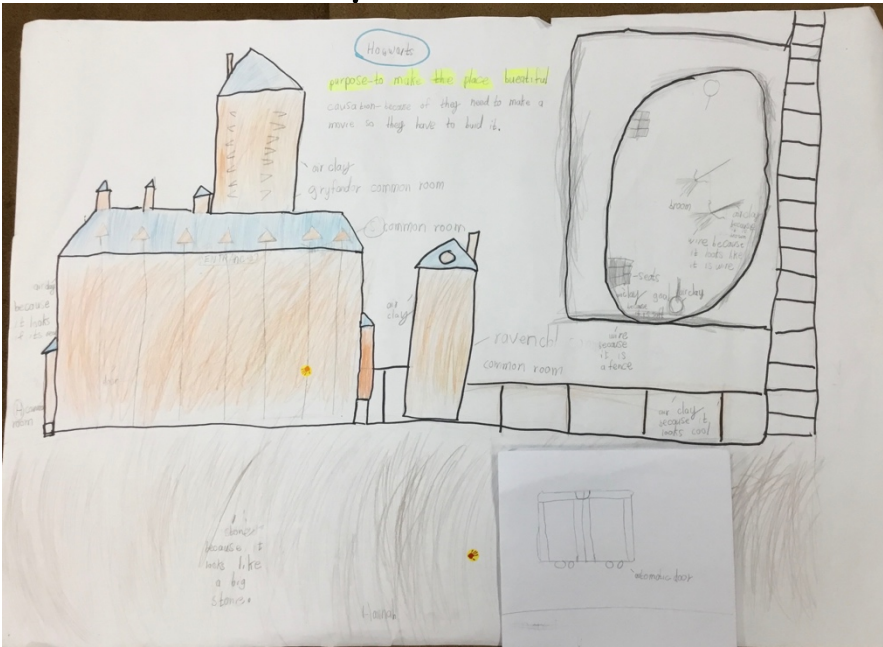


# My Design Journal

# The castle

By Hannah



This is my structure Hogwarts (Harry Potter) castle. The purpose of this structure is to make the place beautiful. The hard part of my structure is (the hand) the automatic door, because I don't know how to make the door automatically open and close.

I was a little bit frustrated when the things didn't work! Like when the door kept tilting.

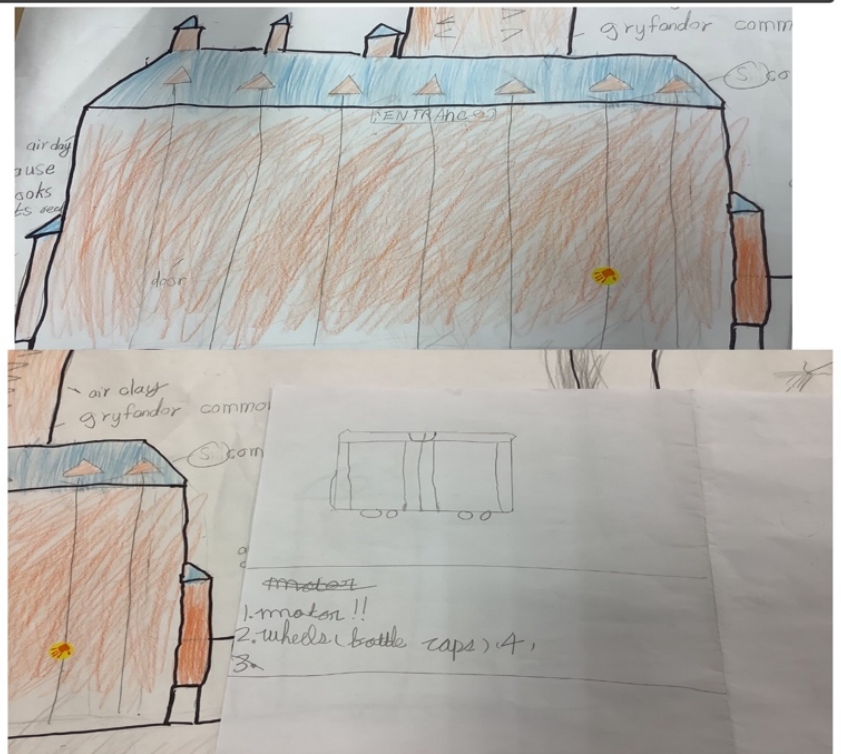
### step 3- Identifying and sharing my 2 challenges



In this picture I am sharing my 2 hard parts, with the class. I talked about the foundation (the stone under the castle) was hard because it has to be stronger than the castle. But then I changed my mind

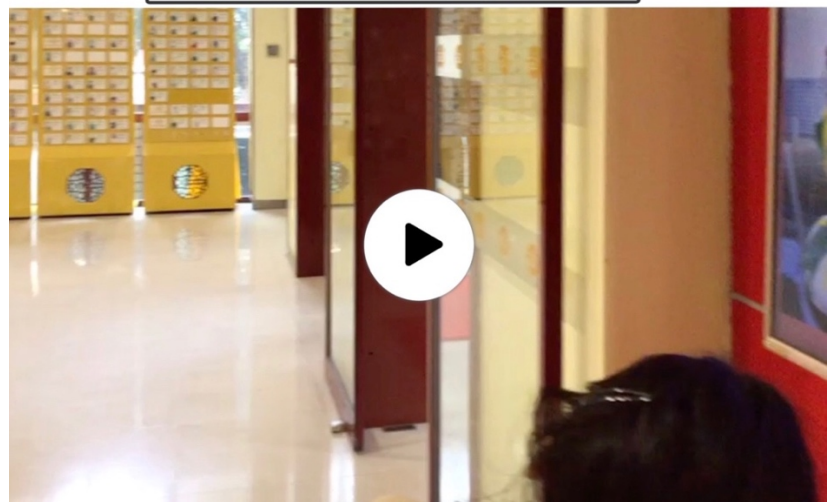
to make the automatic door  
because the foundation is not a  
part of my structure, plus it has to  
be something that works.

### step 5-plan the hard part of the structure



This is my First hard part (was the automatic door), I wrote down what materials I need (Motor, cardboard, tape, strings and straw). I wrote down the solution of my automatic door. The solution of it was: first, see how a real automatic door works, then, write down how would I make it. Next, get all those materials, last, MAKE IT! But when I was writing, I thought about a problem. The problem was: how would I make the automatic door? So, I drew an automatic door for my design.

### Step 6- Investigating





Then I went to where the automatic door was, I investigated how an automatic door works. I said "I think, the automatic door has a security camera, when a person comes the security camera sends a message thorough the electric line and the door opens by the railing." The automatic door has a powered motor, so when it opens the powered motor lets the railing open the door!

I also said "The automatic door has a glass door and a button; the button is use when people wanted to turn the door on (so the automatic door can work.) or turn off the automatic door."

#### step 7- creating

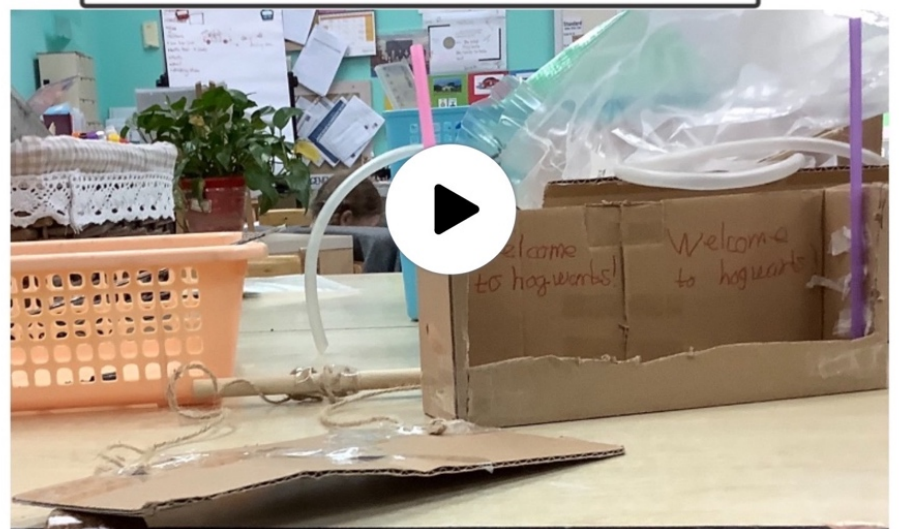


In this picture I was making the automatic door, I was a bit nervous because I thought I didn't have time to finish.

First, I cut the cardboard then, I pasted the other cardboard on top of the first cardboard. Next, I got two pieces of string and straw and stuck the string on the straw.

After that, I put another box on top of the second carboard and put the straw and string inside the third box. Last, I put a stick inside the straw, and then cut two circle pieces of cardboard. I glued the two pieces together and drilled a hole in the middle. Finally, I labeled the automatic door.

#### step 8 -reflections



I learned how to make an automatic door during this unit. I don't know how to lift the string up, because it doesn't have a thing to lift it up. I don't know how to make it automatically open, so I still need to make the door a hand door. I also learned how to create things too.

The hard part when I was making is the door because it kept on tilting, so I had to keep trying. The fun part was when I finished, because I was really happy when I was done. I also used some skills like: thinking skills because I have to think about the structure. And I used research skills because I had to research by reading.