

Engineering Design Process Journal

Date:	What we worked on :	Successes:	Challenges:
9-24-21	Read the requirements	None	None
10-1-21	Brainstormed- What we wanted the base to be and what kind of frame we wanted	We figured out that we wanted wood as our base, and this didn't change throughout the project	We weren't very good at communicating with each other about our ideas and then we got frustrated at each other
10-8-21	Brainstormed- how to start our chain reaction	None	We couldn't quite figure out what we wanted to start with.
10-15-21	Brainstormed 1st step: agreed on pushing a hot wheel car down a tube and started drawing our initial plan	We found out what we wanted our first step to be.	It was hard to decide because not everyone was happy with our final price.
10-22-21	Brainstormed- transition ideas to get to step 2 and also worked on brainstorming step 2	We figured out which idea we liked best.	We all had different ideas and it was hard to decide which one we liked best.
10-29-21	Initial second step- we decided on a marble getting hit by the hot wheel car, which goes down another tube	We planned our second step.	None
11-5-21	Brainstormed- Transition to	We finalized our first and second step.	None

	third step and made sure we all agreed on steps one and two.		
11-12-21	Drew the ideas in our initial plan and went on to brainstorming the 4th step and the transition to step 5	We figured out what we wanted to do for steps 4 and five.	None
11-19-21	Brainstormed-the 6th and 7th step along with transitions to steps 7 and 8	We got steps 6 and 7 down.	None
11-26-21	Brainstormed-steps 9 and 10	We thought of a few ideas.	We were having a hard time coming up with what we should do.
12-3-21	Brainstormed transitions for 9 and 10 and made a supply list for everyone to bring different things	None	None
12-10-21	Brainstormed-steps 11 and 12 and transitions	We knew what we needed so we started bringing supplies.	Some of the supplies we couldn't figure out how to get to school.
12-17-21	Brainstormed-steps 13 and 14 and transitions	We decided what we wanted to do for steps 13 and 14.	None
1-7-22	We went through and counted how many steps we had and discussed if we	We figured out how many steps we needed/ created.	None

	needed to change anything		
1-14-22	Started building different steps like the pendulum	We built about 4 of our steps.	It was almost like we were back to the drawing board because we didn't know where we should start.
1-21-22	Reviewed our plan and thought about what we would need to do for each individual step.	None	None
1-28-22	We added some final touches to our plan.	We were basically done with our plan, so it took some pressure off of us.	None
2-2-22	We finalized our plan and made sure we liked everything that we had planned	We finished our plan.	None
2-3-22	Starting to build our project we screwed together 2x4's and built steps 1-3. We also changed our design for the frame.	We started to create our frame.	We didn't know who should do what.
2-4-22	We decided not to do the pendulum idea and also tested steps 1-3	We figured out why our plan wasn't working.	Since we cancelled that step we weren't sure what to replace it with.

2-5-22	We built/added on to our steps.	We made the transition from step 1 to 2.	We weren't sure how to fit our steps inside our frame.
2-9-22	We built most of our steps, but didn't put them into the frame.	We figured out how to do our motion sensed light, and chemical reaction.	We had a hard time figuring out the motion sensed light.

2-10-22	We built a level for our chemical reaction.	We got a little bit of a step up.	We couldn't quite get the chemical reaction to work correctly.
2-11-22	We worked on our water movement step.	We were super close to getting our chemical reaction down.	We couldn't

2-14-22	We worked on a different ending.	We made a new ending that worked better.	We had to trash our old ending and some people didn't like changing the plan.
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2-18-22	We talked about the competition.	None	None
2-23-22	We talked about what we could add in.	None	None
2-25-22	We started writing down our new ideas.	None	None
3-2-22	We took everything apart and are started	We had a blank start.	Some of the screws wouldn't come out.

	from scratch		
3-5-22	We started drawing on the backboard	We got half of it drawn out.	We couldn't decide on what idea we wanted to do.
3-9-22	Continued drawing	We finished drawing.	None.
3-11-22	Started Painting the pallet and the backboard	We got half of it painted.	We didn't have all the paint colors.
3-16-22	Continued Painting	We finished painting.	None
3-18-22	Finished the Backboard and started working on the title board	We started the title board.	None
3-23-22	Printed off the letters for the title and glued them on	Finishes the title board.	None
3-25-22	We looked over the ideas that we had and looked at what we wanted to keep the same and what we wanted to change	None	None
3-30-22	We decided on what we wanted to do and drew a beginning picture	Drew out our initial ideas.	We had some confusion on what we wanted to do.
4-1-22	Started building the base	We got our base back.	We sort of forgot where the screws needed to be.

4-6-22	We worked on the beginning and tried putting it back together.	We put up our first few steps.	None really.
4-8-22	We worked on the balloon step , and getting something that would hold the glass bottle	We got a good stable thing to hold the glass bottle that the baking soda goes in	None
4-11-22	We came up with a new marble idea.	We got our supplies to make the step.	We didn't quite get it to work correctly.
4-12-22	We built the marble step.	We got it to work almost every time.	Not consistent
4-13-22	We came up with a new tennis ball catch net system	We got it to work first try pretty much	None
4-14-22	We did multiple test runs.	We also added in the light step completely.	We all had different ideas and we didn't communicate the best.
4-15-22	We worked on the journal a lot.	We looked at the criteria for the journals and improved ours.	We have been working individually or in small groups on the project so we don't know what each other are doing
4-20-22	We worked on the journal(finishing touches)		

Materials:

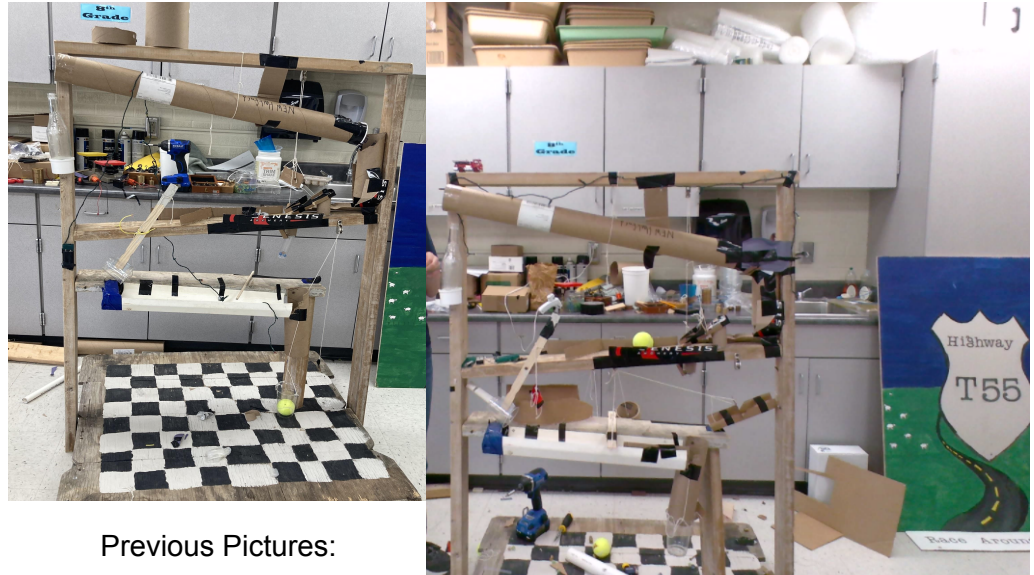
Material:	Cost:
Cardboard Tube	\$0.00
String	\$5.29

Nutella Lid	\$0.00
Paper Towel Roll Tube	\$0.00
2x4 Wood	\$0.00
Duct Tape x2	\$6.48
Wooden Pallet	\$0.00
11x14 Canvas	\$9.99
Dominos	\$0.00
Marbles	\$0.00
Glass bottle	\$0.00
Balloon	\$0.00
Baking Soda x2	\$1.20
Vinegar	\$1.56
Hot glue sticks	\$4.00
Super Glue	\$4.99
Styrofoam	\$0.00\$0.00
Clear Cup	\$8.00
2 Hot Wheel	\$0.00
Tennis Ball	\$8.99
Pulley	\$19.99
Total	\$38.65

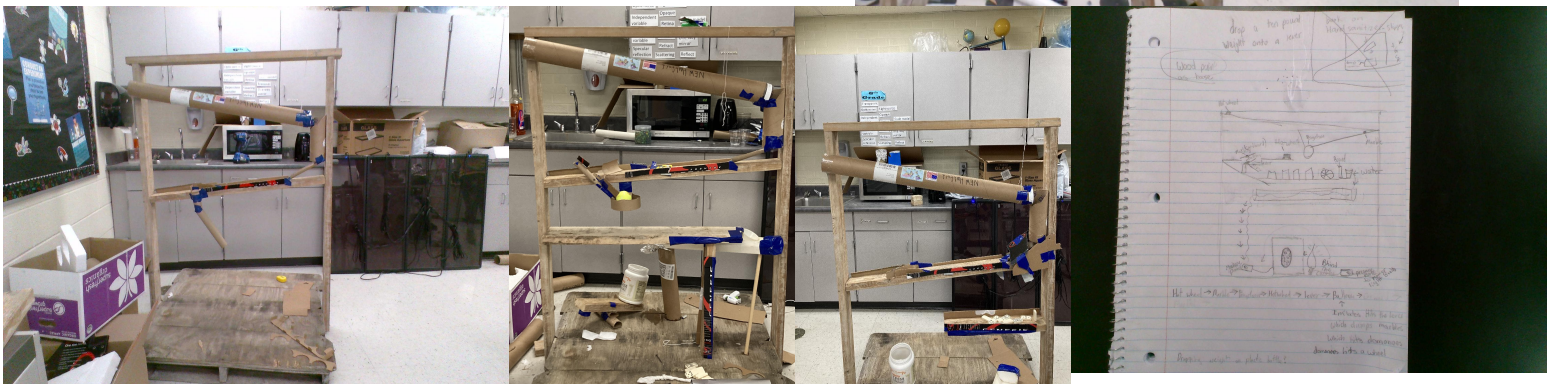
Steps:

1. Balloon Inflates Lifting Car
2. Car goes down tube hitting marble
3. Marble goes down into a tube which opens the door for the car to go down
4. Car rolls down board and hit tennis ball
5. The tennis ball rolls down into a cup attached to the lever which drops down into a plastic gutter while at the same time the lever activates lights and releases another marble.
6. Marble hits a weight
7. Weight goes into cup and releases car
8. Car hits tennis ball
9. Tennis ball goes into cup and opens a door
10. The ball drops down a tube into a cup which releases a door sending a car rolling down a ramp.
11. The lever also releases a marble that goes down

Recent Pictures:



Previous Pictures:



<p>Jaden:</p> <p>What I think went well with the project was our ability to take each other's ideas and apply it.</p> <p>One thing we could do better is communicating.</p>	<p>Chloe:</p> <ol style="list-style-type: none"> 1. What I think went well was coming up with new ideas and springing to make them happen. 2. What I would have done differently was work on the journal more than we did. 3. My part was working on the journal, and helping our initial ideas happen.(finishing touches) 	<p>Bryson:</p> <ol style="list-style-type: none"> 1. What went well was coming up with ideas and building them and making them a reality 2. We could've definitely communicated more and stuff like that 3. My job was coming up with ideas and building them
<p>Payton:</p> <ol style="list-style-type: none"> 1. One thing that I would do different for this project is working on the project more during our free time, through out the time we had to work on it. 2. One thing that we did well was combining ideas between each other. 3. My job for the project was making up the story that follows the project. 	<p>Jacen:</p> <ol style="list-style-type: none"> 1. I think one thing that went well was using recycled materials which saved money and hopefully prevented the use of more resources. 2. One thing we could have done differently was coordinate with each other more, we had some instances where some of us knew what was going on but then didn't have any way to communicate to our group members. 3. My job was mainly thinking of new steps we could make and draw up plans as well as work on the chemical reaction. 	<p>Jacob:</p> <ol style="list-style-type: none"> 1. One thing that I think went well was we never really had to buy a lot of parts (with the exception of duck tape, baking soda, and vinegar), so we weren't really restricted by what we had. 2. One thing we could have done differently was keep everyone informed on what we were doing so we wouldn't get frustrated with each other. 3. I didn't come up with most of the ideas, but I did assemble a lot of other people's ideas.
<p>Rush:</p> <ol style="list-style-type: none"> 1. I think If we were to 		

<p>do the project again I would try and find different materials other than duct tape and cardboard.</p> <p>2. We could have probably communicated better from the start and that would have helped exponentially</p> <p>3. I helped with bringing materials for our project and with electrical type stuff, while also trying to help others with ideas and designs. (I think)</p>		

What do you think that we did well with the project?

What could we do different with the project?

What was your part in the project?