



Las Bilingual power pensadores

From: Lauren, Anna, Maia and Emma

Intro of team members

Anna, Hi my name is Anna and i have done 3 rube goldbergs and Lauren is my twin sister. My hobbies are many sports and doing engineering and building.

Lauren I have done 3 rube goldbergs before and I am excited for this one. My hobbies are Soccer/Sports and making machines to help the world with my Besties.(My twin sister is Anna)

Team Intro:

We are students from ISLA school that is IB and Spanish immersion. We all love the school and enjoy the second speaking language. We made a team name from our power and hobbies. "Las" is for she in spanish. Bilingual means we speak 2 languages. "Pensadores" means thinkers in spanish.

Emma

Hi im Emma, this is my first rube goldberg that i've done. I'm really excited for this i think it will turn out great. My hobbies are swim and building legos.

Maia

Hi i'm Maia, this is my first rube goldberg that i've done. I'm really excited for this i think it will turn out great. My hobbies are many sports and building stuff (like legos).

SKIT

Intro of machine

Our Rube Goldberg solves the simple problem of turning off the lights of funland and turns it into a complex machine to solve the problem of turning of the lights. Our Rube Goldberg is simply showing how an employee of Fun Land has to get to the other side of the amusement park to turn of the big light switch.

Progress photos



Problem

1. Turning off the light was one of our hardest problems because the weight of the material had to be heavy enough so that it can turn off the light.
2. No more than 5 feet. This was one of our biggest problems because it only could be less than 5 feet which is really hard to do.
3. One of our problems was the ball coming off the plinko board ramp because it either got too much speed or the ferris wheel wasn't in the correct spot.

Solution

1. Our solution to this problem was to find the heaviest marble and have it drop into a basket that is connected to the light switch.
2. We did a lot of measuring! This was the most important.
3. We marked the one cup on the Ferris wheel that worked and that was the one that could handle the speed and the marble.

Use of engineering design process

Ask:

Can you build a machine using everyday objects and with multiple steps to complete a simple task. Our simple task will conserve energy by shutting off the lights when not in use.

Imagine:

We created a team of 4 engineering girls from ISLA. We met 3 times a week to brainstorm solutions and choose a solution to try.

Plan:

We picked out some materials to look at and pick the ones that we thought would be the most useful. From there we started to sketch our design and then create and improve from there.

Create:

We started to meet up every week. We meet 2 a week and started to build and think of ideas to make our design even better.

Improve:

Every step we found a way to improve and work on the design.

When we were using a peg board it is wood with a ton of tiny holes so it allows us to make changes and is easy to mount pieces on. Our support board is a wooden thick board that we used so that it can hold everything.

Step 1

Is the Plinko board prizes (aka the wine corks)

This step kicks off the rube goldberg and what better than a plinko prize board.

Step 2

Is the ramp that then leads to the next step. The ramp believe it or not doesn't just bring it from one place to another it lines up the marble for the next step it also gives it just enough speed

Step 3

Is the ferris wheel because you just can't have a funland without a ferris wheel it's also pretty cool to see the ferris wheel move by the weight from the marble

Step 4

Is the funnel it redirects the marble and also slows it down so i don't fly off the rube.

Step 5

Is the ramp that helps slow the marble so it can go to the next step smoothly.

Step 6

Is a ramp that brings it over to the other part of the base smoothly.

Step 7

Is a ramp that brings the marble back from the other board it's also cool to see the transition between step 6 & 7.

Step 8

Is a small but very useful ramp it redirects the marble and slows it from flying off the rube cause that's never good.

Step 9

Is the water slide that help s bring the marble down to the next step and there has to be an aquatic zone in funland.

Step 10

Is the get out of the way part (where the staff tell you to get out of the way of incoming water slide riders)helps redirect the marble to the final step.

Step 11

Is the final step where the marble lands in the baskett that pulls the light switch down and turns it off.

Storyline

Emma works at Funland, the amusement park, her job is to help if needed. And at night when the park closes her job is to turn off the lights of the entire park. Though it sounds hard it really isn't. There is a big light switch that controls all the lights of Funland. Tonight is the first time Emma has the job of turning the lights off and she doesn't want to forget and leave them on all night cause that would be a huge no-no. We all know how expensive electrical bills are now imagine that for an amusement park it's already big no need to add more. Now it's at the end of the night and she's ready to go turn the lights off but there's a problem the light switch is at the other side of the park. Now you can imagine the park is huge, it's 300 acres that's almost as big as the Minnesota State Fair! Now it's our pleasure to get to see her travel through all the parts of the park and turn off the light switch.

Day 1-2

We had problems with not agreeing on a design idea and story.

Day 3-4

We came up with a design and process but in between we had focus problems. We finalised our plan and started designing.

Day 5-6

We started building it but realized we needed a new base

Days 7-8

We started working and coming up with new ideas for a base.

Days 9-12

We got our base done and came up with a new design that seemed to be working

Days 13-16

We changed the design a little bit and that ended up as our final design and started practicing the skit.

Days 13-16

We started building the steps

Days 19-22

We started to put steps on the board

Days 22-26

We put the last couple steps on the board and practiced moving it.

Days 26-28

We started to decorate the Rube Goldberg

Days 28-30

We did the little last couple touches.

Materials we bought and the cost

Pack of hot glue sticks-\$5.00

Peg board-\$10.00

Bag of zipties-\$2.00

Other materials were all recycled or reused materials

They were also 95% of the rube goldberg.

TOTAL PRICE-\$17.00

Finished Machine

Summary

Our rube goldberg takes place in funland. An amusement park for everyone of all ages our journey starts at the prize board then we go towards our trademark ferris wheel as we take a little ride. After we get off the ferris wheel we head on over to the aquatic zone and go down the water slides then we go to the control center across the sidewalk which is where the light switch for the entire park is. And since it's Bella's job to turn the lights off and that's exactly what she does.



Reflection of the time.

Anna:

I think that it was a fun experience and I enjoyed the experience. Some challenges I think that we had was agreeing as a team and I think that I didn't always have a PMA mindset but overall I think that our team was very successful and I would like to win this competition but all that matters is that we tried our best and I am very proud of our team.

Lauren:

I think that we did a great job. I enjoyed that we got to work on this as a group and that I got to have this experience with my besties.

I think that the biggest challenge was agreeing as a team but I think we really got better at that throughout the whole process. We have become closer and I think it turned out great.

Maia:

I think that we did much better than I thought it would be and personally I thought we would do pretty well. I'm really proud of the Rube but I would be lying if I said it was easy. Even though it WAS super fun it was also hard and stressful. I think I've learned from the experience in more ways than one. I've also grown much closer as friends with my teammates and I'm super proud of that.

Emma:

I think that we did awesome. I'm proud of the work that we put in to the Rube. I think that we did better than I expected and I love my group. I hope we did good.

A large Ferris wheel is the central focus of the image, set against a dark night sky. The wheel's structure is illuminated with a cool blue light. In the foreground, the ornate, glowing golden-brown structure of a carousel is partially visible. The word "Funland" is written across the center of the Ferris wheel in a bright, glowing yellow cursive font. Above it, the text "Thank you for visiting Funland" is displayed in a clean, white, sans-serif font.

Thank you for visiting
Funland

Funland