Bombay Scottish School
Mahim

S.U.P.W. Report Performa

Name : SHUBHAN ANCHAN

Grade : IX **Div:** B **Roll No** : 14

Date : 5th February 2022, 19th February 2022

Time from : 11.30 am **Time to** : 2pm **Hours completed : 6 hours**

Work done : FTC (FIRST Tech Challenge) - Dharavi school fund raise and outreach

Location : Shri Shri Ravishankar Vidya Mandir (SSRVM) School, Dharavi

I participated in the robotics and automation competition FTC (FIRST Tech Challenge). One of the components of the competitions was a social outreach program. Towards the same, my teammates and I

1. Raised funds via an online platform Ketto to set up a STEM Lab in the SSRVM school in Dharavi. The link for the fund raise is shared here https://www.ketto.org/fundraiser/stem-lab-for-students-of-dharavi-asias-largest-slum
2. We also trained the students of a school in Dharavi in Lego-9686 over 2 in-person sessions at their school

Name of the NGO / Digital Platform : Shri Shri Ravishankar Vidya Mandir (SSRVM) School, Dharavi and Ketto

Date: 5th February 2022, 19th February 2022
Timing: 11.30am - 2pm on both days
Location: Shri Shri Ravishankar Vidya Mandir (SSRVM) School, Dharavi
Number of participants: 51 (They were divided into groups of 5 each)
Number of G-Force Members: 8 Age group of participants: 7 th - 9 th Grade

Procedure:

What did we teach them?
We covered 2 activities of 9686 lego in a span of 1 ½ hours:
1. Power car
2. Weight Measuring Device What did the power car activity involve?

As a part of theory, we taught them about spur gears and how to calculate gear ratio (drive gear : driven gear). We taught them about wheels and their diameter and circumference. Then, their task was to build the power car by following the instructions given in the manual. We guided them throughout the process and helped them out when they faced any issues. Then, we posed them with a challenge in which they had to make their car run faster and slower and explain the difference in both the mechanisms.

Mr learning - It was a new experience for me – raising funds and teaching kids from an economically challenged background. I was able to learn as much from them as I was able to teach and I cherish the opportunity I got.

Attachments :

1. 2022 FTC Innovate Award Certificate
2. Dharavi Outreach report and photographs of the team at Shri Shri Ravishankar Vidya Mandir (SSRVM) School, Dharavi

Signature of the Supervisor : _____

Shrikant Jain
CEO
ON MY OWN TECHNOLOGY PVT LTD

CERTIFICATE OF RECOGNITION

FREIGHT FRENZY

PRESENTED BY Raytheon Technologies

FIRST® Tech Challenge

FIRST TECH CHALLENGE

Innovate Award for Season 2021 - 2022

FIRST® proudly presents this certificate to recognise

Shubhan Anchan

From *FIRST*® Tech Challenge Team

G-Force - 2124

Venue: Shri Shiv Chhatrapati Sports Complex Stadium, Pune **Date:** 12th & 13th March, 2022

Ashvin B. Savant, Program Delivery Partner
President, InfinityX STEM Foundation

Ken Johnson
Director of *FIRST*® Tech Challenge

"To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders."

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DHARAVI COMMUNITY OUTREACH REPORT

Date: 5th February 2022, Saturday

Timing: 11.30am - 2pm

Location: Shri Shri Ravishankar Vidya Mandir (SSRVM) School, Dharavi

Number of participants: 51 (They were divided into groups of 5 each)

Number of G-Force Members: 8

Age group of participants: 7th- 9th Grade

What did we teach them?

We covered 2 activities of **9686 lego** in a span of **1 ½ hours**:

1. Power car
2. Weight Measuring Device

What did the power car activity involve?

As a part of theory, we taught them about **spur gears** and how to calculate **gear ratio** (drive gear : driven gear). We taught them about wheels and their diameter and circumference. Then, their task was to **build the power car** by following the instructions given in the manual. We guided them throughout the process and helped them out when they faced any issues. Then, we posed them with a challenge in which they had to make their **car run faster and slower** and explain the **difference in both the mechanisms.**

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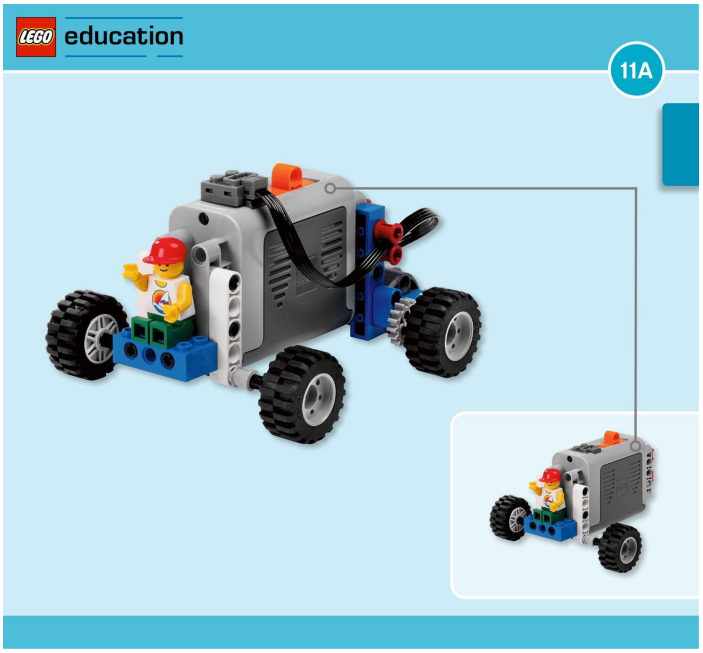
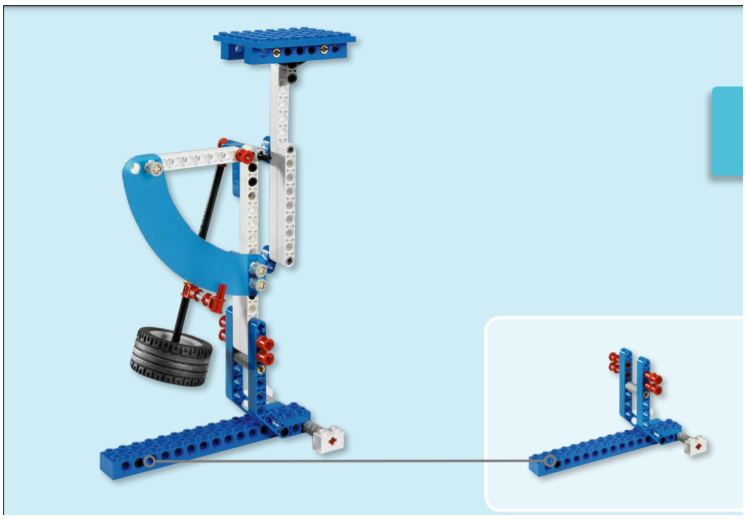


The power car they had to build

What did the weight measuring device activity involve?

We taught them about how a weight measuring system works and the **standard units** (mg, g, kg) used to measure weight. Further, we taught them how to **calibrate scales** and helped them learn how to **estimate** the weights of objects. Then, their task was to build the weight measuring device by following the instructions given in the manual. We explained to them how to calibrate scales in the device and the **system of counterweights and balances.**



The weight measuring device they had to build

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Our takeaways!

Anoushka - It was an enriching and fulfilling experience. The students were fast learners and I am extremely glad I was able to inspire them to learn more about STEM. I am looking forward to the next outreach session.

Arnav - The outreach was eye-opening, as we realized the potential embedded in the underprivileged. Overall, it was a fruitful experience!

Rahi - The outreach was a very inspiring experience as I imbibed communication skills and could teach others about robotics.

Shubhan - It was a fun activity and teaching other children was an enriching experience

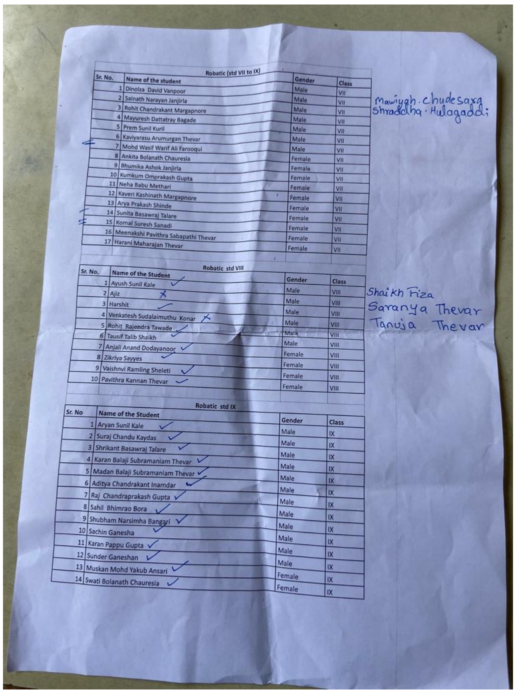
Reyaansh - It was a different experience which made it even better and it was fun teaching.

Hriday - It was amazing and I had a lot of fun, and it was a great experience!

Zidane - It was a joyful experience as we got a chance to put our skills to good use, met new people and see the student's faces full of enthusiasm as they learnt something new. I am glad that over 50 students participated.

Jayveer - It was a fun experience as I got a chance to meet and teach new people. It was nice that I could teach them about STEM and lego.

Pictures of our sessions with the students:



Robatic (std VII to IX)

Sr. No.	Name of the student	Gender	Class
1	Dinolza David Vanpoor	Male	VII
2	Sainath Narayan Janjirla	Male	VII
3	Rohit Chandrakant Margapnore	Male	VII
4	Mayuresh Dattatray Bagade	Male	VII
5	Prem Sunil Kuril	Male	VII
6	Kaviyarasu Arumurgan Thevar	Male	VII
7	Mohd Wasif Warif Ali Farooqui	Male	VII
8	Ankita Bolanath Chauresia	Female	VII
9	Bhumika Ashok Janjirla	Female	VII
10	Kumkum Omprakash Gupta	Female	VII
11	Neha Babu Methari	Female	VII
12	Kaveri Kashinath Margapnore	Female	VII
13	Arya Prakash Shinde	Female	VII
14	Sunita Basawraj Talare	Female	VII
15	Komal Suresh Sanadi	Female	VII
16	Meenakshi Pavithra Sabapathi Thevar	Female	VII
17	Harani Maharajan Thevar	Female	VII

Mawiyah. chudesara
Shraddha. Hulagaddi

Robatic std VIII

Sr. No.	Name of the Student	Gender	Class
1	Ayush Sunil Kale	Male	VIII
2	Ajiz	Male	VIII
3	Harshit	Male	VIII
4	Venkatesh Sudalaimuthu Konar	Male	VIII
5	Rohit Rajendra Tawade	Male	VIII
6	Tausif Talib Shaikh	Male	VIII
7	Anjali Anand Dodayanoor	Female	VIII
8	Zikriya Sayyes	Female	VIII
9	Vaishnvi Ramling Sheleti	Female	VIII
10	Pavithra Kannan Thevar	Female	VIII

Shaikh Fiza
Saranya Thevar
Tanuja Thevar

Robatic std IX

Sr. No	Name of the Student	Gender	Class
1	Aryan Sunil Kale	Male	IX
2	Suraj Chandu Kaydas	Male	IX
3	Shrikant Basawraj Talare	Male	IX
4	Karan Balaji Subramaniam Thevar	Male	IX
5	Madan Balaji Subramaniam Thevar	Male	IX
6	Aditya Chandrakant Inamdar	Male	IX
7	Raj Chandraprakash Gupta	Male	IX
8	Sahil Bhimrao Bora	Male	IX
9	Shubham Narsimha Bangari	Male	IX
10	Sachin Ganesha	Male	IX
11	Karan Pappu Gupta	Male	IX
12	Sunder Ganeshan	Male	IX
13	Muskan Mohd Yakub Ansari	Female	IX
14	Swati Bolanath Chauresia	Female	IX

Attendance List

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Shubhan & Reyaansh teaching a group of students from 7th and 8th Grade

Students building the power car by following the steps in the manual

Takeaways of the Dharavi Students:

Zikriya Sayyes - “I learnt about different types of gears and wheels. I also learnt about gear ratios and scale calibration which was very interesting. It was nice learning these new concepts.”

Anjali Anand Dodayanoor - “It was a very inspiring experience and it helped me become interested in STEM. It was all new to me at first but my instructor helped me understand it very well. I cannot wait for the next session.”

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Ayush Sunil Kale - “I learnt that if you divide the total distance by the circumference of the wheel you can get the number of turns it will take. I also learnt that the circumference of the small wheel is near 10 cm and the circumference of the big wheel is near 14 cms.”

Neha Babu Methari - “It was good to learn about the power car and how changing gear ratios increases or decreases speed. It was new for me and I liked making the weight measuring mechanism by putting objects of different weights.”

Kumkum Omprakash Gupta - “I had fun making the tasks using lego with my friends. I learnt the names of new things like axles, bouche, beams and gears. I want to know more about this.”

Prem Sunil Kuril - “It was an amazing experience, It was my first time learning lego, but thanks to my instructor, he did the practical of lego and it was amazing to see it run so smoothly.”
Komel Surash Sanadi - “I really wish that we will be having this again, it was a fun, hands-on experience and I learnt how the gear ratios work, I am hoping to see team G-force again as they helped us a lot.”
Rohit Rajendra Tawade - “I enjoyed making the lego activities using the parts and the book. I had a fun time with my friends and also learnt about gear ratios and scale calibration.”

Tausif Shaikh - “I loved to see the car that my friends and I made work properly. I learnt a lot about STEM and it was a very interesting session.”

9th Grade students explaining how the power car works