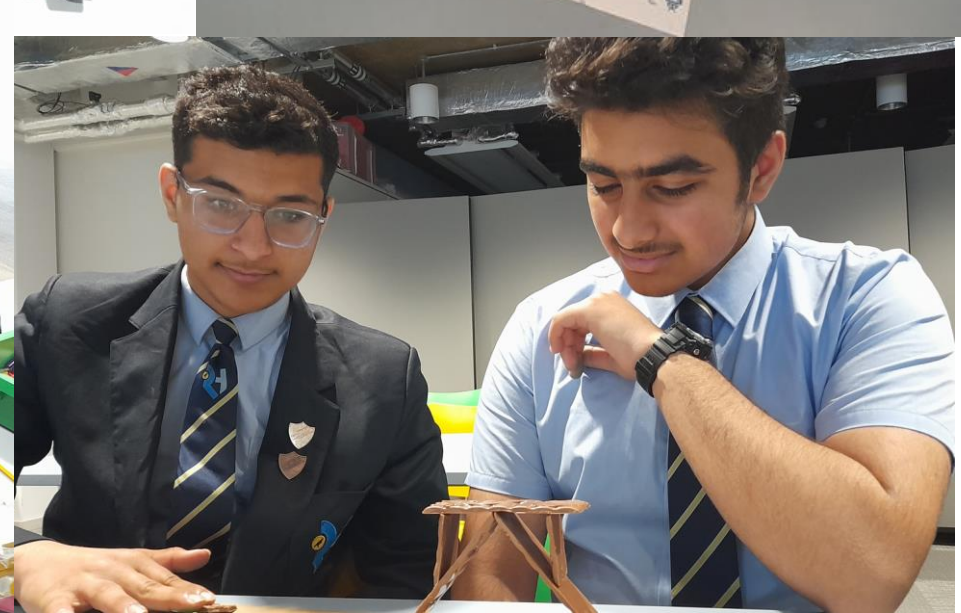
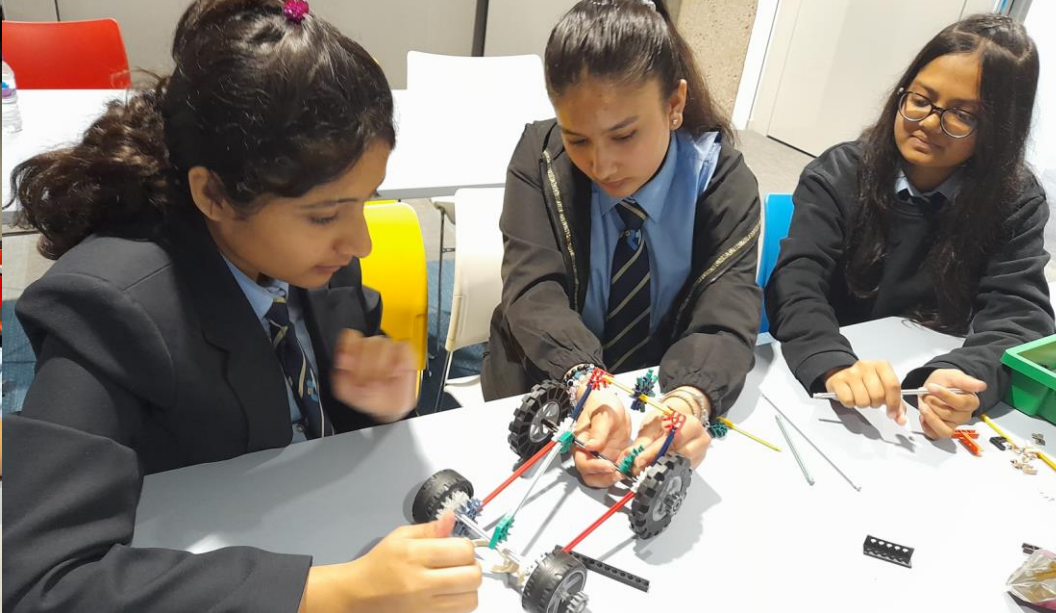
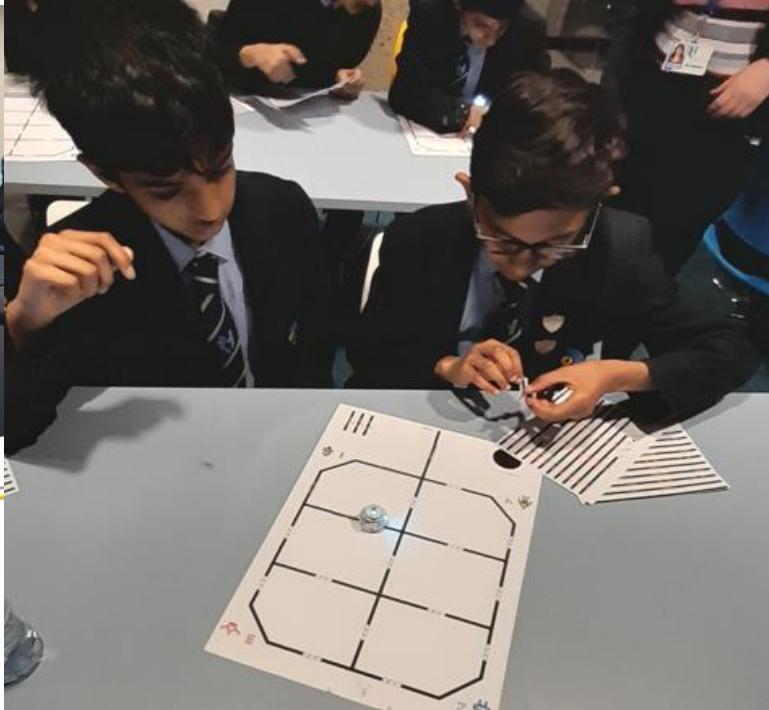
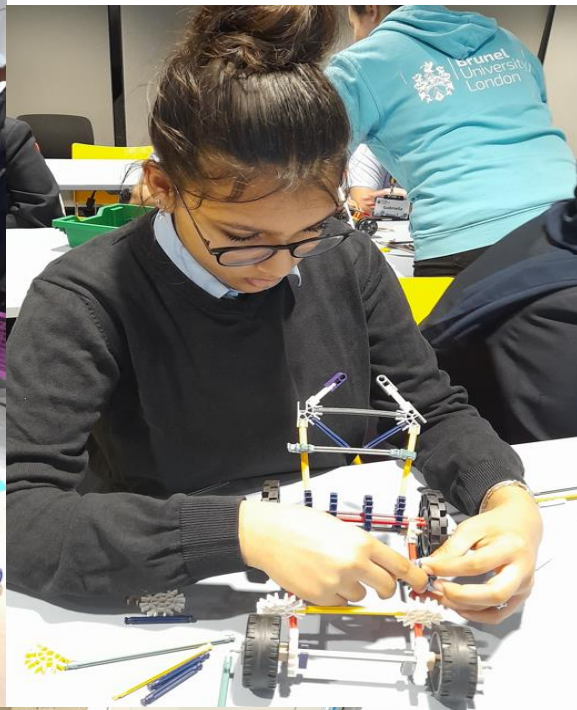


STEM Trip to Brunel University London



Our Maths teacher organised an educational STEM trip for 30, year 9 students on 22nd May 2024, at Brunel University. During our visit, we took part in number of fascinating workshops that provided us with hands-on learning activities on a various topics.

First, we participated in a chocolate welding workshop. We built bridges with chocolate. These bridges were then tested for strength, and the one which held the highest weight won. The winner bridge held 700 grams weight for 4-5 seconds. This activity was both fun and educational, as it combined engineering and creativity. While working on the task, we learned the fundamental principles of welding, which is used to join two base materials by bringing them together under pressure and heating, in some structure it requires filler material. We learnt that there are many types of bridges; beam bridge, arch bridge, truss bridge, cable-stayed bridge, suspension bridge and so on.

Following that, we took part in a car modelling session, where we designed and constructed model cars. This allowed us the opportunity to apply principles of design and mechanics in a practical setting. Designing a car is like art, which requires both creativity and technical ability. Understanding of aerodynamic is very important in car designing, as well as finding perfect balance between speed, agility and stability. At the end of the workshop, we raced our cars. The winning car travelled more than two meters.

Next, we attended a mathematics workshop, where we learned about complex mathematical concepts in an interesting and enjoyable way. It was a 'Helicopter' workshop. While constructing the paper helicopters, we considered a variety of aspects, such as short and long blades, light and heavy weight, and the use of paper clips to balance. We flew our helicopters from the balcony, recorded their landing times, and collected data. Once we had required data, we calculated mean and presented the information using bar charts. We also learned a new concept of number theory – **Permutation**. It is a concept that outlines the number of ways in which a specific set of data can be arranged. This activity helped us to understand the application of statistics and it's important in real life.

Finally, we participated in a robotic session, where we worked with small robots, learning about their construction and programming. The small robots, we used, are known as ‘Ozobots’. They were design to walk along black lines. Our task was to construct a route for the Ozobots that would take them from one location to another, without returning on the same path. We had a competition to check which Ozobot could complete the route in the quickest amount of time. We learned about future possibilities in robotic engineering, such as we can develop robots that adapt to changing condition.

Brunel University generously provided us with food, including free pizza and cookies, which was greatly appreciated. Overall, the trip was a rewarding and enriching experience, where we had a lot of fun while learning new things. We thank Brunel University for hosting us and our teacher for organising this amazing trip for us.

Shradista (Year-9)



