INTER SCHOOL SCIENCE COMPETITION

Inter School Science model-making competition, was held in collaboration with the Atal Tinkering Lab (ATL) on 10 August 2024, was a remarkable display of creativity and innovation. Students from various schools participated, showcasing their talents in building models that incorporated science, technology, engineering, and mathematics (STEM) principles.

Event Overview:

The competition began with an introductory session on the importance of ATL labs in fostering a hands-on learning environment. The students were briefed on the rules, materials, and time allocated for the model-making activity. The theme for the event revolved around sustainability and innovative solutions for modern-day challenges.

Participation and Collaboration:

Teams of students from Cygnus World School, Avalon World School Dabhoi, Delhi Public School Vadodara, Navrachana Higher Secondary School, Sama and Delhi Public School Harni collaborated to brainstorm and create models that addressed issues such as renewable energy, waste management, smart cities, and environmental conservation. The ATL lab provided all necessary resources, including 3D printers, robotics kits, and electronic components, enabling the students to bring their ideas to life.

Model Presentation:

Each team presented their model to our judge, Mr ADITYA KAVALENEKAR (PGT physics, NAVRACHNA INTERNATIONAL SCHOOL, BHAIYLI) explaining the concept, the science behind it, and its potential real-world application. The presentations were followed by a Q&A session where the judges probed deeper into the feasibility and innovation of the models.

The following is the list of the models made by the schools :

Name of the Model: The Night watchman
Name of the School: Cygnus World School

The device created by the students can be used in the field of Agriculture. The children used the Ultrasonic sensors which works on the principle of Reflection of Ultrasonic waves. The device can be used to detect unwanted intruders in the agriculture field during night time by producing beep sounds and alert the farmer.

The students planned to include Laser sensors and GSM module for the notification in the mobile in future.

Name of the Model: Healthcare Automated Assistance for Senior citizens
Name of the School: Delhi Public School Harni

The device was designed by our students to assist the senior citizens who stay alone and requires constant monitoring and supervision. The project is divided into two parts; the robot and the wrist band. The wrist band is made by using Heart beat sensors, Pulse sensors. It can check on patients sugar level, BP, pulse rate and monitoring the sleep and sends signals to the robot and the robot can carry the medicine box.

The robot was designed in order to carry the medicine and send the signals to the registered clinic in case of distress so that emergency services can be activated.

The robot was made using car chasis, motors, LEDs, and Aurdino.

Name of the Model : Extra Hand for a driver.
Name of the School: Delhi Public School Vadodara

The main aim of this project is to avoid accidents on roads by the drivers due to late night long driving hours, unwell, dizziness or micro sleep.

It uses the anti sleep detection system along with IR sensors which alarms the driver and if he does not respond, the vehicle comes to rest gradually. As an additional safety measure, the parking lights will also turn on to indicate others.

Name of the Model : An Aid for the Blind
Name of the School: Navrachana Higher Secondary School, Sama

It is a light weight stick with wifi module, ultrasonic sensor, accelerometer and audio system. The purpose of this stick is to help the blind people walk confidently in the streets using the audio system aided by google maps. The stick will detect the nature of the surface like water, mud, rocks or any other obstacle and also sends the location of the person to the family members.

Name of the Model : Crop Protection System
Name of the School: Avalon World School Dabhoi

The device is for the protection of the agricultural fields. The children used the Infra Sonic sensors which works on the principle of Reflection of IR waves. The device can be used to detect unwanted intruders in the agriculture field during night time by producing beep sounds and alert the farmer.

Judging Criteria:
The models were evaluated based on creativity, technical skills, relevance to the theme, and presentation. The judges were impressed by the students' ability to think critically and solve problems through their models.

Winners and Recognition:
The competition concluded with an award ceremony, where the top two teams were recognized for their outstanding work. **Navrachana Higher Secondary School, Sama** won the first prize followed by **Delhi Public School Vadodara who secured the runner's up position.** All participants received certificates of appreciation, and the winning models will be displayed in the ATL lab as an inspiration for future innovators.

Conclusion:
The interschool model-making competition was a great success, highlighting the importance of practical learning and collaboration in education. The ATL lab proved to be an invaluable resource, providing students with the tools and environment to think innovatively and work on real-world problems. This event not only encouraged teamwork and creativity but also instilled a sense of responsibility in the students to contribute to a sustainable future.