Bal Bharati PUBLIC SCHOOL

"To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science." ~ Albert Einstein

THE SCIENCE COMMUNIQUÉ

Dear All,

We have always endeavoured to provide a potent environment and suitable opportunities to our learners for their latent potentialities to blossom and prosper. Through this newsletter, we have strived to give wings to the imagination, creativity and scientific temperament of zealous Bal Bharatians.

We are proud to present an anthology of some of the most unique and innovative ideas, where our students have managed to harmonise the spirit of invention with their sense of social responsibility.

I congratulate all the contributors who have carved out this meticulous collection, glittering with the brilliance of ingenious minds.
Best Wishes!

Suruchi Gandhi
Principal

Bal Bharati
PUBLIC SCHOOL
Sector 12, Dwarka

THE SCIENCE COMMUNIQUE

"The imaginative child will become the imaginative man or woman most apt to create, to invent, and therefore to foster civilization."

L. FRANK BAUM

Each child is endowed with the natural gift of curiosity and imagination and possesses the ability to create and re-create the world through his/her own unique lens. At BBPS Dwarka, experiential, interdisciplinary and technology aided forms of learning inculcate a scientific temper in learners, honing the future scientists, leaders and entrepreneurs of the nation.

The Atal Tinkering Lab at school is a hub of innovations, where students are provided meaningful opportunities to amalgamate theoretical knowledge with practical application and carve out neoteric inventions.Our students have been at the forefront of a technological revolution and have won national level accolades for designing scientific projects, modernistic robots and mobile applications through a novel approach towards social problems. Projects such as Mamrit, Kisan Suvidha App and Smart Tutor App have resulted in the efficacious coalescing of science and humanitarianism with the sole purpose of upliftment of society at large.

We are immensely proud of our students who have time and again honoured the Bal Bharatian spirit by consistently endeavouring to empower change at the ground level through their extraordinary vision, dexterous skills and philanthropic foresight.

Suruchi Gandhi
Principal

March 2022

FIT WORLD APP

Fit World App was selected among top 300 projects in ATL Marathon, organised by Niti Aayog.

OBJECTIVE

The app provides a platform for users to maintain robust health, providing them guidance and tips to prevent lifestyle disorders.

ABOUT THE APP

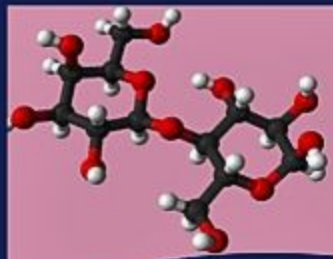
The app has suggestions for regular exercise and physical activities, which promote strong muscles and bones.

It also has a BMI calculator which is supplemented by diet suggestions and instructions for yoga poses.

Kartik Mangla (IX A)

MAMRIT

March 22



OBJECTIVE

Around, 800,000 children die every year due to lack of breast milk, which highlights the immense need of breast milk for the newborn.

This app has been developed to contribute towards an efficient and integrated healthcare system, facilitating milk requirements for infants.

ABOUT THE APP

The platform creates a bridge between milk donors and receivers through a Google form. The app provides the unique facility for users to connect with each other via the contact information provided.

Shrishti (XII A)

Aviral (XII A)

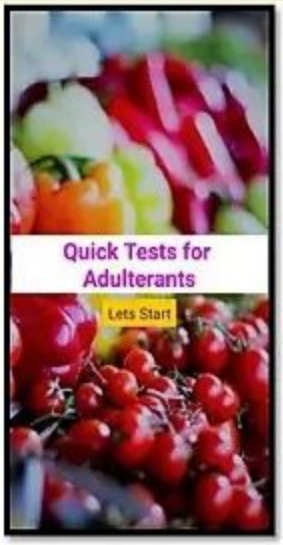
Priyanshi (XII A)

March 2022

FOOD ADULTERATION

OBJECTIVE

People nowadays are influenced by a growing conscience about healthy eating habits. In order to protect the interest of the consumers and curb fraudulent practices, a mobile application has been designed to detect adulterants in common food items.



ABOUT THE APP

The application provides simple and effectice tests to detect the presence of adulteratants in food items. A simple user interface ensures that information is made easily accessible through different categories and sub-categories of edible goods.

ANANYA GUPTA
(XII A)

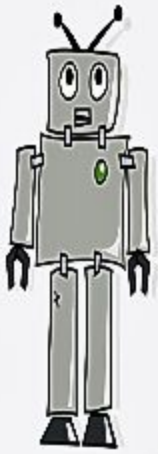
ANJASA CHETRI
(XII A)

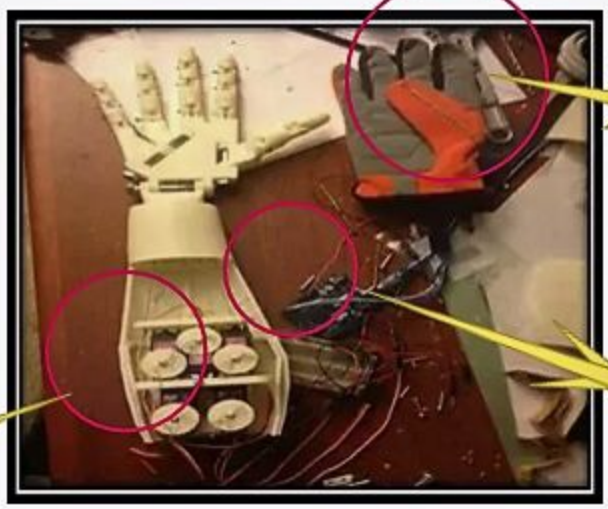
March 2022

RESBOT

OBJECTIVE

Lack of adherence to safety practices like undergoing construction left unmanned, often results in unfortunate incidents in India. The objective of the project is to construct a wireless bionic arm, which can be controlled from the ground and can be used as a rescue robot.





Wearable data glove controller

Arduino uno

Servo motors

The proposed rescue robot (RESBOT) is a bionic arm which can be lowered into borewells and can be wirelessly controlled from the ground itself After wearing the glove, the robotic arm will copy the movements of the hand.

Bharat Luthra
(XI B)

Bhavnoor Singh
(XI B)

March 2022

CHARAK MANAS

OBJECTIVE

In the contemporary age, mental health is as important as physical health. The objective of Chatbot is to provide simple yet effective solutions to mental health problems in our everyday lives.

ABOUT THE APP

Chatbot is fed with questions and datasets which help it recognise the mood or the state of mind of the person. The user starts the conversation with the Chatbot, which in turn asks the user about his/her day. Chatbot responds with a determination to help the user out and asks the user to pick one out of the 4 choices :

i) Entertainment
ii) Social Media
iii) Hobbies
iv) Get Help

This way the user is helped either directly through app or by police or hospital through "GET HELP" option.

Mahak Mehra
(XI B)

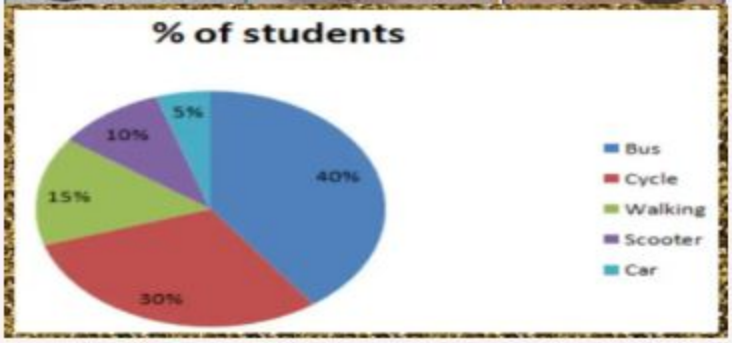
Naman Mohan Singh
(XI B)

March 2022

MOTION ENERGY HARVESTER

OBJECTIVE

To provide our entire population, access to electricity, the kinetic energy produced by physical activities like walking, lifting etc can be harnessed, stored and converted into electric power. Motion Energy Harvester can light up the dreams and aspirations of innnumerable Indian households.



ABOUT THE DEVICE

The device has been designed on the principle of piezoelectric effect, which refers to the ability of piezo-materials to generate electric voltage in response to mechanical stress. It converts mechanical energy produced by physical movement into electrical energy.

ARUSH RAMACHANDRAN
(XII B)

RIDHI KALSI
(XII B)

"Science is an imaginative adventure of the mind seeking truth in a world of mystery"

-Sir Cyril Hinshelwood

Science is a domain of study that provides learners an opportunity to explore the possibilities of natural world and utilize the immense power of the universe proffers on us for human advancement. The joy of learning and practicing science lies in giving wings to children's imagination, allowing the to observe the world around them and setting them free to arrive at their own conclusion through rigorous experimentation. Our learners possess the intellectual prowess and creative faculties, along with indomitable courage, to honour the spirit of science by putting their novel thoughts and ideas into action. We believe that the projects developed by our students shall serve as social, economic and national assets, catering to the needs of people from different strata. 'The Science Communique' is glimpse into the ingenious minds of the scientists, innovators and humanitarians of tomorrow, who shall pave the way for a brighter world.

Sandhya Kakkar
Vice Principal

New teaching learning methodologies, with increasing emphasis on learning by doing, have kindled in students a spark to undertake an audacious journey with Science as their guiding light and unlock the mysteries of the universe. As educators our efforts are geared towards illuminating the path of knowledge for students and providing them the guidance to achieve their goals.

Archana Narang
(PGT Chemistry)

Witnessing the unfolding of innate talents and potentialities of students, with appropriate scaffolding and counsel, has truly been a wonderful experience. With masterful skill and critical attention to detail, our budding scientists and innovators have developed a plethora of applications and programs,

Parul Priya
(PGT Physics)