

S.M.PATEL COLLEGE OF HOME SCIENCE

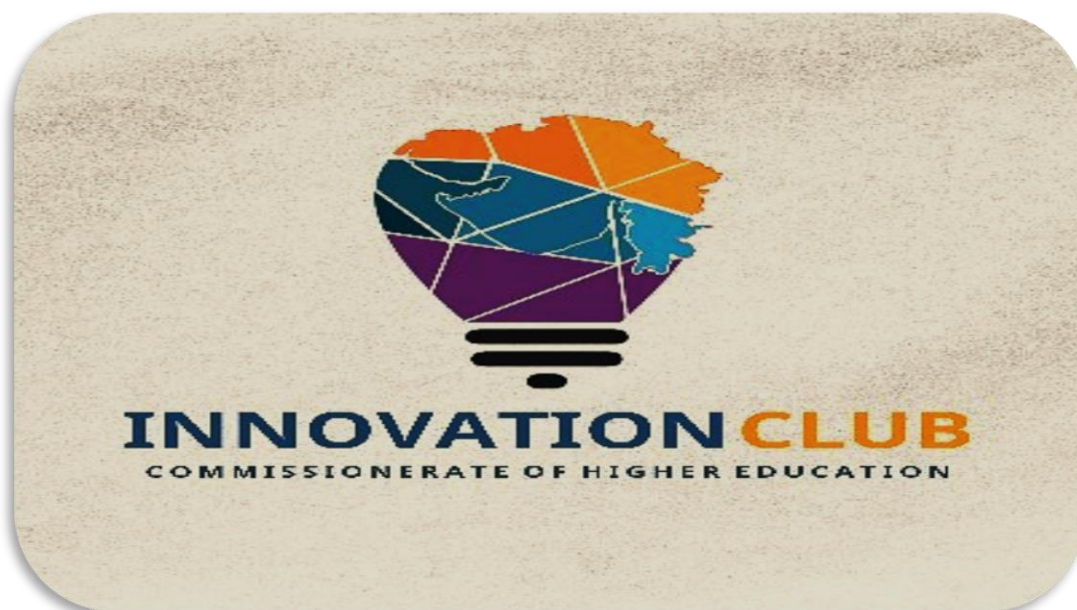


A CHARUTAR VIDYAMANDAL INSTITUTE

NAAC RE-ACCREDITED B++

COLLEGE WITH POTENTIAL FOR EXCELLENCE (CPE-II)

AFFILIATED WITH SARDAR PATEL UNIVERSITY, VALLABH VIDYANAGAR



PRABODH LEVEL TRAINING PROGRAMME

6/2/2023 to 9/2/2023

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REPORT

ON

"DIT KIY TRAINING PROGRAMME"

(PRABODH LEVEL)

Innovation Club Coordinator: Dr Minal Chauhan

The Commissionerate of Higher Education launched a 4-day DIY kit training program entitled "STEM robotics Prabodh level Training" as part of the Innovation Club.

One of the goals of higher education is to prepare students for life after college; therefore it's essential for educators to provide opportunities for students to better grasp how skills learned in the classroom may be used in the profession. Do It Yourself (DIY) Kits include Advance Electronics Kit, Agri-Tech Kit, Basic Electronics, Energy Conservation Kit, Mechanical Kit ,VR Globe Kit, Mechatronics Kit, Telescope Kit, Drone Kit and Advance Science Kit.

The Innovation Prabodh Training was held at S.M.Patel College of Home Science, Vallabh Vidyanagar for 50 students of the institute. Innovation Club in Gandhinagar conducted the training. At institute level, all arrangements such as the venue, support staffs etc. were done by Principal Dr.Bhavana Chauhan, Innovation club Co-ordinator Dr. Minal Chauhan, Joint Co-ordinator Dr.Vandana Modi and other staff members.

Schedule

Sr.No	Activity
	DAY-1 : 06.02.2023 (MONDAY)
1	Introduction of Prabodh level Training Programme
2	Principal Speech
	Electrical Kit presentation
3	Activity 1-Electronic devices
4	Activity 2-Push button Interface
5	Activity 3 –Normal switch
6	Activity 4-Slide switch
7	Activity 5-Buzzer
8	Activity 6-LED Brightness control
9	Activity 7: Transistor as a switch
10	Resistance measurement using multimeter
11	Glue gun and glue stick and its application
12	Assemble the glider

Day- 1 Prabodh Training

With the Prayer, the programme officially began. The students were guided throughout the training by Mr. Het Patel, a junior STM coach trainer at STEM botics. Dr. Bhavana Chauhan, the principal of the S.M. Patel College of Home Science gave energising and encouraging speech and declared this programme officially open. Dr. Minal Chauhan and Dr. Vandana Modi were present throughout the entire session to encourage girls' participation. There were 47 girls present for this training. There were two sessions in which girls learnt about the **Basic Electrical Kit and Mechanical Kit**. In which they learned about the Voltage, Battery, Current, Type of Current, Circuit Connection, Electric Components, Breadboard, Jumper wires, Resistor, Series and parallel connection of Resistor, Ohm's law, Capacitor, Series and parallel connection of Capacitor, Diode, LED, Switches, Types of Switches, Buzzer, Variable Resistor, Potentiometer Interface, Transistor, Type of Transistor, Multimeter, Glue gun and glue stick.

Girls learnt by doing practicals like LED Blink, Push Button Interface, Buzzer, Using Glue gun and glue stick, Use of Multimeter. Girls also assembled glider plane and flown it. Lastly, positive feedback was received by the F.Y. B.Sc. students Varisha Khan, Sirin Doi, and Deeya Talati. Many faculty members were visited during the training programme. It inspired students to study about the technical side of commonplace gadgets.





Day- 2 Prabodh Training

Schedule

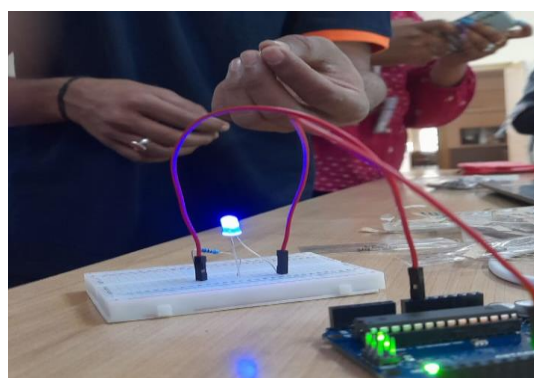
Sr.No	Activity
	DAY-2 : 07.02.2023 (TUESDAY)
	Advanced Electronics
1	Arduino Uno Board
2	Activity 1- LED Blink
3	Activity 2-Push button
4	Activity 3-Object detection alarm
5	Activity 4-Social Distancing
6	Activity 5-Segment LED
7	Telescope -Assemble of Telescope
8	Drone -Use of Remote control

On the second day of their prabodh training, the students engaged in a range of fascinating workshops while learning how to use an **advanced electronics kit**. First, the students learned about the functions of various parts such the Arduino Uno Board, LED, Resistor, Jumper wires, and Bread Board. The students were then shown how push buttons, object detection alarms, social distancing, different sensors like Humidity sensor, Motion sensors, and Temperature sensors as well as segment LEDs operate. Students enthusiastically participated in the group project and independently connected every component.

The students were also exposed to the Arduino IDE software for the Arduino Uno Board. The attendees learned what a "micro controller" is. They were given an explanation of the two types of pins: (2) Digital pins, (1) electronic pins.

Lastly, the students received training on how to operate a **Telescope** and a **Drone**. The students can use this device to form magnified images of distant objects. The students also received training on how to fly a drone and actively learn different application of Drone and how it works. Many teaching and non-teaching faculty members were visited during the training programme.

The training ended with positive feedback from Nidhi Shah and Krupa Suthar students from S.Y.B.Sc students.





GPS Map Camera

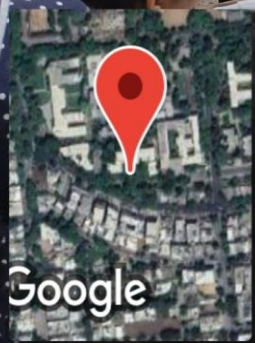
Anand, Gujarat, India

S.M Patel college of home science , mota bazar ,
v v nagar

Lat 22.549093°

Long 72.924764°

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GPS Map Camera

Anand, Gujarat, India

SM Patel College of Home Science

Lat 22.549369°

Long 72.924642°

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Day- 3 Prabodh Training

Schedule

Sr.No	Activity
DAY-3 : 08.02.2023 (WEDNESDAY)	
1	Activity 1-Globe with AR(Augmented Reality)
2	Activity 2-Mechatronic kit
3	Advanced Science Kit
4	Activity 3- Digital Microscope
5	Activity 4-3D Pen
6	Activity 5- TDS meter
7	Activity 6- PH meter

On the third day of the Innovation Club's Prabodh training, the students were made aware of many new facts and knowledge. They first became familiar with the **Orboot Earth AR/VR globe**. Students learnt about augmented reality (AR), a technology that blends virtual information with the actual world, its usage in multimedia, 3D modelling, tracking, etc., after downloading the Orboot Earth app on their smartphones. After that, they worked with the 3D pen, which was enjoyable to use as they created several 3D constructions with it.

The students were knowledgeable with the **Digital Microscope**, its components, including the memory card, mount adjustment knob, and angle adjustment knob, as well as how to set the slide using it. In addition to knowing about the functioning of the objective microscope in the lab, the students from the Foods and Nutrition department also set the slides related to human physiology in the digital microscope. With the aid of several spice samples, the usage of a **digital weighing scale** was demonstrated.

After that, a **TDS (Total Dissolved Solids) metre** demonstration was held, during which students tested several types of water—including tap water, drinking water, RO water, etc.—for the presence of total dissolved solids.

The trainer demonstrated the use of the **PH metre** and described how to determine the PH of acidic and alkaline water using readings for different P^H solutions.

At the end, the students enthusiastically engaged in the **mechatronics kit's** activities, constructing tractors and other small buildings with batteries. The session was really creative and educational.



Day- 4 Prabodh Training

Schedule

Sr.No	Activity
	DAY-4 : 09.02.2023 (THURSDAY)
1	Advanced Electronic Kit
2	Activity1- LED control from webpage
3	Activity2- Blink 2 LEDS from webpage
4	Agri-Tech Kit
5	Activity 3-Rain drop sensor
6	Activity 4- Soil moisture sensor
7	Activity 5- LDR Interface
8	Energy Conservation Kit
9	Activity 6-Dynamo
10	Activity 7-Social media QR code

On 9th February 2023, the participants of prabodh training were. Taught about Agri-Tech kit Components. The students were also given guidance on conserving energy, and how the future generations will need solar energy. The resources are getting finished and we must conserve them. The students were also taught about the dynamo motor. All the participants completed activity 6 - dynamo practical. Participants were given lesson on how the motor helps converting mechanical energy to electricity. The students tried to operate on starting a fan using dynamo motor. The students also learnt on how to measure the moisture of the soil, how to solder. The students were able to light LED from solar power by themselves. The trainee also explains about- LED control from web page, raindrops sensor, LDR interface.

Throughout the training programme, students received encouragement from the Principal and from all the teaching and non-teaching staff. This entire training has been a great and amazing experience for all the participants.

The training ended with positive feedbacks from the students.







