IAPT RC-06 Activities (Innovation Hubs/Workshops/Invited talks) on 'Experiential learning in Science'

1. Innovation Hub Workshop on "Engaging teachers in Experiential Learning" at India International School (IIS), Sitapura on August 22-23, 2022

For 360^0 holistic learning as proposed by NEP 2020, there is a need to incorporate practical approach in classroom teaching with the aim of developing scientific temperament, and making science classrooms with full of fun for students. Keeping in mind this objectives, a two day's Innovation Hub workshop on "Engaging teachers in Experiential Learning" was organized for Science teachers on **August 22-23, 2022** jointly by IAPT RC-06 and India International School, Sitapura, Jaipur. Venue of the event was India International School, Sitapura, Jaipur.

The Principal resource person of the event was eminent **Prof. Y.K. Vijay**, President, IAPT RC-06, and Director - Centre for Innovation in Science Teaching (CIST), IIS University, Jaipur along with other resource persons**, Dr. Vipin Kumar Jain**, Executive Council Member, IAPT RC-06, and Associate Professor-Physics, JK Lakshmipat University, Jaipur, and **Dr. Mukesh Payak**, Executive Council Member, IAPT RC-06, and Resource Person, Premji Foundation conducted the workshop. It was a great learning experience for participants to know about making of scientific teaching aids/models based on optics, mechanics, thermodynamics and electromagnetism. Participants were very excited to learn these cost effective scientific models which are very useful for developing scientific temperament. Participants made models of Manometer (Using pipes and balloon), and Submarine dynamics (Using small and larger size plastic water bottles) in the workshop to understand the concept of pressure, and density respectively. They carried back the teaching aids made by them during the workshop to their respective institutions.

2. **Workshop on 'Innovative Experiments in Physics' was organized by Department of Physics, Mata Jijabai Government P.G. Girls College, Indore under the aegis of World Bank Project, and Indian Association of Physics Teachers - Regional Chapter 06 & 09 during September 19-21, 2022.**

A workshop on 'Innovative Experiments in Physics' was organized by Department of Physics, Mata Jijabai Government P.G. Girls College, Indore under the aegis of World Bank Project, and Indian Association of Physics Teachers - Regional Chapter 06 & 09 during **September 19-21, 2022,** in hybrid mode. More than 300 girl students actively participated in the event. **Resource Persons** of the workshop **Prof. Y.K. Vijay**, President-IAPT RC-06, Director-CIST, IIS University, Jaipur, and **Dr. Vipin Kumar Jain**, IAPT RC-06 EC Member and Associate Professor-Physics, JK Lakshmipat University, Jaipur started experiential learning session on 'Innovative Experiments in Physics' in which 08 experiments and many other projects were demonstrated in virtual mode through Google Meet over big screens. Through demonstration of such innovative experiments and projects, they explained scientific concepts of measuring Sparking potential and Relative dielectric constant of medium by Hertz Experiment, Refractive Index of liquid by prism, Study of interaction between hanging/ floating magnets, Measurement of input and output impedance of power source, L-R and R-C circuit parameters, Resistance of bulb at varying potential, vibration modes, Bohr Model, etc. Students were excited and thrilled to learn through such simple and concept clearing experiments. Through these interactive sessions, students could realize the importance of experimentation in scientific learning. They showed interest to visit a laboratory having such facilities in future.

3. **'VIGYASA: A workshop series for curiosity of science' (An initiative to reach students of remote areas to develop curiosity for Scientific phenomenon and developments)**

   Invited Talk on 'Experiential Learning of Physics: A way of life long Experience' at Govt. Sr. Sec. School, Chhapradi, Amber, Jaipur on October 01, 2022.

Dr. Vipin Kumar Jain, IAPT RC-06 EC Member and Associate Professor-Physics, JK Lakshmipat University, Jaipur conducted a workshop on 'Experiential Learning of Physics: A way of lifelong Experience' at **Govt. Sr. Sec. School, Chhapradi, Amber, Jaipur (Rajasthan) on October 01, 2022.**

In his expert talk, Dr. Jain explained several concepts related to diodes, fuse, resistance, light brightness effect in electric bulbs, Heat transfer, sound waves by singing bowl, vibration modes, Doppler effect and Speedometer, LED, Electromagnetism, Hertz experiment, Charge on flame, Magnetic gun, Vortex, Development of Rise lights for decoration, etc using simple projects. The students were very excited to understand the concepts by hands-on practicing on experiments. About 125 students (Class 8-12) and faculty members enjoyed the workshop. Students were very enthusiastic and keen to learn by doing themselves on experiments.

विज्ञान मेले में लगाई प्रदर्शनी

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छापराड़ी. कस्बे के राजकीय उच्च माध्यमिक विद्यालय में शनिवार को नो बैग डे पर विज्ञान मेले का आयोजन किया, जिसमें विभिन्न प्रदर्शनी, व्याख्यान, भौतिक विज्ञान के विविध प्रयोग किए गए। पीईईओ धर्मराज ने बताया कि प्रो. डॉ. विपिन कुमार जैन द्वारा विद्युत धारा के तापीय व चुंबकीय प्रभाव, शन्टतार प्रयोग, डॉप्लर प्रभाव, घरेलू बल्ब का जलना आदि के प्रयोग किए गए। इस मौके पर मनप्रीत कौर, राजेंद्र कुमार भारद्वाज, विनोद कुमारी, नेतराम धाकड़ ,फूलचंद बुनकर, नानूराम जाट, सुनीता शर्मा, मित्रा शर्मा, कैलाश चंद्र, इंद्रजीत आदि मौजूद थे।

जैतपुरा @ पत्रिका. महात्मा गांधी विद्यालय भोजलावा में शनिवार को विज्ञान मेले का आयोजन किया। इस अवसर पर प्रधानाचार्य डॉ. प्रतिमा शर्मा,

जैतपुरा. भोजलावा के महात्मा गांधी अंग्रेजी माध्यम विद्यालय में प्रदर्शनी लगाते विद्यार्थी।

विद्यालय प्रभारी कैलाशचंद शर्मा, विज्ञान मेला प्रभारी महावीर स्वामी ने विद्यार्थियों द्वारा बनाए गए मॉडलों का अवलोकन किया। इसमें कक्षा 6 से 12 तक के विद्यार्थियों ने हिस्सा लिया। शारीरिक शिक्षक रजनीश शर्मा ने बताया कि प्राथमिक एवं माध्यमिक दोनों श्रेणियों में विजेता छात्र-छात्राओं को पुरस्कृत किया।

ड्राइवर व गार्ड का सम्मान, दैनिक यात्रियों में

4. **'VIGYASA: A workshop series for curiosity of science' (An initiative to reach students of remote areas to develop curiosity for Scientific phenomenon and developments)**

   Workshop on 'Experiential Learning of Physics: A way of life long Experience' at 'The Bohras Global School', Mahwa (Dausa, Rajasthan) on October 10, 2022.

Resource Person Dr. Vipin Kumar Jain, IAPT RC-06 EC Member and Associate Professor-Physics, JK Lakshmipat University, Jaipur conducted a workshop on 'Experiential Learning of Physics: A way of lifelong Experience' at **'The Bohras Global School', Mahwa (Dausa, Rajasthan) on October 10, 2022.**

In his expert talk, Dr. Jain explained several concepts related to Internal structure of Compact Disc and Diffraction, TIR, Optical Fibre, diodes, fuse, resistance, light brightness effect in electric bulbs, Heat transfer, sound waves by singing bowl, vibration modes, Doppler effect and Speedometer, LED, Electromagnetism, Hertz experiment, Charge on flame, Magnetic gun, Vortex, Development of Rise lights for decoration, etc using simple projects. Many students trilled by hands on doing experiments. About 250 students (Class 9-12) and faculty members enjoyed the workshop. Students were very curious and did hand-on activity on experiments.

बिजनेस ब्रीफ...

स्कूल में वर्कशॉप आयोजित

महुवा. बोहरा स्कूल में वर्कशाप में भाग लेते बालक।

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महुवा. द बोहराज ग्लोबल स्कूल में सोमवार को एक्सपीरियंस लर्निंग ऑफ फिजिक्स वर्कशाप का आयोजन किया गया।
इसमें जयपुर से आए जे के लक्ष्मीपत यूनिवर्सिटी के भौतिक विज्ञान के प्रोफेसर डॉ. विपिन कुमार जैन ने संबोधन दिया। वर्कशॉप में कक्षा 9 से कक्षा 12 तक के बालक बालिकाओं के शामिल किया गया।
कार्यक्रम की अध्यक्षता विद्यालय के निदेशक विनय बोहरा ने की। वर्कशॉप में प्रोफेसर ने बच्चों को भौतिक विज्ञान के घूढ़ रहस्यों को अनेकों उदाहरण एवं प्रयोगों द्वारा सहज रूप से समझाया। वर्कशॉप में डायोड, फ्यूज, रेजिस्टेंस, हाइटिंग इफेक्ट, लाइट एल्यूमिनेशन, एनर्जी फ्लो इफेक्ट, कलर इफेक्ट, लाइट ब्राइटनेस इफेक्ट, सिंगिंग बाउल इफेक्ट से ध्वनि तरंगों को निकालना, वाइब्रेशन इफेक्ट, लाईनिंग इफेक्ट आदि बहुत से टॉपिक्स को प्रोगात्मक रूप से समझाया गया।
इस मौके पर प्रिंसिपल ओम प्रकाश नागर, परमेश चंद्र शर्मा, कपिल पंवार, मनोज शर्मा, देवेन्द्र ठाकुर, अवनीश शर्मा सहित अन्य लोग मौजूद थे।

द बोहराज ग्लोबल स्कूल में 'एक्सपीरियंस लर्निंग ऑफ फिजिक्स वर्कशॉप' आयोजित

जयपुर (कासं)। बोहराज ग्लोबल स्कूल में जयपुर से आए जे के लक्ष्मीपत यूनिवर्सिटी के भौतिक विज्ञान के प्रोफेसर डॉक्टर विपिन कुमार जैन ने भव्य एवं ज्ञानवर्धक वर्कशॉप दिया। वर्कशॉप में कक्षा 9 से कक्षा 12 तक के सभी विद्यार्थी सामिल हुए। वर्कशॉप की अध्यक्षता विद्यालय के निदेशक विनय बोहरा जी ने की। इस वर्कशॉप में प्रोफेसर साहब ने बच्चों को भौतिक विज्ञान के घूढ़ रहस्यों को अनेकों उदाहरण एवं प्रयोगों द्वारा सहज रूप से समझाया, अनेकों बच्चों ने भौतिकी के इन प्रयोगों में भाग लेकर इस वर्कशॉप के उद्देश्य को सफल बनाया।

वर्कशॉप में डायोड, फ्यूज, रेजिस्टेंस, हाइटिंग इफेक्ट, लाइट एल्यूमिनेशन, एनर्जी फ्लो इफेक्ट, कलर इफेक्ट, लाइट ब्राइटनेस इफेक्ट, सिंगिंग बाउल इफेक्ट से ध्वनि तरंगों को निकालना, वाइब्रेशन इफेक्ट, लाईनिंग इफेक्ट आदि बहुत से टॉपिक्स को प्रोगात्मक रूप से समझाया। प्रत्येक प्रयोग को बच्चों ने अपने हाथों से करके देखा और सफल होने पर हर बार पूरा कक्ष बच्चों की हथेलियों से गूंज उठता, बच्चो का उत्साह देखते ही बनता था। वर्कशॉप में विद्यालय के प्रिंसिपल ओम प्रकाश नागर एवं स्कूल के भौतिकी परवक्ता परमेश चंद्र शर्मा, कंप्यूटर अध्यापक कपिल पंवार, गणित के अध्यापक मनोज शर्मा एवं देवेन्द्र ठाकुर, सामाजिक विज्ञान अध्यापक अवनीश शर्मा, हिंदी अध्यापक गिरिराज निधि भी मौजूद रहे।

संक्षिप्त समाचार

एक्सपीरियंस लर्निंग ऑफ फिजिक्स वर्कशॉप आयोजित

भवसपुर(महुवा)। द बोहराज ग्लोबल स्कूल में सोमवार को एक्सपीरियंस लर्निंग ऑफ फिजिक्स वर्कशॉप का आयोजन हुआ जिसमें जयपुर से आए जे के लक्ष्मीपत यूनिवर्सिटी के भौतिक विज्ञान के प्रोफेसर डॉक्टर विपिन कुमार जैन ने ज्ञानवर्धक वर्कशॉप दिया। वर्कशॉप में कक्षा 9 से कक्षा 12 तक के बालक बालिकाओं के शामिल किया गया।

कार्यक्रम की अध्यक्षता विद्यालय के निदेशक विनय बोहरा ने की। वर्कशॉप में प्रोफेसर ने बच्चों को भौतिक विज्ञान के गूढ़ रहस्यों को अनेकों उदाहरण एवम् प्रयोगों द्वारा सहज रूप से समझाया, अनेकों बच्चों ने भौतिकी के इन प्रयोगों में भाग लेकर इस वर्कशॉप के उद्देश्य को सफल बनाया। वर्कशॉप में डायोड, फ्यूज, रेजिस्टेंस, हाइटिंग इफेक्ट, लाइट एल्यूमिनेशन, एनर्जी फ्लो इफेक्ट, कलर इफेक्ट, लाइट ब्राइटनेस इफेक्ट, सिंगिंग बाउल इफेक्ट से ध्वनि तरंगों को निकालना, वाइब्रेशन इफेक्ट, लाईनिंग इफेक्ट आदि बहुत से टॉपिक्स को प्रोगात्मक रूप से समझाया। प्रत्येक प्रयोग को बच्चों ने अपने हाथों से करके गया। वर्कशॉप में विद्यालय के प्रिंसिपल ओम प्रकाश नागर एवं स्कूल के भौतिकी परवक्ता परमेश चंद्र शर्मा, कंप्यूटर अध्यापक कपिल पंवार, गणित के अध्यापक मनोज शर्मा, देवेन्द्र ठाकुर, अवनीश शर्मा, गिरिराज निधि भी मोजूद रहें।

ज्ञापन के उपरांत भी समस्या समाधान

द बोहराज ग्लोबल स्कूल में हुआ भव्य 'एक्सपीरियंस लर्निंग ऑफ फिजिक्स वर्कशॉप'

योगेश शर्मा/कंट्री विजन/महवा

बोहराज ग्लोबल स्कूल में जयपुर से आए जे के लक्ष्मीपत यूनिवर्सिटी के भौतिक विज्ञान के प्रोफेसर डॉक्टर विपिन कुमार जैन ने भव्य एवम् ज्ञानवर्धक वर्कशॉप दिया। वर्कशॉप में कक्षा 9 से कक्षा 12 तक के सभी विद्यार्थी सामिल हुए। वर्कशॉप की अध्यक्षता विद्यालय के निदेशक विनय बोहरा ने की। इस वर्कशॉप में प्रोफेसर साहब ने बच्चों को भौतिक विज्ञान के गुढ रहस्यों को अनेकों उदाहरण एवम् प्रयोगों द्वारा सहज रूप से समझाया, अनेकों बच्चों ने भौतिकी के इन प्रयोगों में भाग लेकर इस वर्कशॉप के उद्देश्य को सफल बनाया। वर्कशॉप में डायोड, फ्यूज, रेजिस्टेंस, हाइटिंग इफेक्ट, लाइट एल्यूमिनेशन, एनर्जी फ्लो इफेक्ट, कलर इफेक्ट, लाइट ब्राइटनेस इफेक्ट, सिंगिंग बाउल इफेक्ट से ध्वनि तरंगों को निकालना, वाइब्रेशन इफेक्ट, लाईनिंग इफेक्ट आदि बहुत से टॉपिक्स को प्रोगात्मक रूप से समझाया। प्रत्येक प्रयोग को बच्चों ने अपने हाथों से करके देखा और सफल होने पर हर बार पूरा कक्ष बच्चों की हथेलियों से गूंज उठता, बच्चो का उत्साह देखते ही बनता था। वर्कशॉप में विद्यालय के प्रिंसिपल ओम प्रकाश नागर और स्कूल के भौतिकी परवक्ता परमेश चंद्र शर्मा, कंप्यूटर अध्यापक कपिल पंवार, गणित के अध्यापक मनोज शर्मा एवम् देवेन्द्र ठाकुर, सामाजिक विज्ञान अध्यापक अवनीश शर्मा, हिंदी अध्यापक गिरिराज निधि भी मोजूद रहें। आगे भविष्य में भी इसी तरह की प्रोगात्मक वर्कशॉप को कराने के लिए विद्यालय प्रतिबद्ध हैं।

प्रयोगों से भौतिक विज्ञान के रहस्यों को समझाया

द बोहराज ग्लोबल स्कूल में वर्कशॉप

न्यूज सर्विस/नवज्योति, महुवा। यहां द बोहराज ग्लोबल स्कूल में जयपुर से आए जे.के. लक्ष्मीपंत यूनिवर्सिटी के भौतिक विज्ञान के प्रो. विपिन कुमार जैन ने ज्ञानवर्धक वर्कशॉप का प्रदर्शन किया। वर्कशॉप में कक्षा 9 से कक्षा 12वीं तक के विद्यार्थी शामिल हुए। वर्कशॉप की अध्यक्षता विद्यालय निदेशक विनय बोहरा ने की।

इस वर्कशॉप में प्रो. विपिन ने बच्चों को भौतिक विज्ञान के रहस्यों को अनेक उदाहरण के साथ प्रयोगों से सहज रूप में समझाया। वर्कशॉप में डायोड, फ्यूज, रेजिस्टेंस, हाइटिंग इफेक्ट, लाइट एल्यूमिनेशन, एनर्जी फ्लो इफेक्ट, कलर इफेक्ट, लाइट

ब्राइटनेस इफेक्ट, सिंगिंग बाउल इफेक्ट से ध्वनि तरंगों को निकालना, वाइब्रेशन इफेक्ट, लाइनिंग इफेक्ट टॉपिक्स को प्रोगात्मक रूप से समझाया। प्रत्येक प्रयोग को बच्चों ने अपने हाथों से करके देखा और सफल होने पर हर बार पूरा कक्ष बच्चों की हथेलियों से गूंज उठा। कार्यक्रम में बच्चों का उत्साह देखते ही बनता था। वर्कशॉप में विद्यालय के प्रिं. ओम प्रकाश नागर व स्कूल के भौतिकी प्रवक्ता परमेश चंद्र शर्मा, कंप्यूटर अध्यापक कपिल पंवार, गणित के अध्यापक मनोज शर्मा, देवेन्द्र ठाकुर, सामाजिक विज्ञान अध्यापक अवनीश शर्मा, हिंदी अध्यापक गिरिराज निधि मोजूद रहें।

5. **'VIGYASA: A workshop series for curiosity of science' (An initiative to reach students of remote areas to develop curiosity for Scientific phenomenon and developments)**

   Workshop on 'Understand the Science from Experimental: A way to feel the Science' at 'Lakshmipat Singhania Academy', Bissau, Churu (Rajasthan) on 14.10.2022.

Resource Person Dr. Vipin Kumar Jain, IAPT RC-06 EC Member and Associate Professor-Physics, JK Lakshmipat University, Jaipur conducted a workshop on 'Understand the Science from Experimental: A way to feel the Science' and delivered an expert talk at **Lakshmipat Singhania Academy, Bissau, Churu on 14.10.2022.**

In his expert talk, Dr. Jain explained several concepts related to Internal structure of Compact Disc and Diffraction, TIR, Optical Fibre, diodes, fuse, resistance, light brightness effect in electric bulbs,

Heat transfer, sound waves by singing bowl, vibration modes, Doppler effect and Speedometer, LED, Electromagnetism, Hertz experiment, Charge on flame, Magnetic gun, Vortex, Development of Rise lights for decoration, etc using simple projects. Many students trilled by hands on doing experiments. About 200 students and faculty members enjoyed the workshop. Students were very curious and did hand-on activity on experiments.

6. **'VIGYASA: A workshop series for curiosity of science' (An initiative to reach students of remote areas to develop curiosity for Scientific phenomenon and developments)**

   Workshop on 'Experimental Learning of Science' at Rajesh Pilot Govt. Polytechnic College, Dausa (Rajasthan) on 19.10.2022.

Resource Person Dr. Vipin Kumar Jain, IAPT RC-06 EC Member and Associate Professor-Physics, JK Lakshmipat University, Jaipur conducted a workshop on 'Experimental Learning of Science' at **Rajesh Pilot Govt. Polytechnic College, Dausa (Rajasthan) on 19.10.2022**.

In his expert talk, Dr. Jain explained several concepts related to diodes, fuse, resistance, light brightness effect in electric bulbs, Heat transfer, sound waves by singing bowl, vibration modes, Doppler effect and Speedometer, TIR, LED, Electromagnetism, Hertz experiment, Charge on flame, Magnetic gun, Vortex, Development of Rise lights for decoration, etc using simple projects. Many students trilled by hands on doing experiments. About 150 students and faculty members enjoyed the workshop.

न्यूज IN ब्रीफ

पॉलिटेक्निकल महाविद्यालय में विशेष व्याख्यान

राष्ट्र सम्मत

दौसा। राजेश पायलट राजकीय पॉलिटेक्निक महाविद्यालय में आज एक्सपेरिमेंटल लर्निंग ऑफ साइंस विषय पर व्याख्यान हुआ। इसमें जेके लक्ष्मीपत विश्वविद्यालय के भौतिक विज्ञान प्रोफेसर डॉ विपिन कुमार जैन ने ज्ञानवर्धक व्याख्यान दिया।

महाविद्यालय के प्राचार्य अनिल अजमेरा ने बताया कि व्याख्यान में प्रोफेसर साहब ने बच्चों को भौतिक विज्ञान के गूढ़ रहस्यों को अनेको उदाहरण एवं प्रयोगों के द्वारा सहज रूप से समझाया। व्याख्यान में डायोड, फ्यूज, रजिस्टेंस, हिटिंग इंपैक्ट, एनर्जी इंपैक्ट, लाइट ब्राइटनेस इंपैक्ट, सिंगिंग ब्राउन इंपैक्ट में ध्वनि तरंगों का निकलना, वाइब्रेशन इंपैक्ट, डॉप्लर इंपैक्ट की सहायता से स्पीडोमीटर का कार्य करना आदि टॉपिक्स को प्रयोगात्मक रूप से समझाया। विद्यार्थियों ने स्वयं अपने हाथों से भौतिकी के इन प्रयोगों को किया। अपने हाथों से करके इस विशेष व्याख्यान को सफल बनाया।

इस अवसर पर महाविद्यालय के विद्यार्थियों के साथ महाविद्यालय के प्रधानाचार्य अनिल अजमेरा, रसायन प्रवक्ता डॉक्टर रेणु भूतड़ा, भौतिकी प्रवक्ता डॉक्टर संजय गुप्ता, रसायन प्रवक्ता नगेंद्र सिंह, अंग्रेजी प्रवक्ता डॉ विनीता कुमावत आदि उपस्थित रहे।

7. Two days Ability Enhancement Workshop for School Science teachers of Rajasthan during November 25-26, 2022

An Ability Enhancement Workshop for School Science teachers of Rajasthan was organized by Jaipur National University, Jaipur in association with RC-6, Rajasthan during November 25-26, 2022. The participants of this workshop were science teachers of Swami Vivekananda Model Schools of Rajasthan.54 teachers attended this event. The prime objective of this workshop was to introduce and illustrate what is fundamental understanding and put forward a need for the development of it in young students of middle and secondary classes. The other objectives were to study the suitability of various approaches and to develop a few activities for the development of the scientific temperament in the students during the high school education. Moreover the workshop was aimed to introduce the idea of Innovation Hub and its effectiveness in teaching the fundamental science.

Workshop started on 25th November, 2022 with inaugural function. The purpose of the workshop was introduced by convener Prof. Y. C. Sharma, Vice President,RC-6, and Director, Research & Academic Development, Jaipur National University. The workshop started with the inaugural lecture of the Chief Guest, Prof. Y K Vijay, President, RC-6,and Director, CIST, IIS University, Jaipur. Prof. Vijay introduced the idea of Innovation HUB to the participants and demonstrated some concepts through videos. He physically demonstrated about 10 experiments which were appreciated by all the participants. The function was also addressed by Prof. R. L. Raina, Vice Chancellor, Jaipur National University, Jaipur who welcomed all the participants and the invited speaker. He emphasized on learning the methods of teaching so that students could be prepared for the new age science. He further added that this workshop will be very useful for the participants in the enhancement of their knowledge.

Second session of the workshop was addressed by Prof. Yogesh Bhatnagar, former Vice Principal, St. Xavier's School, Jaipur on the topic “Misconceptions in Science”. He pointed out some general oversights and omissions which usually takes place in science teaching. This was very well received by the teachers and they commented about this session as a real value addition in their own teaching.Third session was for the Laboratory session where the participants were introduced with the experiments and helped in performing them by the team of faculty members of JNU, Jaipur.

Day two started with lecture of convener Prof. Y. C. Sharma on the topic “Quantum Information Science, Computational Thinking and Nobel Prize 2022 in Physics: A triplet in terms of NEP2020”. It was followed by the team of Mr. Kushal and Mr. Himanshu who introduced Atal Tinkering Laboratories to the participants. It was a training session for the participants who already have these labs in their Schools and a motivating session for those who don't have; so that to introduce these new age gadgets in their teaching-learning process. Third session was again reserved for the Laboratory session.

The valedictory session was graced by the Chief Guest Prof. R K Khanna, Former President, RC-6 and EC- Member. Prof. Khanna emphasized on the development of the gratitude towards the nature which permits us to align our understanding with its working. He emphasized the teachers to focus on sharing the knowledge and simultaneous learning. He shared his experience right from Government colleges in Rajasthan to IIT Madras and UK interactions.



8. Innovation Hub establishment and Workshop on 'Science for Everyone: Play, Enjoy, and Learn' at Marwadi University, Rajkot (Gujarat) on 28.11.2022.

Innovation Hub was established at Marwadi University on 28.11.2022 by IAPT RC-06. Students and faculties of the University will be benefitted for learning by doing pedagogy. To showcase it's importance, a workshop on **'Science for Everyone: Play, Enjoy, and Learn'** was organized by **Marwadi University, Rajkot (Gujarat) on 28.11.2022. Resource Persons** of the workshop were **Prof. Y.K. Vijay**, President-IAPT RC-06, Director-CIST, IIS University, Jaipur, and **Dr. Vipin Kumar Jain**, IAPT RC-06 EC Member and Associate Professor-Physics, JK Lakshmipat University, Jaipur. Prof. Sandeep Sancheti, Vice Chancellor, and other dignitaries of the university appreciated the initiative of spreading science communication and develop scientific temprament through experimental demonstrations.

9. Two days Ability Enhancement Workshop for School Science teachers of Rajasthan held during December 9-10, 2022

Second version of the Ability Enhancement Workshop for School Science teachers of Rajasthan was organized by Jaipur National University, Jaipur in association IAPT RC-6, Rajasthan during December 9-10. The participants of this workshop were science teachers of Swami Vivekananda Model Schools of Rajasthan, mostly from Jodhpur, Jalore, Pali, Nagaur, Tonk, Swai Madhopur, Sriganganagar, Jhalawar, Karauli, Jaipur and Udaipur. 40 teachers attended this event. This workshop is aimed to enhance the experimental learning ability of the teachers so that they can extend it to their classes. This type of workshop introduces and illustrates fundamental understanding and the ways and means to extend it to the young students of middle and secondary classes. The other objectives were to study the suitability of various approaches and to develop a few activities for the development of the scientific temperament in the students during the high school education. Moreover the workshop was aimed to introduce the idea of Innovation Hub and its effectiveness in teaching the fundamental science. The workshop started on 9 December 2022 with inaugural function in which purpose of this workshop was introduced by convener Prof. Y. C. Sharma, Vice President, RC06, and Director, Research & Academic Development, Jaipur National University. In the welcome address Prof. R. L. Raina, Vice Chancellor, JNU invited all participants to fully immerse in this concept of teaching and learning so that they can effective teachers and become role model for others. He insisted that such workshops are designed to cater the objectives of NEP 2020 so that our students can become better learners and effective citizens. He further added that this workshop will be very useful for the participants in the enhancement of their knowledge. The workshop started with the inaugural lecture of the Chief Guest of the function, Prof. Y K Vijay, President, IAPT-RC06, Rajasthan and Director, CIST, IIS University, Jaipur. Prof. Vijay introduced the idea of Innovation HUB to the participants and demonstrated some concepts through videos. He physically demonstrated about 10 experiments which were appreciated by all the participants. Prof.

Vijay demonstrated methods of teaching so that students could be prepared for the new age science. Post lunch the second session started with the lecture on “Innovation and creation” by Dr. Neetu Verma, Associate Professor, PG Department, Kanya Maha Vidyalaya, Jalandhar, Punjab. She introduced the idea of wave motion using the transmission line, made by straws. She inspired and motivated participants to design and develop such toys for the students so that they feel more involved. The wave machine was also demonstrated having both longitudinal and transverse wave motion displays in mechanical ways. The concept of conversion of potential energy into kinetic energy on a racing track was shown to the participants. It was followed by a lecture by Prof. Dheera Sanadhya, JNU, Jaipur on “New careers on the horizon for Science students”. She introduced the new avenues available to the students as career. The participants were shown the advanced laboratories available at JNU by her team. This was followed by a laboratory session mentored by Prof. YC Sharma, JNU Jaipur.

In the evening 6-7 PM there was a lecture by Dr. Jaswinder Singh on “Curiosity for Science Practicals” President RC02, Lecturer in Physics, Govt. Sr. Sec. Smart School Kalyan, Patiala. Prof. Singh showed a few tricks of interesting teaching which are very impactful and easy to understand. Second day of the workshop started with the lecture on “Building Blocks of Nature” by Prof. N. L. Sharma, Professor Emeritus, North Michigen University, US. He spoke about the Nature, Matter and Radiation; followed by lecture on “Futuristic 5G Technology” by Prof. R. K. Khanna, Former President and National executive member, IAPT-RC6. After tea Lecture and session by Mr. Himanshu Khandelwal and Kushal Jain, Mentors was on Atal Tinkering Labs. It was a training session for the participants who already have these labs in their Schools and a motivating session for those who don't have; so that to introduce these new age gadgets in their teaching learning process. This was followed by Lecture on “Misconceptions in Science” by Prof. Yogesh Bhatnagar, St. Xavier's College, Jaipur. He pointed out some general oversights and omissions which usually takes place in science teaching. This was very well received by the teachers and they commented about this session as a real value addition in their own teaching. The valedictory session was graced by the Chief Guest Prof. H N Verma, Pro Chancellor, JNU and Guest of Honor Prof. R L Raina, VC, JNU. In his address Prof. Verma congratulated all the participants as they were able to learn the new methods of learning and teaching from the stalwarts of science teaching. He emphasized that such workshops are a learning platform the teaching fraternity to align with the mechanisms indicated and prescribed in the NEP 2020. He invited the teachers to get their students visit the advanced laboratories available in the JNU campus. He also offered the help and support of faculty members of JNU in the schools in the development of new laboratories of the expert lectures. He invited the participants to express their view and experiences in this workshop so that the organizers may calibrate the impact of these efforts. On this initiation 6 participants expressed their thoughts and showed their satisfaction in the proceedings of the event.

10. Workshop on 'SCIENCE IN SECONDS' organized by St. TERESA'S School Mansarovar, Jaipur, Rajasthan on December 10-11, 2022.

In association with ANVESHIKA Jaipur the department of physics St TERESA'S School Mansarovar, Jaipur organized a two days' workshop "SCIENCE IN SECONDS" based on fun of doing experiment. 900 + students from 15 + School of state attended the workshop. The students, faculty members, and science lovers accorded a warm welcome to the resource person Dr. G.S. Menaria. The program started with the inaugural address by Rev Sr. Juicy, superior General in dignified presence of Rev Sr Sushama, Rev Sr Neelima, Principal St Francis School Bandikui, Head Department of physics of various schools. Rev Sr . Jommy Principal of the school delivered a talk on significance of experiment learning in science. Students of St.Anslem's Mansarovar, Army public school, Evolution international school, St Paul's School, Morning Star, Subodh school, St. Angela Sophia ,Birla school etc enjoyed physics in joyful way.

Seven sessions each of about 60 students per day were taken, where demonstration on the concept of physics were performed. The presentation was from topic related to the need of curriculum.

During incredible and throughout provoking and inspiring presentation through demonstration, Dr. Menaria motivated student to give more stress upon learning by doing in their laboratories. Looking into various concept of mechanics, optics & electromagnetism through demonstration was really an awesome experience for the students. 35 demonstrations were performed in the workshop. The workshop was highly interactive and responsive.

The students, parents, dignitaries were highly impressed with overall format and for the passion in explaining concept by resource person.

The event was coordinated by Mr Binnu,Mr Prince and Mr Kevin . Student coordinator Miss Eishwarya , senior student Aviral ,Aayush , and many faculty member looked after . At last, vote of thanks was given by Mrs Jibby.

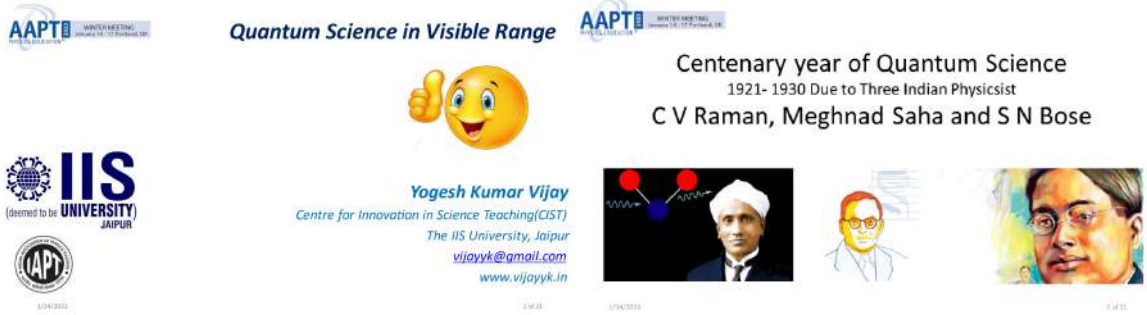
11. IAPT RC-6 at international meet.

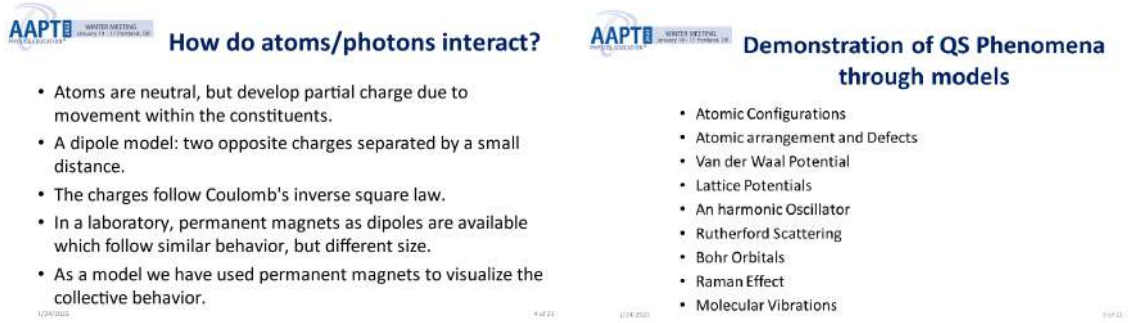
Quantum Science at visible range: Stage Show at AAPT meeting, Portland, USA during 10-17 January, 2023.

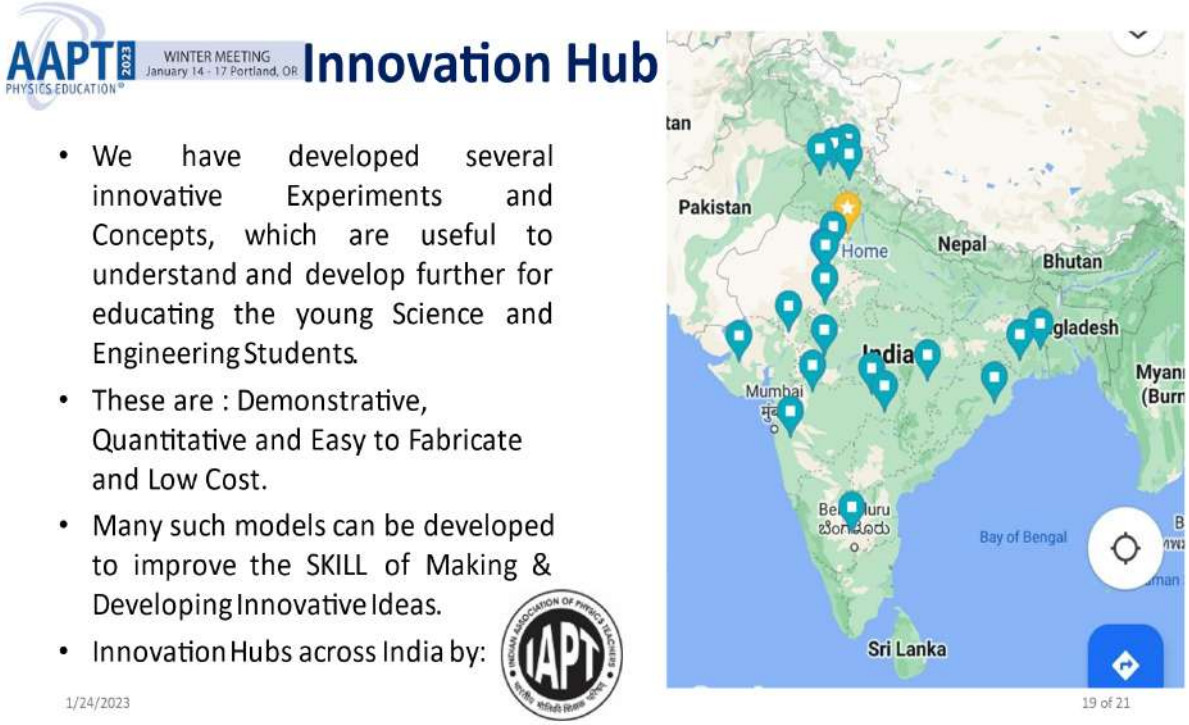
Y K Vijay, CIST, IIS University, Jaipur 302020

I took part in the American Association of Physics Teacher Winter Meet 2023, during 10-17 January, 2023. I happy to share my experience and exposure. We all are teaching quantum

mechanics through mathematical modelling and computing only few physical illustrations. A FEW SLIDES ARE BEING SHARED. I carried a few modes all the way from Jaipur to Portland USA to justify and share with over 100 participants. Dr. Minakshi Siyal from HMV College Jalandhar was also there.








12. Conducted a workshop on 'Experiential Learning of Physics' at JK Lakshmipat University, Jaipur for students of MPS School, Jaipur on 16.01.2023.

A workshop on 'Experiential Learning of Physics' was organized at JK Lakshmipat University, Jaipur for students of MPS School, Jaipur on 16.01.2023. Resource person of the workshop was Dr. Vipin Kumar Jain, Associate Professor - Physics, JK Lakshmipat University, Jaipur. About 60 students learned different scientific concepts by demonstrating themselves and solved their several queries. They appreciated learning by doing pedagogy instead of route learning.


13. Guest of Honor and Resource Person, Workshop on 'Learning Physics through Simple Experiments (LPSE-2023)' at Swami Keshvanand Institute of Technology, Management and Gramothan - [SKIT], Jaipur, Rajasthan on January 24-25, 2023.

A two Day Student Workshop on "Learning Physics Through Simple Experiments [LPSE-2023]" was organized by Department of Physics, Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur in collaboration with Indian Association of Physics Teachers RC6 on January 24-25, 2023. About 300 students have attended the workshop and got benefited from the experience of eminent speakers.
On the first day of the workshop, following Resource Persons graced the occasion.

1. Prof.Y. K. Vijay, President of Indian Association of Physics Teachers, Rajasthan as Chief Guest
2. Dr. Vipin Kumar Jain, Associate Professor in Physics at JK Lakshmipat University, Jaipur as Guest of Honor

A gracious floral welcome, and a memento were presented to Prof. Y. K. Vijay by the honorable Surja Ram Meel, Chairman, SKIT. Dr. Vipin Kumar Jain was welcomed by Prof. R.K. Jain, Dean, SKITM&G by presenting him a flower bouquet and memento.

Prof. Y.K. Vijay started his presentation by paying tribute to Prof. Babulal Saraf, Indian Physicist and experimentalist who received first prize in the apparatus competition, American Association Physics Teachers in 1979.

Prof. Y.K. Vijay threw light on the aims and objectives of the Indian Association of Physics Teachers. He captivated the audience and described the fundamentals of Quantum Physics through simple experiments. He explained Vander wall Interaction, Bohr model, Simple harmonic motion, Resonator, Alpha decay, Atom- atom interactions, and Plasma generation at RF frequency through the simple models and experiments in an interesting way.

On the Second day, we had Dr. Vipin Kumar Jain, Associate Professor in Physics at JK Lakshmipat University as a keynote speaker. He explained the fundamentals of electronics and optics through self-developed models. The session was interactive, and participants learned the phenomena by performing the experiments by themselves.

Both sessions were quite educational. The participants must have benefited from the discussions and would have substantial takeaways.

एसकेआईटी में दो दिवसीय छात्र कार्यशाला का शुभारंभ

जयपुर समाचार जगत न्यूज़ । जगतपुरा स्थित स्वामी केशवानंद इंस्टीट्यूट आफ टेक्नोलॉजी मैनेजमेंट एंड ग्रामोत्थान में मंगलवार को भौतिकी विभाग के द्वारा इंडियन एसोसिएशन ऑफ फिजिक्स टीचर राजस्थान चैप्टर के

सहयोग से 'लर्निंग फिजिक्स थ्रू सिम्पल एक्सपेरीमेंट' विषय पर दो दिवसीय छात्र कार्यशाला का शुभारम्भ हुआ। कार्यशाला में 200 से अधिक विद्यार्थियों ने भाग लिया। इस कार्यक्रम के मुख्य अतिथि प्रोफेसर वाई के विजय (निदेशक, सी आई एस टी, दी आई आई एस यूनिवर्सिटी, जयपुर) तथा विशिष्ट अतिथि डॉ. विपिन जैन, एसोसिएट प्रोफेसर जे के लक्ष्मीपत यूनिवर्सिटी थे। मुख्य वक्ता के रूप में प्रोफ़ेसर (डॉ.)वाई. के. विजय ने क्वांटम फिजिक्स के मूलभूत सिद्धांतों को सिंपल प्रयोगों की सहायता से समझाया। उन्होंने इस सत्र में रदरफोर्ड मॉडल, बोर मॉडल, अल्फा क्षय, चुम्बकीय दोलित्र आदि अनेक प्रयोगों का लाइव प्रदर्शन किया। इस अवसर पर कॉलेज के चेयरमैन सुरजाराम मील तथा डीन प्रोफ़ेसर (डॉ.) आर. के. जैन ने मुख्य अतिथि तथा विशिष्ट अतिथि का स्वागत किया। कार्यक्रम के कोऑर्डिनेटर प्रोफ़ेसर (डॉ.) कोमल शर्मा ने इस प्रोग्राम का संक्षिप्त विवरण प्रस्तुत किया । इस अवसर पर कार्यक्रम के समन्वयक डॉ मनस्वी दीक्षित तथा श्री राजीव कुमार भी उपस्थित थे । कार्यक्रम के अंत में भौतिकी विभाग विभागाध्यक्ष, प्रोफ़ेसर (डॉ.) ब्रजराज शर्मा ने सभी प्रतिभागियों का धन्यवाद ज्ञापित किया।

एसकेआईटी में शुरू हुई दो दिवसीय छात्र कार्यशाला

ब्यूरो/नवज्योति, जयपुर। एसकेआईटी में मंगलवार को भौतिकी विभाग द्वारा इंडियन एसोसिएशन ऑफ फिजिक्स टीचर राजस्थान चैप्टर के सहयोग से लर्निंग फिजिक्स थ्रू सिम्पल एक्सपेरीमेंट विषय पर दो दिवसीय छात्र कार्यशाला शुरू हुई। कार्यशाला में 200 से अधिक विद्यार्थियों ने भाग लिया। इस कार्यक्रम के मुख्य अतिथि प्रोफेसर वाईके विजय (निदेशक, सीआईएस टी, दी आईआईएस यूनिवर्सिटी, जयपुर) और विशिष्ट अतिथि जेके लक्ष्मीपत यूनिवर्सिटी के एसोसिएट प्रोफेसर डॉ. विपिन जैन थे। कार्यशाला में प्रोफेसर विजय ने क्वांटम फिजिक्स के मूलभूत सिद्धांतों को सिंपल प्रयोगों की सहायता से समझाया। इस मौके पर कॉलेज के चेयरमैन सुरजाराम मील के साथ कई अन्य उपस्थित थे।

कर गरीब परिवारों को लाभान्वित किया जाता है।

फिजिक्स के सिद्धान्त समझाए

जयपुर । जगतपुरा स्थित स्वामी केशवानंद इंस्टीट्यूट आफ टेक्नोलॉजी मैनेजमेंट एंड ग्रामोत्थान में भौतिकी विभाग के द्वारा इंडियन एसोसिएशन ऑफ फिजिक्स टीचर राजस्थान चैप्टर के सहयोग से आयोजित दो दिवसीय स्टूडेंट वर्कशॉप, लर्निंग फिजिक्स थ्रू सिमुलेशन एंड एक्सपेरीमेंट का 25 जनवरी को समापन हुआ। इस वर्कशॉप के अंतिम दिन मुख्य वक्ता के रूप में डॉ.विपिन जैन, एसोसिएट प्रोफेसर जे.के.लक्ष्मीपत यूनिवर्सिटी ने अपने व्याख्यान से प्रतिभागियों को लाभावन्वित किया। उन्होंने इस सत्र में भौतिकी के प्रकाशिकी, सेमीकंडक्टर फिजिक्स तथा विद्युत चुम्बकत्व जैसे विषयों से संबधित मूलभूत सिद्धांतों को सरल प्रयोगों की सहायता से समझाया। कार्यक्रम के अंत में कोऑर्डिनेटर डॉ.मनस्वी दीक्षित ने इस प्रोग्राम का संक्षिप्त विवरण प्रस्तुत किया। प्रोफेसर (डॉ.) ब्रजराज शर्मा, विभागाध्यक्ष, भौतिकी विभाग ने स्टूडेंट वर्कशॉप का महत्त्व बताते हुए इसके सफल आयोजन के लिए समस्त आमंत्रित वक्ताओं तथा आयोजको को धन्यवाद दिया। इस कार्यक्रम का संचालन भौतिकी विभाग के एसोसिएट प्रोफ़ेसर डॉ. कोमल शर्मा, डॉ. मनस्वी दीक्षित तथा राजीव कुमार ने किया इस स्टूडेंट वर्कशॉप में 200 से अधिक प्रतिभागियों ने भाग लिया।

एस.के.आई.टी. में दो दिवसीय कार्यशाला शुरू

जयपुर(सीमा सन्देश)। जगतपुरा स्थित स्वामी केशवानंद इंस्टीट्यूट आफ टेक्नोलॉजी मैनेजमेंट एंड ग्रामोत्थान में मंगलवार को भौतिकी विभाग द्वारा 'लर्निंग फिजिक्स थ्रू सिम्पल एक्सपेरीमेंट' विषय पर दो दिवसीय छात्र कार्यशाला का शुभारम्भ किया गया। यह कार्यशाला इंडियन एसोसिएशन ऑफ फिजिक्स टीचर राजस्थान चैप्टर के सहयोग स आयोजित की जा रही है। इसमें 200 से अधिक विद्यार्थियों ने भाग लिया। मुख्य अतिथि प्रोफेसर वाई के विजय (निदेशक, सी आई एस टी, दी आई आई एस यूनिवर्सिटी, जयपुर), विशिष्ट अतिथि डॉ विपिन जैन, एसोसिएट प्रोफेसर जे के लक्ष्मीपत यूनिवर्सिटी रहे। मुख्य वक्ता के रूप में प्रोफेसर (डॉ.)वाई. के. विजय ने क्वांटम फिजिक्स के मूलभूत सिद्धांतों को सिंपल प्रयोगों की सहायता से समझाया । उन्होंने रदरफोर्ड मॉडल, बोर मॉडल, अल्फा क्षय, चुम्बकीय दोलित्र आदि अनेक प्रयोगों का प्रदर्शन किया। कॉलेज चेयरमैन सुरजाराम मील तथा डीन प्रोफेसर (डॉ.) आर. के. जैन ने अतिथि का स्वागत किया । कार्यक्रम कोऑर्डिनेटर प्रोफेसर (डॉ.) कोमल शर्मा ने संक्षिप्त विवरण प्रस्तुत किया । इस अवसर पर कार्यक्रम के समन्वयक डॉ मनस्वी दीक्षित तथा श्री राजीव कुमार भी उपस्थित थे । भौतिकी विभाग विभागाध्यक्ष, प्रोफेसर (डॉ.) ब्रजराज शर्मा ने धन्यवाद ज्ञापित किया।

On Tuesday, a two-day student workshop on the topic 'Learning Physics through Simple Experiments' was started at SKIT Management and Gramothan, Jagatpura, by the Department of Physics in association with the Indian Association of Physics Teachers, Rajasthan Chapter. More than 200 students attend the workshop. Professor (Dr) YK Vijay (Director, CIST, IIS University) was the chief guest and Dr Vipin Kumar Jain (Associate Professor, JKLU) was the guest of honour. On this occasion Dr Vijay explained the principles of Quantum Mechanics. The program was conducted by Dr Manasvi Dixit and Rajiv Kumar.

दैनिक भास्कर जयपुर जिला 25-01-2023

लर्निंग फिजिक्स थ्रू सिंपल एक्सपेरिमेंट पर कार्यशाला

जयपुर। जगतपुरा स्थित स्वामी केशवानंद इंस्टीट्यूट ऑफ टेक्नोलॉजी में भौतिकी विभाग की ओर से इंडियन एसोसिएशन ऑफ फिजिक्स टीचर राजस्थान चैप्टर के सहयोग से 'लर्निंग फिजिक्स थ्रू सिम्पल एक्सपेरिमेंट' पर दो दिवसीय कार्यशाला शुरू हुई। कमुख्य अतिथि प्रो. वाई.के. विजय तथा विशिष्ट अतिथि डॉ. विपिन जैन थे। प्रो. (डॉ.) वाई. के. विजय ने क्वांटम फिजिक्स के मूलभूत सिद्धांतों को सिंपल प्रयोगों की सहायता से समझाया। इस मौके पर कॉलेज के चेयरमैन सुरजाराम मील, डीन प्रो. आर.के. जैन, प्रो. कोमल शर्मा और प्रो. (डॉ.) ब्रजराज शर्मा भी मौजूद रहे।

14. Workshop on "Physics Learning Through Experiments -2023 (WPLE-2023) at University Maharani College, Jaipur during January 30-31, 2023

A two days' workshop on "Physics Learning through Experiments -2023 (WPLE-2023)" has been organized jointly by Department of Physics, University Maharani College, Jaipur and Indian Association of Physics Teachers (IAPT)- Rajasthan Chapter (RC-06) during 30-31 January, 2023. The workshop was inaugurated with floral worship of Goddess Sarswati in presence of Prof. Yogesh Kumar Vijay (Retd.), President IAPT- Rajasthan Chapter (Chief guest), Prof. Mukta Agrawal (Principal), Prof. Sangeeta Bhargava (Vice principal), Dr. Sarita Kumari (Local head), Dr. Pura Ram (Convener), departmental faculty members and students (~30) on 30th January 2023 at 10:30 AM in Conference room at college.

The workshop is initiated with inaugural talk "Joy with Science" delivered by Prof. Y.K. Vijay. Prof. Vijay explained the various fundamental concept on Physics with low cost innovative experiments namely- Coupled Oscillator, Atomic arrangement with balls and magnets, harmonic and an-harmonic oscillations, science with Joy of Moods, etc. After the lectures, a documentary on Prof. Babulal Saraf has shown to the audience which elaborated that how does an experiment skill

play an important roll into realization of concept. The efforts made by Prof. Saraf to develop the Beta decay spectrum have explained by Prof. Vijay. Later on, the inauguration of science gallery, which includes- Sir, CV Raman, the Dr. Homi Jahangir Bhabha, Dr. Vikram Sarabhai, Dr. Subramanayam Chandershekhar, Dr. Meghnath Saha, Dr. Satyendra Nath Bose, and Prof. Babulal Saraf, has been carried out. The purpose of gallery is to introduce the contribution of the great Indian scientist/Physicist at international and national development.

After poster session inauguration, hand on experimental sessions has conducted. In which 10-12 experiments and demonstration were set up were installed namely- Linear Air track-to study elastic and inelastic collisions, Coupled oscillator – to understand the mechanism of energy transfer from one oscillator to other oscillator, the torsion oscillator, Newton Ring, air damping effect on compound oscillator, eddy current set up, air arc discharge, etc.

On the second day, the invited lecture has been delivered by Prof. Sanjeev Kumar Sarma, Dept of Physics, CCU, Meerut, UP. Prof. Sharma elaborated on "Need of Chemosensors for recognition of Hazardous ions/Molecules in food" and precaution during COVID-19. After lecture the hand on experimental sessions was held. The next session was poster session. The various experimental posters were presented by B. Sc. undergraduate students.

At the end of second day, the valedictory session was organized in presence of Prof. Anjali Krishnamurthy (Chief guest), Prof. Mukta Agrawal and other dignitaries of workshop, faculty members, Students. The workshop was ended with vote of thanks delivered by Dr. Sunita Mahavar.

15. Resource Person, Workshop on 'Joy of Learning Physics through Hands-on Experiments' at Vivekanand Global University, Jaipur, Rajasthan on April 15, 2023.

Resource Person Dr. Vipin Kumar Jain, IAPT RC-06 EC Member and Associate Professor-Physics, JK Lakshmipat University, Jaipur conducted a workshop on '**Joy of Learning Physics**

through Hands-on Experiments' at Vivekanand Global University, Jaipur, Rajasthan on April 15, 2023.

In his expert talk, Dr. Jain explained several concepts related to TIR and Optical Fibre, Diffraction by single slit, double slits, and grating, diodes, fuse, resistance, light brightness effect in electric bulbs, Heat transfer, sound waves by singing bowl, vibration modes, Doppler effect and Speedometer, TIR, LED, Electromagnetism, Hertz experiment, Charge on flame, Magnetic gun, Vortex formation, Development of Rise lights for decoration, etc using simple projects. Many students trilled by hands on doing experiments. About 100 students, faculty members, and Dean of the University enjoyed the workshop and appreciated the pedagogy of learning physics through hands-on experiments and demonstrations.

16. Interactive Session on 'Chandra-Yaan Mission' of India at India International School (IIS), Jaipur.

On 17th April 2023, the students at India International School attended a session on space and the solar system at the school's auditorium. The session aimed to educate students about the significance of space exploration, with a particular focus on the Chandra-Yaan mission of India.

The session started with a demonstration of several models of the solar system by the students of class XI, which helped the students understand the concept of centripetal force and how it causes celestial bodies to move in elliptical paths around the sun. They were also introduced to Newton's law of universal gravitation, which describes the force of attraction between two objects in the universe, centrifugal force, Motion of Satellite etc.

Following the demonstration, the students were shown a video that explained the Chandra-Yaan mission of India. The video showcased the various stages of the mission, including the launch, the journey to the moon, and the data collected by the spacecraft. Prof. Y. K. Vijay also highlighted the role of the mission in enhancing India's reputation in the field of space research.

Overall, the session was a valuable learning experience for the students, as they gained a better understanding of the principles that govern the force of attraction between celestial bodies and the latest advancements in space technology, including the Chandra-Yaan mission.

17. Teachers Training Workshop on 'Experimental Learning in Science' at Cambridge Court High School, Jaipur on 24th June 2023.

On Prof. B.L. Saraf Centenary year celebration, Teachers Training Workshop on 'Experimental Learning in Science' was organized by Cambridge Court High School, Jaipur in association with Indian Association of Physics Teachers (IAPT) – RC06 on 24th June 2023.

The **Resource Persons** of the workshop were **Prof. Y.K. Vijay**, President - IAPT RC06 and Director - Centre for Innovation in Science Teaching (CIST), IIS University, Jaipur, and **Dr. Vipin Kumar Jain**, Executive Committee Member, IAPT RC-06 and Associate Professor-Physics & HoD, JK Lakshmipat University, Jaipur. This workshop was witnessed by more than 40 Science teachers from various prestigious schools of Jaipur in the auditorium of the school.
With ever evolving new generation, the teachers today must stay updated to solve and satisfy the queries of their ever-inquisitive students. Not only do they have to answer their queries but also must convince them. Mere telling the information doesn't work, it must be proved also, which can be done through experiments' demonstration. Conduction of simple experiments with simple tools or objects to fix the complex principles of science in the young mind is what was taught to the teachers in the workshop.

Be it Physics principle or be it of Chemistry, there were ready- to- hand experiments demonstrated to the teachers, who found them to be highly useful for their class. Teachers were made to conduct experiment by the own which helped them to learn quickly and gain confidence. All the teachers felt benefitted specially because they were introduced to conduct experiments for clearing the doubts of their pupils as well as for their quick and easy understanding.

Prof. Vijay and Dr. Jain explained scientific concepts with hand-on experiments on measuring Sparking potential and Relative dielectric constant of medium by Hertz Experiment, Behavior of flame in high potential, Refractive Index of liquid by prism, atomic configuration, hanging/ floating magnets, vibration modes, Bohr Model, Lorentz Oscillator and different forces, Doppler effect, Thermal conductivity in solids, Heating effect with resistive wire, Electric Bulb and Brightness, Exploring material structure with digital microscope, Interference in water waves,

LASER and Diffraction with Single slit, double slit, grating, Concept of CD and DVD formation, Raman effect, Optical fibre, etc. Under Hands-on activity, participants also made models of Manometer (Using pipes and balloon), Submarine dynamics (Using small and larger size plastic water bottles), and Vortex formation using plastic bottles in the workshop to understand the concept of pressure, density, surface tension respectively. Participants were very excited to learn these cost-effective scientific models which are very useful for developing scientific temperament.

Thanking the Resource Persons Prof. Y.K. Vijay and Dr. Vipin Kumar Jain, the Mentor of the school Ms. Lata Rawat, Principal Ms. Swati Mathur, and Vice- Principal Ms. Sunita Bhat appreciated them for spreading their knowledge to benefit the teaching fraternity. There can be no other noble deed than sharing your knowledge, said Ms. Rawat in their praises and wished for many more to keep the teachers updated for the latest and the best.