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PRINCIPAL
GOVT. DEGREE COLLEGE
SALUR
PARVATHIPURAM MANYAM DIST.

Gmail **Srinivasa Rao Gangiredla <srinivasarao.gangiredla@gmail.com>**

IPR awareness program- General instructions and Details of the resource person & Format of attendance sheet attached.

1 message

RANDHIR KUMAR <randhir.ipo@gov.in> Fri, Mar 11, 2022 at 12:48 PM
To: sivaramakrishna.darlapudi@gmail.com, Khannalcs@gmail.com, chandu.naik11@gmail.com, aminenikirankumar@gmail.com, saiquanazeer@ksngdcw.ac.in, chandrasekharJoga@gmail.com, srinivasarao.gangiredla@gmail.com, ramaiahdevarapalli@gmail.com, gdcgpm@gmail.com, leelapavani94@gmail.com, pydirajup.telugu@gmail.com
Cc: pondurujkc@gmail.com, dhone.jkc@gmail.com, jkc.gdcmadakasira@gmail.com, jkc.dharmavaram@gmail.com, jkc.anantapurwomen@gmail.com, gdc.rajam@gmail.com, salur.jkc@gmail.com, govtdcglp@gmail.com, gdc.chintapalli@gmail.com, gdcvmdl@gmail.com

Dear Sir/ Madam,

12	ZONE-1	Srikakulam	GDC, RAJAM
13	ZONE-1	Srikakulam	GDC, PONDURU
17	ZONE-1	Vizianagaram	GDC, SALUR
19	ZONE-1	Vizianagaram	GDC, GUMMALAXMIPURAM
22	ZONE-1	Vizianagaram	GDC, GAJAPATHINAGARAM
26	ZONE-1	Visakhapatnam	GDC, CHINTAPALLI
29	ZONE-1	Visakhapatnam	GDC, V.MADUGULA
140	ZONE-4	Kurnool	GVRS GDC, DHONE
150	ZONE-4	Anantapuramu	SYTR GDC, MADAKASIRA
152	ZONE-4	Anantapuramu	K.H. GDC, DHARMAVARAM
153	ZONE-4	Anantapuramu	KSN GDC (W), ANANTAPURAMU

With reference to the “Awareness on Intellectual Property Rights (IPR)” Webinar conducted by “Patent Office Chennai” in association with “Commissionerate of Collegiate Education:: Andhra Pradesh”, the following instructions have been shared to make the program a grand success.
To impart direct knowledge on Intellectual Property Rights the colleges may encourage all the students and faculty members to attend the program by providing video/audio facilities to cater to the entire strength of the college.

We hope you have received the following Cisco Webex link for accessing the program scheduled for 15/03/2022 (Tuesday), Time:-12:00 PM-1:30 PM.

Meeting Link-
https://chennai-patent.webex.com/chennai-patent/j.php?MTID=m148e996fc926864397d5a9f22f9385e4

Preferable mode: Audio and Video (AV)
1. By utilizing projectors/seminar halls/auditoriums/ virtual classrooms/laboratories fitted with computers etc. to the fullest capacity, thereby arranging mass gatherings (following due to covid protocols, if any)

2. Smart TV /Android TV can also be used to access the program by connecting/paring with desktop/laptop/ mobile etc.
3. Laptop/mobiles of faculty members/students may also be encouraged. For example, a group of students can share a single mobile / laptop, and similarly, faculty members can also share their mobiles with a group of students to directly access the programme.
4. Students who are not attending physical classes may also be encouraged to attend through virtual mode i.e., by accessing through mobiles /laptop/desktop/tab, etc.
5. Mass gatherings and a lot of smaller groups as mentioned above would be able to accommodate the entire strength of the college.
6. Colleges may also find other innovative ways like reaching students by arranging audio facilities/transmission to all the students of the college during the program.

Further, as we are clubbing colleges [To optimize capacity and other constraints in getting the slots, as Patent office Chennai is conducting IPR awareness programs in 5 southern states and 2 UT] proceedings of the entire session will be handled/controlled by a resource person (welcome address and vote of thanks also). However, participants are encouraged to interact, ask and clarify their doubts.
We expect kind co-operation and support from the colleges in reaching maximum strength in “planting IP (Intellectual Property) seeds” in the students and faculty members.
Please also provide the following details after the conduct of the program:
1. Attendance Sheet (as per the format attached) separate sheets for students, faculty members.
2. Photograph/Screenshots taken during the session.

Thanks & Regards
Randhir Kumar
Examiner of Patents & Designs
Intellectual Property Office, Chennai.
Govt. of India.
Contact-7903127375

2 attachments

Attendee_ExcelORG (2).xlsx
9K

CH Ramalinga Prasad short CV.pdf
168K

Gmail **Srinivasa Rao Gangiredla <srinivasarao.gangiredla@gmail.com>**

Intellectual Property Rights (IPR) Webinar-Webex meeting invitation: Date: 15/03/2022 (Tuesday), Time:-12:00 PM-1:30 PM

1 message

RANDHIR KUMAR <randhir.ipo@gov.in> Mon, Mar 7, 2022 at 5:46 PM
To: srinivasarao.gangiredla@gmail.com, salur.jkc@gmail.com
Cc: V MAHALAKSHMI <nipam-chennai@gov.in>, "Varaprasad Kukatla Asst.Controller of Patents &Designs,Patent Office IPR Building, GST Road, Guindy, Chennai 32" <varaprasad.ipo@nic.in>

Dear sir/ Madam,

17	ZONE-1	Vizianagaram	GDC, SALUR

I would like to inform you that an awareness program on Intellectual Property Rights under NIPAM has been scheduled for 15/03/2022 from Timing -12:00-1:30 PM. Please circulate the following meeting link to all students and faculty members of your institution to join the scheduled awareness program.

Meeting Link-
https://chennai-patent.webex.com/chennai-patent/j.php?MTID=m148e996fc926864397d5a9f22f9385e4

Thanks & Regards
Randhir Kumar
Examiner of Patents & Designs
Intellectual Property Office, Chennai.

Date: 17-12-2022

To
The Registrar,
Andhra University,
Visakhapatnam – 530 003.

Respected sir

Sub: - Government Degree and PG college, salur request to access online modecourse on IPR - Request - Regarding.

I submit that we have M.Sc organic chemistry course. We request to provide online course of intellectual property rights (IPR). We have 20 students in second year for the acadamic year 2022-23.

In this regard I request you please provide access that above said course.

Thanking you sir.

Yours faithfully,

17/12/2022

(Dr. T. RADHA KRISHNA)

PRINCIPAL

PRINCIPAL
Govt. Degree College-Salur
Parvathipuram Manyam Dist.

Encl: LIST OF M.SC STUDENTS- (20)

Fee Details: ACC HO: SBI · 39962935680
phone pay : UTR NO · 235311373683
Date : 19/12/2022.
Gdc, Salur, Ppm,
DRR Course fee - 6000/- paid.
No of students - 20 (M.Sc. organic chemistry)

IPR REGISTRATIONS GDC SALUR M.Sc Organic Chemistry III-Semester (BATCH 2021-23)				
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INTELLIGENT PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

FIELD OF INVENTION

The present invention relates to the field of teaching tools.

The present invention is related to field of optical physics teaching tool.

The present invention relates to the field of education device for school children to wave optics teaching purpose, particularly, the present invention relates to a kind of physics teaching aid, particularly relates to a kind of teaching optical instrument.

More particularly, the present invention is related to intelligent parallel rays producer device with multiple slits for teaching purposes.

Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS | GEOGRAPHICAL INDICATIONS

Application Details

APPLICATION NUMBER	202141043280
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	24/09/2021
APPLICANT NAME	1 . Dr. Joga. Chandrasekhar Rao 2 . Botcha Venkata Rao 3 . Panduru Venugopal 4 . Srinivasa Rao Varanasi
TITLE OF INVENTION	PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES
FIELD OF INVENTION	PHYSICS
E-MAIL (As Per Record)	patentpublication@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	01/10/2021

पेटेंट कार्यालय
शासकीय जर्नल

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

निर्गमन सं. 40/2021	शुक्रवार	दिनांक: 01/10/2021
ISSUE NO. 40/2021	FRIDAY	DATE: 01/10/2021

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/09/2021

(21) Application No.202141043280 A
(43) Publication Date : 01/10/2021

(54) Title of the invention : PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

(51) International classification :G02F 1/1343
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)Srinivasa Rao Varanasi
Address of Applicant :PGT Physics, School Education, A.P. Model School - Tamada, Srikakulam, Andhra Pradesh, India ---------- ----------

(57) Abstract :
The present invention relates to Intelligent parallel rays producer device with multiple slits for teaching purposes. The objective of the present invention is to solve the problems in the prior art technologies related to teaching learning tools developed for wave optics.

No. of Pages : 30 No. of Claims : 3

FORM 1 THE PATENTS ACT, 1970 (39 of 1970) & THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT [See sections 7,54 & 135 and rule 20(1)]	(FOR OFFICE USE ONLY) Application No.: ..... Filing Date: ..... Amount of Fee Paid: ..... CBR No.: ..... Signature: .....

1. APPLICANT(S):

Sr.No.	Name	Nationality	Address	Country	State
1	Dr. Joga. Chandrasekhar Rao	India	Lecturer In Physics, Department Of Physics, Government Degree & PG College – Salur, Vizianagaram-535003, Andhra Pradesh, India	India	Andhra Pradesh
2	Botcha Venkata Rao	India	School Assistant in Physical Sciences, Zilla Parishad High School - Mettavalasa, Srikakulam, Andhra Pradesh, India	India	Andhra Pradesh
3	Panduru Venugopal	India	School Assistant in Physical Sciences, Zilla Parishad High School - Kancharam, Srikakulam, Andhra Pradesh, India	India	Andhra Pradesh
4	Srinivasa Rao Varanasi	India	PGT Physics, School Education, A.P. Model School - Tamada, Srikakulam, Andhra Pradesh, India	India	Andhra Pradesh

2. INVENTOR(S):

Sr.No.	Name	Nationality	Address	Country	State
1	Dr. Joga. Chandrasekhar Rao	India	Lecturer In Physics, Department Of Physics, Government Degree & PG College – Salur, Vizianagaram-535003, Andhra Pradesh, India	India	Andhra Pradesh
2	Botcha Venkata Rao	India	School Assistant in Physical Sciences, Zilla Parishad High	India	Andhra Pradesh

			School - Mettavalasa, Srikakulam, Andhra Pradesh, India		
3	Panduru Venugopal	India	School Assistant in Physical Sciences, Zilla Parishad High School - Kancharam, Srikakulam, Andhra Pradesh, India	India	Andhra Pradesh
4	Srinivasa Rao Varanasi	India	PGT Physics, School Education, A.P. Model School - Tamada, Srikakulam, Andhra Pradesh, India	India	Andhra Pradesh

3. TITLE OF THE INVENTION: PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

4. ADDRESS FOR CORRESPONDENCE OF APPLICANT / AUTHORISED PATENT AGENT IN INDIA:

Dr. Joga. Chandrasekhar Rao, Lecturer In Physics,
Department Of Physics, Government Degree & PG College – Salur, Vizianagaram- 535003, Andhra Pradesh, India

Telephone No.:
Fax No.:
Mobile No: 8085217942
E-mail: patentpublication@gmail.com

5. PRIORITY PARTICULARS OF THE APPLICATION(S) FILED IN CONVENTION COUNTRY:

Sr.No.	Country	Application Number	Filing Date	Name of the Applicant	Tilte of the Invention

6. PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION:

International Application Number	International Filing Date as Allotted by the Receiving Office
PCT//	

7. PARTICULARS FOR FILING DIVISIONAL APPLICATION

Original (first) Application Number	Date of Filing of Original (first) Application

8. PARTICULARS FOR FILING PATENT OF ADDITION:

Main Application / Patent Number:	Date of Filing of Main Application

9. DECLARATIONS:

(i) Declaration by the inventor(s)

I/We ,Dr. Joga. Chandrasekhar Rao,Botcha Venkata Rao,Panduru Venugopal,Srinivasa Rao Varanasi,

is/are the true & first inventor(s) for this invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) of the inventor(s): .....

(c) Name(s): Dr. Joga. Chandrasekhar Rao,Botcha Venkata Rao,Panduru Venugopal,Srinivasa Rao Varanasi

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) : .....

(c) Name(s) of the singnatory: Dr. Joga. Chandrasekhar Rao,Botcha Venkata Rao,Panduru Venugopal,Srinivasa Rao Varanasi

(iii) Declaration by the applicant(s)

- **The Complete specification relationg to the invention is filed with this application.**
- **I am/We are, in the possession of the above mentioned invention.**
- **There is no lawful ground of objection to the grant of the Patent to me/us.**

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

Sr.	Document Description	FileName
1	DECLARATION OF INVENTORSHIP (FORM 5)	Form 5.pdf
2	REQUEST FOR EARLY PUBLICATION(FORM-9)	Form 9.pdf
3	COMPLETE SPECIFICATION	FORM 2.pdf
4	DRAWINGS	Drawing (1).pdf
5	STATEMENT OF UNDERTAKING (FORM 3)	Form 3.pdf

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated hering are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this(Final Payment Date): ----------

Signature: .....

Name: Balram Singh Yadav

To The Controller of Patents

The Patent office at CHENNAI

This form is electronically generated.

Print

FORM 2

THE PATENTS ACT, 1970

(39 of 1970) &

THE PATENTS RULES, 2003

COMPLETE SPECIFICATION

(See section 10, rule 13)

1. TITLE OF THE INVENTION:

INTELLIGENT PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

2. APPLICANTS

Sr.No.	Name	Nationality	Address
1	Dr. Joga. Chandrasekhar Rao	India	Lecturer In Physics, Department Of Physics, Government Degree & PG College – Salur, Vizianagaram-535003, Andhra Pradesh, India
2	Botcha Venkata Rao	India	School Assistant in Physical Sciences, Zilla Parishad High School - Mettavalasa, Srikakulam, Andhra Pradesh, India
3	Panduru Venugopal	India	School Assistant in Physical Sciences, Zilla Parishad High School - Kancharam, Srikakulam, Andhra Pradesh, India
4	Srinivasa Rao Varanasi	India	PGT Physics, School Education, A.P. Model School - Tamada, Srikakulam, Andhra Pradesh, India

3. PREAMBLE TO THE DESCRIPTION

COMPLETE SPECIFICATION

The following specification particularly describes the invention and the manner in which it is to be performed.

BACKGROUND & PRIOR ART

The subject matter discussed in the background section should not be assumed to be prior art merely as a result of its mention in the background section. Similarly, a problem mentioned in the background section or associated with the subject matter of the background section should not be assumed to have been previously recognized in the prior art. The subject matter in the background section merely represents different approaches, which in-and-of-themselves may also be inventions.

Optics is the branch of Physics which deals with study of nature, propagation and properties of light. Light is a form of energy and moves in all directions in the form of waves. The challenges lie in developing an appropriate learning environment with theory as well as practical knowledge in the field. There are a number of teaching learning tools are developed in the prior art.

Some of the prior work listed herewith:

211319538PHYSICS SIMPLE HARMONIC MOTION TEACHING AIDCN - 21.08.2020 Int.Class G09B 23/10Appl.No

202020186557.XApplicant HENAN NORMAL UNIVERSITY Inventor HANG U The utility model discloses a physics simple harmonic motion teaching aid. Bottom plate, the upper surface of the bottom plate is fixedly connected with a detection plate. The upper surface of the detection plate is arc-shaped; scales are formed in the front surface of the detection plate; symmetrical supporting plates are fixedly connected to the upper surface of the bottom plate. A fixed plate is arranged above the detection plate; the top end of each supporting plate is fixedly connected with the bottom surface of a fixed plate; a fixing column is arranged on the front face of the fixing plate, the back face of the fixing column is fixedly connected with the front face of the fixing plate, a groove is formed in the outer surface of the fixing column, a protractor is arranged below the fixing plate, and the upper surface of the protractor is fixedly connected with the bottom end of the fixing plate. The physics simple harmonic motion teaching aid plays a role in keeping rays emitted by the small laser lamp at the central position of the test ball, and solves the problems that the effect is not obvious when the simple harmonic motion is demonstrated, and the learning interest of students is reduced.

211669850LIGHT REFLECTION DEMONSTRATION DEVICE FOR PHYSICS TEACHING CN - 3.10.2020Int.Class G09B 23/22Appl.No 201820294586.0Applicant HEZE UNIVERSITY Inventor HANG YUNHAI The utility model discloses a light reflection demonstration device for physics

teaching, and the device comprises a bottom plate; the supporting structure comprises an angle adjusting shaft, a supporting rod arranged on the angle adjusting shaft and a supporting box arranged at the free end of the supporting rod; the light beam emitting structure comprises a light beam emitter arranged in the supporting box, and a light emitting head of the light beam emitter extends out of the supporting box; the light beam reflection structure comprises a positioning pin arranged on the bottom plate, a plane mirror base with a through groove in the middle and a plane mirror arranged on the plane mirror base, and the positioning pin is clamped in the through groove in a sliding mode; an angle reference structure; projection screen. The light reflection demonstration device for physics teaching provided by the utility model is convenient for receiving reflected light rays and observing the paths of the light rays at different angles, thereby improving the work efficiency of physics teaching.

206726591PHYSICS INCLINED PLANE DEMONSTRATION TEACHING AID CN - 08.12.2017 Int. Class G09B 23/10Appl.No 201720438485.1Applicant ZHANG ZHANHAO Inventor ZHANG ZHANHAO The utility model provides a physics inclined plane demonstration teaching aid belongs to demonstration teaching aid field. It has solved the inconvenient problem of carrying of current demonstration teaching aid. This physics inclined plane demonstration teaching aid,

including the base, the base top surface is equipped with the card slot, still include the swash plate, swash plate left side broadside both ends are connected with the pivot, the swash plate rotates through the pivot to be connected in the card slot, the card slot tank bottom is equipped with and is parallel to each other, the on -line screen storage device comprises a base, the angle spout is followed and is equipped with angle identification and range marker along length direction at the card slot tank bottom apart from the spout, sliding connection has the angle slider on the angle spout, and can follow angle spout slip angle slider, and make angle slider top withstand the swash plate, and make swash plate and card slot tank bottom be angle setting, have apart from the slider apart from sliding connection on the spout, and apart from being equipped with the adapter sleeve on the slider, and it can the vertical laser pen that upwards sends the ray to be equipped with on the adapter sleeve. The convenient regulation of this demonstration teaching aid forms the arbitrary angle degree, and also convenient storage carries.

209616742SPECIAL DRAWING RULER FOR PHYSICS TEACHING CN - 12.11.2019 Int.Class B43L 3/00Appl.No 201920185155.5Applicant ZHANG JINRONG Inventor ZHANG ZHIXIONG The tility model discloses a special drawing ruler for physics teaching. The drawing ruler comprises an angle measuring ruler and a circle drawing ruler; the circle drawing ruler comprises a plurality of hollowed-out

grooves with circular contours. Wherein the protractor and the circle drawing ruler are rotationally connected through a rotating shaft; the radiuses corresponding to the circular outlines of the plurality of hollowed-out grooves are different and have the same tangent point; the tangent point, the rotating shaft and the zero point of the protractor coincide in position. The circle drawing ruler is further provided with a ray groove used for being aligned with the incident direction of the simulated charged particles. According to the utility model, the track that charged particles are perpendicular to the direction of a magnetic field and are injected into a bounded uniform magnetic field to do uniform circular motion can be rapidly drawn; the teaching aid is simple in structure and convenient to operate, the specific situation of each circular motion trail can be shown as long as the teaching aid moves and rotates according to related requirements, the key for solving problems can be quickly found out from dynamic changes, and teachers and students can be easily liberated from troubles.

109686208TELESCOPIC LENS DEMONSTRATION SLIDE RAIL DEVICE FOR COLLEGE PHYSICS EXPERIMENT CN - 26.04.2019Int.Class G09B 23/22Appl.No 201910122281.0Applicant HANGLUO UNIVERSITY Inventor ZHANG XUEBIN The invention discloses a telescopic lens demonstration slide rail device for a college physics experiment and belongs to the technical field of college physics

experimental apparatuses. The device comprises a fixed base. An electric telescopic rod is arranged on one side of the upper end of the fixed base, the upper end of the electric telescopic rod is fixedly connected to a lamp holder, the other side of the upper end of the fixed base is fixedly connected to a second fixed plate, an imaging plate is arranged on the second fixed plate, a slide rail is arranged between the fixed plates, a slide block is slidably connected to the slide rail, and a lens rack is arranged at the upper end of the slide block. By overturning the image rack as a result of different experiments, when a light source penetrates a convex lens and a concave lens and does not penetrate a lens, corresponding imaging effects are shown on the imaging plate, separately. By adjusting the height of the lens, the light source can rip into different positions of the lens to show corresponding imaging effects on the imaging plate. By adjusting sliding of the slide block on the slide rail, the positions of the lens and the light source are adjusted, so that the distance of the incident ray is adjusted. Understanding of students is deepened favorably, and the teaching quality is improved.

189364CONVEX LENS IMAGING DEMONSTRATION DEVICE

CN - 04.03. 2015Int.Class G09B 3/22Appl.No 201420519189.0Applicant MA ZHENPING Inventor MA ZHENPING A convex lens imaging demonstration device relates to a teaching aid used for the middle school physics teaching, and is mainly designed for solving the problems that the

conventional convex lens imaging rule demonstration device is large in size and is not convenient to move, etc. The convex lens imaging demonstration device comprises an H-shaped frame composed of two upright rods and a transverse rod, the two ends of the transverse rod are connected with and fixed to the middle parts of the two upright rods respectively, and the middle part of the transverse rod is equipped with a hole. Two light ray demonstration rods are respectively connected with the connection positions of the two upright rods and the two ends of the transverse rod via pin shafts, and are sleeved together via a circular hoop. The lower parts of two light ray demonstration rods passing the optical center of a convex lens are connected with the two ends of an object demonstrate rod movably via pin shafts, and the upper parts are crosswise inserted in the hole in the middle part of the transverse rod. The lower parts of the two upright rods are inserted in the circular rings of the two ends of the object demonstrate rod, the upright rods are equipped with scales, and a pointer is fixed on the circular hoop. The advantages of the utility model are that the convex lens imaging demonstration device is simple in structure and small in size.

104680894TWO-DIMENSIONAL HORIZONTAL PROJECTILE EXPERIMENT INSTRUMENT CN - 3.06.2015Int.Class G09B 23/10Appl.No 201310631583.3Applicant SHANGHAI SEHO DIGITAL NFORMATION TECHNOLOGY CO., LTD. Inventor CHEN QIANG The

invention relates to a horizontal projectile experiment instrument for physics teaching. When a conventional instrument is used for doing an experiment, students cannot see a real-time trace curve of the horizontal projectile motion, which occurs in the moving process, of a small ball. The invention aims to solve the problem. The invention discloses an electronic sensing two-dimensional horizontal projectile experiment instrument which is formed by a mechanical part structure and an electronic circuit, wherein the mechanical part comprises a vertical main body supporting plate, a horizontally arranged base and a sliding guide rail positioned at one corner position of the top end of the main body supporting plate; an electromagnet is fixedly arranged on the sliding guide rail; the electromagnet is used for attracting or releasing the steel small ball. The electronic sensing two-dimensional horizontal projectile experiment instrument is characterized in that an infrared ray coordinate system is formed by interweaving perpendicular infrared rays. The circuit part comprises a single chip at the core position; an external power supply, a power supply circuit, a transverse infrared receiving module, a longitudinal infrared receiving module, a longitudinal infrared transmitting module, a transverse infrared transmitting module, a storage module and

208507060PHYSICS TEACHING AID EXPERIMENT OPTICAL LEVER CN - 15.02.2019Int.Class G09B 23/22Appl.No 201820317778.9Applicant XINJIANG INSTITUTE OF ENGINEERING

Inventor XIE NING The utility model discloses a physics teaching aid experiment optical lever, including forward foot in a step fulcrum, rear foot fulcrum, crossbeam and reflector component, be connected with the bracing piece between rear foot fulcrum and the crossbeam, forward foot in a step fulcrum is located the crossbeam lower part, reflector component is located the crossbeam top, and includes stand and two mirror surfaces that set up in opposite directions of two relative settings, the relative inboard fixed damping pivot A that sets up who sets up in stand upper end, damping pivot A's the left and right sides is all fixed and is set up the connecting rod, the left and right sides of mirror surface is all fixed and is set up damping pivot B, through setting up connecting rod fixed connection between damping pivot B and the damping pivot A. The utility model discloses simple structure, lower, the convenient operation of cost, the utility model discloses a reflector component comprises two mirror surfaces that set up in opposite directions, in the time of in incident ray gets into reflector component, understands the reflection that make a round trip between two mirror surfaces, and the great angle of reflection of angulation makes things convenient for the survey crew to measure.

103886795OPTICAL COMPREHENSIVE EXPERIMENT BOX CN - 25.06.2014Int.Class G09B 3/22Appl.No 201210595515.1Applicant QIN WENDONG Inventor QIN WENDONG The invention relates to the

technical field of physics teaching aids, and particularly relates to an optical comprehensive experiment box which is composed of a box body, laser light groups, a triangular prism, a convex lens, a concave lens and an ash box. The optical comprehensive experiment box is characterized in that three laser light groups are inserted into the left side of the box body; and each laser light group is respectively composed of three laser lights, and switching on and off of three laser lights are controlled by the insertion depth at the same time. The triangular prism, the convex lens and the concave lens are respectively fixedly arranged on the inner side on the back of the box body. The triangular prism, the convex lens and the concave lens are water lens, and are composed of transparent thin casing structures and water mixed with scattering materials. A large window is arranged on the front of the box body, thus an internal optical path can be observed. An incense insertion hole is arranged on the right side of the box body. The ash box is fixedly arranged at the bottom of the right side. According to the invention, the optical comprehensive experiment box has the advantages of simple structure and good effect; nine rays can be seen at the same time through the window; and the refraction effect of different lenses on the rays can be directly observed, which deepens students' memory.

Groupings of alternative elements or embodiments of the invention disclosed herein are not to be construed as limitations. Each group member

can be referred to and claimed individually or in any combination with other members of the group or other elements found herein. One or more members of a group can be included in, or deleted from, a group for reasons of convenience and/or patentability. When any such inclusion or deletion occurs, the specification is herein deemed to contain the group as modified, thus fulfilling the written description of all Markus groups used in the appended claims.

As used in the description herein and throughout the claims that follow, the meaning of "a," "an," and "the" includes plural reference unless the context clearly dictates otherwise. Also, as used in the description herein, the meaning of "in" includes "in" and "on" unless the context clearly dictates otherwise.

The recitation of ranges of values herein is merely intended to serve as a shorthand method of referring individually to each separate value falling within the range. Unless otherwise indicated herein, each individual value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context.

The use of any and all examples, or exemplary language (e.g. "Such as") provided with respect to certain embodiments herein is intended merely to better illuminate the invention and does not pose a limitation on the scope

of the invention otherwise claimed. No language in the specification should be construed as indicating any non-claimed element essential to the practice of the invention.

The above information disclosed in this Background section is only for the enhancement of understanding of the background of the invention and therefore it may contain information that does not form the prior art that is already known in this country to a person of ordinary skill in the art.

OBJECTIVE OF THE INVENTION

The principal objective of the present invention is to provide an Intelligent parallel rays producer device with multiple slits for teaching purposes.

SUMMARY

Before the present systems and methods, are described, it is to be understood that this application is not limited to the particular systems, and methodologies described, as there can be multiple possible embodiments which are not expressly illustrated in the present disclosure. It is also to be understood that the terminology used in the description is for the purpose of

describing the particular versions or embodiments only and is not intended to limit the scope of the present application.

The present invention mainly cures and solves the technical problems existing in the prior art. In response to these problems, the present invention discloses Intelligent parallel rays producer device with multiple slits for teaching purposes.

As one aspect of the present invention is to presents "a parallel rays producer device with multiple slits for teaching purposes, wherein the parallel rays producer device comprising: A Convex lens; A filament bulb, wherein the filament bulb is attached exactly at the focal length of the convex lens, wherein the filament bulb is connected to a power source; A shuttle cock barrel, wherein on One end of the cylindrical barrel a focal length convex lens is fixed; A Wooden piece, used to form one wooden stand for the device; and A Black sheet for slit, wherein the black sheet of paper is pasted on a playing card for stiffness and made 5 slits card, 3 slits card and single slit card..."

BRIEF DESCRIPTION OF DRAWINGS

To clarify various aspects of some example embodiments of the present invention, a more particular description of the invention will be rendered by reference to specific embodiments thereof which are illustrated in the appended drawings. It is appreciated that these drawings depict only illustrated embodiments of the invention and are therefore not to be considered limiting of its scope. The invention will be described and explained with additional specificity and detail through the use of the accompanying drawings.

In order that the advantages of the present invention will be easily understood, a detailed description of the invention is discussed below in conjunction with the appended drawings, which, however, should not be considered to limit the scope of the invention to the accompanying drawings, in which:

Figure 1 shows detail flow diagram representation of intelligent parallel rays producer device with multiple slits for teaching purposes.

DETAIL DESCRIPTION

The present invention is related to Intelligent parallel rays producer device with multiple slits for teaching purposes.

Figure 1 shows detail flow diagram representation of intelligent parallel rays producer device with multiple slits for teaching purposes.

Although the present disclosure has been described with the purpose of Intelligent parallel rays producer device with multiple slits for teaching purposes, it should be appreciated that the same has been done merely to illustrate the invention in an exemplary manner and to highlight any other purpose or function for which explained structures or configurations could be used and is covered within the scope of the present disclosure.

The Intelligent parallel rays producer device with multiple slits for teaching purposes is disclosed.

The parallel rays producer device with multiple slits for teaching purposes comprises a convex lens, a filament bulb, a shuttle cock barrel, a wooden piece, and a black sheet for slit.

The filament bulb is attached exactly at the focal length of the convex lens, wherein the filament bulb is connected to a power source. A Holder with connecting wires is used for the power supply.

One end of the cylindrical barrel a focal length convex lens is fixed.

The Wooden piece is used to form one wooden stand for the device.

The black sheet of paper is pasted on a playing card for stiffness and made 5 slits card, 3 slits card and single slit card.

The filament bulb is 15W filament bulb.

This device shows the propagation of travelling of rays.

The present device is used for teaching of , but not limited to Rectilinear Propagation of Light, Refraction, Reflection, First law of reflection, Second law of reflection, Normal incidence on plane mirrors, If mirror rotates an angle Θ then reflected ray rotates an angle 2Θ, parallel rays' propagation through 3 slit card and 5 slit cards, Principal axis, Paraxial rays and Marginal rays, Focal length of convex lens, Variation of focal length of the convex lens with medium, Focal length of concave mirror, Normal incidence on concave mirror, Relation between focal length (f) and radius of curvature (R), Myopia, Hypermetropia, Number of images in two plane mirrors with an angle, Aberrations, Chromatic aberration and Spherical aberration..

EXAMPLE OF THE PRESENT INVENTION

i) OBJECTIVE OF THE TLM:

The prime objective of this Teaching learning material (TLM) is to produce the parallel rays and show the light experiments very effectively.

ii) ITEMS USED FOR PREPARATION OF THE TLM:

1. Convex lens

2. 15W filament bulb

3. Used shuttle cock barrel (Freely available)

4. Wooden pieces

5. Holder with connecting wires

6. Black sheet for slit

iii) THE DESIGNING MECHANISM:

Materials required: 25 cm length and 2 cm width wooden frames of any thickness (2 No's), 5 cm length and 2 cm width wooden frames of any thickness (2 No's), 5 cm length ice cream sticks (5 No's), glue gum, black sheet, shuttle cock barrel (1 No), 15W filament bulb and holder with connecting wire.

Procedure: First of all, we have taken 25 cm and 5 cm length wooden frames and fixed it as shown in the figure (Photo attached) and form one wooden stand. For slit stand purpose, we have taken 5 cm length ice cream sticks (5 No's), one is placed horizontally and remaining placed vertically to this wooden stand by forming grooves to move the slit up and down (as shown in figure, photo attached). To make slits, we have taken the black sheet of paper and pasted it to the playing card for stiffness and made 5 slits card, 3 slits card and single slit card.

Now we have taken shuttle cock barrel (which is freely available) of length 34 cm and cut it into 20 cm length. One end of this cylindrical barrel, we have fixed 15 cm focal length convex lens by using glue gum. On the other

end, we have attached 15W filament bulb exactly at the focal length of this convex lens (i.e., around 15cm to 15.5cm). And now we connected this bulb to the holder with connecting wire. When we switch on this, the rays coming from this bulb incident on this convex lens and after refraction the rays will travel in parallel. In this way we will get the parallel rays from the source. Now by placing the mirrors (plane/concave/convex) or lenses (plane /concave/convex) in the path of this parallel rays, we can easily demonstrate the concepts of light.

iv) COGNITIVE APPROACH OF THE TLM IN THE DISSEMINATION OF TOPIC:

•We know that in science subjects, teaching and learning physics is somewhat difficult. In physics, understanding of optics is some more difficult. So, we designed this device.

•The main significance of this device is not only producing the parallel rays but also, we can show the propagation of travelling of rays.

•Using this device, we can easily explain

1. Rectilinear Propagation of Light,
2. Refraction,
3. Reflection,
4. First law of reflection,
5. Second law of reflection
6. Normal incidence on plane mirrors

7. If mirror rotates an angle Θ then reflected ray rotates an angle 2Θ

8. We can show parallel rays' propagation through 3 slit card and 5 slit cards

9. We can easily explain Principal axis, Paraxial rays and Marginal rays

10. Focal length of convex lens

11. Variation of focal length of the convex lens with medium

12. Focal length of concave mirror

13. Normal incidence on concave mirror

14. Relation between focal length (f) and radius of curvature (R)

15. Myopia

16. Hypermetropia

17. Number of images in two plane mirrors with an angle

18. Aberrations

19. Chromatic aberration and

20. Spherical aberration

v) THE EFFECT AND IMPACT OF THE TLM ON THE COGNITIVE DEVELOPMENT OF THE STUDENTS:

•Using of this device develops the skills and knowledge along with the inculcation of proper interest and attitude among the students.

•It is helpful in bringing clarity to the difficult and abstract concept and phenomena related to ray optics.

•Using of this device helps the students to know and to understand the concepts of ray optics such as rectilinear propagation of light, reflection, laws of reflection, refraction, properties of plane mirror, spherical mirrors and lenses.

•Students definitely pay their attention and concentration while doing the experiment with this device.

•It helps the enquiry habit and scientific attitude.

•It helps the student to form clear and accurate images about the ray optics concepts.

•It helps the students for better acquisition and longer retention of ideas.

•It stimulates student interest towards the learning ray optics, imagination of laws of reflection, refraction etc., the power of observation and motivation for further knowledge.

•By using of this device, we can teach or learn more concepts in less time.

vi) CONCLUSIONS AND RECOMMENDATIONS:

Making of this device is very simple, all the materials are available to make this device, low cost, easy to make, movable and easy to teach fundamental concepts and also easy to understand ray optics concepts, so,

everyone (Teacher as well as student) should make this and use it in their class room.

vii) EDUCATIONAL IMPLICATIONS:

From this experiment students can able to learn fundamental concepts like rectilinear propagation of light, reflection, laws of reflection, refraction, properties of plane mirror, spherical mirrors and lenses.

From this experiment students easily learns about incident ray, reflected ray, angle of incidence, angle of reflection, normal incidence.

Students remembers the concepts and applies in their daily life. Slow learners also learn the basics very easily.

Students can able to design, construct or build or produce new apparatus with locally available materials. Since this device is cheap, the material to make this device is easily available in all the regions and easily movable, so all the physics teachers as well as students can make this device....

The figures and the foregoing description give examples of embodiments. Those skilled in the art will appreciate that one or more of the described elements may well be combined into a single functional element. Alternatively, certain elements may be split into multiple functional elements. Elements from one embodiment may be added to another embodiment. For example, order of processes described herein may be changed and are not limited to the manner described herein. Moreover, the actions of any block

diagram need not be implemented in the order shown; nor do all of the acts need to be necessarily performed. Also, those acts that are not dependent on other acts may be performed in parallel with the other acts. The scope of embodiments is by no means limited by these specific examples.

Although implementations of the invention have been described in a language specific to structural features and/or methods, it is to be understood that the appended claims are not necessarily limited to the specific features or methods described. Rather, the specific features and methods are disclosed as examples of implementations of the invention.

Dated 24th Day of September, 2021

CLAIMS

We claim:

1. A parallel rays producer device with multiple slits for teaching purposes, wherein the parallel rays producer device comprising:

A Convex lens;

A filament bulb, wherein the filament bulb is attached exactly at the focal length of the convex lens, wherein the filament bulb is connected to a power source;

A shuttle cock barrel, wherein on One end of the cylindrical barrel a convex lens is fixed;

A Wooden piece, used to form one wooden stand for the device; and

A Black sheet for slit, wherein the black sheet of paper is pasted on a playing card for stiffness and made 5 slits card, 3 slits card and single slit card.

2. The parallel rays producer device with multiple slits for teaching purposes as claimed in claim 1, A Holder with connecting wires is used for the power supply.

3. The parallel rays producer device with multiple slits for teaching purposes as claimed in claim 1, The filament bulb is 15W filament bulb.

4. The parallel rays producer device with multiple slits for teaching purposes as claimed in claim 1, this device shows the propagation of travelling of rays.

5. The parallel rays producer device with multiple slits for teaching purposes as claimed in claim 1, Wherein the device is used for teaching of but not limited to Rectilinear Propagation of Light, Refraction, Reflection, First law of reflection, Second aw of reflection, Normal incidence on plane mirrors, If mirror rotates an angle Θ then reflected ray rotates an angle 2Θ, parallel rays' propagation through 3 slit card and 5 slit cards, Principal axis, Paraxial rays and Marginal rays, Focal length of convex lens, Variation of focal length of the convex lens with medium, Focal length of concave mirror, Normal incidence on concave mirror, Relation between focal

length (f) and radius of curvature (R), Myopia, Hypermetropia, Number of images in two plane mirrors with an angle, Aberrations, Chromatic aberration and Spherical aberration.

Dated 24th Day of September, 2021

INTELLIGENT PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

ABSTRACT

The present invention relates to Intelligent parallel rays producer device with multiple slits for teaching purposes. The objective of the present invention is to solve the problems in the prior art technologies related to teaching learning tools developed for ray optics.

Dated 24th Day of September, 2021

Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Application Details

APPLICATION NUMBER	202131029813
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	02/07/2021
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TITLE OF INVENTION	INTELLIGENT SECURITY SYSTEM TO MONITOR DRIVER AND GENERATING RESPONSES IN VEHICLE USING MACHINE LEARNING
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	patentpublication@gmail.com
ADDITIONAL-EMAIL (As Per Record)	patentpublication@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	13/08/2021

Application Status

पेटेंट कार्यालय
शासकीय जर्नल

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

निर्गमन सं. 33/2021 ISSUE NO. 33/2021	शुक्रवार FRIDAY	दिनांक: 13/08/2021 DATE: 13/08/2021

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2021

(21) Application No.202131029813 A
(43) Publication Date : 13/08/2021

(54) Title of the invention : INTELLIGENT SECURITY SYSTEM TO MONITOR DRIVER AND GENERATING RESPONSES IN VEHICLE USING MACHINE LEARNING

(51) International classification	:G06N0003080000, G06N0020000000, B25J0009160000, H04N0007180000, H05B0045500000
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to intelligent security system to monitor driver and generating responses in vehicle using machine learning. The objective of the present invention is to solve the problems in the prior art technologies related to monitor the driver's emotional and behavior state.

No. of Pages : 29 No. of Claims : 4

FORM 1 THE PATENTS ACT, 1970 (39 of 1970) & THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT [See sections 7,54 & 135 and rule 20(1)]	(FOR OFFICE USE ONLY) Application No.: ..... Filing Date: ..... Amount of Fee Paid: ..... CBR No.: ..... Signature: .....

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FORM 2

THE PATENTS ACT, 1970

(39 of 1970) &

THE PATENTS RULES, 2003

COMPLETE SPECIFICATION

(See section 10, rule 13)

1. TITLE OF THE INVENTION:

INTELLIGENT SECURITY SYSTEM TO MONITOR DRIVER AND GENERATING RESPONSES IN VEHICLE USING MACHINE LEARNING

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3. PREAMBLE TO THE DESCRIPTION

COMPLETE SPECIFICATION

The following specification particularly describes the invention and the manner in which it is to be performed.

INTELLIGENT SECURITY SYSTEM TO MONITOR DRIVER AND GENERATING RESPONSES IN VEHICLE USING MACHINE LEARNING

FIELD OF INVENTION

The present invention is related to field of driver emotion monitoring.

The present invention relates to the field of machine learning based driver emotion analysis.

The present invention relates to field of image processing based automatically monitor the emotions and behavior of the driver using machine learning.

More particularly, the present invention is related to intelligent security system to monitor driver and generating responses in vehicle using machine learning.

BACKGROUND & PRIOR ART

The subject matter discussed in the background section should not be assumed to be prior art merely as a result of its mention in the background section. Similarly, a problem mentioned in the background section or associated with the subject matter of the background section should not be assumed to have been previously recognized in the prior art. The subject matter in the background section merely represents different approaches, which in-and-of-themselves may also be inventions.

Some of the prior related works as follows:

20150345981ADAPTIVE NAVIGATION AND LOCATION-BASED SERVICES BASED ON USER BEHAVIOR PATTERNS,US - 03.12.2015 Int.Class G01C 21/00Appl.No 14290693Applicant GM GLOBAL TECHNOLOGY OPERATIONS LLCInventor Claudia V. Goldman-Shenhar, A method and system are disclosed for adaptive driver guidance for navigation and location-based services based on

user behavior patterns. A driver-facing camera and a gaze tracking system determine the location of the driver's visual focus while an outside-facing camera detects and interprets external driving situations, a microphone and a speech analyzer identify driver vocalizations, and driver-proximate sensors and the driver-facing camera detect driver emotions. The driver's visual focus, the driver vocalizations and the driver emotions, along with vehicle system parameters from a data bus, are used to evaluate driver satisfaction with navigation guidance and determine driver behavior patterns. An adaptive navigation guidance engine modifies navigation guidance content and timing based on the driver satisfaction and behavior patterns. Adaptation of guidance for location-based services is also provided.

20200269865METHOD OF RECOGNIZING EMOTION OF DRIVER AND APPARATUS USING THE SAME US - 27.08.2020, Int.Class B60W 50/14Appl.No 16790480Applicant ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTEInventor Chang Rak YOON Provided are a method of recognizing an emotion of a driver and an apparatus using the same. The method includes receiving emotion recognition information including at least one of

vehicle state information and driver emotion state information, determining whether a dominant emotion state exists among one or more emotion states possessed by the driver on the basis of the emotion recognition information and an emotion recognition model, and performing a reaction inducing interaction with respect to the driver determined on the basis of the determined dominant emotion state together with the driver when the dominant emotion state of the driver is determined to exist.

3.20180174457METHOD AND SYSTEM USING MACHINE LEARNING TO DETERMINE AN AUTOMOTIVE DRIVER'S EMOTIONAL STATE, US - 21.06.2018 Int.Class G06N 99/00Appl.No 15382092Applicant Wheego Electric Cars, Inc.Inventor Thomas Steven Taylor, Information generated by human behavior detection sensors (i.e., cameras, microphones, pressure sensors, wearables), and vehicle operational parameter information train a machine learning model to determine a driver's emotional state based on vehicle operational parameter information. The training information may be transmitted by a wireless device for each of a fleet of vehicles and their human driver during a training period. A vehicle driven after

the training period may provide vehicle information, vehicle location information, VIN, vehicle operational parameter information, or driver emotional state parameter information to a central computer that may compare the received information to either the trained machine learning model or criteria generated as a result of training the model, to determine whether the first driver, or a second driver of a vehicle proximate the first driver's vehicle, is driving erratically or in an elevated emotional state, and alert the other driver if such a determination is made.

20190161088DRIVING ADVICE APPARATUS AND DRIVING ADVICE METHOD, US - 30.05.2019 , Int.Class B60Q 1/00Appl.No 16174406Applicant SUBARU CORPORATIONInventor Ikuo Goto , A driving advice apparatus includes: an operation determiner; and an advice generator. The operation determiner uses a difference between an emotion of a driver and an emotion of a passenger to determine a specific driving operation of the driver. The advice generator generates an advice for the driver about the specific driving operation on a basis of a difference between a driving feature of the driver and a driving feature of the passenger.

5.20140171752APPARATUS AND METHOD FOR CONTROLLING EMOTION OF DRIVER, US - 19.06.2014, Int.Class A61B 5/16Appl.No 14020572Applicant Electronics and Telecommunications Research InstituteInventor PARK Byoung-Jun,

An apparatus for controlling emotion of a driver includes an emotion sensor unit configured to collect a biomedical signal from the driver, and generate biomedical information data based on the collected biomedical signal, a user memory unit configured to store driver information that includes biomedical signals for respective emotional states of the driver and a plurality of correspondence contents, and deliver the driver information and the correspondence content in response to a received request, and an emotion management unit configured to determine the emotional state of the driver from the driver information received from the user memory unit and the biomedical information data received from the emotion sensor unit, request a correspondence content corresponding to the determined emotional state of the driver from the user memory unit, and provide the driver with the content received from the user memory unit.

201917020461DRIVING ASSISTANCE DEVICE DRIVING ASSISTANCE SYSTEM PROGRAM AND CONTROL METHOD FOR DRIVING ASSISTANCE DEVICE, IN - 23.08.2019, Int.Class B60W 30/188Appl.No 201917020461Applicant HONDA MOTOR CO., LTD.Inventor NOGUCHI, Kohei, The present invention more accurately sets various control settings of a vehicle. The present invention comprises: a driving operation state detection unit (11, 21) which detects the state of driving operations by the driver of a vehicle (10, 20); an environment detection unit (14, 122, 126, 172, 24, 222, 226, 322) which detects the environment where the vehicle (10, 20) travels; an emotion detection unit (124, 125, 174, 224, 225, 324) which detects a driver"s emotion or change in emotion; a characteristic estimation unit (173, 174, 323, 324) which estimates the characteristics of the driver on the vehicle (10, 20) on the basis of the state of driving operations by the driver in the environment detected by the environmental detection unit (14, 122, 126, 172, 24, 222, 226, 322) and the driver"s emotion or change in emotion during the driving operations; and a change unit (175, 325) which changes the various control settings of the vehicle (10,

20) on the basis of the characteristics of the driver estimated by the characteristic estimation unit (173, 174, 323, 324).

8.20200056902VEHICLE AND CONTROL METHOD THEREOF, US - 20.02.2020, Int.Class G01C 21/34Appl.No 16213014Applicant Hyundai Motor CompanyInventor Seunghyun Woo, A vehicle may include a detector configured to collect a biological signal of a driver and driving information of the vehicle; a communication device configured to communicate with an external server; a storage configured to store situation information and emotion tagged data received through the communication device and the biological signal of the driver; and a controller configured to acquire information about current emotion of the driver based on the biological signal of the driver, acquire information about inclination of the driver based on the driving information of the vehicle, extract emotion information corresponding to a current situation of the driver and the inclination of the driver from the emotion tagged data, compare the extracted emotion information with the current emotion information of the driver, and extract a primary situation factor having an influence on the emotion of the driver based on the comparison result.

20180257561METHOD AND SYSTEM FOR HISTORICAL STATE BASED ADVANCED DRIVER ASSISTANCE, US - 13.09.2018, Int.Class B60Q 9/00Appl.No 15597970Applicant THE HI-TECH ROBOTIC SYSTEMZ LTDInventor Anuj Kapuria, The present invention provides a method and system of historical emotion based driver advanced assistance. In this method, a combination of external environment to a vehicle on which the advanced driver assistance system (ADAS) is mounted fetched by forward looking cameras is combined with rear looking camera for internal environment or driver state, is generated. The generated combination is utilized to analyze is there is any critical situation that is upcoming. For providing feedback for such situation, the ADAS fetches a historical combination situation similar to the current situation combination. The intensity of the feedback is varied as per the driver reaction to the feedback provided to the driver at such historical combination situation.

.20200000392VEHICULAR NOTIFICATION APPARATUS, US - 02.01.2020, Int.Class A61B 5/18Appl.No 16566482Applicant DENSO CORPORATIONInventor Junya NASHIDA, A vehicular notification apparatus detects an emotion of a driver based on a line-of-

sight detection result and a brain activity detection result, and performs control to suppress notification in response to that the detected emotion of the driver is uncomfortable.,.

20100134302SYSTEM AND METHOD FOR CONTROLLING EMOTION OF CAR DRIVER,US - 03.06.2010, Int.Class, A61B 5/16 ,Appl.No 12475149,Applicant ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE, Inventor Ahn Sung Ho Provided are a system and method for controlling the emotion of a car driver. A system for controlling the emotion of a car driver includes a detection unit, a control unit, and an emotion controlling unit. The detection unit detects emotion information including the voice, expression, gesture, heart rate, and temperature of the car driver. The control unit compares the detected emotion information with the prestored reference emotion information of the car driver to determine whether to control the emotion of the car driver and outputs a control signal for control of the emotion of the car driver according to the determination result. The emotion controlling unit controls the emotion of the car driver according to the control signal of the control unit.

.20200269865METHOD OF RECOGNIZING EMOTION OF DRIVER AND APPARATUS USING THE SAME, US - 27.08.2020 Int.Class , B60W 50/14, Appl.No 16790480, Applicant ELECTRONICS AND TELECOMMUNICAT,IONS RESEARCH INSTITUTE, Inventor Chang Rak YOON, Provided are a method of recognizing an emotion of a driver and an apparatus using the same. The method includes receiving emotion recognition information including at least one of vehicle state information and driver emotion state information, determining whether a dominant emotion state exists among one or more emotion states possessed by the driver on the basis of the emotion recognition information and an emotion recognition model, and performing a reaction inducing interaction with respect to the driver determined on the basis of the determined dominant emotion state together with the driver when the dominant emotion state of the driver is determined to exist.

20140171752APPARATUS AND METHOD FOR CONTROLLING EMOTION OF DRIVER, US - 19.06.2014, Int.Class ,A61B 5/16, Appl.No 14020572, Applicant Electronics and Telecommunications Research Institute, Inventor PARK Byoung-Jun,

An apparatus for controlling emotion of a driver includes an emotion sensor unit configured to collect a biomedical signal from the driver, and generate biomedical information data based on the collected biomedical signal, a user memory unit configured to store driver information that includes biomedical signals for respective emotional states of the driver and a plurality of correspondence contents, and deliver the driver information and the correspondence content in response to a received request, and an emotion management unit configured to determine the emotional state of the driver from the driver information received from the user memory unit and the biomedical information data received from the emotion sensor unit, request a correspondence content corresponding to the determined emotional state of the driver from the user memory unit, and provide the driver with the content received from the user memory unit..

Groupings of alternative elements or embodiments of the invention disclosed herein are not to be construed as limitations. Each group member can be referred to and claimed individually or in any combination with other members of the group or other elements found herein. One or more members of a group can be included in, or deleted

from, a group for reasons of convenience and/or patentability. When any such inclusion or deletion occurs, the specification is herein deemed to contain the group as modified, thus fulfilling the written description of all Markus groups used in the appended claims.

As used in the description herein and throughout the claims that follow, the meaning of "a," "an," and "the" includes plural reference unless the context clearly dictates otherwise. Also, as used in the description herein, the meaning of "in" includes "in" and "on" unless the context clearly dictates otherwise.

The recitation of ranges of values herein is merely intended to serve as a shorthand method of referring individually to each separate value falling within the range. Unless otherwise indicated herein, each individual value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context.

The use of any and all examples, or exemplary language (e.g. "Such as") provided with respect to certain embodiments herein is

intended merely to better illuminate the invention and does not pose a limitation on the scope of the invention otherwise claimed. No language in the specification should be construed as indicating any non-claimed element essential to the practice of the invention.

The above information disclosed in this Background section is only for the enhancement of understanding of the background of the invention and therefore it may contain information that does not form the prior art that is already known in this country to a person of ordinary skill in the art.

OBJECTIVE OF THE INVENTION

The principle objective of the present invention is to provide an intelligent security system to monitor driver and generating responses in vehicle using machine learning.

SUMMARY

Before the present systems and methods, are described, it is to be understood that this application is not limited to the particular

systems, and methodologies described, as there can be multiple possible embodiments which are not expressly illustrated in the present disclosure. It is also to be understood that the terminology used in the description is for the purpose of describing the particular versions or embodiments only and is not intended to limit the scope of the present application.

The present invention mainly cures and solves the technical problems existing in the prior art. In response to these problems, the present invention discloses intelligent security system to monitor driver and generating responses in vehicle using machine learning.

As one aspect of the present invention is to presents "1. A system to monitor driver and control responses in the vehicle, wherein the system comprises, An emotion monitoring unit, used to monitor the emotion of the driver, wherein emotion monitoring unit comprises, at least one camera, placed at in front of driver to continue captured the expression and face features of the driver, wherein the emotional marketing unit, through using the a computing unit processes the information received from camera and reach out a decision on emotional state of the driver , wherein emotional state of the driver

comprises variety of the emotions state indicate the emotions of the driver, wherein the emotional monitoring unit uses a machine learning based algorithm to predict the emotion of the driver; A response unit, used to response and control a number of devices placed in the vehicle, wherein the devices include speaker and a communication unit; and A Centre unit, used to process the information received from the emotional monitoring unit and the send the signal to the response unit according to the signal received from the emotional monitoring unit , wherein the central unit send the signal the devices in the vehicle to activate the music according to the emotions of the driver and send an alert message on the voice signal , the Central unit sends alerting message to an associate mobile computing rate unite about the state of the driver.

BRIEF DESCRIPTION OF DRAWINGS

To clarify various aspects of some example embodiments of the present invention, a more particular description of the invention will be rendered by reference to specific embodiments thereof which are illustrated in the appended drawings. It is appreciated that these

drawings depict only illustrated embodiments of the invention and are therefore not to be considered limiting of its scope. The invention will be described and explained with additional specificity and detail through the use of the accompanying drawings.

In order that the advantages of the present invention will be easily understood, a detailed description of the invention is discussed below in conjunction with the appended drawings, which, however, should not be considered to limit the scope of the invention to the accompanying drawings, in which:

Figure 1 shows detail block diagram representation of intelligent security system to monitor driver and generating responses in vehicle using machine learning.

DETAIL DESCRIPTION

The present invention is related to intelligent security system to monitor driver and generating responses in vehicle using machine learning.

Figure 1 shows detail block diagram representation of intelligent security system to monitor driver and generating responses in vehicle using machine learning.

Although the present disclosure has been described with the purpose of intelligent security system to monitor driver and generating responses in vehicle using machine learning, it should be appreciated that the same has been done merely to illustrate the invention in an exemplary manner and to highlight any other purpose or function for which explained structures or configurations could be used and is covered within the scope of the present disclosure.

The system to monitor driver and control responses in the vehicle, comprises an emotion monitoring unit, a response unit and a center unit.

The emotion monitoring unit is used to monitor the emotion of the driver.

The emotion monitoring unit comprises at least one camera,

The camera is placed at in front of driver to continue captured the expression and face features of the driver. The camera is used for the capturing, which is configured to capture a plurality of images over

a period of time, the plurality of images being analyzed to identify facial features.

The emotional marketing unit, through using a computing unit processes the information received from camera and reach out a decision on emotional state of the driver.

The emotional state of the driver comprises variety of the emotions state indicate the emotions of the driver. The emotional monitoring unit uses a machine learning based algorithm to predict the emotion of the driver.

The response unit is used to response and control a number of devices placed in the vehicle, wherein the devices include speaker and a communication unit.

The Centre unit is used to process the information received from the emotional monitoring unit and the send the signal to the response unit according to the signal received from the emotional monitoring unit.

The central unit send the signal the devices in the vehicle to activate the music according to the emotions of the driver and send an alert message on the voice signal.

The Central unit sends alerting message to an associate mobile computing rate unite about the state of the driver. The mobile computing unit is smart phone.

The Emotion monitoring unit monitor the emotion using method comprising steps of: obtaining emotional information that indicates an emotional state of the driver; Processing of facial expression information that indicates an emotional state of the driver; and Obtaining behavioral information that indicates driver behavior of the driver.

The figures and the foregoing description give examples of embodiments. Those skilled in the art will appreciate that one or more of the described elements may well be combined into a single functional element. Alternatively, certain elements may be split into multiple functional elements. Elements from one embodiment may be added to another embodiment. For example, order of processes described herein may be changed and are not limited to the manner described herein. Moreover, the actions of any block diagram need not be implemented in the order shown; nor do all of the acts need to be necessarily performed. Also, those acts that are not dependent on other acts may be

performed in parallel with the other acts. The scope of embodiments is by no means limited by these specific examples.

Although implementations of the invention have been described in a language specific to structural features and/or methods, it is to be understood that the appended claims are not necessarily limited to the specific features or methods described. Rather, the specific features and methods are disclosed as examples of implementations of the invention.

Dated 2nd Day of July, 2021

CLAIMS

We claim:

1. A system to monitor driver and generated responses in the vehicle, wherein the system comprises:

An emotion monitoring unit, used to monitor the emotion of the driver, wherein emotion monitoring unit comprises,

at least one camera, placed at in front of driver to continue captured the expression and face features of the driver, wherein the emotional marketing unit, through using the a computing unit processes the information received from camera and reach out a decision on emotional state of the driver , wherein emotional state of the driver comprises variety of the emotions state indicate the emotions of the driver, wherein the emotional monitoring unit uses a machine learning based algorithm to predict the emotion of the driver;

A response unit, used to response and control a number of devices placed in the vehicle, wherein the devices include speaker and a communication unit; and

A Centre unit, used to process the information received from the emotional monitoring unit and the send the signal to the response unit according to the signal received from the emotional monitoring unit , wherein the central unit send the signal the devices in the vehicle to activate the music according to the emotions of the driver and send an alert message on the voice signal , the Central unit sends alerting message to an associate mobile computing rate unite about the state of the driver.

2. The system to monitor driver and generated responses in the vehicle as claimed in claim 1, the Emotion monitoring unit monitor the emotion using method comprising steps of:

obtaining emotional information that indicates an emotional state of the driver;

Processing of facial expression information that indicates an emotional state of the driver;

Obtaining behavioral information that indicates driver behavior of the driver.

3. The system to monitor driver and generated responses in the vehicle as claimed in claim 1, wherein the camera is used for the capturing, which is configured to capture a plurality of images over a period of time, the plurality of images being analyzed to identify facial features.

4. The system to monitor driver and generated responses in the vehicle as claimed in claim 1The mobile computing unit is smart phone.

Dated 2nd Day of July, 2021

INTELLIGENT SECURITY SYSTEM TO MONITOR DRIVER AND GENERATING RESPONSES IN VEHICLE USING MACHINE LEARNING

ABSTRACT

The present invention relates to intelligent security system to monitor driver and generating responses in vehicle using machine learning. The objective of the present invention is to solve the problems in the prior art technologies related to monitor the driver's emotional and behavior state.

Dated 2nd Day of July, 2021

DRAWINGS

Applicants : **Dr. Satish Kumar Kalhotra & others**

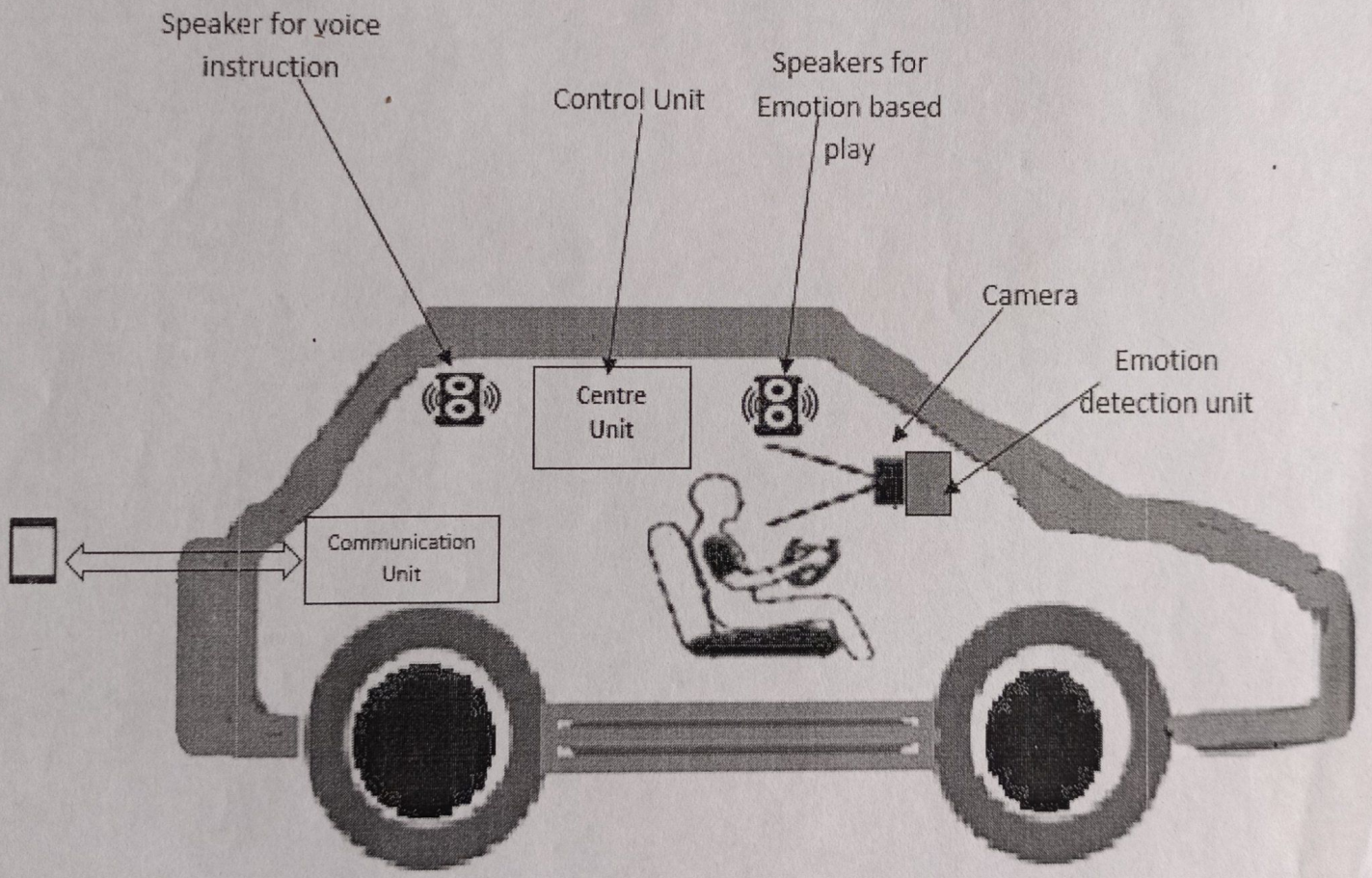

FIGURE 1

Dated 2nd Day of July, 2021

INTELLIGENT PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

FIELD OF INVENTION

The present invention relates to the field of teaching tools.

The present invention is related to field of optical physics teaching tool.

The present invention relates to the field of education device for school children to wave optics teaching purpose, particularly, the present invention relates to a kind of physics teaching aid, particularly relates to a kind of teaching optical instrument.

More particularly, the present invention is related to intelligent parallel rays producer device with multiple slits for teaching purposes.

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Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS | GEOGRAPHICAL INDICATIONS

Application Details

APPLICATION NUMBER	202141043280
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	24/09/2021
APPLICANT NAME	1 . Dr. Joga. Chandrasekhar Rao 2 . Botcha Venkata Rao 3 . Panduru Venugopal 4 . Srinivasa Rao Varanasi
TITLE OF INVENTION	PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES
FIELD OF INVENTION	PHYSICS
E-MAIL (As Per Record)	patentpublication@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	01/10/2021

पेटेंट कार्यालय
शासकीय जर्नल

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

निर्गमन सं. 40/2021	शुक्रवार	दिनांक: 01/10/2021
ISSUE NO. 40/2021	FRIDAY	DATE: 01/10/2021

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/09/2021

(21) Application No.202141043280 A
(43) Publication Date : 01/10/2021

(54) Title of the invention : PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

(51) International classification :G02F 1/1343
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to Intelligent parallel rays producer device with multiple slits for teaching purposes. The objective of the present invention is to solve the problems in the prior art technologies related to teaching learning tools developed for wave optics.

No. of Pages : 30 No. of Claims : 3

FORM 1 THE PATENTS ACT, 1970 (39 of 1970) & THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT [See sections 7,54 & 135 and rule 20(1)]	(FOR OFFICE USE ONLY) Application No.: ..... Filing Date: ..... Amount of Fee Paid: ..... CBR No.: ..... Signature: .....

1. APPLICANT(S):

Sr.No.	Name	Nationality	Address	Country	State
1	Dr. Joga. Chandrasekhar Rao	India	Lecturer In Physics, Department Of Physics, Government Degree & PG College – Salur, Vizianagaram-535003, Andhra Pradesh, India	India	Andhra Pradesh
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4	Srinivasa Rao Varanasi	India	PGT Physics, School Education, A.P. Model School - Tamada, Srikakulam, Andhra Pradesh, India	India	Andhra Pradesh

2. INVENTOR(S):

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1	Dr. Joga. Chandrasekhar Rao	India	Lecturer In Physics, Department Of Physics, Government Degree & PG College – Salur, Vizianagaram-535003, Andhra Pradesh, India	India	Andhra Pradesh
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3	Panduru Venugopal	India	School Assistant in Physical Sciences, Zilla Parishad High School - Kancharam, Srikakulam, Andhra Pradesh, India	India	Andhra Pradesh
4	Srinivasa Rao Varanasi	India	PGT Physics, School Education, A.P. Model School - Tamada, Srikakulam, Andhra Pradesh, India	India	Andhra Pradesh

3. TITLE OF THE INVENTION: PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

4. ADDRESS FOR CORRESPONDENCE OF APPLICANT / AUTHORISED PATENT AGENT IN INDIA:

Dr. Joga. Chandrasekhar Rao, Lecturer In Physics,
Department Of Physics, Government Degree & PG College – Salur, Vizianagaram- 535003, Andhra Pradesh, India

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5. PRIORITY PARTICULARS OF THE APPLICATION(S) FILED IN CONVENTION COUNTRY:

Sr.No.	Country	Application Number	Filing Date	Name of the Applicant	Tilte of the Invention

6. PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION:

International Application Number	International Filing Date as Allotted by the Receiving Office
PCT//	

7. PARTICULARS FOR FILING DIVISIONAL APPLICATION

Original (first) Application Number	Date of Filing of Original (first) Application

8. PARTICULARS FOR FILING PATENT OF ADDITION:

Main Application / Patent Number:	Date of Filing of Main Application

9. DECLARATIONS:

(i) Declaration by the inventor(s)

I/We ,Dr. Joga. Chandrasekhar Rao,Botcha Venkata Rao,Panduru Venugopal,Srinivasa Rao Varanasi,

is/are the true & first inventor(s) for this invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) of the inventor(s): .....

(c) Name(s): Dr. Joga. Chandrasekhar Rao,Botcha Venkata Rao,Panduru Venugopal,Srinivasa Rao Varanasi

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) : .....

(c) Name(s) of the singnatory: Dr. Joga. Chandrasekhar Rao,Botcha Venkata Rao,Panduru Venugopal,Srinivasa Rao Varanasi

(iii) Declaration by the applicant(s)

- **The Complete specification relationg to the invention is filed with this application.**
- **I am/We are, in the possession of the above mentioned invention.**
- **There is no lawful ground of objection to the grant of the Patent to me/us.**

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

Sr.	Document Description	FileName
1	DECLARATION OF INVENTORSHIP (FORM 5)	Form 5.pdf
2	REQUEST FOR EARLY PUBLICATION(FORM-9)	Form 9.pdf
3	COMPLETE SPECIFICATION	FORM 2.pdf
4	DRAWINGS	Drawing (1).pdf
5	STATEMENT OF UNDERTAKING (FORM 3)	Form 3.pdf

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated hering are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this(Final Payment Date): ----------

Signature: .....

Name: Balram Singh Yadav

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FORM 2

THE PATENTS ACT, 1970

(39 of 1970) &

THE PATENTS RULES, 2003

COMPLETE SPECIFICATION

(See section 10, rule 13)

1. TITLE OF THE INVENTION:

INTELLIGENT PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

2. APPLICANTS

Sr.No.	Name	Nationality	Address
1	Dr. Joga. Chandrasekhar Rao	India	Lecturer In Physics, Department Of Physics, Government Degree & PG College – Salur, Vizianagaram-535003, Andhra Pradesh, India
2	Botcha Venkata Rao	India	School Assistant in Physical Sciences, Zilla Parishad High School - Mettavalasa, Srikakulam, Andhra Pradesh, India
3	Panduru Venugopal	India	School Assistant in Physical Sciences, Zilla Parishad High School - Kancharam, Srikakulam, Andhra Pradesh, India
4	Srinivasa Rao Varanasi	India	PGT Physics, School Education, A.P. Model School - Tamada, Srikakulam, Andhra Pradesh, India

3. PREAMBLE TO THE DESCRIPTION

COMPLETE SPECIFICATION

The following specification particularly describes the invention and the manner in which it is to be performed.

BACKGROUND & PRIOR ART

The subject matter discussed in the background section should not be assumed to be prior art merely as a result of its mention in the background section. Similarly, a problem mentioned in the background section or associated with the subject matter of the background section should not be assumed to have been previously recognized in the prior art. The subject matter in the background section merely represents different approaches, which in-and-of-themselves may also be inventions.

Optics is the branch of Physics which deals with study of nature, propagation and properties of light. Light is a form of energy and moves in all directions in the form of waves. The challenges lie in developing an appropriate learning environment with theory as well as practical knowledge in the field. There are a number of teaching learning tools are developed in the prior art.

Some of the prior work listed herewith:

211319538PHYSICS SIMPLE HARMONIC MOTION TEACHING AIDCN - 21.08.2020 Int.Class G09B 23/10Appl.No

202020186557.XApplicant HENAN NORMAL UNIVERSITY Inventor HANG U The utility model discloses a physics simple harmonic motion teaching aid. Bottom plate, the upper surface of the bottom plate is fixedly connected with a detection plate. The upper surface of the detection plate is arc-shaped; scales are formed in the front surface of the detection plate; symmetrical supporting plates are fixedly connected to the upper surface of the bottom plate. A fixed plate is arranged above the detection plate; the top end of each supporting plate is fixedly connected with the bottom surface of a fixed plate; a fixing column is arranged on the front face of the fixing plate, the back face of the fixing column is fixedly connected with the front face of the fixing plate, a groove is formed in the outer surface of the fixing column, a protractor is arranged below the fixing plate, and the upper surface of the protractor is fixedly connected with the bottom end of the fixing plate. The physics simple harmonic motion teaching aid plays a role in keeping rays emitted by the small laser lamp at the central position of the test ball, and solves the problems that the effect is not obvious when the simple harmonic motion is demonstrated, and the learning interest of students is reduced.

211669850LIGHT REFLECTION DEMONSTRATION DEVICE FOR PHYSICS TEACHING CN - 3.10.2020Int.Class G09B 23/22Appl.No 201820294586.0Applicant HEZE UNIVERSITY Inventor HANG YUNHAI The utility model discloses a light reflection demonstration device for physics

teaching, and the device comprises a bottom plate; the supporting structure comprises an angle adjusting shaft, a supporting rod arranged on the angle adjusting shaft and a supporting box arranged at the free end of the supporting rod; the light beam emitting structure comprises a light beam emitter arranged in the supporting box, and a light emitting head of the light beam emitter extends out of the supporting box; the light beam reflection structure comprises a positioning pin arranged on the bottom plate, a plane mirror base with a through groove in the middle and a plane mirror arranged on the plane mirror base, and the positioning pin is clamped in the through groove in a sliding mode; an angle reference structure; projection screen. The light reflection demonstration device for physics teaching provided by the utility model is convenient for receiving reflected light rays and observing the paths of the light rays at different angles, thereby improving the work efficiency of physics teaching.

206726591PHYSICS INCLINED PLANE DEMONSTRATION TEACHING AID CN - 08.12.2017 Int. Class G09B 23/10Appl.No 201720438485.1Applicant ZHANG ZHANHAO Inventor ZHANG ZHANHAO The utility model provides a physics inclined plane demonstration teaching aid belongs to demonstration teaching aid field. It has solved the inconvenient problem of carrying of current demonstration teaching aid. This physics inclined plane demonstration teaching aid,

including the base, the base top surface is equipped with the card slot, still include the swash plate, swash plate left side broadside both ends are connected with the pivot, the swash plate rotates through the pivot to be connected in the card slot, the card slot tank bottom is equipped with and is parallel to each other, the on -line screen storage device comprises a base, the angle spout is followed and is equipped with angle identification and range marker along length direction at the card slot tank bottom apart from the spout, sliding connection has the angle slider on the angle spout, and can follow angle spout slip angle slider, and make angle slider top withstand the swash plate, and make swash plate and card slot tank bottom be angle setting, have apart from the slider apart from sliding connection on the spout, and apart from being equipped with the adapter sleeve on the slider, and it can the vertical laser pen that upwards sends the ray to be equipped with on the adapter sleeve. The convenient regulation of this demonstration teaching aid forms the arbitrary angle degree, and also convenient storage carries.

209616742SPECIAL DRAWING RULER FOR PHYSICS TEACHING CN - 12.11.2019 Int.Class B43L 3/00Appl.No 201920185155.5Applicant ZHANG JINRONG Inventor ZHANG ZHIXIONG The tility model discloses a special drawing ruler for physics teaching. The drawing ruler comprises an angle measuring ruler and a circle drawing ruler; the circle drawing ruler comprises a plurality of hollowed-out

grooves with circular contours. Wherein the protractor and the circle drawing ruler are rotationally connected through a rotating shaft; the radiuses corresponding to the circular outlines of the plurality of hollowed-out grooves are different and have the same tangent point; the tangent point, the rotating shaft and the zero point of the protractor coincide in position. The circle drawing ruler is further provided with a ray groove used for being aligned with the incident direction of the simulated charged particles. According to the utility model, the track that charged particles are perpendicular to the direction of a magnetic field and are injected into a bounded uniform magnetic field to do uniform circular motion can be rapidly drawn; the teaching aid is simple in structure and convenient to operate, the specific situation of each circular motion trail can be shown as long as the teaching aid moves and rotates according to related requirements, the key for solving problems can be quickly found out from dynamic changes, and teachers and students can be easily liberated from troubles.

109686208TELESCOPIC LENS DEMONSTRATION SLIDE RAIL DEVICE FOR COLLEGE PHYSICS EXPERIMENT CN - 26.04.2019Int.Class G09B 23/22Appl.No 201910122281.0Applicant HANGLUO UNIVERSITY Inventor ZHANG XUEBIN The invention discloses a telescopic lens demonstration slide rail device for a college physics experiment and belongs to the technical field of college physics

experimental apparatuses. The device comprises a fixed base. An electric telescopic rod is arranged on one side of the upper end of the fixed base, the upper end of the electric telescopic rod is fixedly connected to a lamp holder, the other side of the upper end of the fixed base is fixedly connected to a second fixed plate, an imaging plate is arranged on the second fixed plate, a slide rail is arranged between the fixed plates, a slide block is slidably connected to the slide rail, and a lens rack is arranged at the upper end of the slide block. By overturning the image rack as a result of different experiments, when a light source penetrates a convex lens and a concave lens and does not penetrate a lens, corresponding imaging effects are shown on the imaging plate, separately. By adjusting the height of the lens, the light source can rip into different positions of the lens to show corresponding imaging effects on the imaging plate. By adjusting sliding of the slide block on the slide rail, the positions of the lens and the light source are adjusted, so that the distance of the incident ray is adjusted. Understanding of students is deepened favorably, and the teaching quality is improved.

189364CONVEX LENS IMAGING DEMONSTRATION DEVICE

CN - 04.03. 2015Int.Class G09B 3/22Appl.No 201420519189.0Applicant MA ZHENPING Inventor MA ZHENPING A convex lens imaging demonstration device relates to a teaching aid used for the middle school physics teaching, and is mainly designed for solving the problems that the

conventional convex lens imaging rule demonstration device is large in size and is not convenient to move, etc. The convex lens imaging demonstration device comprises an H-shaped frame composed of two upright rods and a transverse rod, the two ends of the transverse rod are connected with and fixed to the middle parts of the two upright rods respectively, and the middle part of the transverse rod is equipped with a hole. Two light ray demonstration rods are respectively connected with the connection positions of the two upright rods and the two ends of the transverse rod via pin shafts, and are sleeved together via a circular hoop. The lower parts of two light ray demonstration rods passing the optical center of a convex lens are connected with the two ends of an object demonstrate rod movably via pin shafts, and the upper parts are crosswise inserted in the hole in the middle part of the transverse rod. The lower parts of the two upright rods are inserted in the circular rings of the two ends of the object demonstrate rod, the upright rods are equipped with scales, and a pointer is fixed on the circular hoop. The advantages of the utility model are that the convex lens imaging demonstration device is simple in structure and small in size.

104680894TWO-DIMENSIONAL HORIZONTAL PROJECTILE EXPERIMENT INSTRUMENT CN - 3.06.2015Int.Class G09B 23/10Appl.No 201310631583.3Applicant SHANGHAI SEHO DIGITAL NFORMATION TECHNOLOGY CO., LTD. Inventor CHEN QIANG The

invention relates to a horizontal projectile experiment instrument for physics teaching. When a conventional instrument is used for doing an experiment, students cannot see a real-time trace curve of the horizontal projectile motion, which occurs in the moving process, of a small ball. The invention aims to solve the problem. The invention discloses an electronic sensing two-dimensional horizontal projectile experiment instrument which is formed by a mechanical part structure and an electronic circuit, wherein the mechanical part comprises a vertical main body supporting plate, a horizontally arranged base and a sliding guide rail positioned at one corner position of the top end of the main body supporting plate; an electromagnet is fixedly arranged on the sliding guide rail; the electromagnet is used for attracting or releasing the steel small ball. The electronic sensing two-dimensional horizontal projectile experiment instrument is characterized in that an infrared ray coordinate system is formed by interweaving perpendicular infrared rays. The circuit part comprises a single chip at the core position; an external power supply, a power supply circuit, a transverse infrared receiving module, a longitudinal infrared receiving module, a longitudinal infrared transmitting module, a transverse infrared transmitting module, a storage module and

208507060PHYSICS TEACHING AID EXPERIMENT OPTICAL LEVER CN - 15.02.2019Int.Class G09B 23/22Appl.No 201820317778.9Applicant XINJIANG INSTITUTE OF ENGINEERING

Inventor XIE NING The utility model discloses a physics teaching aid experiment optical lever, including forward foot in a step fulcrum, rear foot fulcrum, crossbeam and reflector component, be connected with the bracing piece between rear foot fulcrum and the crossbeam, forward foot in a step fulcrum is located the crossbeam lower part, reflector component is located the crossbeam top, and includes stand and two mirror surfaces that set up in opposite directions of two relative settings, the relative inboard fixed damping pivot A that sets up who sets up in stand upper end, damping pivot A's the left and right sides is all fixed and is set up the connecting rod, the left and right sides of mirror surface is all fixed and is set up damping pivot B, through setting up connecting rod fixed connection between damping pivot B and the damping pivot A. The utility model discloses simple structure, lower, the convenient operation of cost, the utility model discloses a reflector component comprises two mirror surfaces that set up in opposite directions, in the time of in incident ray gets into reflector component, understands the reflection that make a round trip between two mirror surfaces, and the great angle of reflection of angulation makes things convenient for the survey crew to measure.

103886795OPTICAL COMPREHENSIVE EXPERIMENT BOX CN - 25.06.2014Int.Class G09B 3/22Appl.No 201210595515.1Applicant QIN WENDONG Inventor QIN WENDONG The invention relates to the

technical field of physics teaching aids, and particularly relates to an optical comprehensive experiment box which is composed of a box body, laser light groups, a triangular prism, a convex lens, a concave lens and an ash box. The optical comprehensive experiment box is characterized in that three laser light groups are inserted into the left side of the box body; and each laser light group is respectively composed of three laser lights, and switching on and off of three laser lights are controlled by the insertion depth at the same time. The triangular prism, the convex lens and the concave lens are respectively fixedly arranged on the inner side on the back of the box body. The triangular prism, the convex lens and the concave lens are water lens, and are composed of transparent thin casing structures and water mixed with scattering materials. A large window is arranged on the front of the box body, thus an internal optical path can be observed. An incense insertion hole is arranged on the right side of the box body. The ash box is fixedly arranged at the bottom of the right side. According to the invention, the optical comprehensive experiment box has the advantages of simple structure and good effect; nine rays can be seen at the same time through the window; and the refraction effect of different lenses on the rays can be directly observed, which deepens students' memory.

Groupings of alternative elements or embodiments of the invention disclosed herein are not to be construed as limitations. Each group member

can be referred to and claimed individually or in any combination with other members of the group or other elements found herein. One or more members of a group can be included in, or deleted from, a group for reasons of convenience and/or patentability. When any such inclusion or deletion occurs, the specification is herein deemed to contain the group as modified, thus fulfilling the written description of all Markus groups used in the appended claims.

As used in the description herein and throughout the claims that follow, the meaning of "a," "an," and "the" includes plural reference unless the context clearly dictates otherwise. Also, as used in the description herein, the meaning of "in" includes "in" and "on" unless the context clearly dictates otherwise.

The recitation of ranges of values herein is merely intended to serve as a shorthand method of referring individually to each separate value falling within the range. Unless otherwise indicated herein, each individual value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context.

The use of any and all examples, or exemplary language (e.g. "Such as") provided with respect to certain embodiments herein is intended merely to better illuminate the invention and does not pose a limitation on the scope

of the invention otherwise claimed. No language in the specification should be construed as indicating any non-claimed element essential to the practice of the invention.

The above information disclosed in this Background section is only for the enhancement of understanding of the background of the invention and therefore it may contain information that does not form the prior art that is already known in this country to a person of ordinary skill in the art.

OBJECTIVE OF THE INVENTION

The principal objective of the present invention is to provide an Intelligent parallel rays producer device with multiple slits for teaching purposes.

SUMMARY

Before the present systems and methods, are described, it is to be understood that this application is not limited to the particular systems, and methodologies described, as there can be multiple possible embodiments which are not expressly illustrated in the present disclosure. It is also to be understood that the terminology used in the description is for the purpose of

describing the particular versions or embodiments only and is not intended to limit the scope of the present application.

The present invention mainly cures and solves the technical problems existing in the prior art. In response to these problems, the present invention discloses Intelligent parallel rays producer device with multiple slits for teaching purposes.

As one aspect of the present invention is to presents "a parallel rays producer device with multiple slits for teaching purposes, wherein the parallel rays producer device comprising: A Convex lens; A filament bulb, wherein the filament bulb is attached exactly at the focal length of the convex lens, wherein the filament bulb is connected to a power source; A shuttle cock barrel, wherein on One end of the cylindrical barrel a focal length convex lens is fixed; A Wooden piece, used to form one wooden stand for the device; and A Black sheet for slit, wherein the black sheet of paper is pasted on a playing card for stiffness and made 5 slits card, 3 slits card and single slit card..."

BRIEF DESCRIPTION OF DRAWINGS

To clarify various aspects of some example embodiments of the present invention, a more particular description of the invention will be rendered by reference to specific embodiments thereof which are illustrated in the appended drawings. It is appreciated that these drawings depict only illustrated embodiments of the invention and are therefore not to be considered limiting of its scope. The invention will be described and explained with additional specificity and detail through the use of the accompanying drawings.

In order that the advantages of the present invention will be easily understood, a detailed description of the invention is discussed below in conjunction with the appended drawings, which, however, should not be considered to limit the scope of the invention to the accompanying drawings, in which:

Figure 1 shows detail flow diagram representation of intelligent parallel rays producer device with multiple slits for teaching purposes.

DETAIL DESCRIPTION

The present invention is related to Intelligent parallel rays producer device with multiple slits for teaching purposes.

Figure 1 shows detail flow diagram representation of intelligent parallel rays producer device with multiple slits for teaching purposes.

Although the present disclosure has been described with the purpose of Intelligent parallel rays producer device with multiple slits for teaching purposes, it should be appreciated that the same has been done merely to illustrate the invention in an exemplary manner and to highlight any other purpose or function for which explained structures or configurations could be used and is covered within the scope of the present disclosure.

The Intelligent parallel rays producer device with multiple slits for teaching purposes is disclosed.

The parallel rays producer device with multiple slits for teaching purposes comprises a convex lens, a filament bulb, a shuttle cock barrel, a wooden piece, and a black sheet for slit.

The filament bulb is attached exactly at the focal length of the convex lens, wherein the filament bulb is connected to a power source. A Holder with connecting wires is used for the power supply.

One end of the cylindrical barrel a focal length convex lens is fixed.

The Wooden piece is used to form one wooden stand for the device.

The black sheet of paper is pasted on a playing card for stiffness and made 5 slits card, 3 slits card and single slit card.

The filament bulb is 15W filament bulb.

This device shows the propagation of travelling of rays.

The present device is used for teaching of , but not limited to Rectilinear Propagation of Light, Refraction, Reflection, First law of reflection, Second law of reflection, Normal incidence on plane mirrors, If mirror rotates an angle Θ then reflected ray rotates an angle 2Θ, parallel rays' propagation through 3 slit card and 5 slit cards, Principal axis, Paraxial rays and Marginal rays, Focal length of convex lens, Variation of focal length of the convex lens with medium, Focal length of concave mirror, Normal incidence on concave mirror, Relation between focal length (f) and radius of curvature (R), Myopia, Hypermetropia, Number of images in two plane mirrors with an angle, Aberrations, Chromatic aberration and Spherical aberration..

EXAMPLE OF THE PRESENT INVENTION

i) OBJECTIVE OF THE TLM:

The prime objective of this Teaching learning material (TLM) is to produce the parallel rays and show the light experiments very effectively.

ii) ITEMS USED FOR PREPARATION OF THE TLM:

1. Convex lens

2. 15W filament bulb

3. Used shuttle cock barrel (Freely available)

4. Wooden pieces

5. Holder with connecting wires

6. Black sheet for slit

iii) THE DESIGNING MECHANISM:

Materials required: 25 cm length and 2 cm width wooden frames of any thickness (2 No's), 5 cm length and 2 cm width wooden frames of any thickness (2 No's), 5 cm length ice cream sticks (5 No's), glue gum, black sheet, shuttle cock barrel (1 No), 15W filament bulb and holder with connecting wire.

Procedure: First of all, we have taken 25 cm and 5 cm length wooden frames and fixed it as shown in the figure (Photo attached) and form one wooden stand. For slit stand purpose, we have taken 5 cm length ice cream sticks (5 No's), one is placed horizontally and remaining placed vertically to this wooden stand by forming grooves to move the slit up and down (as shown in figure, photo attached). To make slits, we have taken the black sheet of paper and pasted it to the playing card for stiffness and made 5 slits card, 3 slits card and single slit card.

Now we have taken shuttle cock barrel (which is freely available) of length 34 cm and cut it into 20 cm length. One end of this cylindrical barrel, we have fixed 15 cm focal length convex lens by using glue gum. On the other

end, we have attached 15W filament bulb exactly at the focal length of this convex lens (i.e., around 15cm to 15.5cm). And now we connected this bulb to the holder with connecting wire. When we switch on this, the rays coming from this bulb incident on this convex lens and after refraction the rays will travel in parallel. In this way we will get the parallel rays from the source. Now by placing the mirrors (plane/concave/convex) or lenses (plane /concave/convex) in the path of this parallel rays, we can easily demonstrate the concepts of light.

iv) COGNITIVE APPROACH OF THE TLM IN THE DISSEMINATION OF TOPIC:

•We know that in science subjects, teaching and learning physics is somewhat difficult. In physics, understanding of optics is some more difficult. So, we designed this device.

•The main significance of this device is not only producing the parallel rays but also, we can show the propagation of travelling of rays.

•Using this device, we can easily explain

1. Rectilinear Propagation of Light,
2. Refraction,
3. Reflection,
4. First law of reflection,
5. Second law of reflection
6. Normal incidence on plane mirrors

7. If mirror rotates an angle Θ then reflected ray rotates an angle 2Θ

8. We can show parallel rays' propagation through 3 slit card and 5 slit cards

9. We can easily explain Principal axis, Paraxial rays and Marginal rays

10. Focal length of convex lens

11. Variation of focal length of the convex lens with medium

12. Focal length of concave mirror

13. Normal incidence on concave mirror

14. Relation between focal length (f) and radius of curvature (R)

15. Myopia

16. Hypermetropia

17. Number of images in two plane mirrors with an angle

18. Aberrations

19. Chromatic aberration and

20. Spherical aberration

v) THE EFFECT AND IMPACT OF THE TLM ON THE COGNITIVE DEVELOPMENT OF THE STUDENTS:

•Using of this device develops the skills and knowledge along with the inculcation of proper interest and attitude among the students.

•It is helpful in bringing clarity to the difficult and abstract concept and phenomena related to ray optics.

•Using of this device helps the students to know and to understand the concepts of ray optics such as rectilinear propagation of light, reflection, laws of reflection, refraction, properties of plane mirror, spherical mirrors and lenses.

•Students definitely pay their attention and concentration while doing the experiment with this device.

•It helps the enquiry habit and scientific attitude.

•It helps the student to form clear and accurate images about the ray optics concepts.

•It helps the students for better acquisition and longer retention of ideas.

•It stimulates student interest towards the learning ray optics, imagination of laws of reflection, refraction etc., the power of observation and motivation for further knowledge.

•By using of this device, we can teach or learn more concepts in less time.

vi) CONCLUSIONS AND RECOMMENDATIONS:

Making of this device is very simple, all the materials are available to make this device, low cost, easy to make, movable and easy to teach fundamental concepts and also easy to understand ray optics concepts, so,

everyone (Teacher as well as student) should make this and use it in their class room.

vii) EDUCATIONAL IMPLICATIONS:

From this experiment students can able to learn fundamental concepts like rectilinear propagation of light, reflection, laws of reflection, refraction, properties of plane mirror, spherical mirrors and lenses.

From this experiment students easily learns about incident ray, reflected ray, angle of incidence, angle of reflection, normal incidence.

Students remembers the concepts and applies in their daily life. Slow learners also learn the basics very easily.

Students can able to design, construct or build or produce new apparatus with locally available materials. Since this device is cheap, the material to make this device is easily available in all the regions and easily movable, so all the physics teachers as well as students can make this device....

The figures and the foregoing description give examples of embodiments. Those skilled in the art will appreciate that one or more of the described elements may well be combined into a single functional element. Alternatively, certain elements may be split into multiple functional elements. Elements from one embodiment may be added to another embodiment. For example, order of processes described herein may be changed and are not limited to the manner described herein. Moreover, the actions of any block

diagram need not be implemented in the order shown; nor do all of the acts need to be necessarily performed. Also, those acts that are not dependent on other acts may be performed in parallel with the other acts. The scope of embodiments is by no means limited by these specific examples.

Although implementations of the invention have been described in a language specific to structural features and/or methods, it is to be understood that the appended claims are not necessarily limited to the specific features or methods described. Rather, the specific features and methods are disclosed as examples of implementations of the invention.

Dated 24th Day of September, 2021

CLAIMS

We claim:

1. A parallel rays producer device with multiple slits for teaching purposes, wherein the parallel rays producer device comprising:

A Convex lens;

A filament bulb, wherein the filament bulb is attached exactly at the focal length of the convex lens, wherein the filament bulb is connected to a power source;

A shuttle cock barrel, wherein on One end of the cylindrical barrel a convex lens is fixed;

A Wooden piece, used to form one wooden stand for the device; and

A Black sheet for slit, wherein the black sheet of paper is pasted on a playing card for stiffness and made 5 slits card, 3 slits card and single slit card.

2. The parallel rays producer device with multiple slits for teaching purposes as claimed in claim 1, A Holder with connecting wires is used for the power supply.

3. The parallel rays producer device with multiple slits for teaching purposes as claimed in claim 1, The filament bulb is 15W filament bulb.

4. The parallel rays producer device with multiple slits for teaching purposes as claimed in claim 1, this device shows the propagation of travelling of rays.

5. The parallel rays producer device with multiple slits for teaching purposes as claimed in claim 1, Wherein the device is used for teaching of but not limited to Rectilinear Propagation of Light, Refraction, Reflection, First law of reflection, Second aw of reflection, Normal incidence on plane mirrors, If mirror rotates an angle Θ then reflected ray rotates an angle 2Θ, parallel rays' propagation through 3 slit card and 5 slit cards, Principal axis, Paraxial rays and Marginal rays, Focal length of convex lens, Variation of focal length of the convex lens with medium, Focal length of concave mirror, Normal incidence on concave mirror, Relation between focal

length (f) and radius of curvature (R), Myopia, Hypermetropia, Number of images in two plane mirrors with an angle, Aberrations, Chromatic aberration and Spherical aberration.

Dated 24th Day of September, 2021

INTELLIGENT PARALLEL RAYS PRODUCER DEVICE WITH MULTIPLE SLITS FOR TEACHING PURPOSES

ABSTRACT

The present invention relates to Intelligent parallel rays producer device with multiple slits for teaching purposes. The objective of the present invention is to solve the problems in the prior art technologies related to teaching learning tools developed for ray optics.

Dated 24th Day of September, 2021

Field Trips

DEPARTMENT OF ZOOLOGY

The field visit to the poultry farm, organized by the Department of Zoology, offered 45 3rd CBZ students valuable learning experience in the field of animal husbandry. Through firsthand observations, active participation, and interactions with farm experts, the students gained practical insights into the techniques and management practices involved in poultry farming. This excursion not only expanded their knowledge but also inspired them to consider potential career paths in the agricultural industry, particularly in animal husbandry and poultry farming.

Field visit to the Vermi Compost Unit (2021-2022 -Batch)

The Department of Zoology organized a visit for 50 students to a vermicompost unit at the Salur Municipality. The main objective of this educational trip was to provide the students with a practical understanding of the vermicomposting process and its significance in waste management and organic farming. By directly observing the process in action, the students were able to enhance their knowledge and gain valuable insights into sustainable waste management practices.


25/07/2022 15:05

Visit To the Fish Farm

A field visit to a fish farm was organized for students from the Government Degree College to provide them with a practical understanding of fish farming techniques and operations. This initiative aimed to supplement their theoretical knowledge with real-world experiences, allowing them to witness firsthand the processes involved in fish farming and the importance of sustainable aquaculture practices.


03/02/2023 15:43


03/02/2023 15:42

Field visit to the Vermi Compost Unit (2022-2023 -Batch)

The Department of Zoology organized a visit for 25 students (Ist CBZ) to a vermicompost unit at the Salur Municipality. The main objective of this educational trip was to provide the students with a practical understanding of the vermicomposting process and its significance in waste management and organic farming. By directly observing the process in action, the students were able to enhance their knowledge and gain valuable insights into sustainable waste management practices.


SALUR MUNICIPALITY
MATERIAL RECOVERY FACILITY
(MRF)

Department Of Botany

A field visit was organized to explore and observe the abundance of Medicinal Plants.

A field visit was organized to explore and observe the abundance of medicinal plants in the vicinity of Salur. The objective of this visit was to provide participants with an opportunity to learn about the diversity of medicinal plants, their therapeutic properties, and their cultural and ecological significance. By observing these plants in their natural habitats, participants gained a deeper understanding of the local biodiversity and the traditional uses of medicinal flora.

Date 16-12-2017

Department of Botany

Field Visit to Chandra Nursery located in Rambadhrapuram.

The Department of Botany organized a field visit to Chandra Nursery located in Rambadhrapuram. The visit aimed to provide students with practical exposure to nursery management practices, plant propagation techniques, and an opportunity to explore the diverse plant species available at the nursery. By visiting the nursery, students had the chance to enhance their knowledge and gain hands-on experience in the field of botany.

Date: 22/9/2018

Department of Botany
Field Visit to Chandra Nursery located in Salur.

The Department of Botany organized a field visit to Chandra Nursery located in Salur. The visit aimed to provide students with practical exposure to nursery management practices, plant propagation techniques, and an opportunity to explore the diverse plant species available at the nursery. By visiting the nursery, students had the chance to enhance their knowledge and gain hands-on experience in the field of botany.

Date:18/2/2021

Department of Botany

A filed visit to observe rare species at Salur Municipal Park.

The Department of Botany has arranged a captivating hands-on field experience at Salur Municipal Park, with the primary objective of accomplishing multiple goals, centered mainly around observing rare species and promoting environmental awareness.

Date:4/1/2022

Field visit by the Department of Botany

Field visit by the department of botany to foster practical awareness regarding tree taxonomy and its relevance in establishing nomenclature. This enlightening excursion aims to expand participants' knowledge and understanding of the intricate classification system of trees while emphasizing the importance of accurate and consistent naming conventions.

Date:3/3/2023

Bachelor Of Arts Field Trip.

The Department of History, Economics, and Political Science organized a field visit to the Salur region with the aim of providing students with practical insights into the functioning of various government and non-governmental organizations. The visit aimed to foster an understanding of how theoretical knowledge intersects with practical implementation in different spheres. During the visit, the students had the opportunity to explore the following bodies:

Market Yard.

Market Yard: The visit to the market yard provided students with insights into the agricultural economy of the region. They witnessed the trading of agricultural produce, interactions between farmers and traders, and the functioning of market committees. This experience enabled students to connect economic theories of supply and demand with the practical aspects of agricultural markets and understand the role of government regulations in facilitating fair trade.

Town Police Station.

Town Police Station: At the town police station, students had the opportunity to observe the operations and functions of the local law enforcement agency. They learned about the challenges faced by the police in maintaining law and order, ensuring public safety, and managing criminal investigations. The visit allowed the students to analyze the intersection of politics, governance, and the role of law enforcement in society.

Philadelphia Community Hospital.

Philadelphia Community Hospital: The students had the opportunity to visit the hospital and witness firsthand how healthcare services are provided to the community. They observed the interaction between medical professionals and patients, learned about the challenges faced in delivering healthcare in rural areas, and analyzed the role of various policies in improving healthcare infrastructure.

Government Girls High School, Salur.

Government Girls High School, Salur: The field visit also included a visit to the Government Girls High School in Salur. Students had the opportunity to observe the educational environment, interact with teachers and students, and learn about the challenges and initiatives in providing quality education to girls in rural areas. This visit facilitated an examination of the intersection between educational policies, socio-economic factors, and the empowerment of women through education.

Municipal Office, Salur.

Municipal Office, Salur: The students visited the Municipal Office in Salur to gain insights into local governance and administration. They observed the functions of the municipal authorities, the decision-making processes, and the implementation of public services. This visit allowed students to analyze the role of political institutions, public policies, and community participation in municipal governance.

Rotary Club.

Rotary Club: As part of the field visit, students had the opportunity to interact with the Rotary Club, a prominent non-governmental organization. They learned about the club's community development initiatives, social welfare projects, and collaborative efforts with the government. This engagement highlighted the importance of civil society organizations in complementing government efforts and addressing socio-economic issues.

Sub Registration Office.

Sub Registration Office: Students visited the Registration Office to understand the processes related to property registration, documentation, and legal formalities. They learned about the role of the government in maintaining property records, ensuring transparency in transactions, and protecting the rights of individuals. This visit shed light on the interface between legal frameworks, economic transactions, and political institutions.

Sub Treasury Office.

Sub Treasury Office: The field visit also included a trip to the Sub Treasury Office, where students learned about fiscal administration and financial management at the local level. They explored the processes related to revenue collection, budget allocation, and expenditure management. This visit provided practical insights into the relationship between economic policies, governance, and financial decision-making.

Rural Police Station.

Rural Police Station: Students visited the rural police station to gain a broader perspective on law enforcement in rural areas. They explored the unique challenges faced by rural police, such as addressing agrarian issues, maintaining social harmony, and resolving disputes. This visit allowed students to examine the intersection of political factors, socio-economic dynamics, and the role of the police in rural communities.

Mandal Revenue Office (MRO Office).

Mandal Revenue Office (MRO Office): The students visited the MRO Office to understand the administrative functioning of the local government at the Mandal level. They learned about the roles and responsibilities of revenue officers, land records management, taxation processes, and the execution of government welfare schemes. This visit provided valuable insights into the coordination between economic policies, political decision-making, and administrative efficiency.

Division Court.

Division Court: The visit to the Division Court provided students with insights into the judicial system at the local level. They observed court proceedings, learned about the roles of judges and lawyers, and gained an understanding of the challenges faced by the judiciary in delivering justice. This visit allowed students to explore the connection between political institutions, legal frameworks, and the administration of justice.

Industrial Visit by the Department of Chemistry.
Patil Rail Infrastructure Pvt. Ltd, Growth Centre of Bobbili

The Department of Chemistry organized an industrial visit to Patil Rail Infrastructure Pvt. Ltd, located in the Growth Centre of Bobbili. The primary objective of this visit was to provide practical exposure to students regarding the utilization of iron ore in the manufacturing of various rail components. Additionally, the students had the opportunity to observe the operations of the Quality Control and Quality Analysis units within the industry.

During the visit, students were able to witness firsthand how iron ore is transformed into different parts used in rail manufacturing. They gained valuable insights into the processes involved, including extraction, purification, and fabrication techniques. This hands-on experience allowed them to understand the crucial role of chemistry in the production of rail components and its impact on the overall quality of the final product.

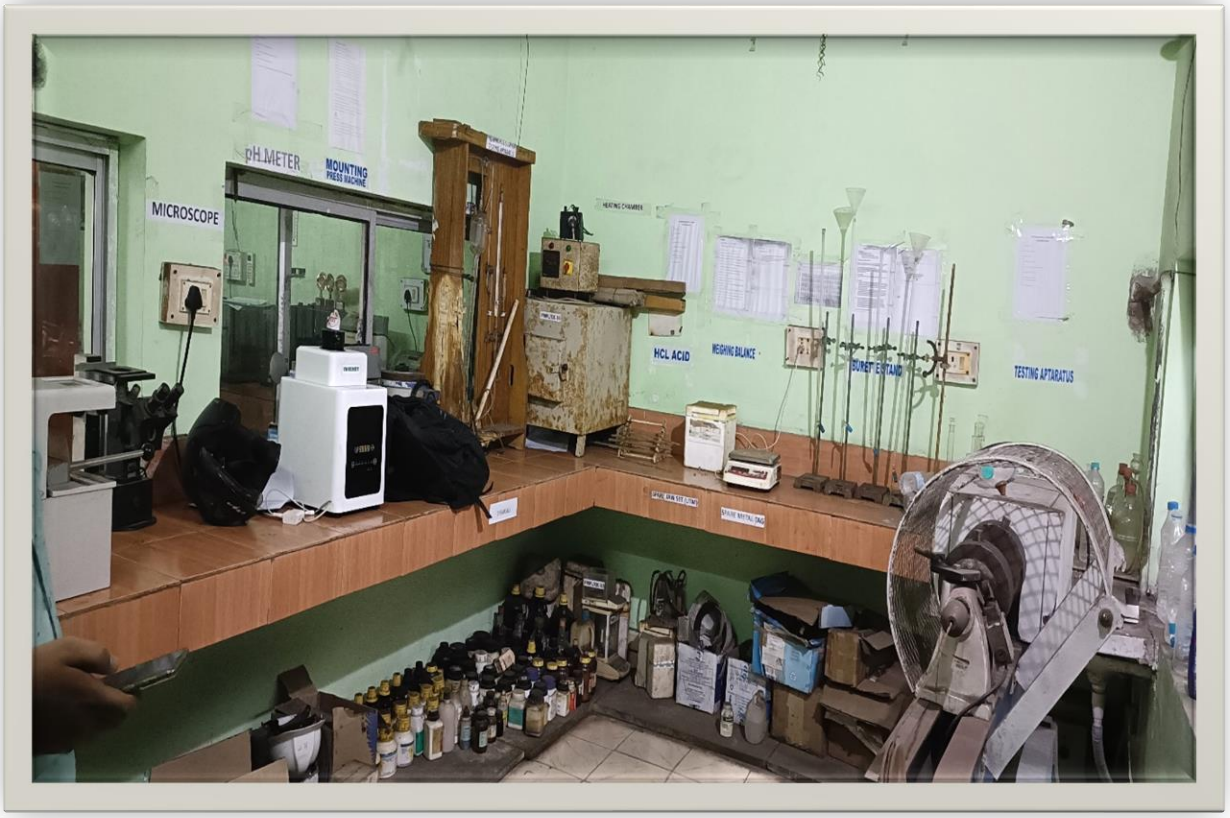
Furthermore, the students had the privilege of exploring the company's commitment to sustainable practices. Patil Rail Infrastructure Pvt. Ltd. had installed a one-megawatt solar power plant to meet a significant portion of its power consumption needs. This initiative, recognized and acknowledged by the government, positioned the company as an environmentally friendly enterprise. During the visit, students had the opportunity to visit the solar plant, learning about the innovative use of solar energy and its positive impact on reducing carbon emissions.


GOVERNMENT DEGREE & P.G. COLLEGE, Salur
Re- Accreditated by NAAC with 'B' Grade
College of Excellence & District Identified Degree college
Parvathipuram Manyam Dist - 535591
Department of Chemistry
Industrial Field Visit
Date: 24 -04 -2023


ప్రభుత్వ డిగ్రీ మరియు పీజీ కళాశాల,సాలూరు.
GOVERNMENT DEGREE AND PG COLLEGE STAFF & STUDENTS
INDUSTRIAL FIELD VISIT ACADEMIC YEAR 2022-23


CHEMICAL LABORATORY


QUAITY CONTROL
Whistel Blower No. 9133448181
PUSH


pH METER
MOUNTING
PRESS MACHINE
MICROSCOPE
HCL ACID
WEIGHING BALANCE
BURET STAND
TESTING APTARATUS


H82F+G2P, Mettavalasa, Andhra Pradesh 535558, India
Mettavalasa
Andhra Pradesh
India
32°C
90°F

Department of Commerce.

Field visit to Create Awareness among the Rural customers about deposit and withdrawal by the Department of Commerce.

Date: 13-07-2022,

Banks are such places where people can deposit their savings with the assurance that they will be able to withdraw money from the deposits whenever required. However, it can be challenging for customers living in rural areas to fill out the deposit and withdrawal forms on their own. The vast majority of the time, they are required to seek assistance from either other customers or bank workers. This may result in other customers having trouble or inconvenience. Because of this, we made regular trips to the financial institutions that were close by in order to educate and assist individuals who were unable to properly complete the deposit and withdrawal forms. As a result, we were able to raise awareness among the customers who lived in rural areas and contribute to the movement towards financial inclusion.


SBI


STATE BANK OF


SBI


SBI

GOVERNMENT DEGREE & P.G. COLLEGE, Salur

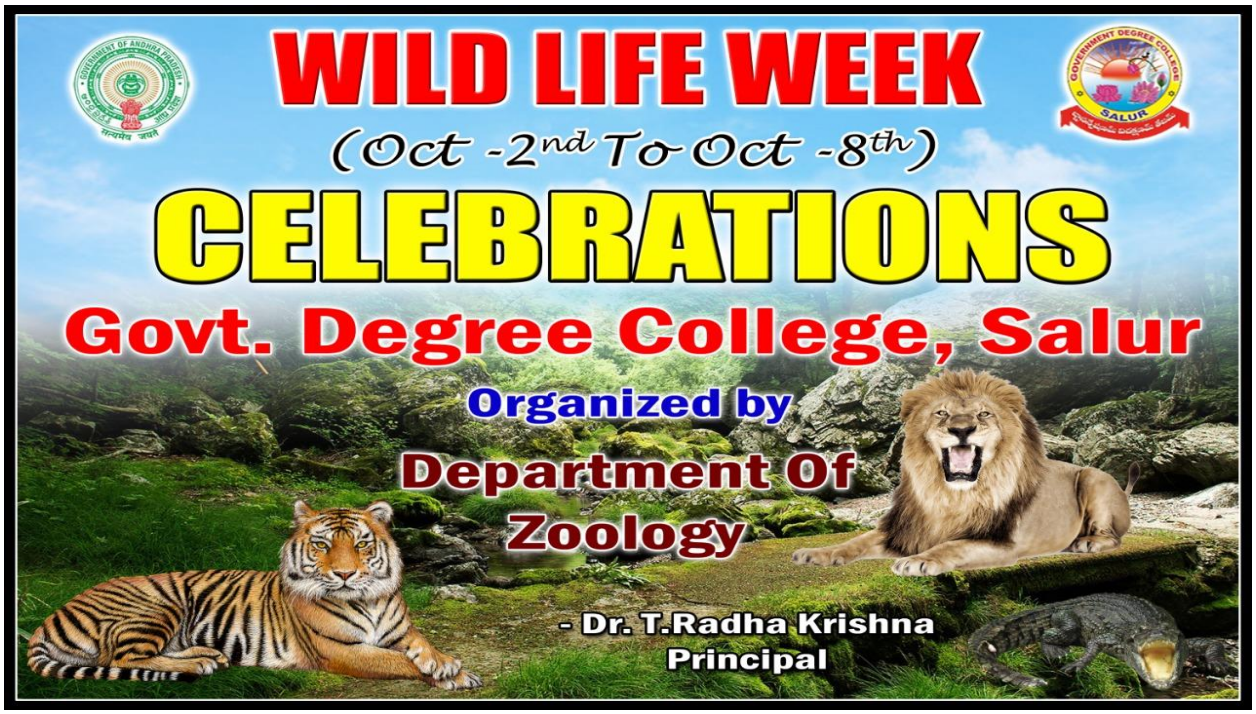
(Re-Accreditated by NAAC with "B" Grade)

(College of Excellence & District Identified Degree College)

Parvathipuram(Manyam) Dist. -535591

Vanam Manam Programme Conducted by NSS on 14.07.18

Wild life week celebrations:

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11/11/2022 12:27


WILD LIFE WEEK
(Oct -2nd To Oct -8th)
CELEBRATIONS
Govt. Degree & P.G
, Salur
Organized
Departm
Zoo
EXCTINCT SPECIES
RUSA


BIODIVERSITY
11/11/2022 11:53

National Science Day Celebrations on 28.02.20

National Science Day celebrations on 28.02.2021

National Science Day Celebrations Conducted by the All science departments on 28.02.22

College to school programme

Attended to Vedasamajam High school to give awareness on Health Education on 27.12.2022

Attended to Primary school to give awareness on Health education and COVID 19

In October 2021

WORLD ENVIRONMENT DAY CELEBRATIONS 2022:


NSS UNIT-1
GOVT DEGREE COLLEGE
SALUR
GPS Map Camera
Salur, Andhra Pradesh, India
G693+6W, konki veedi , Salur, Andhra Pradesh 535591, India
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Long 83.204957°
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GPS Map Camera
Salur, Andhra Pradesh, India
G693+6W, konki veedi , Salur, Andhra Pradesh 535591, India
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NSS UNIT
GOVT DEGREE COLLEGE
SALUR
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NSS UNIT-I
GOVT DEGREE
COLLEGE
SALUR


NSS UNIT-1
GVT DEGREE
COLLEGE
ALUR

WATER HARVESTING:


GOVERNMENT DEGREE COLLEGE
SALUR
NSS UNIT- 1
ACTIVITY:


GOVERNMENT DEGREE COLLEGE
SALUR
NSS UNIT- 1

College to school programme


POCO
SHOT ON POCO M2
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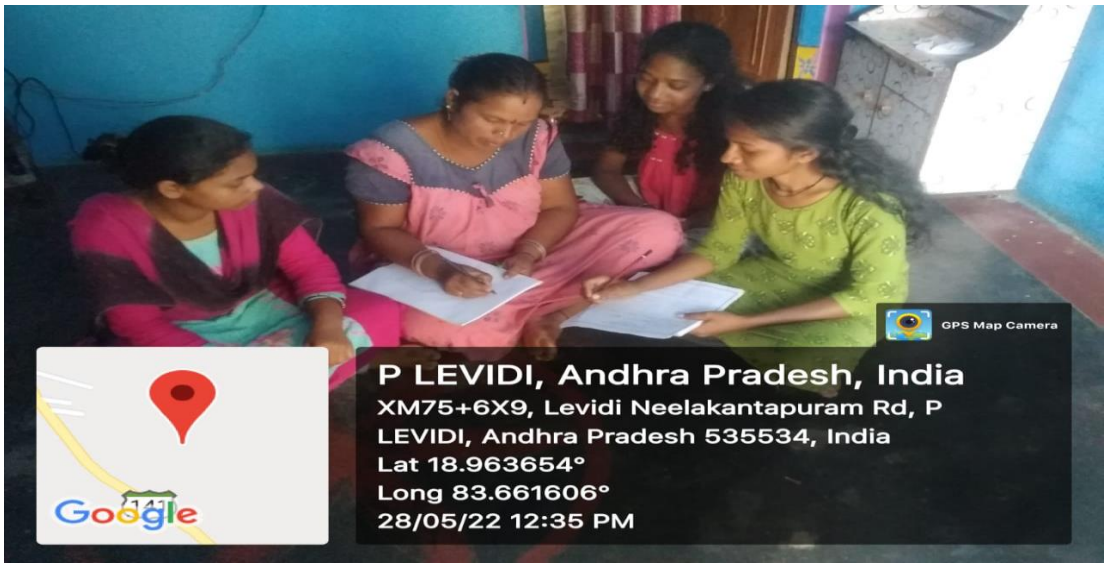
Plantation


The weapon which you can use to change the world

GOVERNMENT DEGREE & P.G. COLLEGE, Salur
(Re-Accreditated by NAAC with "B" Grade)
(College of Excellence & District Identified Degree College)
Parvathipuram(Manyam) Dist. -535591

Community service project photos


GPS Map Camera
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LEVIDI, Andhra Pradesh 535534, India
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Long 83.661606°
28/05/22 12:35 PM
Google


GPS Map
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Saturday, 28-05-2022


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Vivo AI camera
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Neliparti, Andhra Pradesh, India
G54J+2HV, Neliparti, Andhra Pradesh 535591, India
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03/06/22 05:21 PM
Neliparti
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Shot on realme 2


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Note: BANGARAMMA BANDA
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Powered by NoteCam


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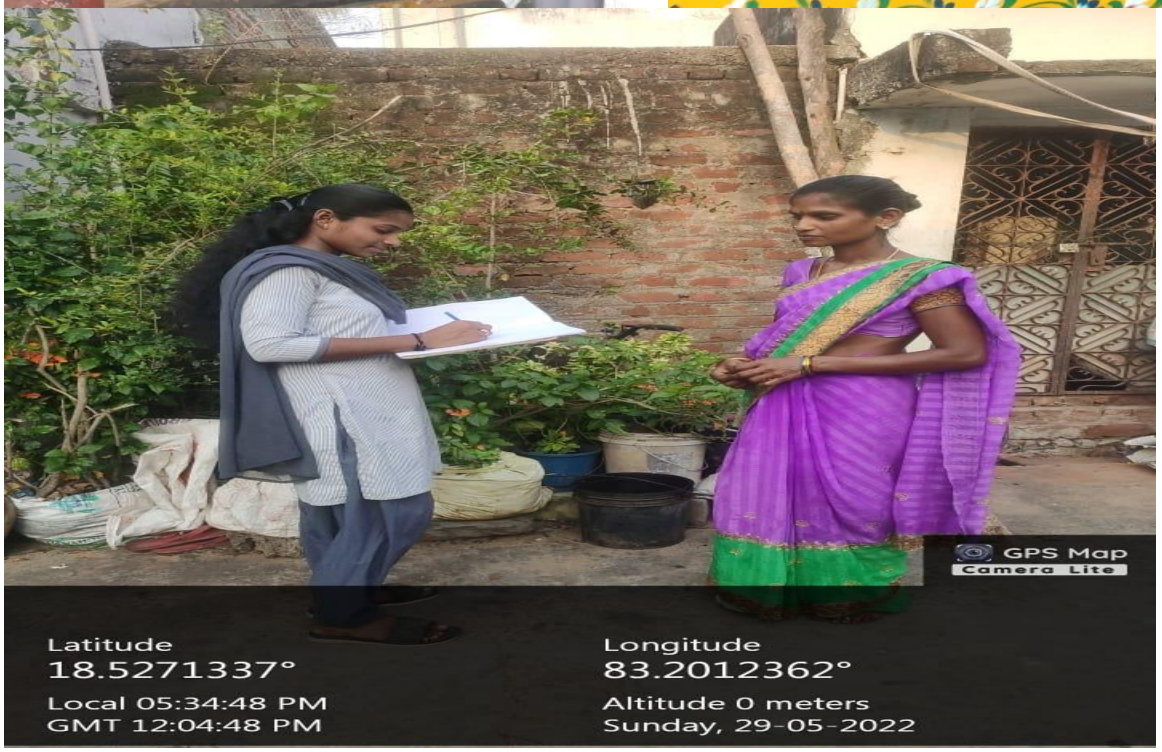
Sunday, 29-05-2022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Arikatota Rd, Arikatota, Andhra Pradesh 535579, India
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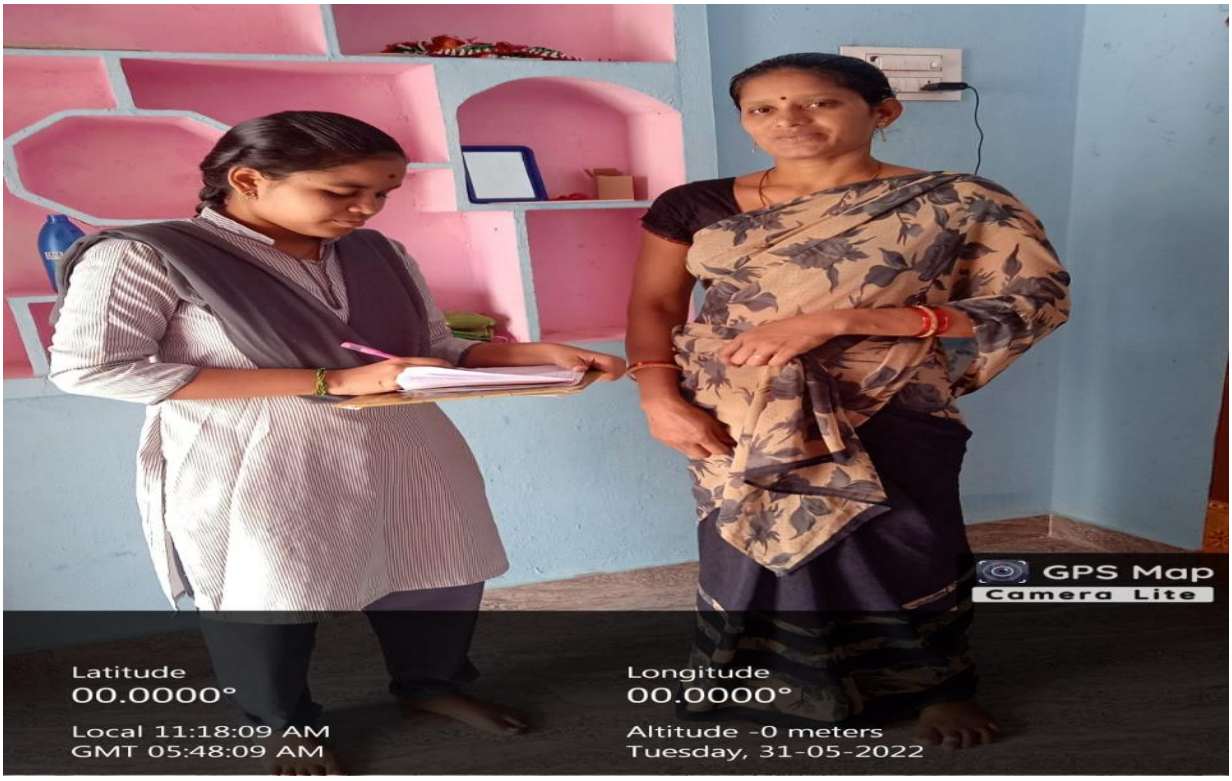
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Tuesday, 31-05-2022


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Sunday, 29-05-2022


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Tuesday, 31-05-2022


GPS Map Camera
Salur, Andhra Pradesh, India
G693+6W, konki veedi , Salur, Andhra Pradesh 535591, India
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Neliparti
Google
Neliparti, Andhra Pradesh, India
G54J+2HV, Neliparti, Andhra Pradesh 535591, India
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GPS Map
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GPS Map Camera
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G693+6W, konki veedi , Salur, Andhra Pradesh
535591, India
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Love

GOVT.DEGREE COLLEGE –SALUR

VIZIANAGARAM DIST. A.P

You are wholeheartedly invited to

WEBINAR

On

7th International YOGA DAY

On 21.06.2021 (12.00PM To 1.00PM)

Resource person:

Dr.Indumani (Adyatmika guru)

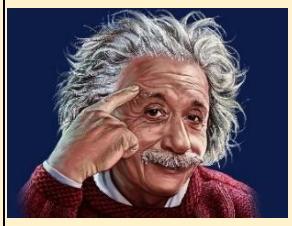
Director, Raparthi Rama Yoga Chaitanya Samstha

Organised by

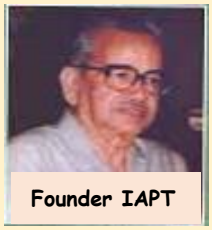
Deparrtment of Physical Education and Sports
Govt.Degree College-Salur

Platform: googlemeet : Webinar on International Yoga Day - GDC Salur
Monday, June 21 · 12:00 – 1:00pm
Google Meet joining info
Video call link: https://meet.google.com/czc-gqts-sng
Note :1) e- certificates will be issued to all the participants

Dr. P.Gowrisankar	Dr.G.Lakshmana Rao	Dr.T.Radhakrishna
Physical Director	IQAC CoOrdiantor	Principal



Einstein's NObel Prize Centenary Year Celebrations (ENOPCYC 2021) and D.P Khandelwal Birth Centenary Celebrations



Organized by

FOCUS IAPT Anveshika

GOVT. Degree College – Salur, Vizianagaram, Andhra Pradesh

Indian Association of Physics Teachers (IAPT) RC-11

Vigyan Prasar Vipnet Club VP-AP0041 &

Andhra Pradesh Physical Science Teachers Forum (APPSTF)

Under the Guidance and Inspiration of

Padma Shri Prof. H.C Verma - NANI Coordinator

Events related to Photo-Electric effect

Lecture -Demonstrations; Research Story Telling

Building and Playing with an Electroscope

Quiz, Model Making and More...

- Interaction with participants by **Padma Shri Prof. H. C Verma,** NANI Coordinator
- Talk on PHOTOELECTRIC EFFECT by **Dr. S. Sanyasi Raju,** Rtd. Principal
- Experimental Demonstrations on PHOTOELECTRIC EFFECT by **Dr. J. Chandrasekhar Rao**
  Lecturer in Physics, GDC Salur

ON LINE NATIONAL WEBINAR
Date: 29-05-2021, 5:00 pm to 7:00 pm

Organising Committee

Dr. T. Radhakrishna, Principal, GDC Salur
Prof. M. Krishnaiah, President, IAPT RC-11
Dr. J. Chandrasekhar Rao, Secretary, IAPT RC-11
Dr. G. Sahaya Baskaran, Professor of Physics, Andhra Loyola College
Mr. V. Srinivasa Rao, Member, IAPT
Mr. G. Lakshmana Rao, Member, IAPT

All Staff, Students and Physics Enthusiasts are welcome to Participate.
e-certificates, Prizes and an Opportunity to Participate in National Events, await...

email: anveshikaandhrapradesh@gmail.com WhatsApp: 9390421450

Government Degree College, Salur - FOCUS IAPT ANVESHIKA (Andhra Pradesh)

S.No.	Date of Workshop	Title of the event and Venue	No. of students participated	No. Of Teachers participated	Resource Person	About the workshop
1.	19-04-2019	**Demonstration** at Gurajada School, Vizianagaram	**107** 9th & 10th class students	**08**	Sarmistha Sahu J. Chandrasekhar Rao Shravani Kale	Explained about Probability and Simulations, Pressure, Surface Tension and Reflection
2.	28-04-2019	**Workshop on Construct-o-Colloquy 3 for teaching and learning physics** at M R College (A), Vizianagaram	-	**24**	Sarmistha Sahu J. Chandrasekhar Rao P. Chandra Rao V. Srinivasa Rao	It is completely **hands on physics experiments**. In this workshop our FOCUS ANVESHIKA team demonstrated Making of Electric motor, function of commutator, Flemings left hand rule, pressure gradient, water fountain, Newtons third law, wind mill generator etc., Teachers did all the expts very actively.
3.	22-07-2019	**Chandrayaan-2** At Govt. Degree College, Salur	**139** B.Sc Students	**08**	i)J.Chandrasekhar Rao HOD Physics,GDC, Salur ii)P.Chantibabu Lecturer in Physics, GDC, Salur	Here we explained about motion of rocket, escape velocity, orbital velocity, use of satellites etc. Also explained about ISRO, **Chandrayaan 2. We showed live telecast of launching of Chandrayaan 2.**
4	07-08-2019	**NAEST-19 Screening** at Govt. Degree College, Salur, Vizianagaram	**172** 9th,10th, +2, +3 Students	**25**	1. Dr.S.Sanyasi Raju RC-11, IAPT, National EC Member 2. Dr. D R K Raju Retd. Correspondant, Mansas Educational Institutions. 3. Dr. G J Naga Raju HOD Physics, UCEV, JNTU, Vizianagaram.	Since our NAEST Screening contains daily life simple video clippings, all the participant students were very actively and interestingly participated in the discussion. Teachers also enjoyed a lot. After completion of prelims some students and teachers told me that "Some experiments given in the prelims seems to be in our text book, but these are very simple, low cost, available materials with most interesting and innovative. In our schools/colleges they are not conducting practicals, even though sometimes they are giving chance to do
5	07-08-2019	**NAEST-19 Screening** at A. P. Model School, Tamada, Srikakulam	**55** 9th,10th, +2, +3 Students	**11**		
6	08-08-2019	**NAEST-19 Screening** at R K Junior & Degree College, Vizianagaram	**378** 9th,10th, +2, +3 Students	**49**		
7	08-08-2019	**NAEST-19 Screening** at Andhra Loyola College, Vijayawada	**68** 9th,10th, +2, +3 Students	**13**		
8	08-08-2019	**NAEST-19 Screening** at	**187**	**23**		

		VCS & TA Hall, Kedareswara Peta, Fruit Market, Vijayawada	9th,10th, +2, +3 Students		4. Dr.J.Chandrasekhar Rao, HOD Physics, GDC, Salur. 5. Dr. I. Sahaya Bhaskaran, HOD Physics, Andhra Loyola College, Vijayawada. 6. Prof. M. Krishnaiah, RC-11, President Teachers 7. V. Srinivasa Rao 8. G. Durga Prasad 9. U. Lakshmana Suri 10.K. SrikrishnaSai 11.G. M. Murali Krishna 12. P. Chandra rao 13.P. Chanti Babu	experiments but those are boring and this much of interest we may not feel". Also they told that this is one of the biggest and best events they saw in our district. **The entire activity was covered by Telugu channel 'ETV Andhra Pradesh' and they telecasted as YUVA Program on 14-08-19 by 9.30 pm**. Below is the link to see https://youtu.be/mdjrtj0qCFs
9	08-08-2019	**NAEST-19 Screening** at Sri Padmavathi Mahila University, Tirupathi	**80** 9th,10th, +2, +3 Students	**13**		
10	08-08-2019	**NAEST-19 Screening** at P R Govt. Degree College, Ramachandrapuram	**104** 9th,10th, +2, +3 Students	**15**		
11	08-08-2019	**NAEST-19 Screening** at A. P. Model School, Edullavalasa Srikakulam	**115** 9th,10th, +2, +3 Students	**14**		
12	08-08-2019	**NAEST-19 Screening** at Sri GCSR College, GMR Nagar, Rajam, Srikakulam	**130** 9th,10th, +2, +3 Students	**18**		
13	12-08-2019	**NAEST-19 Prelims** at R K Junior & Degree College, Vizianagaram	**126** B.Sc 2nd Year Students	**14**		
14	17-08-2019	Workshop on **Innovative Experiments in Optics** at Rajalakshmi Engg. College, Chennai	**326 Biomedical Engineering students**	**10** Faculty members	1. Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur. 2. Dr. Kalpana, Dean, REC, Chennai	This workshop aims to explore the nature of light with a series of activities at the elementary level to the undergraduate students. I demonstrated all the properties of light from rectilinear propagation of light to polarisation. At the end of session participants conceive the principle behind the application of optics in medicine.
15	19-08-2019	Workshop on **Innovative Experiments in Physics** at Govt. Junior College, Madhuravada, Visakhapatnam.	**46** Intermediate Students	**6**	1. Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur. 2. Sri. K. Sri Hari Principal, GJC, Madhurawada, VSP.	Especially these students came from backward area studying in Govt. Jr. College. Here I Demonstrated discussed and interacted with the students about the concepts given in the text book of +1 and +2 level.

16	30-09-2019	Workshop on **Innovative Experiments in OPTICS** at Sri Venkateswara Kalamandir, Parvathipuram, Vizianagaram	**526** 2nd B.Sc Students	**18**	1. Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur. 2. Sri. K. Chandra Mouli, Lect. In Physics. 3. Sri. M. Sastri, Lect. In Physics.	This workshop is only for B.Sc 2nd Year students those have Optics in their 3rd semester syllabus. With the request of Parvathipuram division Physics lecturers, I demonstrated Optics experiments in Venkateswara kalamandir (Theatre). Here one educator who loves science provided all the facilities including theatre. 8.00am to 11.00 am we conducted this program. Since this area is SC, ST Constituency, all the students very enthusiastically participated and enjoyed a lot. When I interact with these students I saw happiness and glow from these students, this is really one of the best experiences for me.
17	22-12-2019	**Solar Eclipse (Eclipses and Myths) at** Municipal High School, Kaspa	**63**	**21**	Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur.	While I am discussing with our students about the Solar Eclipse, which is forming on 26th December 2019, maximum number of students arised more doubts such as 1) Don't go outside during the Eclipse, 2) Don't cook and don't eat any food during the Eclipse, 3) Put grass pieces in milk and food material, 3) If pregnant women go outside during eclipse their child to be born with various deformities such as blindness, cleft lips, birth marks, women are told to lie straight in bed, 4) They do not do their daily activities as usual during Eclipse, 5) Wooden pestle placed in brass bowl with turmeric water or milk then only it stands in straight during Eclipse, after Eclipse automatically it will fall down, etc., To clarify all the doubts we explained the formation of Eclipses and its effects scientifically through ppt in various institutions and also told the do's and don'ts
18	23-12-2019	**Solar Eclipse (Eclipses and Myths)** at GDC-Salur	**44**	**6**	Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur.	
19	24-12-2019	**Solar Eclipse (Eclipses and Myths) at** Vasavi Jr. College, Bobbili	**40**	**9**	Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur.	
20	26-12-2019	**Solar Eclipse Observation at GDC Salur**	**26**	**4**	1.Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur. 2.P.Chantibabu, Lecturer in Physics, GDC Salur	

						of viewing the Eclipse. Also we watched Solar Eclipse at open field of Govt. Degree College, Salur on 26th December 2019 and took some photos with solar filters and with No. 12 solar glass plate. Especially we observed wooden pestle placed in brass bowl and ordinary bowl with water, without water, with turmeric water, with milk, before eclipse, during eclipse and after eclipse. From this finally students conclude that these are all superstitions only. Our students took photos using solar filters during solar eclipse in different times at Vizianagaram District and the edited final photo is as shown.
21	08-02-2020	Content Enrichment Program for high school teachers at Premasamajam, Phool Bhaugh, Vizianagaram	-	**98**	Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur.	In our Andhra Pradesh one of the biggest Physical Science forum known as Andhra Pradesh Physical Science Teachers Forum (APPSTF) conducted Content Enrichment Program (CEP) for Physical Science Teachers working in Government and Zilla Parishad High Schools at Vzm district and Sklm district separately as well as conducted Proficiency Advancement Test for 10th class students simultaneously. In the morning session students were writing the test and teachers participated in CEP. We demonstrated Snell's law derivation, Rectilinear propagation of light, Refraction of light when light incidents normally, using of sine conventions in the derivation of Lens makers formula and also in solving problems, Lateral shift, Real depth - Apparent depth and relation between them, Finding refractive index of glass and water, Total internal reflection, Physical
22	23-02-2020	SIKKOLU SRUJANOTSAVAM – Content Enrichment Program for high school teachers at Govt. College for women, Srikakulam	**150**	**173**	Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur.	

						phenomenon involved in Rainbow formation, Spectrum and visible region etc. In the afternoon session teachers evaluated question papers and students participated in our demonstration program. Here we showed simple physics experiments like upthrust force, centre of mass, centre of gravity, Newton's 3rd law using magnets, Pascal's law, Bernoulli's principle, creating resonance using transparent pipe, wave motion using spring etc.
23	27-02-2020	**National Science Day Celebrations-2020** at Govt. Degree College, Salur	**200**	**21**	1.Dr. J. Chandrasekhar Rao, HOD Physics, GDC, Salur. 2.P.Chantibabu, Lecturer in Physics, GDC Salur	In the memory of Sir C V Raman, we celebrated National Science Day at our college. The main theme of our program is WOMEN IN SCIENCE. For this we conducted essay writing, elocution and working models competitions to degree college students studying in our Salur mandal. In the morning session, our college Principal Dr. T Radhakrishna garlanded C V Raman's photo which was drawn by B. Sc final year student Mr. B. Karuna. Our principal, in his first words said that every student must learn each concept by learning by doing method. He asked the students to think innovatively and do scientifically as our college is providing all the facilities; you should improve your scientific attitude and serve to the society. Sri P. Chanti Babu delivered Life Story of Sir C V Raman through ppt. Mr. P. Raja final year student explained about role of women in development of science through ppt.

						Students presented their working models like 1) drone, 2) formation of rainbow, 3) grass cutter, 4) wave motion, 5) hydraulic bridge, 6) hydraulic machine, 7) water clock, 8) solar smoke absorber, 9) walking robot, 10) wind energy, 11) water alarm, 12) homemade projector etc. In the afternoon session we demonstrated some experiments in mechanics, waves and oscillations, optics, solar energy and wind energy. In the valedictory function we gave the prizes to winners and also felicitated women science lecturers working in our college.
		TOTAL	**2,559**	**269**		

I am here with enclosing photos of each event. Kindly see the attachment.

Thanking you sir,

Yours Sincerely,

Dr. J. Chandrasekhar Rao,

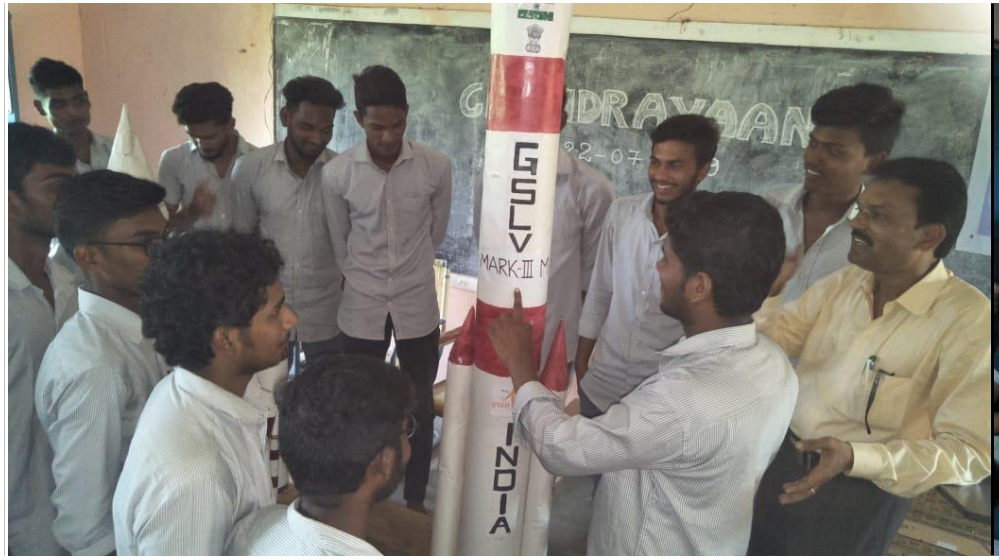
Coordinator,

FOCUS IAPT ANVESHIKA.

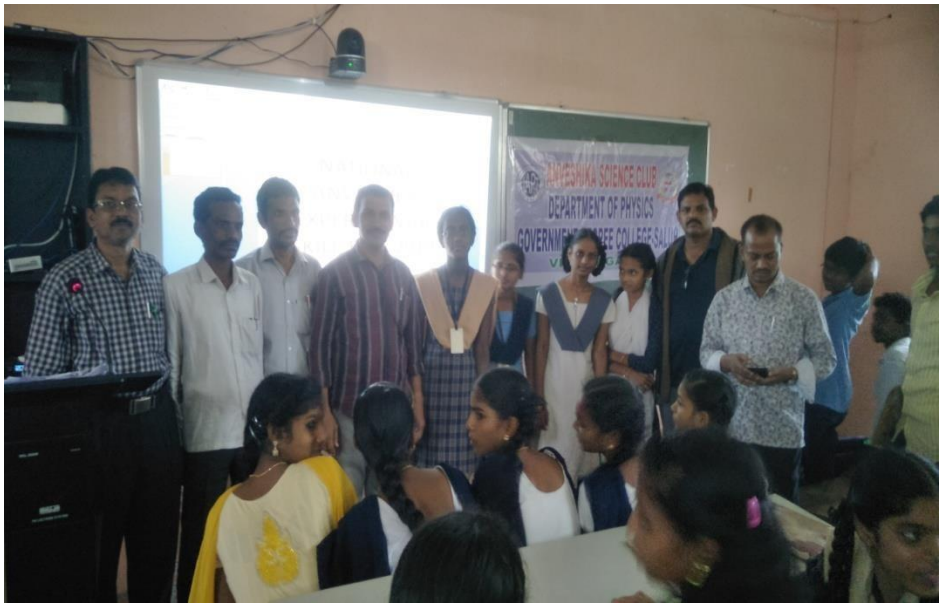
1. **Demonstration** at Gurajada School, Vizianagaram on 19-04-19

2. **Workshop on Construct-o-Colloquy 3 for teaching and learning physics** at M R College (A), Vizianagaram on 28-04-2019

3. **Chandrayaan-2** at Govt. Degree College, Salur, Vizianagaram on 22-07-2019



4. **NAEST-19 Screening** at Govt. Degree College, Salur, Vizianagaram on 07-08-2019.



6. NAEST-19 Screening at R K Junior & Degree College, Vizianagaram on 08-08-2019

7. NAEST-19 Screening at Andhra Loyola College, Vijayawada & at Sri GCSR College, GMR Nagar, Rajam, Srikakulam




8. NAEST-19 Screening at P R Govt. Degree College, Ramachandrapuram

9. NAEST-19 Screening at VCS & TA Hall, Kedareswara Peta, Fruit Market, Vijayawada

9. NAEST-19 Prelims at R K Junior & Degree College, Vizianagaram

Venue: R K Jr. & Degree College, Vizianagaram, AP.

Title of the programme: National Anveshika Experimental Skill Test 2019 – State Level Prelims.

Participants: 21 students from juniors and 15 students from seniors, 20 teachers and 12 evaluators.

Resource Persons: Dr. S. Sanyasi Raju, National EC Member, RC 11, AP.

Dr. D R K Raju, Ex. Correspondent, Mansas Educational Institutions, Vizianagaram.

Dr. J. Chandrasekhar Rao, HOD Physics, Govt. Degree College - Salur, Vizianagaram.

Programme Details: In this state level prelim, selected students from regional level were attended. We have given 3 experiments such as refractive Index of material of the prism; internal resistance of the cell; Young's modulus by non uniform bending to the juniors and for seniors another 3 experiments like Oscillation patterns of a pendulum; To Measure wavelengths of light from a CFL; Finding the speed of sound in an air

Experiments being performed by juniors

Experiments being performed by seniors

column were given. For all these 6 experiments we have given write ups and related material to the students. Each student can perform 3 experiments from each level. Our evaluators observe students performance while doing the experiments. Depending on their experimental skills, taking of readings, minimization of errors, plotting graphs, result analysis, our evaluators observes, discussed with the students positively and selected 1 from juniors and 1 from seniors to the national level NAEST-2019 which will be conducted at Kanpur. Here students participated very interestingly, enthusiastically and they enjoyed a lot while performing the experiments. We have given cash awards and certificates to the winners. The entire activity was covered by Telugu channel 'ETV' and they telecasted as YUVA Program on 14-08-19 by 9.30 pm.

NAEST-2019 Andhra Pradesh state level winners with delegates.

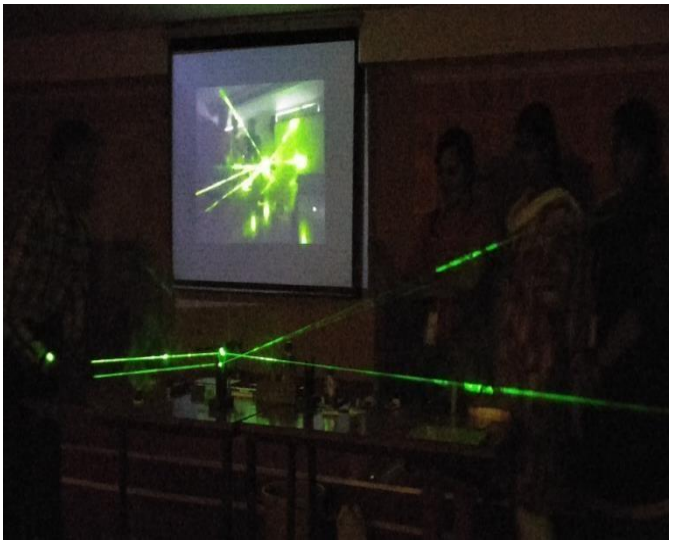
10. Venue: Rajalakshmi Engineering College, Thandalam, Chennai.

Title of the programme: Workshop on 'Innovative Experiments in OPTICS'

Participants: 326 Biomedical Engineering students and 10 faculty members

Resource person: Dr. J. Chandrasekhar Rao, Secretary, RC-11, IAPT, Andhra Pradesh.

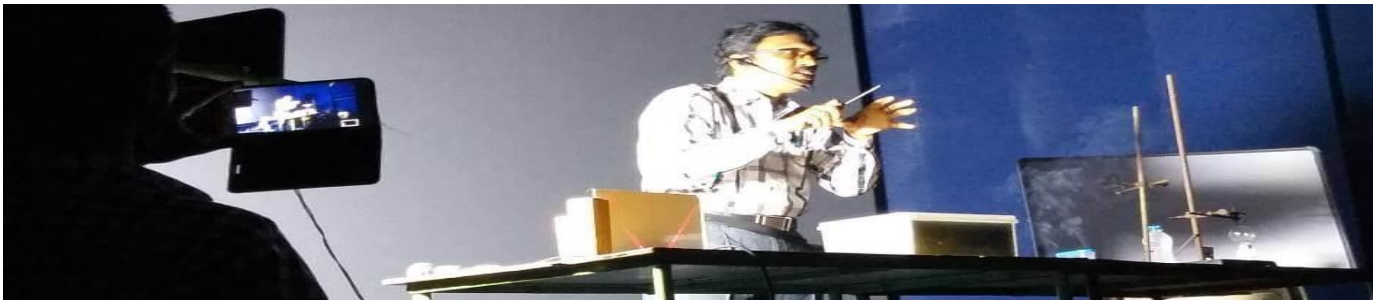
Programme details: Optics has, since ancient times, being used as aid for the examination of human patients and in some therapeutic treatments. Learn some fun and interesting things about optics in this workshop. This workshop aims to explore the nature of light with a series of activities at the elementary level to the undergraduate students. I demonstrated all the properties of light by showing the experiments such as rectilinear propagation of light, reflection, laws of reflection, refraction, laws of refraction, snell's law, finding the refractive index of water, denser medium and rarer medium, types of lenses and mirrors, real and virtual images, total internal reflection, chromatic aberration, interference, diffraction due to single slit and double slit, polarization and angle of rotation of sugar solution. Dean and Prof. of Biomedical Engineering department Dr. Kalpana motivate the students. She told to the students that 'if we know the



refractive index of different tissues it will help in the treatment. So think innovatively and find simple smart innovative instruments in the treatment'. Winners of Smart Hackathon STUPENDOUS SIX team and The_TACHYONS team of this college interacted with participants and share their experience and knowledge. At the end of session participants conceive the principle behind the application of optics in medicine.

11. Workshop on Innovative Experiments in Physics at Govt. Junior College, Madhuravada, Visakhapatnam.

12. Workshop on Innovative Experiments in OPTICS at Sri Venkateswara Kalamandir, Parvathipuram, Vizianagaram on 30-09-2019.



విజయనగరం | మంగళవారం | అక్టోబర్ | 1 | 2019 సాక్షి

ప్రయోజనం చేకూర్చిన ప్రయోగం

- ఇన్నోవేటివ్ ఎక్స్‌పెరిమెంట్స్ ఇన్ ఫిజిక్స్‌కు విశేష స్పందన
- కాంతి ధర్మాలపై ప్రయోగాత్మక విశదీకరణ
- ప్రయోగాలతో సమాధానాలు రాబట్టిన విద్యార్థులు

ప్రయోగశాలకు హాజరైన వివిధ పాఠశాలల విద్యార్థులు, కాంతి తరంగాలకు సంబంధించి వివిధ రకాల ప్రయోగాలు చేస్తున్న డాక్టర్ జోగ చంద్రశేఖరరావు

పార్వతీపురం: పార్వతీపురంలోని వేంకటేశ్వర కళామందిర్‌లో సైన్స్ విద్యార్థులకు భౌతిక శాస్త్ర అంశాలపై సోమవారం నిర్వహించిన ప్రయోగాత్మక విద్యాబోధన ప్రయోజనం కల్పించింది. గాయత్రీ డిగ్రీ, పీజీ కళాశాల, ఇండియన్ అసోసియేషన్ ఆఫ్ ఫిజిక్స్ టీచర్స్, ఫోకస్ అన్వేషికా ప్రభుత్వ డిగ్రీ కళాశాల (సాలూరు) సంయుక్త ఆధ్వర్యంలో ఇన్నోవేటివ్ ఎక్స్‌పెరిమెంట్స్ ఇన్ ఫిజిక్స్ వర్క్‌షాపు సాగింది. దీనికి ముఖ్య అతిథిగా రిసోర్స్ పర్సన్ డా.జోగ చంద్ర శేఖర్‌రావు హాజరయ్యారు. భౌతికశాస్త్రంలోని క్లిష్టమైన అంశాలను సులభంగా అర్థంచేసుకునే విధానాలను ప్రయోగపూర్వకంగా వివరించా రు. కాంతి ధర్మాలైన కాంతి రుజువర్తనం, వివర్తనం, పరావర్తనం, వక్రీభవనము, సంపూర్ణాం తర పరావర్తనము, నిజ ప్రతిబింబం, వ్యతికరణం, మిథ్య ప్రతిబింబం, ధృవణం, కటకాలు, దర్పణాలు తదితరవి అభిసారి, అపసారి కట కాలుగా ఎలా పనిచేస్తాయన్న అంశాలను లేజర్ కిరణాలు, ఫిజమెంట్ బల్బులుతో ప్రయోగాలు చేసి చూపించారు. విద్యార్థులు కేవలం పా ఠ్యాంశాలకే పరిమితం కాకుండా ప్రతీ విషయాన్ని వినూత్నంగా ఆలోచించి శాస్త్రీయబద్ధంగా సమాధానం రాబట్టాలని కోరారు. ఉపాధ్యాయులు కూడా చూపించు.. తర్వాత నేర్పించు అను నినాదంతో ముందుకు సాగాలని సూచించారు. వర్క్‌షాపులో వివిధ కళాశాలల నుంచి 526 మంది విద్యార్థులు, 18 మంది ఉపాధ్యాయులు పాల్గొన్నారు. కార్యక్రమాన్ని గాయత్రి కళాశాల కరస్పాండెంట్ పీవీకే మణికుమార్ ఆధ్వర్యంలో భౌతిక శాస్త్ర విభాగం నుంచి బి.చంద్రమౌళి, పీవీ రాజ్యలక్ష్మి, ఎంఆర్ఎస్ శాస్త్రి, బి.అన్వేష్, ఎం.చంద్రశేఖర్, జి. శివన్నాయుడు, కంప్యూటర్ విభాగం నుంచి పి.వంశీకృష్ణ నిర్వహించారు.

సైన్స్‌పై ఆసక్తి పెరిగింది

ప్రయోగాత్మక విద్యతో భౌతిక శాస్త్రంపై ఆసక్తి పెరిగింది. తరగతి గదిలో అధ్యాపకుడు బోధించే సమయంలో అర్థమయ్యే దానికంటే నేరుగా ప్రయోగాలు చేయడం ద్వారా బాగా అర్థమవుతోంది. కాంతి తరంగాలకు సంబంధించిన ప్రయోగాలు కళ్లకుకట్టాయి.

– ఎన్.సాహితి, వాసవీ డిగ్రీ కళాశాల, పార్వతీపురం

సాక్షి Tue, 01 October 2019
https://epaper.sakshi.com/c/44233751

LOCAL SAKSHI NEWS PAPER 01-10-2019

FOCUS –IAPT Anveshika & RC-11 Activities
Govt. Degree College, Salur, Vizianagaram Dist. Andhra Pradesh.

Activity 1: On 22-12-2019 at Municipal High School, Kaspa (63 Students 21 Teachers)
On 23-12-2019 at GDC-Salur (44 Degree Students and 6 Teachers)
On 24-12-2019 at Vasavi Jr. College, Bobbili (40 Students and 9 Teachers)
On 26th December 2019 at Govt. Degree College, Salur, Vizianagaram(26 Students)

Title of the programme: Solar Eclipse (Eclipses and Myths)

Catalyzed and supported by: IAPT RC 11 & National Anveshika Network of India (NANI)

Resource Persons: Dr. Joga. Chandrasekhar Rao, HOD Physics, GDC Salur, Vizianagaram.

Programme Details: While I am discussing with our students about the Solar Eclipse, which is forming on 26th December 2019, maximum number of students arised more doubts such as 1) Don't go outside during the Eclipse, 2) Don't cook and don't eat any food during the Eclipse, 3) Put grass pieces in milk and food material, 3) If pregnant women go outside during eclipse their child to be born with various deformities such as blindness, cleft lips, birth marks, women are told to lie straight in bed, 4) They do not do their daily activities as usual during Eclipse, 5) Wooden pestle placed in brass bowl with turmeric water or milk then only it stands in straight during Eclipse, after Eclipse automatically it will fall down, etc., To clarify all the doubts we explained the formation of Eclipses and its effects scientifically through ppt in various institutions and also told the do's and don'ts of viewing the Eclipse. Also we watched Solar Eclipse at open field of Govt. Degree College, Salur on 26th December 2019 and took some photos with solar filters and with No. 12 solar glass plate. Especially we observed wooden pestle placed in brass bowl and ordinary bowl with water, without water, with turmeric water, with milk, before eclipse, during eclipse and after eclipse. From this finally students conclude that these are all superstitions only.

Our students took photos using solar filters during solar eclipse in different times at Vizianagaram District and the edited final photo is as shown.

Activity 2: Feb 8th 2020 at Premasamajam, Phool Bhaugh, Vizianagaram (Vzm) Dist.
Feb 23rd 2020 at Govt. College for women, Srikakulam (Sklm) Dist.

Title of the programme: SIKKOLU SRUJANOTSAVAM – Content Enrichment Program

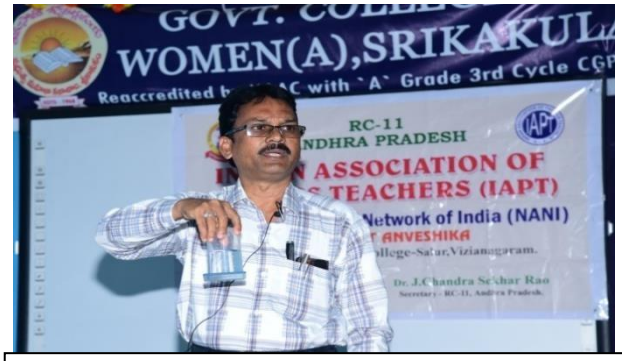
Participants: 98 Teachers from VZM Dist. & 150Students + 173 Teachers from SKLM Dist.

In collaboration with: Andhra Pradesh Physical Science Teachers Forum (APPSTF)

Catalyzed and supported by: IAPT RC 11 & National Anveshika Network of India (NANI)

Resource Persons: Dr. Joga Chandrasekhar Rao, HOD Physics, GDC, Salur, Vzm.
Sri. K. Hara Gopal, J L in Physics, Govt. Jr. College, Rajam, Sklm.

Program details: In our Andhra Pradesh one of the biggest Physical Science forum known as Andhra Pradesh Physical Science Teachers Forum (APPSTF) conducted Content Enrichment Program (CEP) for Physical Science Teachers working in Government and Zilla Parishad High Schools at Vzm district and Sklm district separately as well as conducted Proficiency Advancement Test for 10th class students simultaneously. In the morning session students were writing the test and teachers participated in CEP. We demonstrated Snell's law derivation, Rectilinear propagation of light, Refraction of light when light incidents normally, using of sine conventions in the derivation of Lens makers formula and also in solving problems, Lateral shift, Real depth - Apparent depth and relation between them, Finding refractive index of glass and water, Total internal reflection, Physical phenomenon involved in Rainbow formation, Spectrum and visible region etc. In the afternoon session teachers evaluated question papers and students participated in our demonstration program. Here we showed simple physics experiments like upthrust force, centre of mass, centre of gravity, Newton's 3rd law using magnets, Pascal's law, Bernoulli's principle, creating resonance using transparent pipe, wave motion using spring etc. After evaluation we gave the prizes. In this program Smt. G. Naga Mani, DEO, Dr. B. Narendra, Vizianagaram, Smt. K. Chandrakala, DEO, Sri. A.Prabhakar Rao, Ex. DEO, Srikakulam, Sri. Sai Srinivasa Sharma, State Hon'ble president, Dy. DEO'S, Science Officers, MEO's, HM's participated.



Content Enrichment Program at Govt. Degree College for Women, Sklm Dist for High School PS Teachers

Content Enrichment Program at Premasamajam, Vzm Dist for High School PS Teachers

Activity 3: Feb 27th 2020
Venue: Govt. Degree College, Salur, Vizianagaram Dist.
Title of the programme: National Science Day Celebrations-2020
Participants: 200 B. Sc Students and 21 Lecturers.
Catalyzed and supported by: IAPT RC 11 & National Anveshika Network of India (NANI)
Resource Persons: Dr. Joga Chandrasekhar Rao, HOD Physics, GDC, Salur, Vzm.
Sri. P. Chanti Babu, Lecturer in Physics, GDC, Salur,Vzm.
Program details: In the memory of Sir C V Raman, we celebrated National Science Day at our college. The main theme of our program is WOMEN IN SCIENCE. For this we conducted essay writing, elocution and working models competitions to degree college students studying in our Salur mandal. In the morning session, our college Principal Dr. T Radhakrishna garlanded C V Raman's photo which was drawn by B. Sc final year student Mr. B. Karuna. Our principal, in his first words said that every student must learn each concept by learning by doing method. He asked the students to think innovatively and do scientifically as our college is providing all the facilities; you should improve your scientific attitude and serve to the society. Sri P. Chanti Babu delivered Life Story of Sir C V Raman through ppt. Mr. P. Raja final year student explained about role of women in development of science through ppt. Students presented their working models like 1) drone, 2) formation of rainbow, 3) grass cutter, 4) wave motion, 5) hydraulic bridge, 6) hydraulic machine, 7) water clock, 8) solar smoke absorber, 9) walking robot, 10) wind energy, 11) water alarm, 12) homemade projector etc. In the afternoon session we demonstrated some experiments in mechanics, waves and oscillations, optics, solar energy and wind energy. In the valedictory function we gave the prizes to winners and also felicitated women science lecturers working in our college.


National Science Day Celebrations at Govt. Degree College – Salur, Vizianagaram Dist.

Thank you, sir, for publishing our RC 11 activities without missing. I am grateful to you for your kind cooperation and encouragement.

Thanking you sir.

Dr. J. Chandrasekhar Rao,

Secretary, RC – 11,

Andhra Pradesh.