

# Outreach Activity of Teaching Departments of University of Kerala



## Outreach Invitation

The Mother University opens its knowledge treasures

University of Kerala Welcomes School Students to its Campus



Visit University Herbarium



See Cutting Edge Instruments



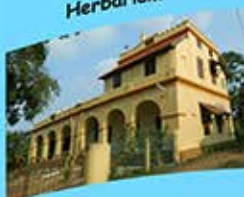
Visit rocks and fossils museum



Do exciting science experiments



Visit Thulasivanam Herbal Garden



Watch Sky from observatory (1836)



See 3000 yr old artefacts in Archeology Museum



See marine wonders in AquaMuseum



See hand writing of famed literary figures



See manuscripts in Oriental Library



### And much more...

Quiz, Puzzles, Creativity Games, Mind games, Group Discussions, Essay Competitions, Science Flashtalk Competitions, Akshara Sloka Mathsaram, Exposure to foreign languages (Arabic, German & Russian), Quickstart in Sanskrit,

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University-level Extension Committee  
Internal Quality Assurance Cell (IQAC)  
University of Kerala  
2017

**University-level Extension Committee**  
**Activities offered by various Depts. of the University of Kerala**  
**for Visiting School Students**

**General**

*Screening of interesting and short videos on subjects related to the Dept,*  
*Quizzes on the subject related to the Dept.*  
*Screening of motivational videos.*

**1 Aquatic Biology**

- Visit to Aqua Museum
- Orientation on Aquarium Keeping
- Awareness on Oceans and Marine Life
- Introduction to Life in Water and Water Conservation
- Demo of extraction of compounds from marine organisms and algal culture

**2 Arabic**

- Introduction to Arabic Language
- Arab words in Malayalam
- Write your name/favourite quote in Arabic

**3 Archaeology**

- Visit to Archaeology Museum

**4 Bio Chemistry**

- **Microbiology**
  - Gram staining of bacteria
  - Microscopic viewing of bacteria, plant and animal cells
- **Clinical Biochemistry**
  - Blood glucose determination
  - Haemoglobin level determination in blood
  - Urine analysis- presence of sugar, protein and ketone bodies
- **Nutritional Biochemistry**
  - Determination of carbohydrate, protein and fat content of food samples
  - Physical fitness and BMR determination

- **Analytical Biochemistry**

- Column and thin layer chromatographic separation of plant leaf pigments
- Extraction of Urease enzyme from food sample
- Precipitation of Urease as crystals
- Rapid extraction and purity determination of DNA by simple methods

## **5 Biotechnology**

- Introducing the new trends and possibilities in Biotechnology
- Lab visits
- Demonstration of microbial quality analysis of drinking water and food materials
- Awareness on: dreadful viral and other contagious diseases, food adulteration and management of house hold wastes, usage of chemical pesticides vs Biopesticides and usage of biofertilizers / Organic farming

## **6 Bioinformatics**

- Fun-filled Science experiments based on Physics, Chemistry, Biology & Maths:  
(a) Light experiment (b) DNA isolation (c) Matchstick puzzles (d) Shape puzzles
- Puzzles and activities to assess and improve sense, sensibility, cognition and communication
- Tangram
- Craft making using palm leaves, paper, coconut tree leaves and other parts  
(a) Paper pen, kite making (b) Making *Olapanthu*, *Olapeepi*
- Inter-disciplinary activities including music, dance and literature:  
(a) *Nadan Pattu* (b) *Nadan Kalilakal* (*Eerkil Kali*, *Valapottu Kali*, *Chakku Kali*)

## **7 Botany**

- Visit to Museum in Dept.
- Visit to Lab
- Visit to Thulaseevanam Garden
- Visit to Seed Bank
- Visit to Kerala University Herbarium
- Introducing Dashapushpam

## **8 Chemistry**

- These programs are conducted in association with our affiliate of Indian Association for Hydrogen Energy and Advanced Materials.
- Students Hydrogen Energy Parliament. A school level debate competition to create the awareness about Hydrogen Energy and Advanced Materials [Exclusively for school students at the level of 11th / 12th standard].
- A National level Quiz Competition Rasathanthra for Science and Engineering Graduate students on Hydrogen Energy and Other Renewable Energy Resources.
- A school level program to create about the interest and awareness about Chemistry [Exclusively for 7th to 10th standard students from schools near Trivandrum]. This is conducted on or near to 28th February.

## **9 Commerce**

- Higher studies guidance and career orientation for +1&+2 students of Commerce stream

## **10 Communication & Journalism**

- Newspaper making
- News item analysis

## **11 Computer Science**

- Make your own web site
- Make an animation
- Make an Android App
- Introduction to resourceful web sites
- Awareness on “e-banking and security threats”.
- Career talk on IT
- Awareness on Internet/mobile abuses

## **12 Demography**

- Visit to micro census data station

## **13 Economics**

- Introducing world renowned economists

## **14 Education**

- Do an IQ test
- How to reduce examination anxiety

- How to learn more efficiently

## **15 English**

- Visit to the 5 centres: (a) Centre for Canadian Studies (b) Centre for Cultural Studies (c) Centre for Australian Studies (d) Centre for English Language Teaching (e) Centre for Womens Studies
- Awareness on Effective Communication Skills
- Introduction to Soft Skills

## **16 Environmental Science**

- Demonstration of Water Quality testing
- Visit to the laboratories and instrumentation facility in the dept.
- Conduct quiz programme for school children.
- Video/ Film show related to Environment and its importance.

## **17 Future studies**

- Computational Modelling & Forecasting
- Visit to High Performance Computer Centre

## **18 Geology**

- Visit the rocks, minerals, and fossils museum
- Lectures on volcano, earthquake, climate, soil, remote sensing etc.
- Awareness on natural and man-made disasters, demonstration of techniques in disaster rescue and management
- Video show on various geological processes
- A day with a geologist in the field to understand how to extract the data stored in the

rock for the understanding of the earth and its processes

- Use of Global Positioning System
- How to read the Topographic maps
- Identification of rocks and minerals collected by students from their neighbourhood
- How groundwater is found, and how it is determined to be potable.

## **19 German**

- Introducing German language and culture

## **20 Hindi**

- Hindi Language lab visit
- Awareness on importance of Hindi – lectures at schools

- Inviting students during Hindi pakwada week

## **21 History**

- History Quiz

## **22 Islamic Studies**

- Introduction to West-Asian studies
- Islam in Kerala

## **23 Law**

- Awareness talk on Constitution, IT Law etc.
- Awareness of Legal system

## **24 Library & Information Science**

- Visit to University Library
- Demo of LIDAS

## **25 Linguistics**

- Etymology of Words
- Awareness on Place Name Study

## **26 Malayalam**

- നാടോടിപ്പാട്ടുകൾ പഠിക്കാം
- കവിത ചൊല്ല് പരിശീലിക്കാം
- കടങ്കഥകൾ പറയാം
- പഴഞ്ചൊല്ല്കൾ പഠിക്കാം
- നാട്ടറിവുകൾ പരിചയപ്പെടാം
- കവിത - കഥ രചനയുമായി ബന്ധപ്പെട്ട സംശയങ്ങൾ പരിഹരിക്കാം
- കേരളീയ കലകൾ പരിചയപ്പെടുത്താം
- എഴുത്തുകാരനായി ചർച്ചകൾ നടത്താം
- പര്യവേഷണയുമായി അടുത്ത് ഇടപഴകാനുള്ള അവസരം ഉണ്ടാക്കാം
- മാതൃഭാഷാ സ്നേഹം വളർത്താം

## **27 Management (IMK)**

- Group Discussions
- Mock Interviews
- Management Games

## **28 Maths**

- Number Games
- Presentation on Famous Mathematicians

## **29 Music**

- Introducing Carnatic music
- Demonstrating Musical Instruments

## **30 Optoelectronics**

- LED Lamp Assembly
- Lab visit and familiarization of X Ray, Spectra, Raman, Laser etc.
- Science talks

## **31 ORI**

- Visit to Manuscript Library
- See writing system of ancient India
- Write your name on plam leaf with Narayam

## **32 Philosophy**

- Yoga Practice
- Awareness on Logic
- Awareness on Ethics

## **33 Physics**

- Quiz programme
- Lab visit to students and experiment demo
- Sky watch – observatory – for students

## **34 Politics**

- Politics Quiz
- Awareness on different Political Ideologies

## **35 Psychology**

- Visit to Psychology Laboratory
- Psychological Tests (finger dexterity, manual dexterity, personality tests etc)
- Visual illusions
- Puzzles
- Mazes

## **36 Russian**

- Introduction to Russian language and culture

## **37 Sanskrit**

- Introduction to Sanskrit



### **38 Sociology**

- Awareness on Social issues

### **39 Statistics**

- Why Statistics?
- How to conduct Sample Surveys?
- Introducing world renowned statisticians
- Introducing Statistical Packages
- Introduction to Official Statistics
- Statistics and Truth
- Experimental Statistics

### **40 Tamil**

- Introduction to Tamil language and culture

### **41 Zoology**

- Ornamental fish keeping (Aquarium keeping) : A video/ppt on different species of ornamental fishes can be displayed with explanation, Demonstration of fabrication and setting of aquarium tank can be done. Expected out comes are: (a) Students will learn fabrication and setting of aquarium. (b) Students will understand/experience the principle behind functioning of aquarium. (c) Students will understand the activities of each organism and its function. d) Students will start admiring Nature/aesthetics. (e) Looking after an Aquarium includes feeding water quality monitoring etc which will make him active/dynamic.
- Visit to Animal Biology lab
- Demonstration of Electron Microscope (SEM)
- Demonstration of PCR Machine
- View microscopic organisms through microscope

### **Other Institutions:**

- Visit to Scriptorium in ICKS
- Visit to Malayalam Lexicon (where the world's biggest dictionary of Malayalam is in the making)
- Visit to Sophisticated Instrumentation and Computation Centre which houses latest scientific instruments



- Visit to Kerala University Computer Centre, oldest computer centre in the city and housing high-end server
- Visit to Observatory, founded in 1837 by Maharaja Swathi Thirunal

**Note:** Department of Nanoscience & Nanotechnology is not included as it is a new department.