

Dear Parent,

This communication is regarding Learning by Questioning Summer Workshops by Sciansation, in association with GP Birla Library and TV5 News.

Sciansation solves a very fundamental problem- to get students to ask questions and to think- to induce student sense-making of the content being transferred to him/her through the textbook/lectures. Generally the topics which one learns in school, is understood only after a few years, after exposure to real life scenarios. Why is it that conventional pedagogy doesn't induce student sense-making?

Can we employ inquiry/research/case-study based learning methods, like the Ivy League Universities/IISERs/IIMs? Sciansation believes that we can't leave student sense-making to chance and has come up with a programme called "Learning by Questioning".

### **Sciansation Profile**

- \* Sciansation works towards promoting inquiry/research based learning amongst school students.
- \* 150+ schools participated in Sciansation events/competitions/TV Shows over the last 6 years.
- \* 7th graders took on MBA students in a Socratic Dialogue on "Hack your MVP" (around Eric Ries' Lean Startup methodology), at JNTU Kukatpally.
- \* School students (of over 40 schools) presented data/experiment based research on "Future of Education" at Central Book Shop- Extrapolate 2016 and won the accolades of the judges. This was the first time in India, that school students presented serious research, which usually begins only at a PhD level. Sciansation conceptualized the programme and trained the students on Design Thinking, so that they could diagnose problems better and then prototype their solutions/pedagogies within their classrooms.
- \* School students presented their projects during a "Policy Research Conclave" organized by Gitanjali Senior School, Begumpet. This was probably the first time, school students were presenting data/experiment based analysis of state/central government policy. Mr Sujiv Nair, CEO, TASK has praised the efforts of the students- conceptualized by Sciansation and students were trained on Design Thinking.
- \* Sciansation is the only organization at the global level, to work on Philosophy of Science/Math/Language at school level, to improve the conceptual clarity of students.

### **Learning by Questioning Workshop**

25hr long workshop which culminates in Ekalavya Research Reality Show on TV5 News. Students learn to probe textbook topics and churn out insights through questioning -Real Life Applications. Social Studies: Perspectives, Sciences: Experimentation, Language: Meaning, Mathematics: Problem Solving

### **Curriculum**

- 1- Socrates- Questions to understand Logical Arguments
- 2- Bloom- Questions to understand higher order abstract concepts
- 3- Shreiber- Questions to understand varied perspectives around the same topic
- 4- Guszak- Questions to comprehend a passage

### **Objectives of the Workshop**

- 1- Make Textbook Reading an enjoyable experience, through questioning
- 2- Transform students into confident and insightful speakers
- 3- Improve analytical skills and problem solving skills through the method of inquiry based learning
- 4- Help the students in churning out insights/inner meaning of data/text.

### **Here is a small example of a History Class**

Topic: 18th Century Political Developments, Class7

Context: Awadh was under Mughal rule, with the governor Burhan ulmul Saadat Khan ruling it.

A Socratic Dialogue between two students- Einstein and Adith

Einstein: Who was the weakest person in Awadh

Students: Rajput jagirdars or may be Mahajans

Einstein: Why not the farmers?

Adith: I think it is the Mughal emperor who is the weakest.

Einstein: How is the Mughal emperor the weakest?

Adith: Saadat Khan removed all the Mughal jagirdars and appointed his own jagirdars, so in Awadh, Mughal emperor is the weakest.

Einstein: Well, that was possible since the emperor is not aware. If he was aware, both your Saadat Khan and the jagirdars would be removed, isnt it?

Adith: Even if he gets to know what will he do? He is facing Nadir Shah invasion right now, this is mentioned in the textbook.

Einstein: That's alright, the relatives of the emperor can sort the problem, can't they?

Adith: The relatives of the mughal emperor were being killed by the jagirdars, which is why the mughal emperor was weakening in the 18th century. This is also mentioned in the textbook.

### **Previous Event Judges:**

Sciensation has had distinguished personalities from the academia and the industry who had helped us in making a case for inquiry and research driven approaches to education.

- 1- Mr Javagal Srinath, former Indian fast bowler (Extrapolate- Future of Education Nov 5th 2016)
- 2- Mr Nagesh Kukunoor, Film-Maker (Idea of India Sciensation, Aug 15th 2016)
- 3- Dr Ramanjaneyulu G.V., Executive Director, CSA (Ekalavya, June 7th, 2015)
- 4- Mr Pramod Reddy, Lawyer (Jan 26th, Construe the Constitution, Jan 26th 2017)
- 5- Dr Vishnupriya, Sr Scientist, CCMB (Evolution of Emotions, Feb 14th 2017)
- 6- Dr Ritesh Khunyakari, Asst Professor, TISS-Hyd (Pedagogy-Sciensation, Sep 4th 2016)
- 7- Mr Sriram Karri, Author, Novelist and Columnist (Ethics & Social Justice, April 14th 2017)
- 8- Prof Geeta Durairajan, Professor, EFLU-Hyd (Sciensation'16, Nov 20th 2016)
- 9- Mr Sujiv Nair, CEO, TASK (Gitanjali Revisioning, July 20th 2016)
- 10- Mr Jayesh Ranjan IAS, Principal Secretary, Govt of TS (Hack your MVP, March 21st 2017)

### **Sciensation History: Winners**

Sciensation'11: E&L School, Nallakunta

Sciensation'12: Bhavans SRKV, Sainikpuri

Sciensation'13: Little Flower High School, Abids

Sciensation'14: Bolton School, Sec'bad

Sciensation'15 Sr: Manthan International School, Tellapur

Ekalavya'15: Gitanjali, Begumpet

Sciensation'15 Jr: Bhavans ARRS, Jubilee Hills

Ekalavya'16: DAV, Safilguda

Idea of India'16: Meridian School, Banjara Hills

Pedagogy'16: Meridian School, Madhapur (competition for school teachers)

Sciensation'16: Little Flower High School, Uppal

ConstrueTheConstitution'17: Sentia Global School, Bachupally

EvolutionOfEmotions'17: St Martins (inter-college competition)

RememberingSteve'17: CVSR (inter-college competition)

Hack your MVP'17: (Group of students from Tejasvi and Reqelford)

Ethics & Social Justice'17: Group of students from Tejasvi and DSE