

Biology through the lenses of Evolution



INDIA has a long history of scientific innovation and excellence, although most students at grassroot level have no opportunities or exposure to India's research scenario or even understand the concepts behind the text in their curriculum. If teachers can interact with eminent researchers for understanding concepts of science in a very simplified manner, they and their students can feel and realise the phenomena and not just learn the printed texts or multimedia content. Interaction of teacher with scientists can open an opportunity to directly understand the ongoing research and participate in the scientific process. This may help them to innovate and improve the static part of syllabus after such exposure and promote students to visit research labs in early age. Overall, a science teacher can be transformed into a "teacher scientist" (Elizabeth et al., 2019). A student led initiative from researchers of the Behaviour and Ecology Laboratory, IISER Kolkata have been awarded an outreach award from the European Society for Evolutionary Biology (ESEB), Society for the Study of Evolution (SSE) and Animal Behaviour Society (ABS) to reach under-represented sections of society from the states of Jharkhand and West Bengal for engagement with teachers and youth with a biology background.

The main objectives of our events are to (TEEM):

Train the young biology teachers currently undergoing teacher's training to develop an evolutionary context while teaching biology.

Exposure of students from lesser privileged and fringe demographics to evolution and receive hands-on experiences through various activities during workshops.

Exposure of early-career teachers to international curricula (motivated by Evolutionary activities for high school) to elevate their perspective to global standards.

Motivate early career teachers to promote scientific understanding of evolution throughout their career to inspire multiple generations of students.

We hope our outreach efforts will cultivate an act of courage for defending the scientific truth in front of senior policymakers. The programme is not planned to provide additional knowledge but to share the real-life experience and excitement of scientists in lab or field. During the interactive workshop, scientists will share memories about school, college, or early career stages (both struggles and success) and what inspired them to take science as a career. The main attraction for participants will be to listen to two or three fascinating or serendipitous findings from each scientist. While explaining the incidence of such experimentation and findings, experts will deliver a few key concepts of biology and a closely tailored activity (puzzle, verbal question, any other innovative method) designed by experts themselves to evaluate participant's understanding.

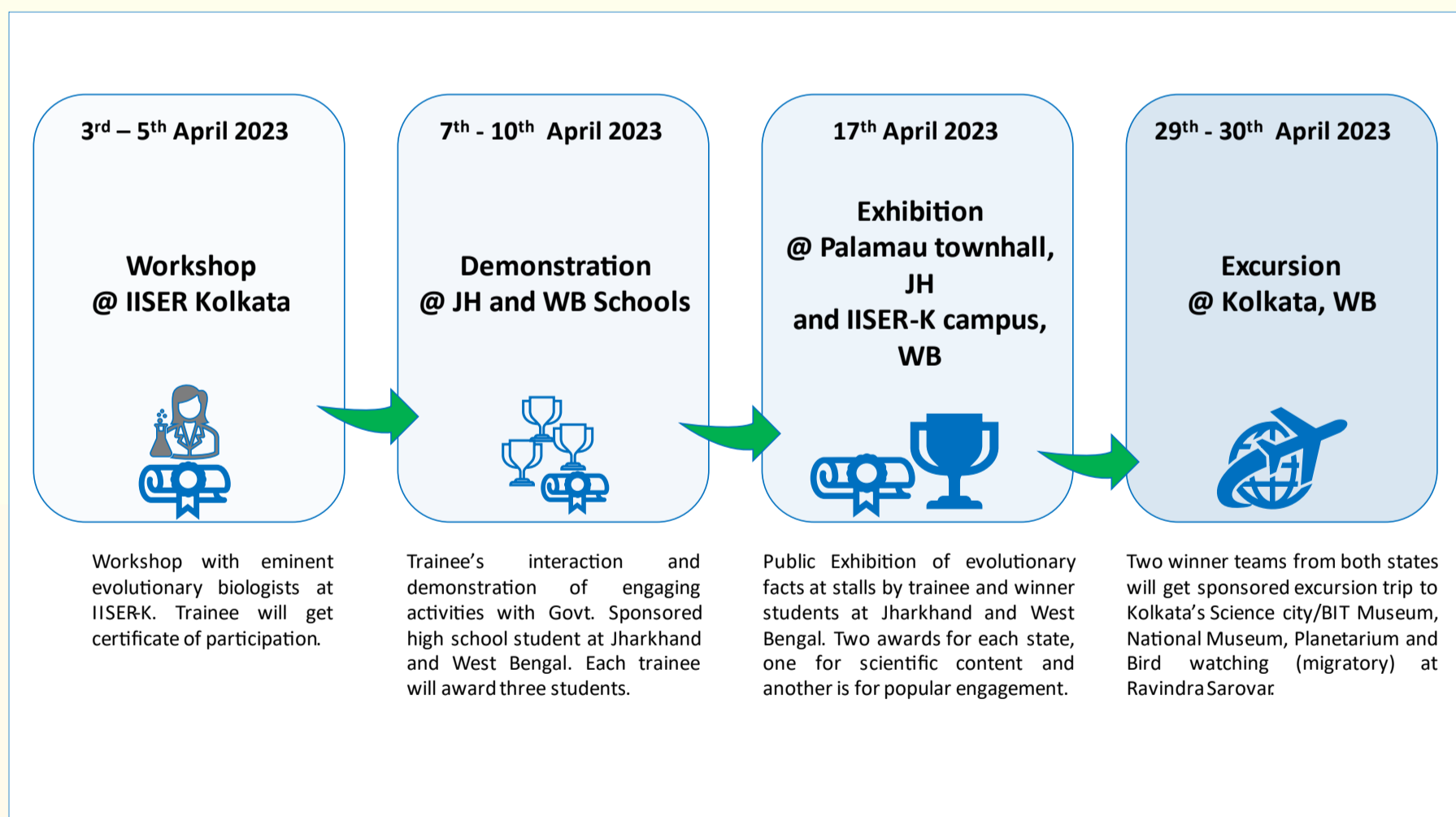
This programme is planned in four engaging stages:

(1) Workshop and interaction with eminent evolutionary biologists at IISER-K.

(2) Demonstration of evolutionary activities to Govt. sponsored school students by trainees and formation of teams with top three students based on their performance and understanding.

(3) Open exhibition on evolution by teacher-student teams explaining evolutionary facts in simplified way to citizens.

(4) Winner teams of the public exhibition at Jharkhand and West Bengal will get an excursion trip to Kolkata (Science City, BIT Museum, National Museum, Bird watching (migratory) around Ravindra Sarovar and Birla planetarium to explore science and evidence about origin, evolution, and diversity of life forms on earth).



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