

Mongolia

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Cooperating Organizations: MSUE, Tomyo secondary school complex, Education and Information Technology Center, MULS

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GLOBE schools: Medle e-school, Tomyo school, “New beginning” school, “Erdmiin Orgoo” complex, Khuvsgil aimag erdenebulgan soum’s school, Tuv aiimag Altanbulag soum’s school, Umnugovi 4-th secondary school

Area schools focus on: GLOBE protocols: clouds, pedosphere

Number of Schools Reporting Data over Past Year:

A. Education: In 2022, Along with 2000 natural science teachers who are experienced with teaching for more than 5 years, teachers coming from Agricultural University of Mongolia and MSU, these teachers’ teaching contents and their curriculum included GLOBE program’s cloud and soil research.

After TomYo and Medlee was founded, their students who are willing to learn natural science were provided training learning to do basic research in natural science by collaborating with local and international teachers. Throughout this training and workshop, TomYo school teachers and students were introduced to doing research opportunities in the future hand. Also, online training with Teams programs gave possibilities in a way of studying and researching with methods of Most importantly, through the Teams program, the chance to own learning speed was given to the students, which was such an effective way of doing research for these students. During this training, students and teachers made a proposal of observing clouds and understood how to work together in the future with effective collaboration.

GLOBE elementary books “Do you know that Clods have names?”, “What in the world is happening to our Climate?”, “What’s Up in the Atmosphere? Exploring Colors in the Sky” translated to mongolian language and distributed to secondary school. Primary school’s “Human and Nature”, “Natural science” subject’s have developed align Globe protocol.

B. Science

Within the framework of the GLOBE program, a volunteer team of students in natural sciences was set up to conduct research using the GLOBE protocol during the academic year, led by teachers from the Agricultural University of Mongolia and the School of Natural Sciences of MSU. This team uses the GLOBE OBSERVER mobile application and EXCEL and SPSS programs to enhance and distribute their results to the local community. Furthermore, In cooperation with colleagues of the Agricultural University of Mongolia, we are preparing guidelines for land research on beforehand of students' practicum in terms of soil temperature and soil structure. In the local region of Mongolia, IV School of Umnogov province, a school of Khuvsgul province, Altanbulag sum school of TUV province, and 21st schools of Ulaanbaatar city are still involved in the expansion of this Globe program.

C. Volunteer Work

Nowadays, after school hours in students' respective schools, the teachers and students learn the methods of research and set up a voluntary science inquiry club implementation of research methods. This club will organize activities such as training students in STEM learning methods, presenting their work to their classmates, and developing and presenting content.

D. Technology

Teachers and students are using MXXT for teaching and research. During training, using Office365's Teams program, online and classroom training was organized, surveys were conducted on Forums, and its results are processed using EXCEL and SPSS programs. Therefore, we are preparing a poster for students and teachers with tips on how to use the GLOBE Observer app.

This Academic Year of Plans: We are planning those actions.

Teachers and students are working to develop a database for GLOBE research to share information and integrate it with all other schools in Mongolia.

- To organize events for high and middle school students. For the Asian Physics Olympiad of Ulaanbaatar, in May 2023 among high and middle school students, we intend to conduct and organize an event of r "Let's explore our environment" based on giving presentations and sharing their posters.
- To participate in online meetings and workshops conducted by Asian Pacific Regions in terms of related topics and subject manners
- To focus on data collection using the GLOBE application, conduct training, and expand observations in the expansion of local regions of Mongolia