Broadening Participation through Citizen Science for Youth with Disabilities

Audience: Youth with diverse abilities • Funding agencies: NASA, National Science Foundation EPSCoR
Collaborators: Pre-service teachers, faculty in Special Education, broader impacts professionals

Montana State University’s Inclusive Community Camp, or “ICC,” gives elementary-aged children with additional support needs—such as those with Down syndrome or autism—an authentic summer camp experience along with their peers.

The MSU Science Math Resource Center (SMRC) worked with camp organizers to brainstorm ways the camp might include STEM research content alongside its core activities in art and physical movement. The NASA AEROKATS and ROVER Education Network (AREN)—with its focus on kite-based Earth observations, remote sensing and citizen science—was a good fit.

Two undergraduate pre-service teachers in Special Education tested NASA AREN activities and suggested adaptations to meet the needs of campers of all abilities.

After using GLOBE Observer, campers were excited to receive satellite images from NASA that matched their own data and furthered their sense of belonging in the larger scientific community.

Citizen science allowed youth who have been underrepresented in STEM to see themselves as scientists and participate in the scientific process.

SMRC is now working with 2022 camp organizers to include STEM content from the Montana NSF EPSCoR project and its theme of WATER. The partnership lays the groundwork for continuing to share research impacts with youth of all abilities through ICC.

Inclusively with a Little Bit of STEAM
A blueprint for a five-day camp for children of all abilities featuring activities from the NASA AEROKATS and ROVER Education Network

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