The Science and Math Informal Learning Educator (SMILE) Pathway

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“...teachers working in tutoring and out-of-school settings, field trip facilitators, home schooling parents and other caregivers, educational outreach program coordinators, education specialists in national laboratories and university-based science and engineering programs, scientists and engineers volunteering in educational programs, out-of-school educators in underrepresented communities, and community-based educators working in youth development centers (e.g., YMCA, 4H, Girl Scouts, Beacon Centers).”
♦ Create a working, national partnership

♦ Establish a specific metadata profile

♦ Review and choose from available digital library management software

♦ Leverage pre-existing STEM informal learning digital assets

♦ Promote diversity in STEM education

♦ Design value-added services

♦ Encourage and expand the informal learning community’s use of the SMILE pathway and NSDL.org

♦ Explore multiple solutions to sustain the SMILE pathway
“...LHS staff will conduct a front-end and formative evaluation study of potential users of the SMILE pathway. These studies will identify and articulate different profiles and typical online interactions of potential users that represent the informal learning community.”

“Digital assets selected for the SMILE pathway will be added in three stages...”

“The science and math diversity coordinators at LHS will foster adoption of the SMILE pathway by educators working with students historically underrepresented in the fields of science and mathematics.”
Technical Infrastructure Team

"An online community will help keep resources relevant and current, by its members providing comments, ratings, and suggestions to similar resources within the pathway."

"Building upon visual GUI prototypes previously developed by the CI team, the technical infrastructure team will design a GUI that will assist SMILE pathway users to quickly identify important aspects of digital resources without being overwhelmed by text-based search results."

"LHS staff will create an embedded web application that connects to the SMILE pathway through server-side processing; thereby allowing users to obtain basic search results without leaving the page they are currently viewing."
Dissemination and Outreach Team

“Case studies and downloadable PDF files on how to use the SMILE pathway based on existing resources developed by SMM for educators…”

“An extended course, lasting up to 90 minutes, would support the use of materials and hands-on demonstrations, which are key characteristics of the resources available to educators on the SMILE pathway.”

“ASTC has a successful history of hosting weekend RAP sessions (Roundtables for Advancing the Professions) and workshops during its annual conference, which bring together diverse audiences and allow for face-to-face hands-on learning.”
53,996,399
Goals of the Digital Library After School Project

- To bring more science and math enrichment into out-of-school time using resources from the Exploratorium’s Digital Library one of the many collections from the National Science Digital Library.
- Offer professional development workshops designed for both professional development providers and after school educators to build capacity to deliver STEM content-rich afterschool activities to learners in the 4th through 12th grades.
EXPLORATORIUM
AfterSchool

Bringing hands-on activities and
digital library resources into afterschool play

Activities
- Jitterbug
- Bottle Rocket
- Laughing cup
- Water bottle saxophone
- Spaghetti building
- Sound sandwich

Buy materials

Events

Community

About

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NSF
National Science Foundation

NSDL
National Science Digital Library