### STAR\_Network

A Library Education Program for Rural Communities

A Production of the *National Center for Interactive Learning* @ Space Science Institute

Support from the National Science Foundation











# Libraries: Serving Communities

African Americans (58%) and Latinos (62%) use a public library at least once a year

Many rural communities with no science centers are served by a public library

In 2007, nearly

1.3 billion

visits to

public

libraries

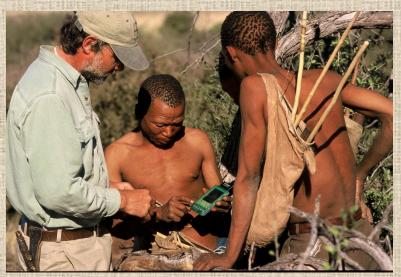
Over 17,000 public libraries serve cities, suburbs, and small towns

Americans go to school, public and academic libraries more than twice as often as they go to the movies

### **Key Project Elements**



Understand Planet Earth



**Engineers Impact People** 



**Rural Public Libraries** 



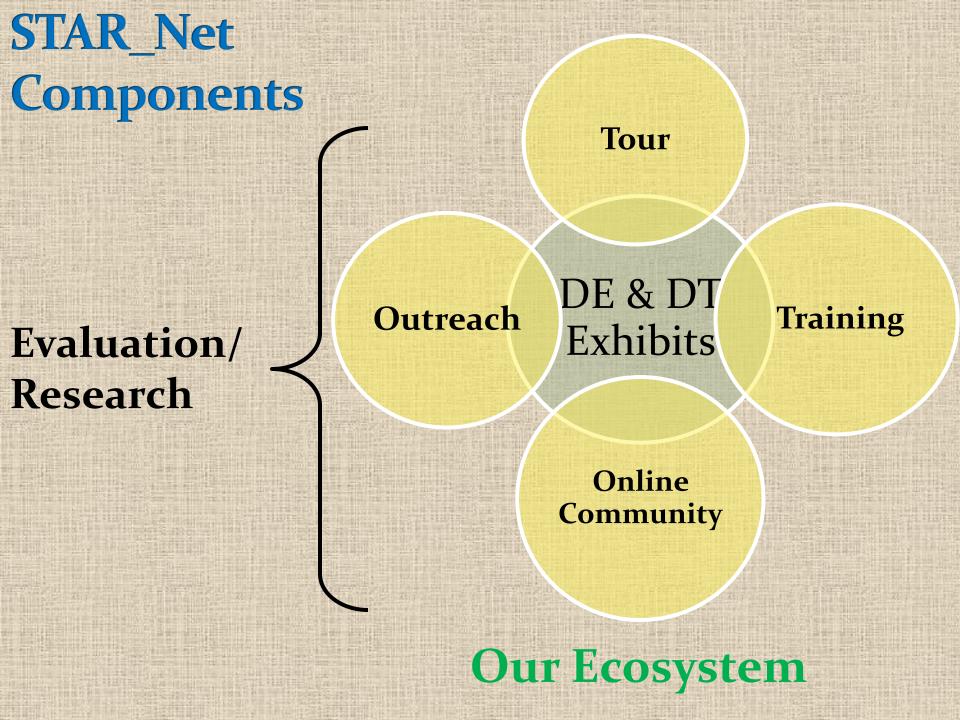
**Library Patrons** 

# **Project Goals**

- Inspire interest and increase understanding of STEM disciplines and the vital role they play in our everyday lives.
- Increase interest and engagement in STEM learning by involving rural communities in hands-on, inquiry-based activities.
- Build and sustain a Community of Practice (CoP) between librarians, project staff, and STEM professionals and educators.
- Assess informal, free-choice learning in a library setting and compare results to other informal education environments (e.g. science centers), and disseminate results to educators and STEM professionals.

## **Project Deliverables**

- Design, fabricate and tour 2 STEM-based, interactive exhibits (Discover Earth and Discover Tech).
- Develop inquiry-based activities and resources (for host and non-host libraries) in collaboration with professional STEM organizations.
- Develop and implement a library staff training program (online and inperson).
- Create a CoP (Community of Practice) that includes project team members, librarians, and professionals in relevant STEM disciplines.
- Conduct education research and evaluation and disseminate results to the ISE and library community through presentations at professional education meetings and publications.
- Design and implement an online exhibit website.



#### **Innovations**

The STAR\_Net project has three primary innovations:

 Develop inquiry-based experiences (exhibits and programs) for rural and underserved libraries,

 Establish an effective Online Community whose members are from <u>libraries</u> and <u>professional STEM organizations</u>, and

 Conduct a research project that explores how libraries can serve as STEM Learning Centers in their communities. We would also like to investigate free choice learning in a library environment and how that compares to what typically happens in science centers.



## A Century of Change



#### Discover Earth









### Engineers Make a World of Difference

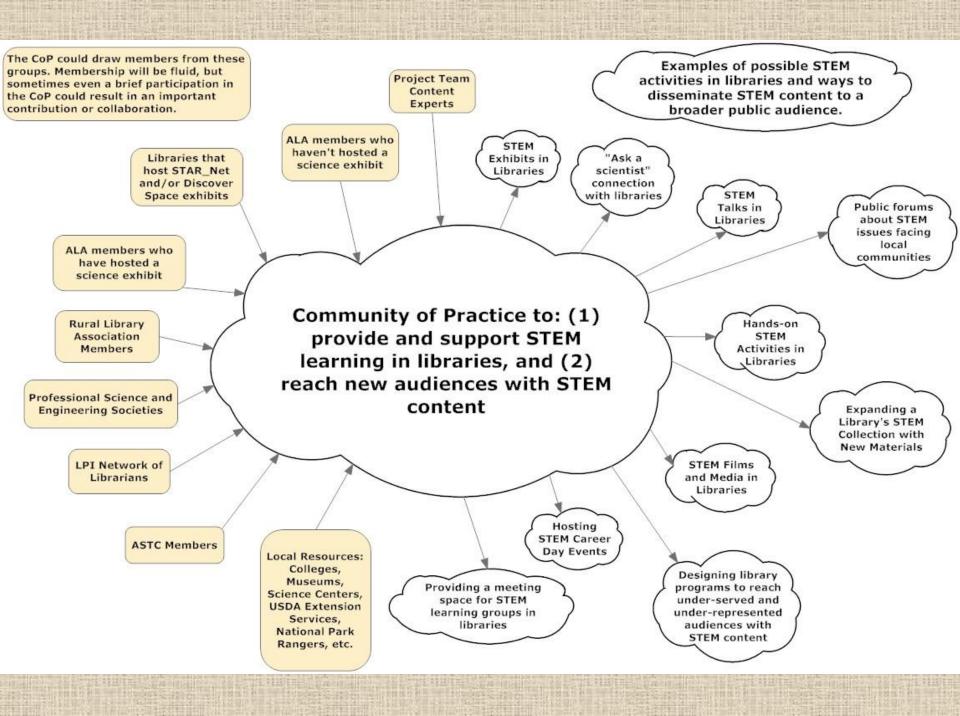




### STAR\_Net CoP Goals

The CoP structure will provide a dynamic forum for host libraries and other members to share resources and disseminate best practices.

- **Build the capacity** of the professionals and organizations involved in STAR\_Net.
- Leverage the efforts of CoP member libraries, the project development team, and STEM organizations.
- Foster partnerships and collaborations among Online Community members to develop new STEM learning experiences for libraries.
- Achieve broader dissemination of education products and services and increase audience impact as a direct result of the STAR\_Net CoP.



## STAR\_Network Model

STEM Professionals (1,000s)

Exhibit Host Libraries (19)

ALA Member Libraries (1,000s)

NGCP Network (1,000s)

Explore! Libraries (hundreds)

STAR\_Net

#### Value to Member Libraries

- Networking & Partnerships (formal & informal)
- Access to Activities & Resources
- Build an R&D Capacity
- Professional Development (e.g. webinars)
- Professional Identity
- Knowledge Sharing & Dissemination

#### Value to STEM Professionals

- Inspiration & Impact
- Reach Diverse Audiences
- Geographical Reach
- Partnerships
- Product Development
- Knowledge Sharing & Dissemination

Providing and Supporting Informal STEM Learning in Libraries

Discussion Board Resources

Calendar

Member Libraries STEM org Members

Discover Earth Exhibit Info

Discover Tech Exhibit Info

Search this site ...



Useful Links

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Site Content

#### Welcome to the STAR\_Net Project's Community of Practice

Libraries provide lifelong learning opportunities to millions of people every day. The STAR\_Net project is developing two hands-on exhibits —Discover Earth and Discover Tech—that will travel to public libraries across the country. The project is also forming a Community of Practice (CoP) for professionals -librarians, scientists, engineers, educators, and others—who want to provide and/or support STEM learning experiences in libraries.

This community is open to those librarians who are hosting the project's exhibits, as well as to those who aren't but are interested in STEM programming. Members of this community will be able to communicate with each other and share ideas and resources for bringing STEM learning experiences to libraries.

This Web site is a place where librarians and STEM professionals can explore ways to collaborate to support existing STEM programming in libraries and develop new programming. For example:

- STEM Exhibits
- Science Cafes
- Ask a Scientist Events
- Make a Rocket
- Build a Robot
- STEM Talks
- Public Forums on STEM Issues
- Hands-on STEM Activities
- Astronomy Events
- Skype Talks with NASA Scientists





STEM stands for

Science, Technology, Engineering, and **Mathematics** 

The National Center for Interactive Learning at the Space Science Institute is leading the STAR\_Net project and development of the Discover Earth and Discover Tech exhibitions. Project partners include the American Library Association, the Lunar and Planetary Institute, and the National Girls Collaborative Project.





Modified

ALA Conference in New Orleans

6/23/2011 9:29 AM







EXCITE. EXPLORE. DISCOVER

Community of Practice Newsletter



#### Welcome to the STAR\_Net Community of Practice

Thanks you for joining our online community of practice, or CoP, at <a href="http://cop.discoverexhibits.org">http://cop.discoverexhibits.org</a>. We hope that it will be a place where librarians, scientists, engineers, educators, and others work together to find ways to provide hands-on STEM (Science, Technology, Engineering and Math) learning opportunities in libraries.

If you have any questions about the CoP, please contact Lisa Curtis at <u>Curtis@spacescience.org</u>. If you have questions about the CoP site or joining the site, please contact Anne Holland at <u>aholland@spacescience.org</u>.



#### Joining Online Discussions

To get the most of your CoP participation, please set your personal profile to receive email alerts of certain online activities in the CoP. For example, you may want to receive an email when someone posts a description of a STEM activity on the CoP.

#### Setting Your Profile to Receive Alerts

On the CoP Home Page on the top right-hand corner, you'll see your name. Click on the arrow next to it to open a drop down menu. Under "My Settings" you'll find your profile. Choose "My Alerts" and update the alerts that you want to receive from the menu on the right, such as the "Team Discussions." Under "Team Discussions," you can click on the subjects of the discussions that you want to hear about.

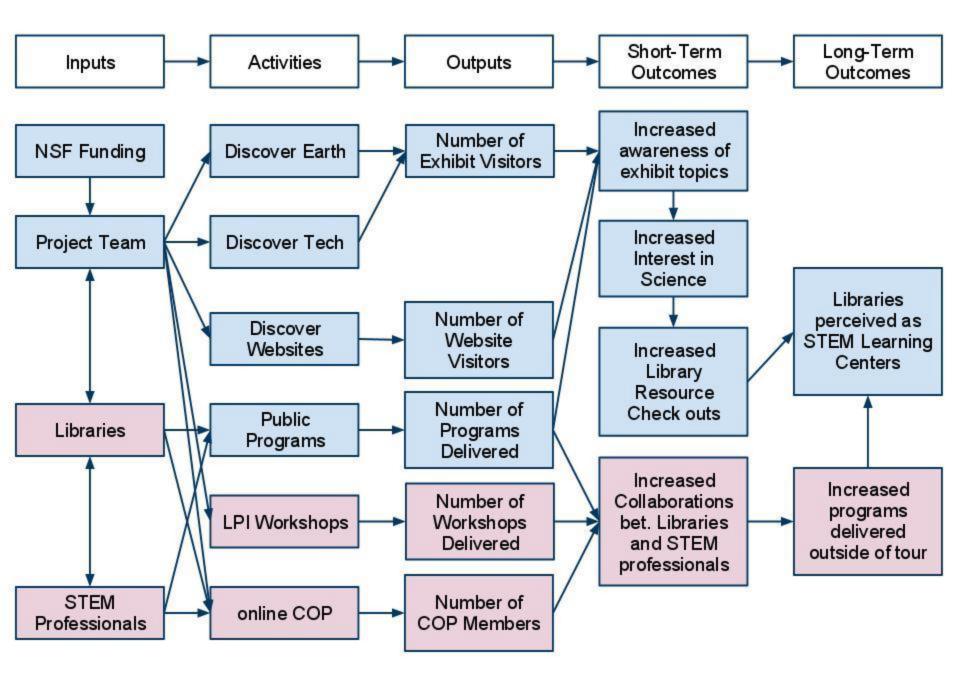
NCIL's Lisa Curtis facilitates a hands-on activity with librarians using string, foil, and a toaster to explore how wind is formed. The demonstration was part of a workshop for attendees of ALA's Annual Conference in New Orleans, in June 2011.

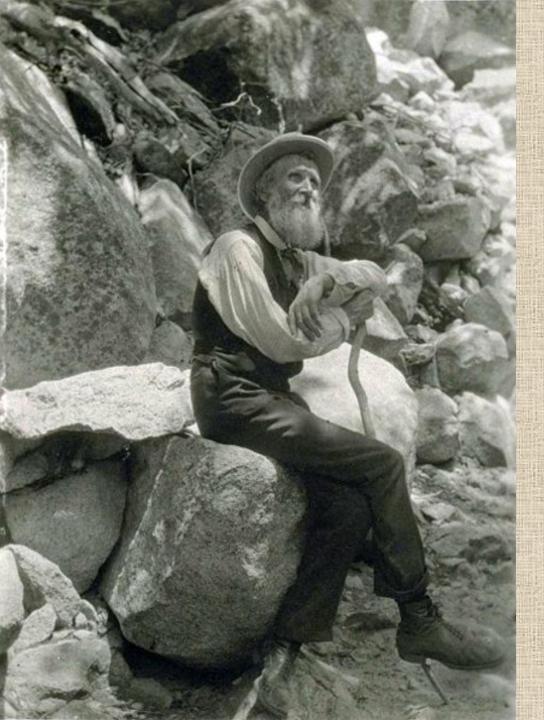


#### STAR\_Net Team Posting Dozens of Hands-on STEM Activities Online

# Other Ways to Connect:

- Webinars
- ALA Conferences
- Web 2.0 Activities





"When we try to pick out anything by itself, we find it hitched to everything else in the universe."

John Muir

"My First Summer in the Sierra" 1911