

Partnering with Science Centers and Museums

Introduction

Local science centers and museums are tailor-made partner organizations for 4-H Science programs. Science centers and museums have the capacity to provide a wealth of resources (including space for programs and events), and are a stellar source for recruiting content rich volunteers. Partnering with science centers and museums helps to develop a positive perception of 4-H and the relevant science programming 4-H provides youth.

It is important to recognize that science centers and museums are not always “labeled” as such. They can include: botanical gardens, working farms, zoos, nature centers, and so forth. The Association of Science-Technology Centers has a searchable directory of centers (see *Resources* below). The purpose of this section is to provide practical information and ideas for developing and sustaining successful partnerships with science centers and museums.

Promising Practices

The promising practices for *Partnering with Science Centers and Museums* are subdivided into three categories: (a) Program Planning and Evaluation, (b) Developing and Sustaining Partnerships, and (c) Museum Resources.

Program Planning and Evaluation

1. *Read the chapter [4-H Science Program Design – 4-H Science Checklist](#).* This chapter provides fundamental program planning and evaluation information required for successful 4-H Science programs. The information contained here is specific to partnering with science centers and museums to deliver 4-H Science programs.
2. *Take advantage of the trend in the science center community to support ongoing groups.* Science centers and museums are doing more programmatic outreach (beyond the walls of their facilities), and are providing space at the centers for groups to use, including OST organizations (summer and afterschool).
3. *Partner with science centers on National Science Foundation (NSF) Informal Science Education (ISE) grants.* Science centers and museums are seeking partner organizations to involve youth in long-term programs.
 - Partner with the science center from the beginning of the proposal process to ensure the 4-H Science program’s interests and contributions are adequately represented.
 - Include funding for program supplies, transportation, staff time, and any other additional resources needed.
4. *Match 4-H Science program interests with exhibits at nearby science centers and museums.* Procure the schedule of featured exhibits as soon as it is available to help plan relevant field trips.
5. *Work with science centers and museums to involve teen leaders.* This is a great way to engage older youth in the sciences. Teens can serve as either volunteer or paid staff (see [Staffing with Teenagers and Teens as](#)





Cross-Age Teachers). Consider establishing a teen group whose members serve as museum summer camp counselors, docents (tour guides), and so forth. It is likely that at least a few day campers will aspire to one day join the museum teen club!

Developing and Sustaining Partnerships

1. *Read the [Section Introduction](#) to Partnerships, Resource Development, Program Growth and Sustainability.* This introduction contains critical “overarching principles” that are vital to developing and sustaining program partners. The information included here is specific to partnering with science centers and museums.
2. *Find opportunities to join informal science education coalitions.* This can be an excellent source of potential science center and museum partners. In addition, the opportunity to help shape informal science education in the community is priceless.
3. *Support relevant science center and museum activities, regardless of partnership status.* Publicize activities that support curricular or programmatic goals. Involve club members and program participants in the activities as well (e.g., robotic events, Engineering Day, etc.). This increases 4-H Science visibility with potential partners and demonstrates willingness to provide support to other organizations.

Museum Resources

1. *Host meetings and events at science centers and museums.* Science centers and museums usually have community meeting space, storage space for science equipment or kits, and so forth. Consider using center space for 4-H science club meetings, sleepover events, or for contests and skillathons. Science centers and museums are also a great venue for science program showcases, volunteer recognition events, and science staff/volunteer trainings.
2. *Tap into museum staff and volunteers for their content rich expertise.* They may welcome additional opportunities to engage others in the sciences (see *Martin* in *Case Studies* below).
3. *Use inquiry-based science center and museum developed resources to fill curricular gaps.* Several science centers and museums have developed outstanding, research-based, developmentally appropriate youth science curricula. Consider their offerings when reviewing curricula for possible inclusion in 4-H Science programs (see *Inquiry Based Learning Approaches*).
4. *Utilize the kit-making capacity of science centers and museums.* Many science centers and museums have dedicated staff available for assembling kits for use in science programming. These facilities may be able to store the kits for future use.

Case Studies

Francis – 4-H and Science Center Complement Resources to Better Serve OST Programs. Utah State University (USU) Extension 4-H and Thanksgiving Point Institute, a private not-for-profit organization, created a youth education partnership to provide quality hands-on discovery experiences for youth. Located in the heart of the population of Utah, Thanksgiving Point includes a fossil museum, a botanical garden, and a working farm. The youth programs include afterschool programs, summer day camps, a Junior Master Gardener® 4-H club, a teen leadership 4-H club, and field trips. Started over 10 years ago, the partnership continues to grow as both orga-

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nizations recognize new program opportunities. Both partners work collaboratively in developing programs and pursuing external funds. USU Extension 4-H provides professional staff time and cost sharing of an onsite Youth Education Coordinator. Thanksgiving Point provides facilities, class/camp promotion, and hourly paid staff to assist with program delivery. 4-H benefits through its access to amazing facilities and promotion efforts by the museum. Thanksgiving Point benefits by linking their programs to the credibility and ongoing research of a major land grant university. –**Dave Francis, Utah State University**

Martin – 4-H Afterschool Aerospace Training Takes Flight at Local Museum. As part of the Corridor STEM Initiative in eastern Iowa, 4-H collaborated with the Iowa Children’s Museum and the Grant Wood Area Education Agency to lead “Take Flight,” an educational workshop for afterschool providers. Forty afterschool program providers from 10 sites participated. The two-hour program included: Principles of Flight, by a professor from the University of Iowa; STEM in the Afterschool Program, by the Teacher in Residence from the Grant Wood AEA for the STEM Initiative; the “Take Flight” exhibit in the museum by their staff; and 4-H Afterschool Aerospace Resources by Martin, the 4-H Specialist. Each of the 10 sites received a “tub of resources” including a paper rocket launcher built by the museum staff; the book *Science Is . . . : A sourcebook of fascinating facts, projects and activities* by Susan V. Bosak; and hands-on flight items from the museum store. –**Janet Martin, Iowa State University**

Resources

Association of Science-Technology Centers – an organization of science centers and museums dedicated to furthering public engagement with science among increasingly diverse audiences. For informal learning publications and professional development opportunities, or to find a science center near you, visit <http://www.astc.org/index.htm>. For information specific to youth involvement in science centers, see <http://www.astc.org/resource/youth/index.htm>.

Designing Partnerships Between Science Centers and After-School Programs: Lessons from *Design It! Engineering in After School Programs* – this document introduces informal science educators to a new partnership model based on lessons learned during a 3-year national pilot project to support collaboration between six urban science centers and over 30 community-based afterschool programs. The collaboration tested and refined an innovative curriculum challenging children to building working models of small functional machines and toys and to practice crucial elements of the design process. Available at <http://www.eric.ed.gov/>.