The Grand Forks Public Library (GFPL) Children’s Department began a partnership with the Dakota Science Center (DSC) in 2007, to develop STEM programming at the library. The University of North Dakota College of Engineering and Mines joined the partnership in 2011. University of North Dakota STEM departments participate in the program.

1) Greater Grand Forks Robotics Club: [electronic mailing list & team sign-up: www.e-mail] Aaron Stefanich astefanich@ggfrc.org

DSC became a FIRST® LEGO® League (FLL®) team sponsor in 2003. GFPL became a team sponsor in 2011. Teams cannot be registered without parent volunteers. The Greater Grand Forks Robotics Club has 3 program components, FLL® Jr. teams, FLL® teams and the off-season club.

FLL® Jr. (ages 6-9) teams meet 12 times each season. Using the LEGO® Education Inspire model as a starting point, they design a new model of their own with LEGO® elements. Teams also document their work in an Engineering Notebook and share their journey through a team Show Me Poster. The season ends with a public Expo event where the youth share what they have learned.

The FLL® (ages 9-14), teams meet August-January. The University of North Dakota, College of Engineering and Mines hosts the FLL® Qualifying Tournament and the North Dakota Championship Tournament. Teams are judged on 4 things. 1) Core Values - have they learned that friendly competition and mutual gain are not separate goals, and that helping each other is the foundation of teamwork? 2) a project - teams research a real-world problem and present an innovative solution to that problem. 3) robot design – teams answer questions regarding their approach to the design. 4) field challenge - robots are designed and programmed by team members to perform a series of missions during 2½ minute matches.

The off-season robotics club program provides engineering and technology experience to youth that were not able to be on the team, and those honing their skills for next year. The club also provides leadership opportunities to team members who help teach the computer programming to younger children. A qualified professional or university student is hired to lead the off-season robotics club, which meets at the Grand Forks Public Library.
STEAM (Science, Technology, Engineering, Art and literacy, Math)
The library STEM program includes art and literacy. Exhibits and displays provide a visual component to the STEM program. The science and math of art and music are explored in the STEM Kids classes. Extended learning handouts along with book/dvd lists and on-line games/iPad app lists provide a literacy component.

2) STEM @ Your Library – Check the GFPL web site calendar for the schedule.
   • Educators, university students and faculty share STEM education with the children at the STEM sessions which are part of the summer and winter reading programs.
   • Hands-on activities are provided at each session.
   • Activities are parent directed which means that the instructions are provided so that the parents can do the activities with their children. The volunteers are at the activity stations to provide information that puts the activity in context and to inspire the children to take an interest in the STEM fields.
   • The library provides the needed consumable supplies and purchases the books recommended by the National Science Teacher Association.
   • The Dakota Science Center provides the lesson plans for the volunteers and extended learning take-home handouts.
3) STEM Kids - Check the GFPL web site calendar for the schedule. Classes are offered as one-hour topic-based sessions throughout the year. The library STEM Coordinator develops lesson plans for the STEM classes. The lesson plans include grade level, instruction time, material list, objectives, teacher’s introduction, student instruction, skills, and vocabulary. Engineering process worksheets are developed for any activity where students are expected to design and redesign. The lessons plans are peer-reviewed.
5) Children's Garden Club - Check the GFPL web site calendar for the schedule. The club meets once a week during the summer. The library STEM Coordinator developed agricultural science lesson plans for the program that spark an interest in gardening, nutrition, and the environment. The gardening program closes with the Garden Party with activities provided by the Dakota Science Center.

4) STEM education is extended to all patrons of the Children's Department. DVD's and books recommended by the National Science Teachers Association are purchased annually.
6) Exhibit Programs
Exhibits from the State Historical Society of North Dakota and out of state agencies are displayed. Scholars are recruited to provide lectures and informational handouts are written to tie the exhibit to the Greater Grand Forks area. For each exhibit an afternoon program for families is planned by the Dakota Science Center with hands-on STEM activities.