



Massachusetts Libraries

BOARD OF LIBRARY COMMISSIONERS

Full STEAM Ahead:

FACT SHEET

Supporting Science, Technology, Engineering, Art, and Math in Public Library Preschool Programming

PROGRAM DESCRIPTION

Public Libraries can offer an array of learning experiences that engages the preschooler's curiosity of the concepts of science that introduce how the arts and science intertwine with each other. During the project, the library may collaborate with local preschools and their Coordinated Family and Community Engagement programs (CFCE), as well as with museums, local businesses, industry (if applicable), and others to promote improved STEAM learning.

Public libraries may apply for grants of up to \$7,500 to plan and implement a project. Grant funds may be used to support a limited number of additional staff hours.

Suggested components include:

- Develop a series of simple or complex programs for preschoolers (ideally a minimum of eight programs throughout the grant year). These can be stand-alone or part of a series.
- Create activity stations around simple STEAM topics. These might be in a special corner of the children's room dedicated to the project using grant funds or a table with attractive and changing "hands on displays".
- Additional activities might include offering a STEM-based StoryWalk® or the creation of specially designed STEAM kits that can be either circulated or used in the library. The library could offer LEGO contests or special "Block Parties" that encourage building. Other experiences for preschoolers would encourage experimentation with Rockets, Pulleys, Balls, Ramps, Rocks and Minerals, Animal Habitats, and many other topics.
- Offer a preschool science program and build story time around a STEAM concept that would also include hands-on experiments.
- Funds may be used to purchase books, CDs, DVDs, or Apps that advance the STEAM topics covered in the library's programs.

ELIGIBILITY

Public libraries that meet standard eligibility requirements for Direct Grant programs are eligible to apply.

Libraries must have identified an interest in supporting educational goals for preschool children (Pre-K) in their long range plan.

INTERESTED?

Applicants must submit a Letter of Intent form with the “Full STEAM Ahead” option checked off. If you need more information about this program, call Shelley Quezada at the MBLC 1 800-952-7403 ext. 235 or email shelley.quezada@state.ma.us.

BACKGROUND

Recent trends in education acknowledge the importance of the inclusion of the Arts with the critical 21st century skills of Science, Technology, Engineering, and Math (STEM). Library Preschool programs have long facilitated informal learning opportunities that may include simple science and math activities. These efforts incorporate opportunities to engage and encourage the natural curiosity of the young child by offering stories, rhymes, music, and hands-on activities. These activities may extend a specific math or science topic such as building with blocks or Legos, experimenting with plant science, making simple rockets, or even playing with bubbles.

The Full STEAM Ahead projects build upon these successful library programs but focus specifically on creating an environment where preschoolers will be offered an array of learning experiences such as observing, experimenting, building, making predictions, solving problems, and exploring sequence, pattern, and design. Children will be encouraged to develop an understanding of science concepts through first hand observation and participation. While adult caregivers and library staff may serve as facilitators, a great deal of these efforts should focus on allowing the child to interact with an array of learning experiences that will provide a positive foundation for ongoing brain development. This program aligns with the Massachusetts **Early Childhood Program Standards Guidelines for Preschool Learning Experiences**. These guidelines underscore the importance of high quality early childhood education including excellent programs offered in the informal environments of libraries and museums.

2013-2017 MASSACHUSETTS LONG RANGE PLAN GOAL & OBJECTIVE

Goal 1: Support learners of all ages with their individual educational and learning goals.

Objective 2: MBLC supports literacy programs for all ages.