



## Why STEM

- o Elementary classrooms have a limited amount of time for science, technology and engineering
- o Students that struggle with math but do not qualify for outside help or may not be able to afford a tutor could use some extra support
- o School librarians can help support STEM curriculum by
  - having materials at hand for staff and students
  - incorporate STEM into Library lessons or co-teaching science and math lessons in the classroom
  - collaborating with classroom teachers on STEM projects

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## Start Simple: Ways to introduce STEM

Use the State Standards:

- Start out by getting familiar with MA Frameworks for Science and Technology/Engineering and Mathematics (<http://www.doe.mass.edu/frameworks/current.html>). Keep a copy of the Frameworks in your Teacher Collection.
- Use book displays to promote materials that support STEM standards; even post the standards that the materials support
- Display student work / projects in LMC, especially if it is something they did with you
- Create Pathfinders with web sites that support standards

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## Reaching out to Teachers: Curriculum Mapping

Before you do your ordering, send out a Curriculum Map form for staff to fill out

- Focus ordering to support STEM; this maybe a great way to get extra money for your budget
- Use the Interlibrary Loan service to get more materials
- Research web resources / databases; start a Delicious or Filamentality site specifically for STEM materials and post it on your LMC's web site

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## Reaching out to Teachers: Monthly Topics

A monthly topic forms is a great way to communicate with staff to know what is going on in the classroom.

- Send out the forms the 15th for the following month
- As staff return the form, pull materials, create pathfinders, adapt lessons to support the classroom curriculum
- At the beginning of the month- give the staff the materials that you have for them to keep in the classroom
- Take a look at your lesson plans- how can you supplement STEM?
- Talk to staff about what you can offer-- get other teachers involved too (i.e. Music, Art, and Computers)

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## Reaching out to Teachers: Special Unit

Special Unit can be something teachers want to spend more time on or what to do a project or a report with the students.

- Encourage staff to complete a Special Unit form prior to meeting with students
- Plan to meet to discuss the project
- Pull, locate, and gather materials the students are going to need

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## Using Fiction

Science and Technology / Engineering

- Chris Van Allsburg, *Two Bad Ants*
- Dr. Seuss, *The Lorax and Bartholomew and the Oobleck*
- Nina Laden, *Roberto, the Insect Architect*
- Carl Hiaasen, *Hoot and Flush*

Math

- Pat Hutchinson, *The Doorbell Rang*
- [Cindy Neuschwander](#), *Sir Cumference Series*
- Loreen Leedy, *Measuring Penny*
- Loreen Leedy, *It's Probably Penny*
- Blue Balliett, *Chasing Vermeer*

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Lesson Ideas for Library: K-2

Bookmaking- Engineering

- Students learn about parts of the book
- List the materials needed to create book
- Plan out their books (rough draft)
- Create/ put together

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Project Idea for Grades 3-5

Mad Scientists

- Students research a famous scientist, mathician, or inventor
- Research
- Present

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Materials and Resources:  
Print and Electronic

- BrainPop:** [www.brainpop.com](http://www.brainpop.com) \$  
*(although they do have some movies for free)*
- United Streaming:** [www.unitedstreaming.com](http://www.unitedstreaming.com) \$
- Science Net Links:** <http://www.sciencenetlinks.com/>
- Illuminations:** <http://illuminations.nctm.org/>
- Go Pebbles:** Animal and Space \$  
databases: <https://www.pebblego.com/> \$
- National Library of Virtual Manipulatives:**  
<http://nlvm.usu.edu/en/nav/vlibrary.html>

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Web sites mentioned

- **MA Frameworks:**  
<http://www.doe.mass.edu/frameworks/current.htm>
- **School Library Journal:**  
<http://www.capstonepub.com>
- **Science Books and Film:**  
<http://www.sbsonline.com>
- **Capstone Publishers** (Picture Window Books):  
<http://www.capstonepub.com>

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