STEAM in the Public Library:

Programs & Services for Children

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Infopeople *helping libraries think differently*

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Hello!

- Amy Koester

- Children's Librarian with St. Charles City-County Library District, Missouri

- The Show Me Librarian

- Youth programs, services, and outreach

In today's webinar…

- What is STEAM, and why does it belong in my public library's youth services?

- Programs for preschoolers

- Programs for school-age children

- STEAM services

- What you need to do STEAM, and where to find it

What is STEAM?

Why STEAM instead of STEM?

- Arts in STEAM is NOT crafts

- Arts in STEAM means creativity

- Makes STEAM more accessible, more meaningful

Why STEAM Matters

- American children are lagging

- School & life success isn't just about reading

- Creativity is a top work skill

STEAM at the Library

- What's your mission?

- Literacy

- School success

- Lifelong learning

Anyone can STEAM

You don't need to be a content expert to use STEAM with library kids.

Programs for Preschoolers

Why STEAM with preschoolers?

- Natural curiosity

- Introduce concepts

- Reinforce concept knowledge

- Vocabulary

- Hands-on learning

STEAM Stories

- Be intentional about your books

- Include non-fiction

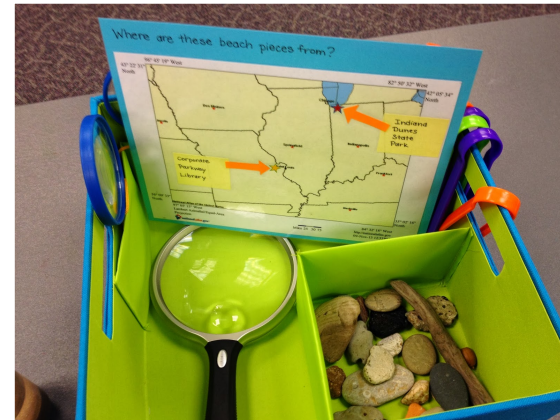- Tap the STEAM concepts in fiction

- Talk!

STEAM Activities

- Hands-on is integral

- Add an experiment

- Use tools

- Make something

- Provide options

Observation Stations

- Exploring things close-up

- Sensory experiences

- Things that grow & change

- Tie to books

STEAM Programs

STEAM Preschool Storytime

- Start with a book

- Talk about the STEAM concepts

- Ask (and answer) questions

- Hands-on activities

- Supply at-home options

Take-Home Kits

- Build around a topic

- Pack a few books

- Add some songs

- Include activity instructions

POLL

Can you think of one of your existing preschool programs that you could modify to include a STEAM element?

Please type your answers into the Chat Box.

Programs for School-Age Children

Why STEAM with school-age children?

- Curiosity

- Reinforce basic concepts

- Multiple literacies

- Creative problem-solving

- Developing personal interests

Science Programs

- Introduce your concept

    - Books!

    - Images & videos!

- Take questions

- Pose a challenge

- Time to build

- Test & observe

Technology Programs

- Meet kids where they are

- Introduce new tech

- Tablets & media creation

- Circuits & electricity
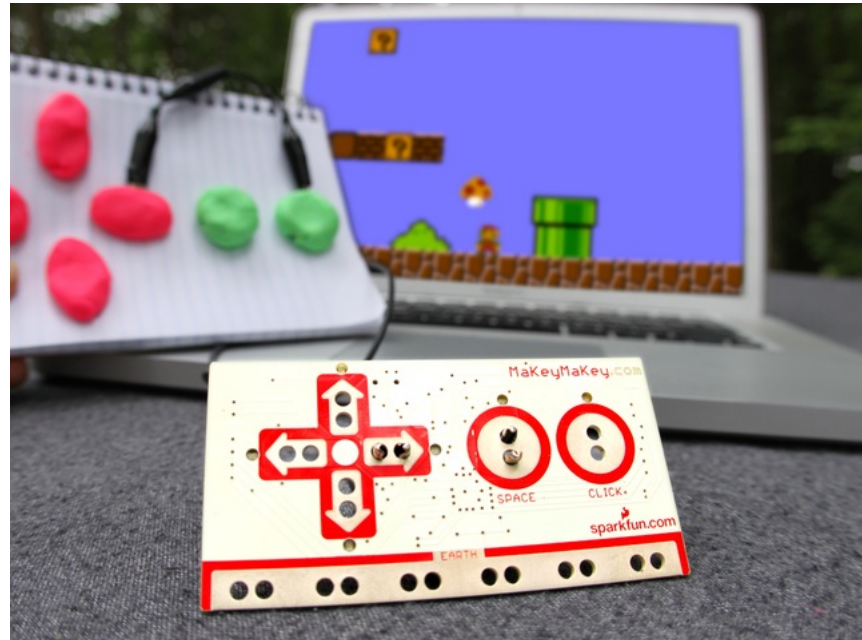
- Programming & gaming

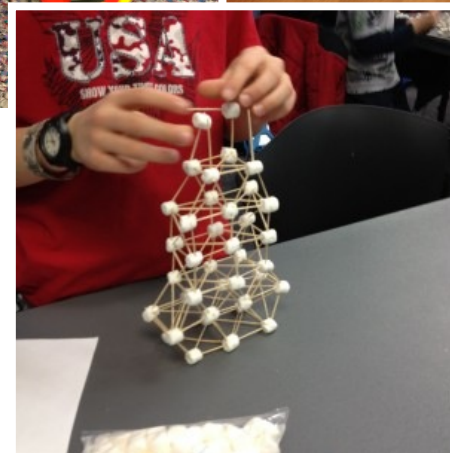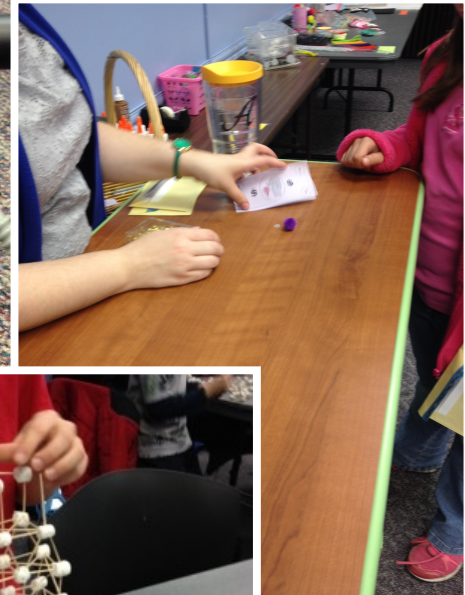photo from MaKey MaKey: An Invention Kit for Everyone

Engineering Programs

- Build something

- Give direction, but leave room for creativity

- Variety of materials

- Share examples

- Test & compare structures

STE**A**M Programs

- Find the STEM potential in arts & crafts

- Create with atypical materials

- Provide context for activities

Math Programs

- Don't call it a "math program"

- Find the math in games

  - Puzzles!

  - Board games!

- Spatial thinking

  - Origami

  - Simple weaving

POLL

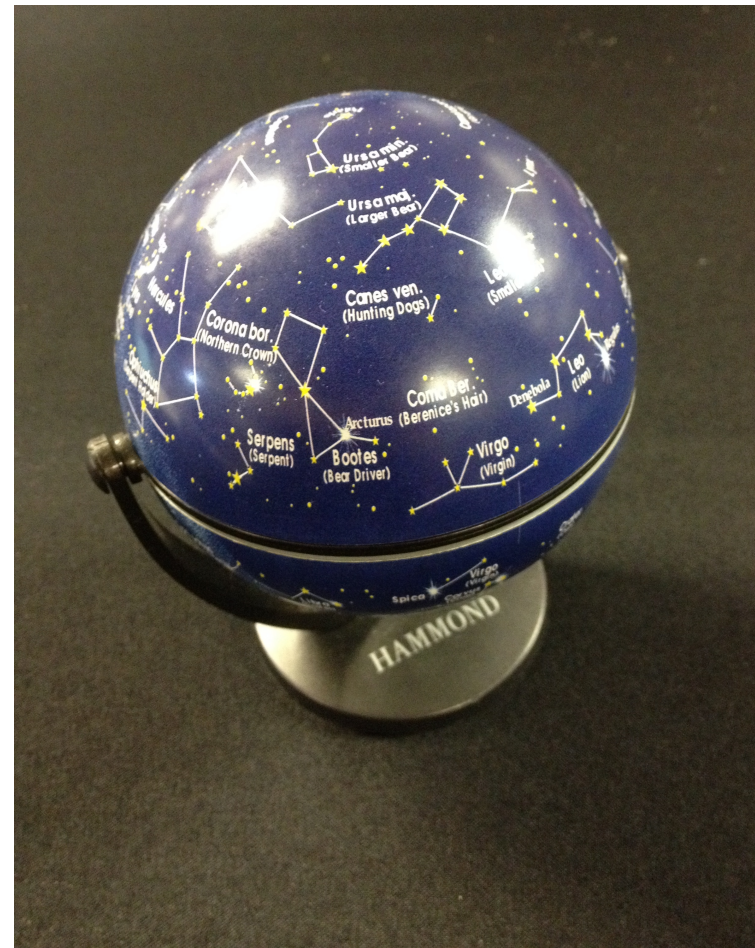Can you think of one of your existing school-age craft programs that you could turn into a STEAM program?

Please type your answers into the Chat Box.

STEAM Services

Displays

- Make them attention-grabbing!

- Fiction and non-fiction

- Range of reading levels

- Visual interest

- Realia

Databases & Apps

- Highlight what you've got!

- Shelf talkers

- Tablet time

- Handouts

- Demo in programs

DIGI-TOTS PLAYTIME!

Play and Learn:

Sock Puppet will get your child talking, singing, and making their own stories with a variety of sock puppets and animations.

Lazy Larry Lizard bedtime story brings a unique interactive element to a story that teaches appropriate social behavior as children see how the lizard feels when being bothered in a way he doesn't like. Bonus built-in game with app.

Peek-A-Zoo builds vocabulary for animals, sounds, actions and emotions as the kids play along to find the matching picture.

Open Wide Snap is a great story book with built-in "Read to Me" or "Read it Myself" that will grow with young readers as they develop their literacy skills. Built-in puzzle and memory matching games with characters from the book help child build critical thinking skills in a way that is engaging and fun!

Wheels on the Bus Band—Experience an interactive version of "Wheels on the Bus" story. Jam along with built in keyboard and other instruments. Sing along with child over and over to your heart's content.

Apps of the Month:

Sock Puppet (Free w/ in-app extras) Apple

Lazy Larry Lizard Bedtime story (Free) Apple

Peek-A-Zoo ($1.99) Apple

Open Wide Snap ($0.99) Apple

Wheels on the Bus Band (Free) Apple
(storybook on Android)

GARFIELD COUNTY LIBRARIES

photo from Digi-tots Playtime, by Stephen Tafoya

STEAM Readers' Advisory

Things to keep in mind:

- Non-fiction isn't just for homework

- Different ways of reading

- Stories with STEAM themes

- Pairing materials

POLL

Do you venture into the non-fiction stacks when doing readers' advisory with children?

Please type your answers into the Chat Box.

What you need,
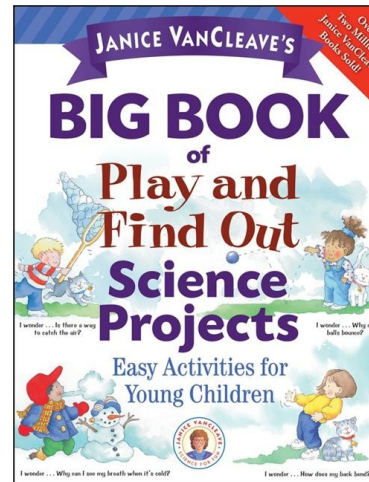and where to find it.

Resources: Books

Activity Ideas

- Janice Van Cleave

- Kids Can Press

Great Publishers

- Pebble Plus

- Jump! from Bullfrog Books

Authors/Illustrators

- Gail Gibbons

- Steve Jenkins

Resources: Blogs

Library Blogs

- The Show Me Librarian

- Library Makers

- Little eLit

- Abby the Librarian

Other Blogs

- Teach Preschool

- PreKinders

The Show Me Librarian

| The Blog | About Me | Review Policy | All Things STEAM |

All Things STEAM

Welcome to All Things STEAM, a resource for offering library programming in science, technology, engineering, arts, and mathematics. When it comes to developing my STEAM programming, I have a number of go-to resources that I use for inspiration and concept knowledge support. I've gathered links to those resources, my program how-tos, and other STEAM resources for your convenience. I'll be this page and get programming! And if comment here or start a conversation STEAM discussion.

All Things STEAM

Library Makers {hands-on learning for all ages}

Show me posts about:
- CraftLab
- NeedleReads
- Toddler Art Class
- WonderWorks

FAQ: NEEDLEREADS

FAQ: TODDLER ART CLASS

FAQ: CRAFT LAB

FAQ: WONDERWORKS

RECOMMENDED BOOKS

Links we love

Madison Public Library

WonderWorks: Ramps + Textures

Textured Ramps
a WonderWorks exPloration

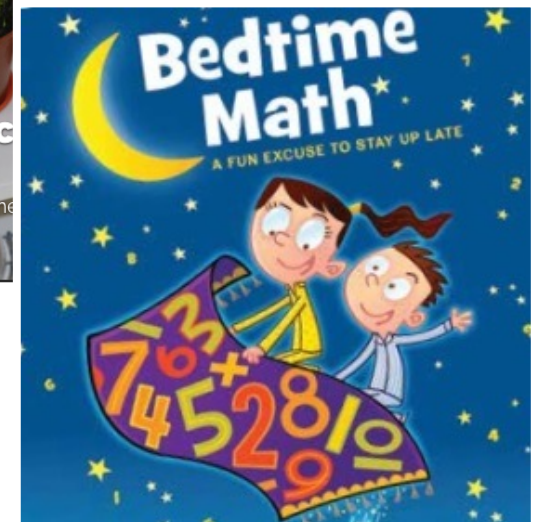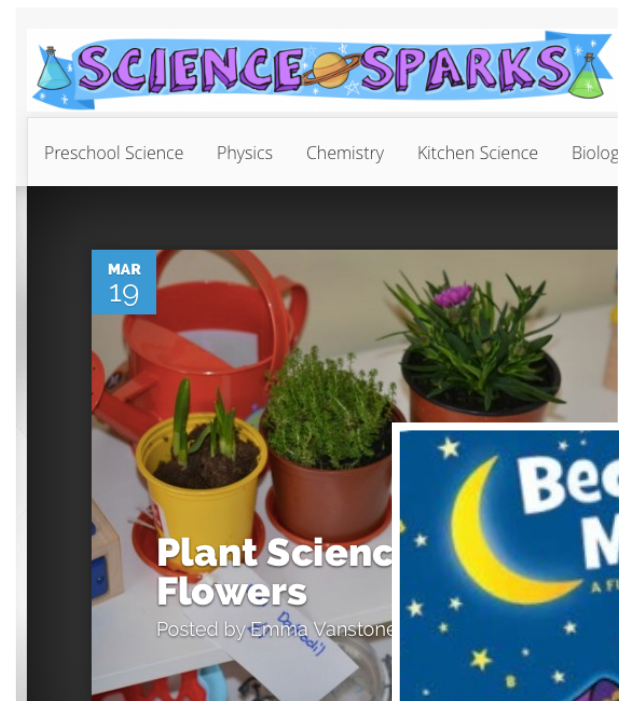Exploring ramps was fun, let's try adding one extra element and see what happens!

Today's Topic: Friction (or Textured Ramps)
Supplies:
lengths of wooden cove molding
blocks
cardboard carpet tubes (optional)
things to slide down the ramps (balls, cars, marbles, blocks, etc.)

Resources: Websites

- Science Sparks

- Fun Science from National Geographic Kids

- Bedtime Math

- Mixing in Math

- Wonderopolis

- Pinterest (lots of STEAM boards!)

Supplies to Start

- Consider your STEAM service goals

- Gather recyclables

- Procure the basics

Funding, Grants, & Partnerships

- Budget

  - No amount is too small

  - Don't be too modest

- Grants

  - LSTA Grants

  - Friends of the Library

  - Private Grants

- Partnerships

  - Local Businesses

  - Local Schools

Wrapping Up

- STEAM has a place in public library youth services

- Existing programs can be modified with STEAM aspects

- STEAM services means more than just programs

- Lots of resources are available to help

Questions?

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http://showmelibrarian.blogspot.com

Infopeople

helping libraries think differently