STEM Teacher Roundtable

Jessica Hayes, Director of Programming
STEM Programs

The Children’s Museum
OF THE UPSTATE
Background

• Undergraduate Degree in Child Development from University of North Carolina at Charlotte
  – BK and Elementary Education Teaching Licensure
  – Part-time Creative Play Professional at Discovery Place KIDS in Huntersville, North Carolina
  – Promotion to full-time Program Specialist
    • Oversaw all educational programming for children’s museum with birth – eight age range

• Graduate Degree in Early Education from University of North Dakota
  – Began at TCMU as Program Manager and recently promoted to Director of Programming
What Do I Do?

• Oversee Programming Department
  – Managing, Training, Scheduling, Budgeting
  – Also Under Programming: Birthdays, Volunteers, Early Childhood, School Programs

• Develop Day-to-Day Programs
  – STEAM-based Demonstrations, Weekend Programs, Exhibit-related and Traveling Exhibit Programs, Art Programs, etc.

• Develop Fee-based Programs
  – Summer Camps, Out-of-School Camps, Grown-Up Events, STEAM-based Scout Workshops and Overnights, Afterschool Programs

• Develop Special Events
  – Member Previews, Saturday Events (Mess Fest, Maker’s Fest, Build-it Day)

• Work with Exhibits and Marketing Team to Create Exhibit Content
  – Most Recent Example: Fun and Games

• Assess Guest Feedback
  – Surveys, Attendance Tracking, Observational Data, etc. on STEM-based Programs

• Community Outreach

• Working with Development
  – Content for Grant Writing and Sponsorships

• Working with Marketing
  – Relevant Information – Get the Word Out!

The Children’s Museum of the Upstate
According to 2007 data, more than 30 million children and families annually visited children’s museums.

In 1975 there were approximately 38 children’s museums in the United States. Eighty new children’s museums opened between 1976 and 1990. Since 1990, an additional 125 have opened. There are about 70 children’s museums in the planning phase.

Eighty-one percent of ACM museums have a dedicated early childhood exhibit space specifically designed for infants and toddlers.

Thirty-five percent of ACM museums have an outdoor exhibit and/or garden.

Forty-nine percent run after school programs.

Sixty percent develop curriculum materials.

Seventy percent provide school outreach.

The largest children’s museum is The Children’s Museum of Indianapolis (Indiana), which has a total of 433,000 square feet.

The oldest children’s museum is the Brooklyn Children’s Museum (New York), which opened in 1899.
Successful STEAM Programs at TCMU

• First LEGO League and Junior
  First LEGO League
  – Opportunities for children 6 – 9
    and 10 – 14 to gain experience in
    LEGO robotics, simple machines,
    collaboration in STEAM, and more
    with real-life application
Successful STEAM Programs at TCMU

• Saturday Events
  – Maker’s Fest (with guests from Seneca Treehouse Project, iT2pi, STEAM Tech Teams, etc.).
  – Mess Fest
  – Build-it Day
  – Noon Year’s Eve
  – Career Day (with GE and Michelin representation)
More STEAM-based Programs at TCMU

- Winter Hockey Workshop
  - Collaborating with partners like The Swamp Rabbits to share the science of hockey

- Artist-in-Residencies
  - Yoshiko Moon, Senora Lynch and Dr. Sara Worth

- Girl Scout Overnights
  - Helping scouts meet badge requirements related to first-aid, music, nature, and more.
Involving Everyone at TCMU

- **Fund-a-Family**
  - 7,405 Free Museum Visits for Children and Families in Need by Working with Organizations
  - Partners include: A Child’s Haven, Miracle Hill, Greenville County First Steps, and many more

- **Watt’s Current: 3rd Grade Classes**
  - Giving lessons on electricity inside and outside of the museum to 500 third grade students in Title 1 schools

- **Create-a-Skate with Dr. Paul Schmitt**
  - Children in foster care built their own skateboards with founder of Create-a-Skate and CEO of the largest skateboard manufacturing company

- **Fostering Celebrations**
  - Monthly birthday parties for children living in foster homes in collaboration with Blue Tent

- **Finances for the Family**
  - In partnership with the Greenville County Human Relations, Finances for the Family promotes financial literacy to help stop the cycle of poverty. We go two sessions a year with intentions to expand this program to more.
Continuing Projects

- **My Sky Tonight Workshops** through the Astronomical Society of the Pacific (ASP) in anticipation of Space-themed Program Day, Camps, etc. –National Informal STEM Education Network Newsletter

- Through collaboration with informal science education (ISE) institutions and partnering scientists, a physical *Building with Biology* kit of hands-on activities and programs is being developed to create conversations among publics and scientists about synthetic biology. During the summer of 2016, two-hundred (200) sites nationwide will participate in Building with Biology events and conversations. –Association of Children’s Museums Newsletter, funded by National Science Foundation, led by Museum of Science, Boston, and more.
Brain-Compatible Environments


• The brain is uniquely organized
  – Every child learns STEM principals differently. Children can play and learn in Museum exhibits as they are.

• The brain is continually growing
  – Billions of neuron connections are being made in early childhood – intelligence is not fixed!

• A brain-compatible environment pairs positive emotions with learning
  – Children guide the learning process – children make decisions in museums that have intentional learning goals related to STEM in their exhibits.

• Children need to be immersed in hands-on, real life, and meaningful experiences
  – What children’s museums are all about!