



# *Summer STEAM Camps*

**Leah Kraus**

Director of Community Engagement  
& Experience

Fayetteville Free Library

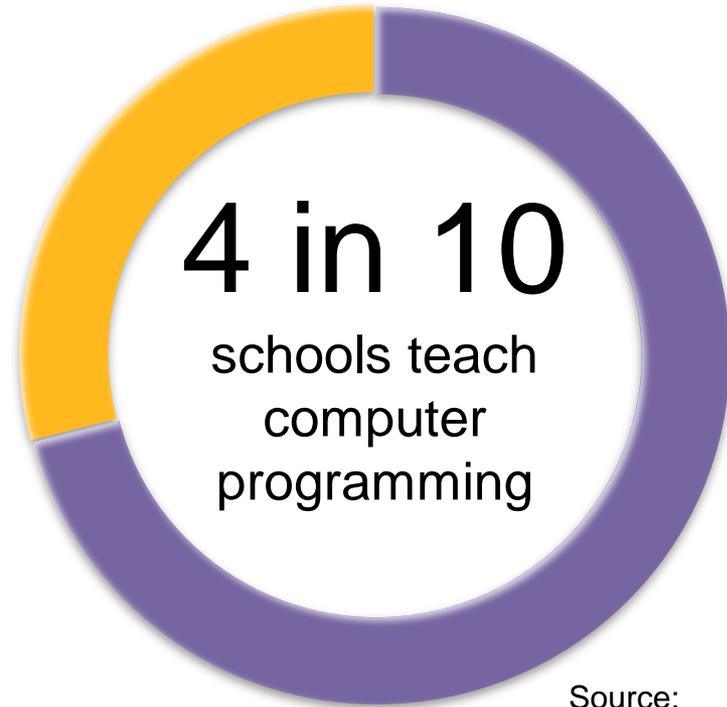
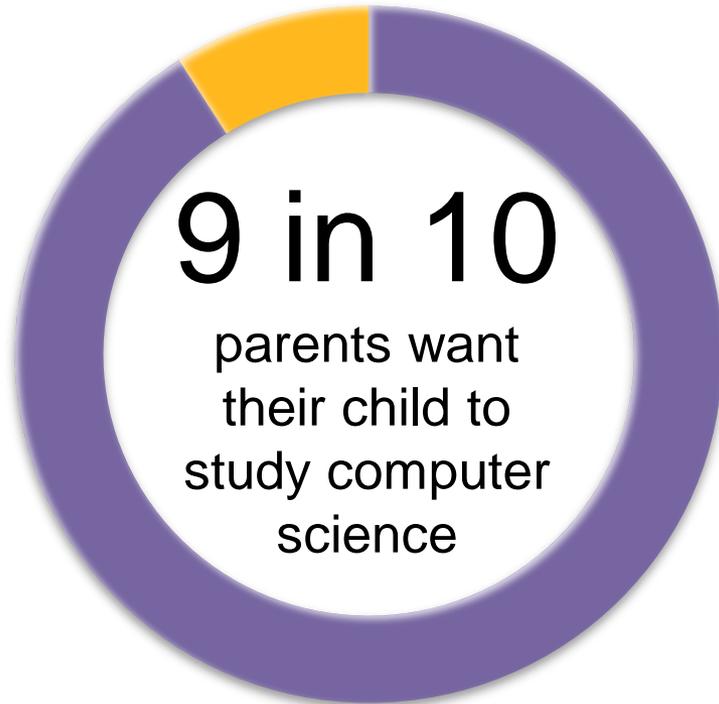
[lkraus@fflib.org](mailto:lkraus@fflib.org)

YSS Conference  
April 28<sup>th</sup>, 2017

[www.fflib.org](http://www.fflib.org)

# + What is STEAM Literacy?

# + Why STEAM in Libraries?



Source:  
<https://code.org/advocacy/state-facts/NY.pdf>



# In New York

**31,441**  
Open computing jobs

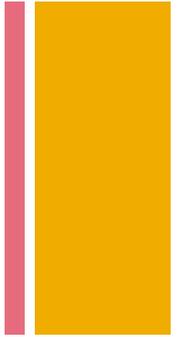
**3,801**  
Computer science graduates

**14%**

of schools teach AP computer science



Sources: [The Conference Board](#), [National Center for Education Statistics](#), and the [College Board](#).



# + Why STEAM during the summer



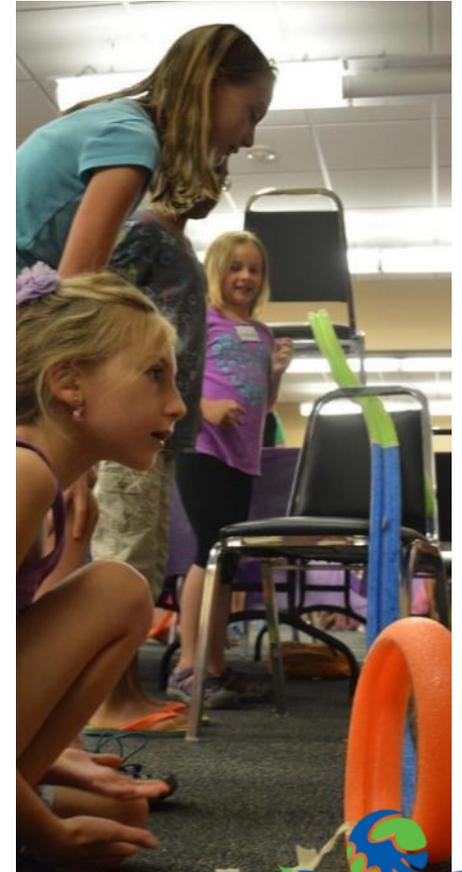
National Summer Learning Foundation, "Know the Facts."  
(2017) <http://www.summerlearning.org/>

# + Why Camps?

- *Experience success & gain confidence (Camp teaches kids that they can!)*
- *Gain resiliency; learn to fail (Camp helps conquer fears!)*
- *Unplug from technology (And/or, learn how to create it, not just consume it!)*
- *Develop life-long skills (Camp expands every child's abilities!)*
- *Grow more independent (Camp helps kids develop who they are!)*
- *Have time to pursue and nurture early interests (At Camp we play!)*
- *Learn social skills (Camp builds teamwork!)*
- *Reconnect with nature (Camp gets kids back outside!)*
- *Make true friends; gain mentors & role models (Camp builds community!)*



# Geek Girl Camp

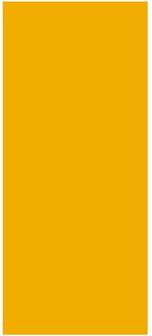


# + Goals

- Provide early pathway to STEM for girls
- Make STEM fun & cool!
- Exposure to hands-on STEM activities
- Positive female role-models in STEM fields
- Lower financial barriers
- Supportive community for learning

<http://www.aauw.org/research/why-so-few/>  
<http://files.eric.ed.gov/fulltext/ED523766.pdf>

# + Results





# STEAM Camp for Guys



# + Strategies

- Staff Committees
- Work in groups
- High-interest topics
- Takeaways
- Be aware of attention span
- Hands-on activities – and test them!
- Partner with community organizations
- CITs



# + Administrative Schedule

**Before Feb. Break:** Put dates for weeklong summer camps, and registration open date, in library online Event's Calendar.

**March:** Joint meeting with STEAM Camp & Geek Girl team to discuss Registration; Promotions; Speakers; Field trip

**April:** Open camp registration the first Mon. of April at 6 PM, or similar. Assess Geek Girl Day. Discuss status of registration, promotions, speaker and field trip solicitations; identify and move on to plan B for these if needed. Send out invitations for past CITs/aged out campers to apply as CITs.

**May:** Plan camp activities. Scholarship review. CIT application review. Confirm specific days/times with speakers.

**June:** Interview and select CITs. CIT training meetings. Finalize daily schedule.

**Early July:** Put campers into groups; Make attendance sheets, sign out and info sheets for each group and put with applications in designated groups' folder.

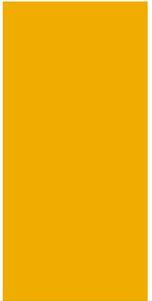
**Week before camp:** Email all parents with reminders; buy snacks.

**First week August:** Send out follow-up surveys, mail out certificates with photo, mail out thank you letters from admin office (get addresses in document for Laurel and Sue)

**September:** Assess the camps; schedule dates for Feb Break Geek Girl Day & STEAM Camp Day



# Weekly Schedule Template



7/27/2015

7/28/2015

7/29/2015

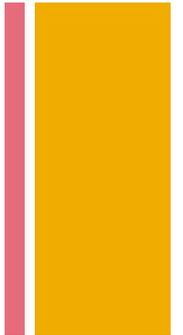
7/30/2015

7/31/2015

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00 AM	drop off	drop off	drop off	drop off	drop off
10:00 AM	Rules/Intro/assessment/Icebreaker led by Meredith 10-10:40	10-1030 Kathy Phillips SAAB	Syracuse University	Dry Ice Experiment/Dash& Dot	assessment play doh planets/stars to ceiling
11:00 AM	Make wooden cars / Inclined Planes- LK/ML Lego Robotics SP/MP	1030-1130 Water Bucket Challenge Logic Problems 1130-12 Group 3D Printer training	Syracuse University	10:40-11:15 elephant toothpaste/M&M's SP/MP 11:15-12 Borax Crystals ML/LK (SWAP)	11-1130 Dr. Mamta Nagaraja Skype 1130-12 telescope/center of gravity
12:00 PM	12-1230 Lunch Mitchell 1230-1 Sally	12-1230 Lunch 1230-1 Microsoft	Syracuse University	12-1230 lunch /video star demo 1230-1 Courtney Bendall	12-1230 lunch 1230-1 Paper planes/stars on ceiling
1:00 PM	1-130- Sara Venn Skype 130-230 Wooden cars/Inclined Planes- SP/MP Lego Robotics LK/ML	Microsoft -DeFrancisco joining group	Syracuse University	1-2 NRG-Angie Graci Make oobleck in cups and make dance	Chalk Rockets Bottle Rockets Regular Rocket fortress/marshmallow rockets
2:00 PM	2:30-30make rollercoaster/engineering all	Microsoft	Syracuse University 230-3- Write thank you notes for SU	Oobleck Pool/Video Star 2 groups each 30 minute sessions	Rocket Party/Closing
3:00 PM	Pick up	pick up remind parents 9am drop off Wed.	pick up 3-330	pick up	pick up



# Lesson Plans



- **Lesson Title:** \_\_\_\_\_
- **Grade:** \_\_\_\_\_ **Creator and Date of Lesson:** \_\_\_\_\_
- **Essential Question:** (The purpose of the program which is shared with the attendees)
- **Resources needed:**
- **Learning Outcomes:**
- **Warm Up:** (the “hook” or grab that captures the attention and interest of the program attendees)
- **Activity:** (If you are demonstrating the skill, how will this be done? What steps will students take? Are there checks for understanding or scaffolding questions?)
- **Closure:** (What method of review and evaluation will be used?)

# + Indoor Activities



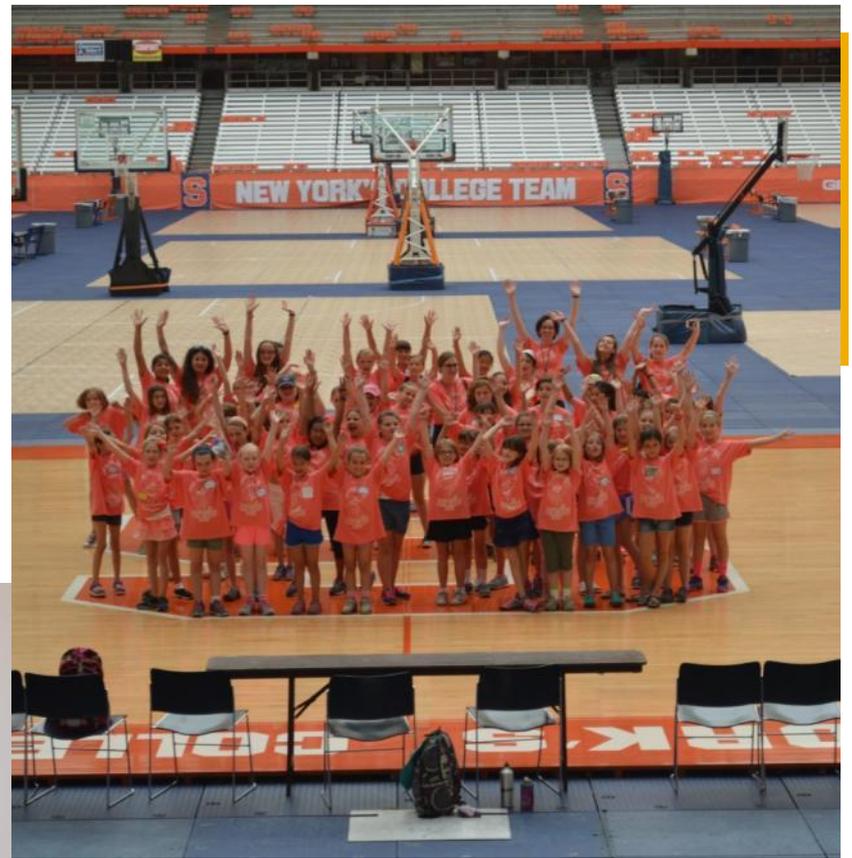
# + Outdoor Activities

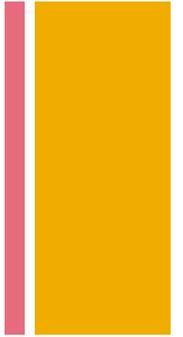


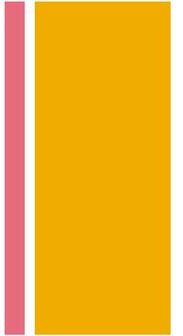
# + Speakers



# + Field Trips







■ Name: \_\_\_\_\_

■ Age: \_\_\_\_\_ Grade going into: \_\_\_\_\_

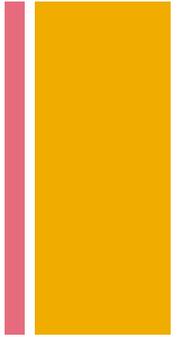
■ What do you want to be when you grow up?

■ What was one new thing you learned about during Geek Girl Camp?

■ What were your favorite activities this week?

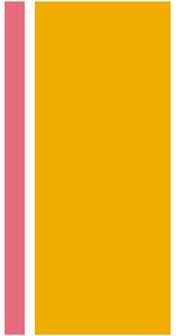
■ What was your favorite thing about Girl Camp?

# + Staff Assessment



- How did registration and pre-camp preparation go?
- From your perspective, how did the week of the camp go, including execution of the camp?
- What did you think of the activities we offered?
- What did you think of the speakers? Did we have enough? Were they high quality?
- Please list 3 suggestions for improvement:

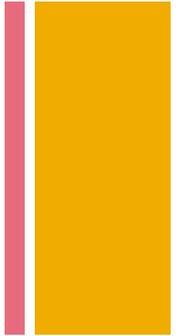
# + Parent Assessment



- Why did you choose to send your child to Geek Girl/STEAM Camp?
- Do you think STEAM camps are important and why?
- Please describe the impacts your child experienced from attending Geek Girl/STEAM Camp.
- Did your child participate in any other STEAM camps? How do they compare?
- Would you send your child to this Camp again next year?
- Do you have a story or comment to share about your or your child's overall experience?

# + Results

- She shows increased confidence in expressing herself using these topics. A change from the standard, 'I can't do math' attitude.
- She made so many new friends and really enjoyed learning STEAM occupations/principles. The camp was successful in making STEAM fun!
- She loved it. She didn't realize how many types of engineers there are.
- My daughter had a fun week and came home one day talking about what she wants to do when she grows up. That was great.
- She loved the content...and the socialization. It was very memorable going to the SU campus - and speaking with students.
- Total excitement about science and math experiences. She is growing up thinking girls in math and science is the norm, not the exception.
- Meeting like-minded girls from her school district reinforced that there were other girls with similar interests that she can spend time with at school.
- My daughters both came away from camp excited about learning and about the opportunities that await them. Although it is a long way off, they both were chattering about what they would like to study in college and who they want to be like when they grow up (focusing on the intelligent, accomplished influences they had interacted with all week). It is great to see them so inspired.
- My daughter would come home with an enthusiasm to learn more about the topics covered in camp that day.



# + Questions?

Sue Considine  
FFL Executive Director  
sconsidine@fflib.org

Leah Kraus  
FFL Director of Community Engagement & Experience  
lkraus@fflib.org

Fayetteville Free Library  
Website: [www.fflib.org](http://www.fflib.org)  
Twitter: [@fayettevillelib](https://twitter.com/fayettevillelib)

