



# The ICT4me Curriculum

## About ICT4me

ICT4me is an after school and summer curriculum for middle school youth to develop ICT fluency, interest in mathematics, and knowledge of information, communication, and technology (ICT) careers. This problem-based curriculum capitalizes on youth interest in design and communication technologies. ICT4me provides structured interactions with ICT professionals, including having youth participate in engineering design and development teams. ICT4me's promotes a train-the-trainer approach to building capacity in informal ICT learning.

### Build IT vs. ICT4me

ICT4me is a derivative of the Build IT curriculum co-developed between SRI International and Girls Inc. of Alameda County. Questions about the Girls Inc. implementation of Build IT can be directed to them at <http://www.girlsinc-alameda.org/about/contact>.

SRI is no longer supporting the development of ICT4me, so the curriculum materials are offered as is.

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## Electronic Versions of Materials

Electronic versions of all materials in this unit are available for download from the website at <http://ict4me.sri.com/>.

## Contact Information

Please contact the SRI International Inquiry line for questions about ICT4me.  
<https://www.sri.com/contact/form>

# ICT4me

## Unit 2 Scope and Sequence

### Design Online: Communication Tools & the Internet

#### Big Ideas

- Designs have both form (how it is designed, what it looks like) and function (what it is designed to do). The functionality can be visible (e.g. web page navigation) and hidden (e.g. html code) to the user.
- Networked computing enables three types of communication: one to one; one to many; many to many. Audience and intent of the communication should determine communication design and choice.
- The Internet is a large global network comprised of thousands of smaller networks that allow information to be routed among computers. These structures have an impact on the flow of information that can affect a user’s experience.
- How to use structured approaches and models to address complicated counting problems that are found in the development of Web applications. (i.e. algorithmic thinking)

#### Essential Questions

- Identify the form and function of a communication tool. How does the form of a communication tool relate to its function?
- How does your audience and the intent of the communication affect your technology choices?
- How does information travel on the Internet?

#### Mapping the Big Ideas

Session/ Core Activity	Description	IT Professional	Perfor- mance Task	Form and Function	Internet Structure	Algorithmic Thinking
<b>Week 1: Introducing the Internet</b>	Youth experience the Internet as a communication technology. They discuss the design of websites and other Internet-based tools.			X	X	
<b>Week 2: Email Accounts &amp; the Internet</b>	Youth create email accounts and learn how information travels on the Internet in the form of emails and web pages.			X	X	
<b>Week 3: Internet Safety &amp; Design</b>	Youth learn about Internet safety and learn about two distinct forms of communication - synchronous and asynchronous.			X	X	

Session/ Core Activity	Description	IT Professional	Perfor- mance Task	Form and Function	Internet Structure	Algorithmic Thinking
<b>Week 4: Site Visit and ICT Visitors</b>	Youth go on a site visit to an ICT-related organization and learn about careers in ICT.					
<b>Week 5: Cyberclub Creation!</b>	Youth are introduced to Cyberclub Design requirements and begin developing their cause-oriented Cyberclubs.	Interactive Web Designer		X		
<b>Week 6: Getting to Graphs</b>	Youth learn about the mathematical idea of graph theory and apply it to map their Cyberclubs.			X		X
<b>Week 7: Hosting a Gathering</b>	Youth host gatherings in their Cyberclubs and participate in other club gatherings.			X	X	
<b>Week 8: Final Touches on your Cyberclub</b>	Youth create final touches on their Cyberclub and reflect on the group creation process.			X	X	
<b>Week 9: Blog Creation</b>	Youth learn about self-expression and reputation online, and design blogs using the Design Process in their collaboration space.			X	X	
<b>Week 9: Post Here!</b>	Youth develop a strategy for encouraging others to post to their blog and give each other feedback on their blog designs.		Mini	X		
<b>Week 10: Getting to Your Blog</b>	Youth practice algorithmic thinking with and without math.	Interactive Websites & Online Communitie s Designers			X	X
<b>Week 11: Post Here!</b>	Youth discuss cyberbullying and appropriate online communication, and comment on each other's blogs.				X	

Session/ Core Activity	Description	IT Professional	Perfor- mance Task	Form and Function	Internet Structure	Algorithmic Thinking
<b>Week 12: Site Visit and ICT Visitors</b>	Youth go on a site visit to an ICT-related organization and learn about careers in ICT.	X		X	X	
<b>Week 13: Performanc e Task: Adding to Your Blog to Club</b>	Youth identify interesting things to do in a blog or group, and decide what medium to use for the task.			X	X	
<b>Weeks 14 &amp;15: FTN Planning &amp; Presentatio ns</b>	Youth prepare for Family Tech Night. Youth present the blogs and Cyberclubs they have created. They demonstrate their understanding of how the Internet and communication tools work.	X	X	X	X	