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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This material is based upon work supported by the National Science Foundation under Grant Nos. 1339181, 1232461, and 0524762. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

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

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ICT4me
Unit 4 Scope and Sequence

Design in Networked Technologies

Big Ideas

- Networked technology, such as the Internet or a local network, allows people to send and receive information across devices, such as computers or phones.
- Different types of networks (such as PAN, LAN, and WAN) solve certain problems, and different types of connections are better in certain situations.
- Networks have different topologies (layouts) that are made up of the nodes and links of the network. Topologies can tell us about the characteristics of the network, such as how long it will take information to get to a device.

Essential Questions

- Why would you want to use a network?
- How do computer networks and the computers they connect impact your life?

Mapping the Big Ideas

Session/Core Activity	Description	IT Profe-ssional	Perfor-mance Task	Network Technology	Types of Networks	Network Topology (Math)
Week 1: Networked Devices	Youth explore wired and wireless telephone technologies: the devices and their networks.			X	X	
Week 2: Network Connectors	Youth use Bluetooth, infrared, local networks, and the web. Youth compare their strengths and weaknesses of these networks.			X	X	
Week 3: Network Layouts (aka Topologies)	Youth play graph games and learn about basic network topologies and their properties.			X	X	X
Week 4: Site Visit or ICT Visitors	Youth take a field trip to an ICT site that is involved in the development of network technologies.	X		X	X	
Week 5: Making an Interactive Whiteboard	Youth make an interactive whiteboard by networking a computer, a projector, a Wii remote, and an IR pen.			X	X	
Week 6: First Week of Design	Youth begin to design technology for the networked classroom of the future by brainstorming and learning about design requirements.			X	X	X

Week 7: Interviews & Peer Feedback (Performance Task)	Youth conduct user interviews to get feedback on their network designs. In the Performance Task, girls present their designs to the whole group for feedback.	X	X	X	X	
Week 8: ICT Visitor & Prototype Building	Youth create physical prototypes of their networked technologies. If possible, an ICT visitor provides feedback.	X	X	X	X	
Week 9: Second Week of Prototype Building	Youth continue to construct their physical prototypes and develop demonstrations of their devices.			X	X	
Weeks 10 & 11: Family Tech Night (FTN)	In Weeks 10 & 11, youth plan and execute a Family Tech Night (FTN), in which they present their technology designs and other learnings.	X	X	X	X	X