PROGRAM TITLE: Learn to Solder

BRIEF PROGRAM DESCRIPTION:
- Learn how to use a soldering iron to create an electronic game from basic components. You'll solder together the buttons, LEDs, brain, and other bits of a simple memory game you can play.

MATERIALS NEEDED/COST:
- Soldering irons ($10.99) & stands with sponges ($4.19)
- Solder ($8.59)
- Flux pens ($4.99)
- Power strips & cords
- Project Kit Brain Game Simon Says ($7.71)
- Solder Wick (for clean-up/mistakes)
- Batteries ($16.64 for 48)
- **TOTAL COST**: $319.69

PROGRAM PROCEDURE:
- Find presenter—someone who is familiar with electrical engineering or electronics soldering
- Set up tables/soldering irons with power strips (don't plug in until ready to go—they get hot!)
- Explain basics of soldering process and maintaining a clean iron
- Show people the instructions in the brain game insert—process needs to be followed in order
- Work through each step with expert and helpers checking the work and answering questions
- Explain how things work and why they work as each component is added
- At final stage, have participants check that it works before doing the final solder connection to stabilize device—expert can help fix problems if necessary
- Complete project, play game!

OUTSIDE PRESENTER CONTACT INFORMATION:
- Nashua MakeIt Labs | http://makeitlabs.com/ | (978) 226-3266 | info@makeitlabs.com

USEFUL PLANNING RESOURCES
- Supplies ordered from MCM Electronics: http://www.mcmelectronics.com/

SUGGESTIONS FOR MARKETING THIS PROGRAM
- Great Teen Tech Week program
- Pass along to schools—many attendees were directed here from their tech and shop teachers.

ADDITIONAL COMMENTS:
- For us, this program worked well with 2 expert presenters, 2 library staff to help and deal with logistics, and 12 teens ages 12-18. It took about 3 hours from start to finish.
- If each participant had his/her own soldering iron the program should take no more than 2.5 hours and would work more smoothly.
- It is helpful to check the work of the participants at each stage. At the end a few hadn't put in their components in the correct order, and it took expert help to unsolder the mistakes.

CONTACT INFORMATION OF LIBRARIAN SUBMITTING PROGRAM:
- Sophie Smith | Nashua Public Library | sophie.smith@nashualibrary.org | 603-589-4601