



Virginia 4-H MAKING the Future

The Make Education Movement *18 U.S.C. 707

While there has been a resurgence in the do-it-yourself (DIY) culture around the world, it has been an inherent part of 4-H, historically and culturally, for over 100 years! 4-H has engaged youth in thinking with their hands through tinkering, creative and inventive problem-solving, and use of advancing technologies since its beginnings in 1902. Through a variety of self-chosen projects-of-interest, 4-Hers work independently and in groups to modify, repurpose, upcycle, and fabricate to solve problems and to meet their needs, the needs of their families, their communities, and their world.

Making is embedded in the diverse and engaging 4-H projects which 4-H youth participate in each year, including sewing, gardening, animal science, robotics, book publishing, employing shortcuts or novel methods to increase productivity, and entrepreneurship. It is now the challenge of 4-H educators and volunteers to become more intentional and strategic than ever in opening-up the learning environment using questions, exploration through tinkering and trying, and mentoring through co-facilitation, co-learning and co-teaching. Using an integration of science, technology, engineering, art, and mathematics, 4-H youth will become engaged across all delivery modes and project areas.

A Maker program strikes a balance between focused activities and free play. It is not a traditional school or a classroom, so the activities drive the program. The students move through hands-on, design-based activities at their own pace, and develop their own solutions to challenges. The learning follows, or simply put, is the result of the activities.

Makers play with technology to learn about it. They like to figure out how things are made, how to fix them, or how to use them in a whole new way. They are non-linear thinkers, curious inventors and problem-solvers. According to Thomas Kalil, deputy director of the White House's Office of Science and Technology Policy, the Maker movement really "begins with the Makers themselves — who find making, tinkering, inventing, problem-solving, discovering and sharing intrinsically rewarding."

The Maker community has evolved into a growing movement of individuals who, in the words of Dale Dougherty, founder of *MAKE* magazine and creator of Maker Faire, "look at things a little differently and who just might spark the next generation of scientists, engineers and Makers."

Excerpted from: *A Blueprint: Maker Programs for Youth*, New York Hall of Science, 2013; Worker & Ambrose (2013)

WWI Maker Activities

The WWI Maker Activities are a series of hands-on activities providing children the opportunity to build, make and create. They are designed to move children from short, guided experiences to more open-ended opportunities where children can tinker and try, respond to challenges, connect with the science behind them and be introduced to a brief WWI related history. The activities can be offered as a WWI Military Maker event for families or as an ongoing series of weekly activities for children and youth at a variety of local, regional or state venues.

www.ext.vt.edu/topics/4h-youth/makers

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