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Jenna P Carpenter* (carpenter@campbell.edu), PO Box 115, Buies Creek, NC 27506. *Using Makerspaces to Attract and Retain Women In STEM.*

Despite decades of effort to recruit and retain women in STEM fields, we have made little progress in the hard sciences (AAUW, 2015). Research suggests connecting STEM to applications that make a difference in the world (NAE, 2008), using hands-on projects (Vas, R., Quinn, P., & A. Heinricher, 2013) and developing a sense of belonging (Stout, Dasgupta, Hunsinger, & McManus, 2011) all help with recruitment and retention of women. Makerspaces offer opportunities for doing all three, through the use of equipment such as 3D printers, vinyl cutters, embroidery machines, etc. These tools can be used to introduce students to CAD software and bolster 3D visualization skills, which improves student success across the curriculum (Sorby, 2009). Makerspaces invite creativity, allow for expression of artistic talent, and permit girls to acquire technical skills in a less-gendered environment, which may increase sense of belonging and fit. All of these suggest ways to use makerspaces to increase the number of women in STEM (Morocz, R., Levy, B., Forest, C. & R. Nagel, 2015; Roldan, W., Hui, J., & E. Gerber, 2017). We will report on our first year of makerspace usage, with suggestions for other programs interested in similar strategies for recruiting and retaining women. (Received July 14, 2017)