

**Creative Kids**  
**An after-school program for 2<sup>nd</sup> – 5<sup>th</sup> grade**  
**Salem Public Library**

A year ago I was facilitating a fairly traditional book club for 3<sup>rd</sup> and 4<sup>th</sup> grade children. Each session included a craft project, which soon became the highlight of our monthly get-togethers. One such program included us stringing cranberries as a winter treat for birds. While I was concerned that the cranberries might be a bit of a mess, I wasn't ready for what really stopped the craft dead in the water: not one of the children was familiar with threading a needle, and only a couple understood the concept of stringing. Our teen librarian said the same was true with her not-quite-as-young patrons. Although kids could be wizards at two finger texting and navigating a tablet, traditional crafting skills were unknowns. This fall at Salem Public Library we temporarily shelved our book club format and introduced a crafts program in its place. Each month we have presented an afternoon session to introduce children to new-to-them hands-on skills that stimulate their imagination, empower them with a sense of their own capabilities, and strengthen their spatial intelligence, an important component of later excelling in science and mathematics. <sup>(1)</sup> Although we have always offered a plethora of papercraft programs, these crafts would be of a more three dimensional variety, with an assortment of media. A wonderful additional bonus that we hadn't anticipated is that once kids were brought in to the programs and their grown-ups saw what project their child was about to experience, they didn't want to leave. Soon we had a room full of adults and children, learning, laughing and exploring together. We taught 22 kids (and one very proud dad!) how to sew on a button while they created sock monsters in October, while everyone struggled but ultimately mastered basic origami folds making a diamond book that unfolded to become a star in our December program. Research is clear that arts *and* crafts education (both the invitation to express oneself visually in an open-ended format and the invitation to create and construct in three-dimensions) goes hand in hand in complementing and improving reading and science skills. And the sense of self-esteem that such projects bring to young creators is truly priceless. As funding for arts programs continues to be cut in elementary schools, and fee based arts classes preclude many families from taking advantage of them, public libraries have the opportunity to add, in yet another way, to the education of their young patrons.

<sup>(1)</sup> Recognizing Spatial Intelligence: Our schools, and our society, must do more to recognize spatial reasoning, a key kind of intelligence. Gregory Park, David Lubinski, Camilla P. Benbow, Scientific American, November 2, 2010

Retrieved from: <http://www.scientificamerican.com/article/recognizing-spatial-intel/> 2-4-16

**“Arts and crafts teach skills of relevance to STEM education outcomes:**

K-12 curricula in most school systems focus on mathematical and verbal skills, but the ability to succeed in science and engineering requires a broader range of skills that can be, and often are, taught through arts and crafts. Arts- and crafts-trainable skills that have proven to enhance science, technology, engineering and mathematics (STEM) success in K-12 classrooms include the following “thinking tools”:

- 1) **observing** (Checkovich & Sterling, 2001; Stein, et al., 2001);
- 2) **imaging and visualization** (Ferguson, 1977; Ferguson, 1992; Root-Bernstein, 1989; Root-Bernstein & Root-Bernstein, 1999; Root-Bernstein & Root-Bernstein, 2005; Root-Bernstein, et al. 2008);
- 3) **abstracting** (Root-Bernstein, 1991; Bennedsen & Caspersen, 2008);
- 4) **pattern recognition and pattern invention** (Silvia, 1977; Burton, 1982; Hopkins, 1984; Pasnak, et al., 1987; Root-Bernstein & Root-Bernstein, 1999; Harvard, 2008);
- 5) **analogizing** (Glynn, 1991; Treagust, et al., 1992; Harrison & Treagust, 1993, 1994; Thiele & Treagust, 1994; Root-Bernstein & Root-Bernstein, 1999; Coll, et al., 2005);
- 6) **dimensional thinking** (Root-Bernstein & Root-Bernstein, 1999; Dodick & Orion, 2003; Steiff, et al., 2005; Kastens & Ishikawa, 2006);
- 7) **modeling** (Welden, 1999; Root-Bernstein & Root-Bernstein, 1999; Gilbert, et al., 2000; Ewing, et al., 2003; Steiff, Bateman & Uttal, 2005; Musante, 2006; Starfield & Salter, 2010);
- 8) **body or kinesthetic thinking** (Druyan, 1997; Root-Bernstein & Root-Bernstein, 1999; Root-Bernstein & Root-Bernstein, 2005; Robson, 2011);
- 9) **manual dexterity** (Wilson, 1982; Root-Bernstein, 1989);
- 10) **familiarity with tools** (Taylor, 1963; Root-Bernstein, et al., 1995; Root-Bernstein, et al., 2013);
- 11) **transforming data into visual or graphical forms** (Wilson, 1972; Root-Bernstein, 1989; Root-Bernstein & Root-Bernstein, 1999);
- 12) **converting theories into mechanical procedures** (Wilson, 1972; Root-Bernstein, 1989; Root-Bernstein & Root-Bernstein, 1999);
- 14) **and understanding data and experiments kinesthetically and empathetically**(Root-Bernstein & Root-Bernstein, 1999; Dow, et al., 2007; Riess, et al., 2012; Chan, et al., 2012).”

<https://seadnetwork.wordpress.com/white-paper-abstracts/final-white-papers/the-importance-of-early-and-persistent-arts-and-crafts-education-for-future-scientists-and-engineers/>

“In a ten-year national study by Shirley Brice Heath of Stanford University, it was discovered that young people who are involved in highly effective non-school arts-based community programs in under-resourced communities, in comparison with a national sample of students were:

- Four times more likely to win an academic award, such as being on the honor roll.
- Eight times more likely to receive a community service award.
- Three times more likely to win a school attendance award.
- Four times more likely to participate in a math or science fair.
- Likely to score higher on their SAT college admission test scores if they have been involved for more than four years of after-school arts study.

It is typical that those who fund school programs have seen the visual and performing arts as frills — programs that can be added only when there is enough money for them, as well as the first to be cut if there is a budget crisis.”

[http://childdevelopmentinfo.com/learning/multiple\\_intelligences/the-importance-of-the-creative-arts-for-children-and-teens/#ixzz3zG1h7fRH](http://childdevelopmentinfo.com/learning/multiple_intelligences/the-importance-of-the-creative-arts-for-children-and-teens/#ixzz3zG1h7fRH)