

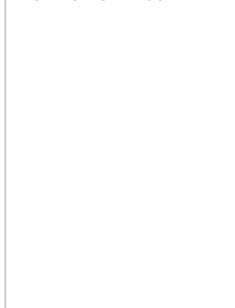
# Autism Spectrum Disorder and the Library Makerspace

Libraries are welcoming spaces, embracing all patrons with support and empowerment. Library makerspaces must be open and accepting of all our students' needs. From English Language Learners to students with physical and learning disabilities, all children can benefit from makerspace activities as making encourages communication skills, time management, critical thinking, and problem solving among numerous other essential skills. Imagination and inquiry develop and thrive in these creative learning spaces. Welcoming makerspaces are a benefit to all, especially the differently abled student. Students with autism can thrive in our makerspaces through staff awareness and a few modifications to your program.

## What Is Autism?

Autism spectrum disorder (ASD) is a developmental disorder that affects one in fifty-nine children; occurs across all ethnic, racial and socioeconomic groups; and is diagnosed more frequently in boys than girls ("Data & Statistics" 2019). Developmental and neurological symptoms, including difficulty communicating and interacting with others, can impact the child's ability to function at school and in social situations. The severity of the disorder falls on a spectrum, ranging from mild to severe.

Knex Ferris Wheel



## Why Encourage ASD Makers?

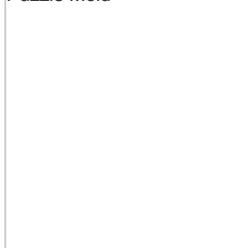
According to the National Institute of Mental Health, programs that help students "learn life-skills necessary to live independently, increase or build upon strengths" and "learn social, communication, and language skills" are highly beneficial for people with ASD (2019). These skills easily correspond with skill sets learned through maker activities. When students feel successful, there is an impact on their self-confidence and self-esteem; a significant benefit for special needs students. Communication and social skills are important attributes for any child, but the benefits to students with special needs increase substantially. So how do we welcome the ASD child to our makerspaces?

## Programming Tips

With planning, children with autism can benefit and succeed in makerspace programming. Taking a look at typical ASD characteristics, librarians should mold programs to promote success. "Leveraging strengths and managing the challenges are two keys to running a successful makerspace" (Water 2015). Students with autism have certain known attributes that affect interactions, including limited eye contact and failure to respond when spoken to. Social communication can be limited, if nonexistent, depending on the severity of the disorder experienced by the student. However, ASD youth will converse at length about subjects of interest to them. Flexibility and patience are most effective when dealing with the above behaviors.

Limit the number of choices for the ASD child as too many options tend to overwhelm the child. A few choices (two or three) will allow the child to be in control and more productive. Bombarding children with excessive options overwhelms and overstimulates. Autistic children can be more sensitive to their environment—too hot, too crowded, too much light, just "too much." Allow breaks and movement during your session, particularly when you notice an overstimulated child. If possible and safe, lower lighting levels or adjust the window shades.

Puzzle Mold



Realize you may have limited eye contact with the ASD child. They'll be listening, but more likely will not look at you while doing so. Be clear and concise when giving directions and provide visuals, too. Don't be dissuaded by lack of eye contact. Flexibility is a must for all staff working with ASD students. Ignore certain behaviors, such as wiggling or rocking. If the student isn't bothering anyone with these behaviors, leave them be. Of course, destructive behaviors in any student is unacceptable. Safety is always paramount. Allow students to do whatever they choose, within reason. ASD children have individual special interests and will repetitively seek out these activities. If the student wants to build or work with gears day after day, allow it during their open tinker time. Or, as a motivator you can capitalize on the student's special interest by using it within your project.

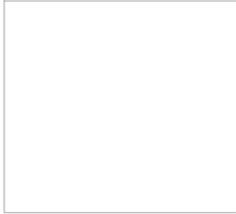
Remember to be consistent and set boundaries and expectations. Don't change plans midway or introduce a new concept. ASD students prefer stability.

Usually the student's classroom special education teacher will be able to give you pointers on what works for that student. Use this staff member's insight to develop a deeper relationship with the student; this will be helpful for the long run. Work with special education staff to learn all you can about your students' needs and their individual strengths and limitations and build programming from there. Students with disabilities have an individual education plan (IEP) that should be read and referred to by the school librarian. The IEP is a legal and educational document that outlines the needs of the student and

how they will be addressed. In our school we use our makerspace as part of students' IEPs in addressing goals.

For example:

- "In the high school library's maker center, \_\_\_\_ has demonstrated that he likes to build things."
- "\_\_\_\_ demonstrated that he likes -and-effect relationships, problem solving, and basic programming skills while using the high school library's maker center to construct models or program a mouse to navigate mazes."
- "\_\_\_\_ maintains his attention for longer periods of time when completing hands-on activities. According to his Transitional Assessment, these skills will help him in achieving his goal to work with computers."



Our autistic students have many highly valuable strengths. Notably, the ability "to learn things in detail and remember information for long periods of time, being strong visual and auditory learners [and] excelling in math, science, music, or art" (National Institute of Mental Health 2018). Just think of all the possibilities!

### Activities

Most functioning autistic students can participate in any maker activity if you keep in mind your students' limitations. Do not expect eye contact or a response to your instruction and be sure to limit the number of choices and items on the workspace. The beauty of choice other students experience in our makerspaces can be a burden for the ASD students.

Students with ASD typically have repetitive tendencies and limited interests. With this in mind, school librarians can provide activities that suit the student's needs and personal interest. I have found success with K'nex and Legos, as both building tools involve a repetitive activity for those who enjoy and find success in large creations over a course of time. Many of our children on the spectrum can apply themselves to a task requiring a significant length of time. The world's largest Lego model, a 26-foot model of the *Titanic*, took over 700 hours to build and 65,000 Lego bricks to complete. At just ten years old, Brynjar Karl Birgisson, an autistic boy from Iceland, spent eleven months developing the plans from historic blueprints and building a model that is now on display in the Titanic Museum. Brynjar spent many months travelling to various countries with his completed model. The once shy boy went from limited interactions and communication to what he describes as a complete turnaround. "The whole journey has helped me out of my autistic fog....I was totally unable to communicate when I started the project. Now I'm standing on stage and giving interviews" ("Autistic Teen's" 2018). Confidence and self-esteem of this sort are noted core advantages of makerspace use.

### Awareness

During April, bring autism and ASD to the forefront by celebrating Autism Awareness Month. Bring others into your makerspace and promote awareness of this prevalent disorder. Several hands-on projects can be found at "5 Autism-Friendly Maker Activities + Programming Tips" (<http://ideas.demco.com/blog/5-autism-friendly-maker-activities/>). Using the nationally recognized symbol of autism awareness, the puzzle piece, messages of encouragement, information, and of hope can be shared among library patrons and the community through decorative puzzle pieces, visually reinforcing the need to work together. Awareness helps other staff members and the student body, as well. Working together through awareness emboldens change, an advantageous change that aids understanding and promotes familiarity.

### Conclusion

While this article does not anticipate that the situations and solutions listed above will apply to every child on the spectrum or to all school library makerspaces, it should be considered a starting point: a conversation and an invitation to collaborate with special needs teaching staff. With some modifications and differentiated instruction, students with autism spectrum disorder can experience multiple benefits in our school library makerspaces.

### Works Cited

"Autistic Teen's Lego Titanic Replica on Display in US." BBC News (April 18, 2018). <https://www.bbc.com/news/world-us-canada-43813267>

"Data & Statistics on Autism Spectrum Disorder." Centers for Disease Control and Prevention. <https://www.cdc.gov/ncbddd/autism/data.html>. Accessed January 11, 2019.

National Institute of Mental Health. Autism Spectrum Disorder. <https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index.shtml>. Accessed January 4, 2019.

Waters, Patrick. "Encouraging Neurodiversity in Your Makerspace or Classroom." Edutopia (December 24, 2015). <https://www.edutopia.org/blog/encouraging-neurodiversity-in-makerspace-classroom-patrick-waters>

### Autism Spectrum Disorder in the Library Makerspace

1. Students with disabilities have an individual education plan (IEP) that should be read and referred to by the school librarian.
2. Autism spectrum disorder (ASD) students prefer stability.
3. Be clear and concise when giving directions and provide visuals.
4. Allow breaks and movement during your session, particularly when you notice an overstimulated child.
5. Limit the number of choices for the ASD child as too many options tend to overwhelm the child.
6. Limit the number of items on the workspace.

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## About the Author

**Gina Seymour**, MLS, MEd, is the library media specialist at Islip (NY) High School. Gina was named to Library Journal's Movers & Shakers (2017) list as a "Change Agent" and was awarded the Suffolk School Library Media Association's School Librarian of the Year in 2014. She is author of *Makers with a Cause: Creative Service Projects for Library Youth* and a chapter on inclusive makerspaces in *School Library Makerspaces in Action* and is working on a book on how to cultivate social action in the library. Gina has served on numerous committees for ALA and YALSA and is an adjunct professor at St. John's University, NY. Gina shares her work, musings and reflections on her blog [GinaSeymour.com](http://GinaSeymour.com) and on Twitter @ginaseymour.

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