autism at-a-glance

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Using Technology to Increase Independence

Autism at-a-Glance is a series of practitioner and family-friendly documents created by the Center on Secondary Education for Students with ASD (CSESA) designed for high school staff members supporting students on the autism spectrum, as well as family members of adolescents with ASD. The purpose of the *Autism at-a-Glance* series is to provide a current summary of topics relevant to high school students with ASD as well as practical tips and resources for school and community personnel and family members.

This *Autism at-a-Glance* was designed to support high school staff and family members in promoting independence in daily living skills for adolescents and young adults on the autism spectrum.

Many teens with autism love to use technology and are using a variety of everyday technologies such as smartphones, tablets, laptops, and desktop computers for entertainment and for schoolwork. These devices can also be powerful tools to increase independence, something that teens need to be working on as they prepare for adulthood. (Hedges, Odom, Hume, & Sam, 2018)

Examples of Technology Use to Promote Independence

Here are some tips for ways teens can use technology at home, school, and in the community to be more independent. Initially, it may take some practice to get used to some of these functions, but once they are learned, they can soon become a regular part of everyday life. If needed, a reward system may help to get things going.

Home
Sam's mom used to wake him up every morning so he wouldn't be late for school, but after trying the alarm function under the clock icon on his smartphone, Sam had no problem getting himself up and ready for school.

- **Wake up** in the morning by using the <u>alarm</u> on the clock function on a smartphone, iPod touch or tablet device.
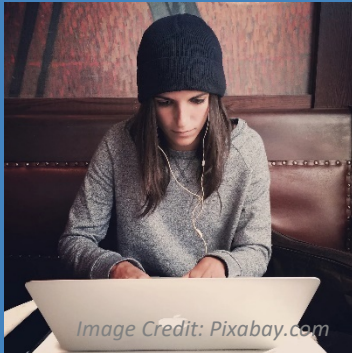
Increasing Independence

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- **Select clothes to wear** by checking the weather to know what to wear. There are many weather-related apps including ones that make suggestions for the type of clothing for the particular weather forecast that day.
- **Keep track of tasks** by creating checklists of things to do (list of chores to do on Saturday, or list of groceries to find at the store). There are a variety of checklist apps including specific ones for groceries.
- **Remember to complete tasks** like homework or walking the dog by setting a reminder alarm on a smartphone.
- **Communicate** by texting with parents at work when a student arrives home from school, or with teacher when having difficulty with an assignment.
- **Increase social interactions** by following friends on social media or joining an online community engaged in a special interest such as gaming, fiction writing, art, anime, astronomy, etc. The possibilities are endless.

School

Aisha is a good student but some days she would forget to do her homework, and this was hurting her grades. Her resource teacher taught her how to put daily alerts into her smartphone, so she was reminded every afternoon at 4pm to check her planner.

- **Keep track of homework assignments** in a smartphone by adding them in the calendar section with an alert to remember to complete them at home. You can also write them in the Notes application on a phone or tablet, or you can take a picture of the assignments on the board. There are also a host of homework apps to help with keeping track of assignments.
- **Work on homework assignments** in one place where they can be found easily. Google Docs or other free online word processors make it simple. Google Docs and many of these tools save things automatically so no more "dog ate my homework" excuses. Also, these tools make it easy to share documents with others, so students can get help with editing a paper, for example.
- **Overcome handwriting problems** by using a laptop to take notes in class or you can take a close-up picture of the notes on the board or take a picture of another student's note (*just be sure to have permission from both the teacher and the student first*).
- **Record a lecture** using the audio record or video record function on a smartphone or tablet so it can be replayed at home.
- **Ask questions** by texting or emailing the teacher about things you do not understand in-class or about homework assignments, (can even do it during class). Make sure that you get permission from the teacher in advance.
- **Decrease anxiety** by texting or emailing parents when feeling worried at school or if you have an important question.
- **Reduce stress** by listening to music using headphones or earbuds when walking in the busy hallways or sitting in the noisy cafeteria.
- **Find social events** by checking club Facebook pages or websites about upcoming events.

- **Cooperate** with other students on projects using <u>Google Drive, Skype, Zoom</u> or other collaborative tools.
- **Attend an IEP meeting** from a less intimidating location <u>by phoning or video-calling in</u> from a nearby room to avoid sitting at a table with so many adults).
- **Use alternative forms of communication** for students who are non-verbal. There are <u>apps available for tablet devices</u> (some free) that use pictures and will generate sound to help communicate a student's wants and needs.

Community
John's mom does not drive so John had to learn take the bus by himself to get to his job at the grocery store on Saturdays. His mom taught him how to do a video chat with her so he could see and talk with her while he was taking the bus. This helped relieve his stress and after a few times doing it, he was able to do it without the support of the video chat.

- **Stay safe** by using <u>video chat</u> with a friend or parent while taking the bus or any other time navigating a place alone until you get used to the routine.
- **Communicate with an employer** about any concerns or difficulties by using <u>text, phone, or email</u>. It can be as simple or complicated as needed. Sometimes an emoji can say it all. 🤔
- **Find directions** to the nearest bus stop using <u>GPS or a map app</u> on a smartphone.
- **Complete multi-step activities** using <u>video modeling</u> on a smartphone or tablet to have step-by-step visual instructions.

- **Increase fitness** using an <u>app or an electronic device</u> to keep track of movement during the day by counting your steps or recording distances walked, run, or biked.

Tips for Selecting Apps, Software, and Technology Tools

- Read the reviews-many apps have ratings so take the time to read the ratings to find out what others' experiences have been.
- Google it-type what you are looking for in the search bar on your browser. For example, type in "best app for making a checklist" or "best app for teens with autism to learn …." You may be surprised to discover you are not the first one to ask the question.
- For information regarding staying safe while using the internet and social media, see our Autism-At-A-Glance on Internet Safety. Web address: http://csesa.fpg.unc.edu/sites/csesa.fpg.unc.edu/files/Internet%20Safety%20for%20Adolescents%20with%20Autism.pdf

Resources

AFIRM Modules: Task Analysis, Reinforcement, Visual Supports, Prompting, Modeling, Self-management, Video Modeling, and Technology-aided Instruction & Intervention
AFIRM Team. (2018). *Autism Focused Intervention Resources & Modules*. Chapel Hill, NC: National Professional Development Center on Autism Spectrum Disorder, FPG Child Development Center, University of North Carolina. Retrieved from **afirm.fpg.unc.edu**

Daily Living Skills
Duncan, A. W., & Bishop, S. L. (2015). Understanding the gap between cognitive abilities and daily living skills in adolescents with autism spectrum disorders with average intelligence. *Autism, 19*(1), 64-72. doi: 10.1177/1362361313510068

Key to Independence
Sarris, M. (2014, April 10). Daily Living Skills: A Key to Independence for People with Autism. Retrieved from **https://iancommunity.org/ssc/autism-adaptive-skills**

Supporting Adults with ASD through Uncertain Times
Sam, A., Dees, B., Waters, V., Hume, K., Steinbrenner, J., Tomaszewski, B., Perkins, Y., White, M., Rentschler, L., McIntyre, N., Szendrey, S., Nowell, S., & Odom, S. (2020). Supporting adults with autism through uncertain times: Companion guide. Retrieved from:
https://afirm.fpg.unc.edu/supporting-individuals-autism-through-uncertain-times

Transition Toolkit
Coyne, P. (2016). Autism Spectrum Disorder / ASD Transition Toolkit Unit 3.8. Retrieved from **https://www.crporegon.org/Page/285**

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Hedges, S., Odom, S., Hume, K., & Sam, A. (2018). Technology use as a support tool by secondary students with autism. *Autism, 22*(1), 70-79. doi:10.1177/1362361317717976