



# AT & Adaptive Equipment for Diverse Sensory Needs

Presented by: Courtney Ness Fuchs, ATP & Jamis Wehrenberg

Reviewed by: Randon Lovering, MOTR/L

March 8<sup>th</sup>, 2023

A hand holding a small Earth globe against a starry space background. The hand is positioned at the bottom, with fingers slightly curled, holding a small, realistic-looking globe of the Earth. The globe shows continents and clouds. The background is a deep blue and green space filled with numerous white stars of varying sizes. The text "The world is sensory." is overlaid in the center in a white, italicized serif font.

*The world is sensory.*

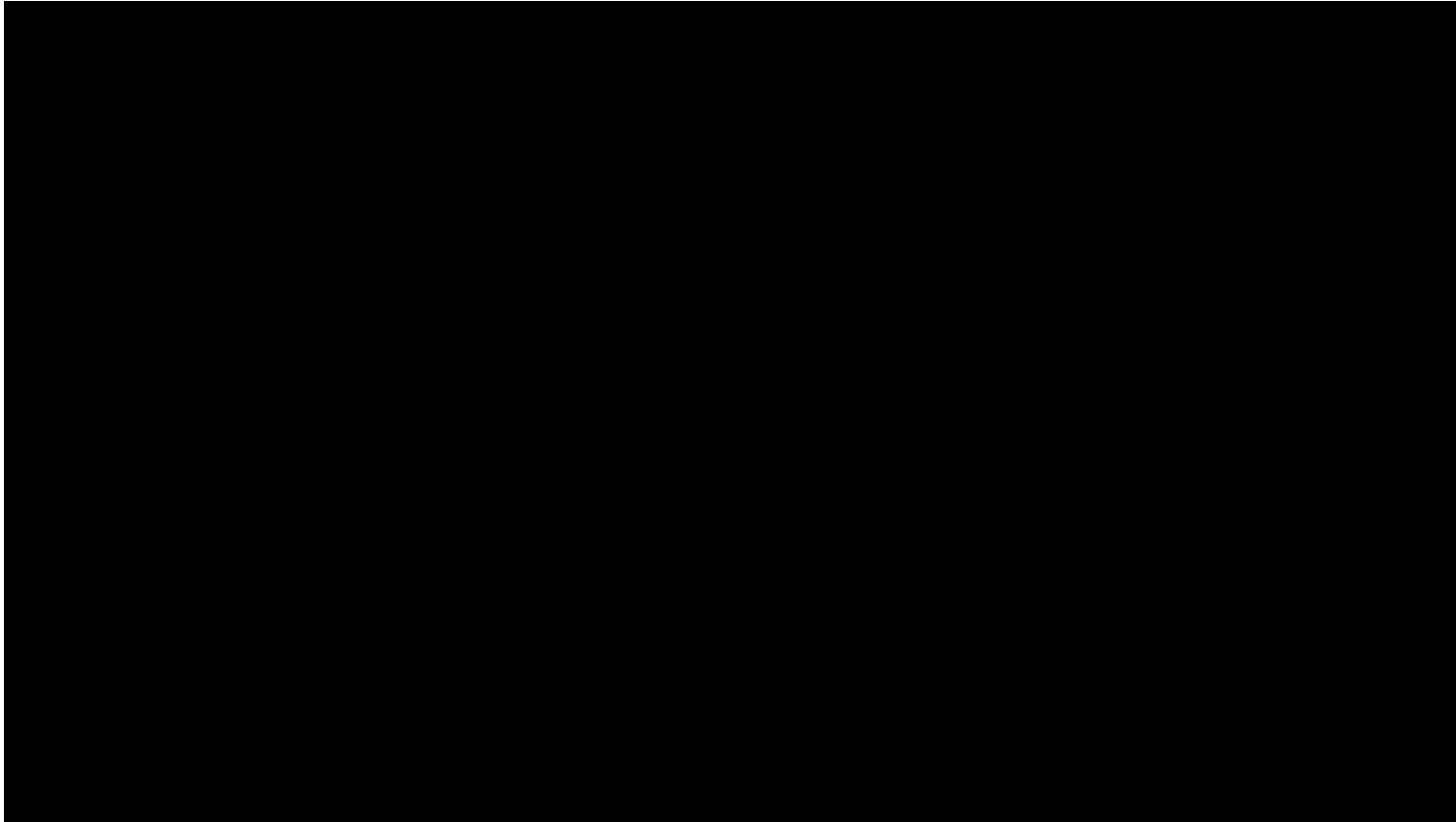
Randon Lovering, MOTR/L

# Intro to Sensory Processing

*Disclaimer: We are not medical professionals. The information presented is not intended or implied to be a substitute for professional medical advice, diagnosis, or treatment.*



# What is sensory processing?



[YouTube video: What is Sensory Processing? Creator: STAR Institute](#)

# What is sensory processing disorder (SPD)/ sensory integration disorder?

- ▶ *“Trouble managing information that comes in through the senses”. – [Understood.org](https://www.understood.org)*
- ▶ *“People with SPD **misinterpret everyday sensory information**, such as touch, sound, and movement. They may feel bombarded by information, they may crave intense sensory experiences, or they may be unaware of sensations that others feel. They may also have sensory-motor symptoms such as a weak body, clumsiness or awkwardness or delayed motor skills.”- [STAR Institute](https://www.starinstitute.org)*

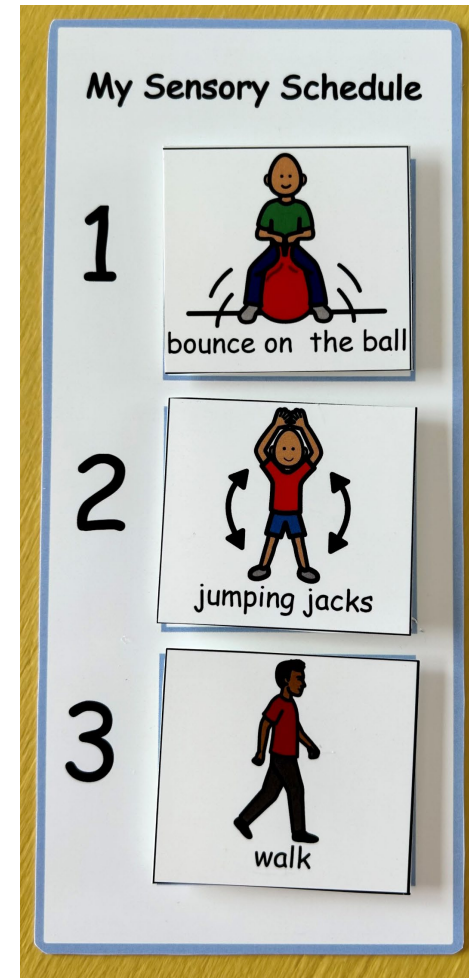
# Types of Sensory Processing Differences

- ▶ Hypersensitivity AKA sensory-avoidant
  - ▶ Can be called oversensitive
  - ▶ Examples: avoid loud noises and bright lights, dislike tags on clothing, dislike crowded places, avoid trying new foods
- ▶ Hyposensitivity AKA sensory-seeking
  - ▶ Examples: want to touch things, want to squeeze things, like to be tightly hugged, play rough, high pain tolerance
- ▶ A person can be hyper and hypo sensitive in one or more senses
- ▶ May not be as affected by SPD in all circumstances

# Assistive Tech for SPD

*Please consult with an occupational therapist and/or behavioral specialist when implementing specific devices.*

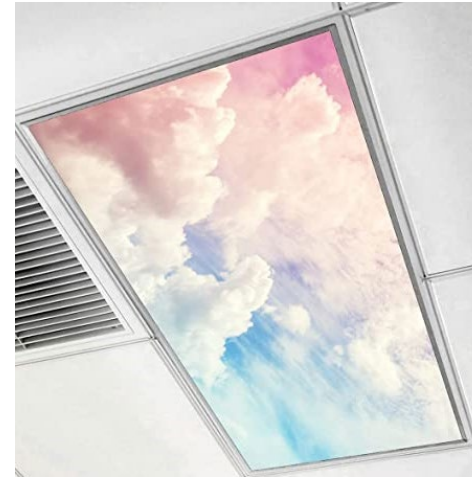
# Sensory Choice Boards & Sensory Schedule



Credit: [Tobii Dynavox myboardmaker.com](https://www.tobii.com/dynavox-myboardmaker.com)

# Lighting Strategies

- ▶ If appropriate, reduce overhead light
- ▶ Offer multiple lighting sources – overhead, lamps, task lighting
- ▶ Use smart home technology to create Scenes for different activities and needs
  - ▶ Smart lightbulbs, smart light strips, smart light switches
  - ▶ Make it easy to access – consider a smart button or create a [Shortcut](#) or [Action Block](#) on a smartphone or tablet to activate



[Fluorescent light cover](#)



[Govee Smart Lights](#)

# Visual Stimulation

- ▶ Fiber optic lights
- ▶ Projectors
- ▶ Bubble tubes
- ▶ Disco balls
- ▶ Lava lamps
- ▶ Fairy curtain lights
- ▶ Mirrors, “fun house” mirrors
- ▶ Glitter tubes
- ▶ Article: [How to Make Sensory Bottles](#)



[Lunar Light Show](#)

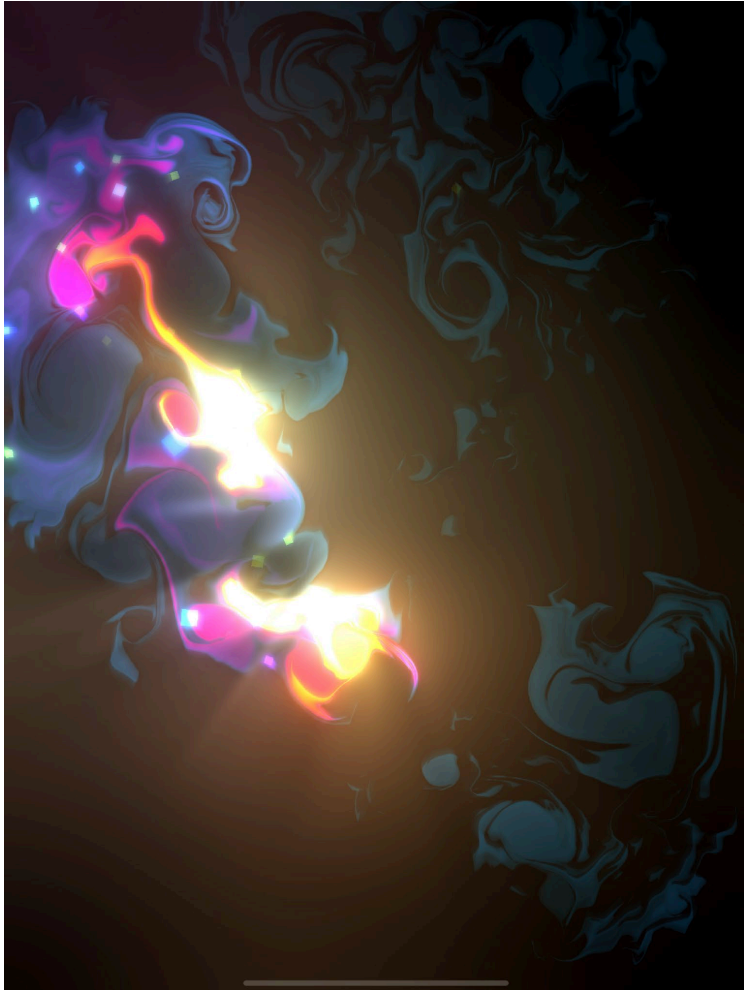


[Galaxy Projector](#)

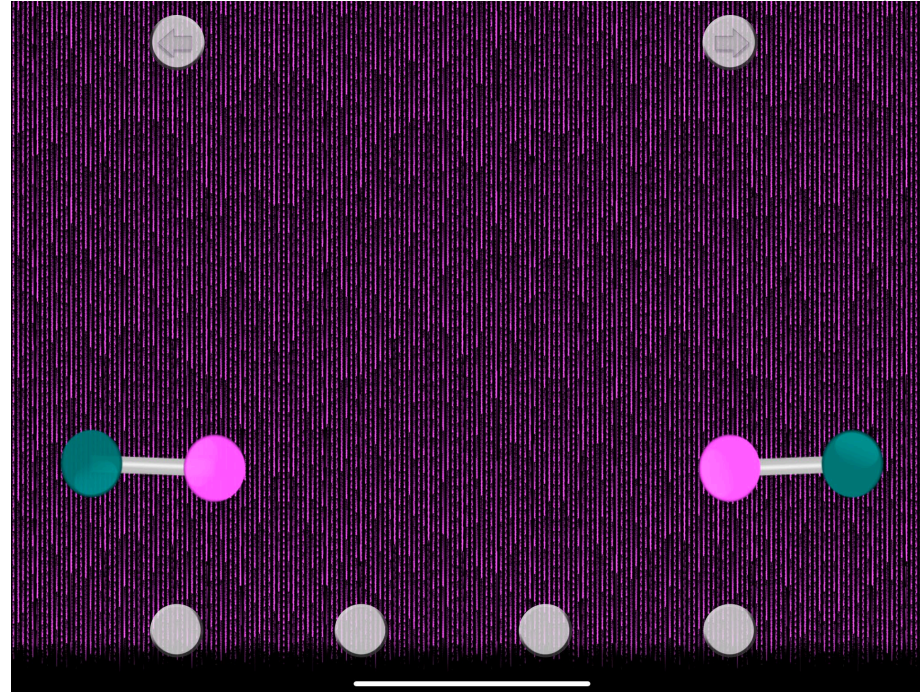


[Convex Acrylic Bubble Mirror](#)

# Apps for Visual Stimulation



[Fluid Simulation app](#)

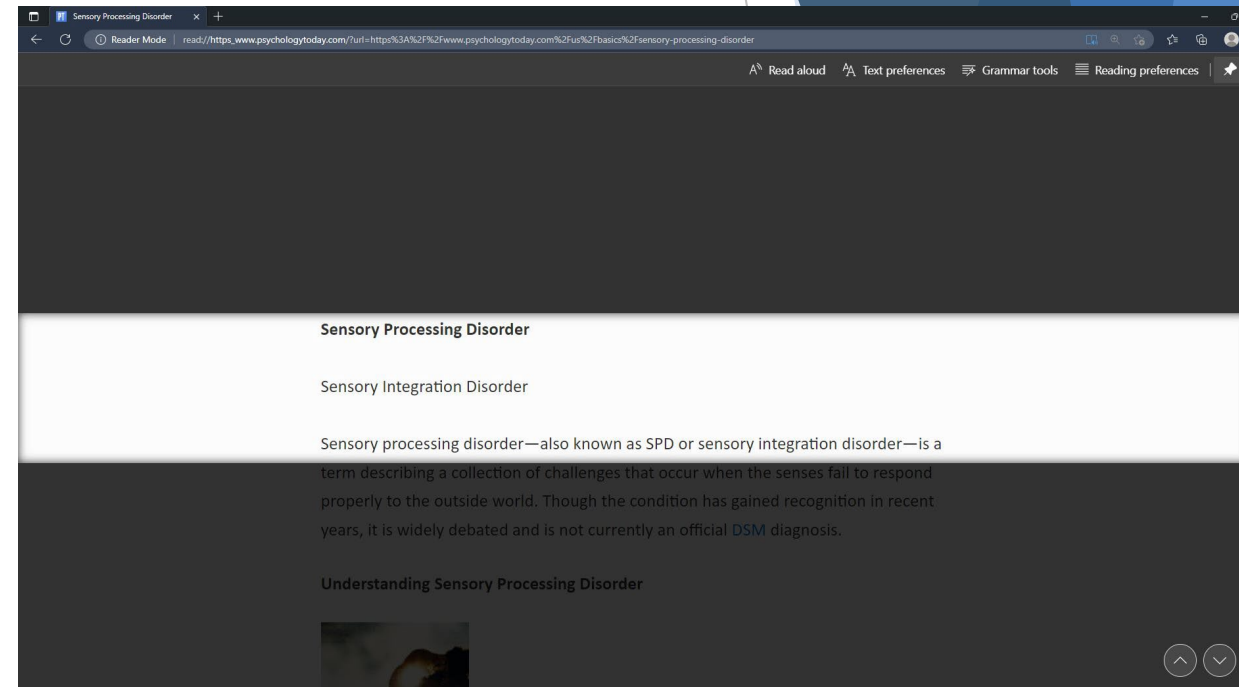
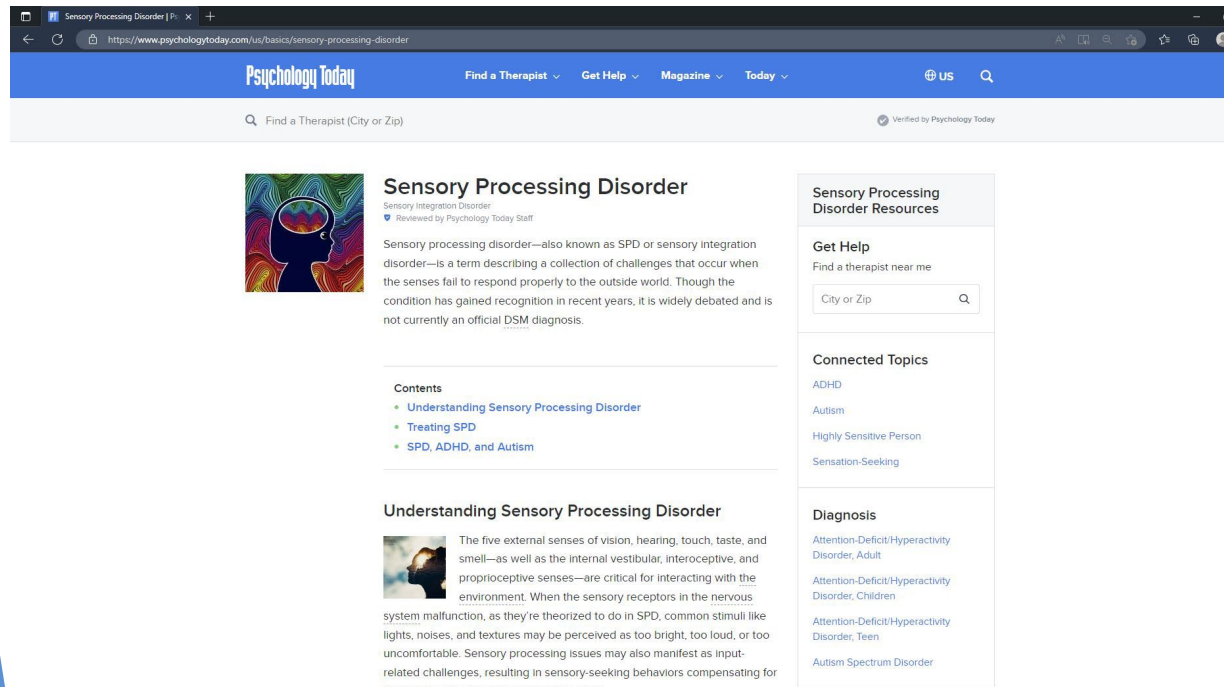


Switch Accessible!  
[Marche app by Sensory App House](#)

# Reduce Visual Stimuli on Electronic Devices

- ▶ Color filters
- ▶ Dark mode – inverts colors
- ▶ Focus mode reduces notifications, movement, etc.
- ▶ Anti-glare filters for monitors
- ▶ Anti-glare screen protectors for smartphones/tablets
  - ▶ [Paperlike screen protectors for iPads](#)
- ▶ Try reading mode in a browser or try [Immersive Reader in Microsoft Edge](#)

# Immersive Reader Before/After Line Focus



Article: [How to use Immersive Reader in Microsoft Edge](https://www.psychologytoday.com/us/basics/sensory-processing-disorder)

# Smell - AT Strategies

- ▶ Fragrance-free environment
- ▶ Increase airflow
- ▶ Open windows
- ▶ Aromatherapy
  - ▶ Essential oil rollers
  - ▶ Essential oil diffusers
- ▶ Peppermint gum



# Smell - more AT strategies

- ▶ Scented playdough, markers, stickers, etc. for stimulation
- ▶ Safety
  - ▶ Natural gas detector
  - ▶ Visual reminder to check that food/beverages are consumable
    - ▶ Check the expiration date
    - ▶ Check for mold
    - ▶ Check to see if the item has changed in color/texture
    - ▶ Check for hazard symbol or Mr. Yuk sticker



# Oral Motor



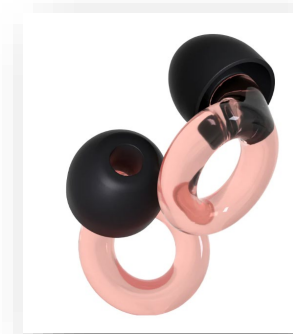
Chew Stixx Flavored Oral Motor Chews



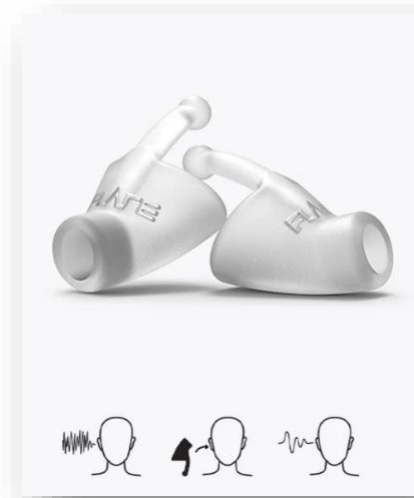
ARK Chewlery

# Hearing

- ▶ Noise-cancelling headphones/earphones
- ▶ Earplugs
  - ▶ Earring or necklace earplug holders - lots of styles on Etsy!
- ▶ Create custom playlists
- ▶ Background sounds/white noise apps & machines



[Loop Engage earplugs](#)



[Calmer alternative earplugs](#)



[Earring holders for Loop earplugs](#)



[BetterSleep app](#)

# AT Strategies for Touch and Proprioception

# Clothing & Wearables

- ▶ Compression
  - ▶ Sportswear
  - ▶ Compression clothing for autism
- ▶ Weighted clothing
- ▶ Weighted jewelry
- ▶ Tagless, seamless, larger armholes
- ▶ Cooling clothing and accessories
- ▶ Easy-on shoes



[Kozie Clothes Double  
Take Compression Shirt](#)



[Billy Shoes](#)



[CalmCare Bodysuit](#)

# Small Handheld/Portable Items

- ▶ Spiky massage balls
- ▶ Koosh balls
- ▶ Stress balls/putty
- ▶ Therapressure brushes
- ▶ Fidget poppers, cubes, keychains, etc.



# Flexible Seating

- ▶ Exercise Balls
- ▶ Rocker Chairs
- ▶ Wobble Chair
- ▶ Adapt existing chairs w/ balance discs and chair fidgets
- ▶ [Squeezeie Seat](#)
- ▶ Floor Seating
- ▶ Textured Floor Mats
- ▶ Article: [6 Low-cost Ways to Create a Sensory-Friendly Chair](#)



[Textured Floor Mats](#)



[Wobble Seat](#)



[Chair Fidget for Feet](#)

# Active Seating for the Office



Wobble or Balance Disc



Kneeling Chair by UPLIFT



Active Seat by Vari

# Deep Pressure Sensory Items

- ▶ Compression and weighted items such as cocoons, blankets, lap pads, and bed sheets
- ▶ Squeeze Roller/Steam Roller
- ▶ Foam Rollers
- ▶ Exercise Bands
- ▶ Mini Trampolines
- ▶ Bounce Balls
- ▶ Swings



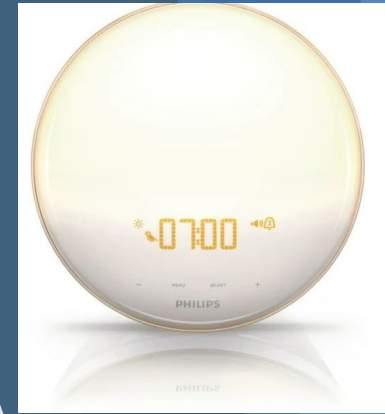
Steamroller



Hop Balls

# Sleeping

- ▶ White noise machine or app
- ▶ Earplugs
- ▶ Blackout curtains
- ▶ Eye mask - blackout, weighted, scented
- ▶ Weighted blankets
- ▶ Sensory compression bed sheets
- ▶ [Sleep Pods](#)
- ▶ Essential oil diffuser
- ▶ Wake up light/ sunlight alarm clock



# Transitioning

Cueing - let them know something is coming up soon

Visual timer

Visual schedule

# Time Timer Visual Timers

[Time Timer](#) offers a variety of visual timers including apps for smartphones & Apple Watch



# Countdown Timers

[Time Tracker by Learning Resources](#)



[Light-up Countdown Timer by Lake](#)



# Smart Home & Smartphone/Tablet Tools

# Smartphone Apps & Built-ins

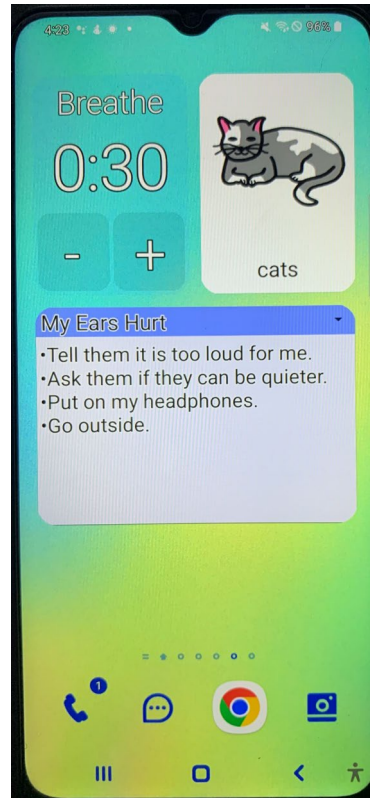
- ▶ Guided breathing and meditation apps like [Calm](#) and [Headspace](#)
- ▶ [Calming colors and images](#)
- ▶ Coloring apps
- ▶ [Choiceworks app](#) for iOS



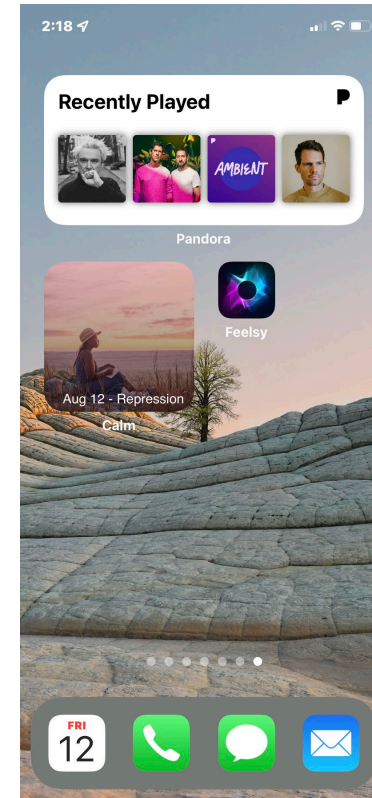
Choiceworks App

# Make Smartphone Tools Easy to Access

- ▶ Android
  - ▶ [Action Blocks](#)
  - ▶ [Widgets](#)
- ▶ iOS
  - ▶ [Shortcuts](#)
  - ▶ [Widgets](#)



Android



iOS

# Smart Home Tools

- ▶ Create custom smart home routines to support sensory needs
- ▶ Consider how your client/child will access the routine when they need it
  - ▶ Voice command
  - ▶ Icon on one's communication board
  - ▶ Smart button like Flic

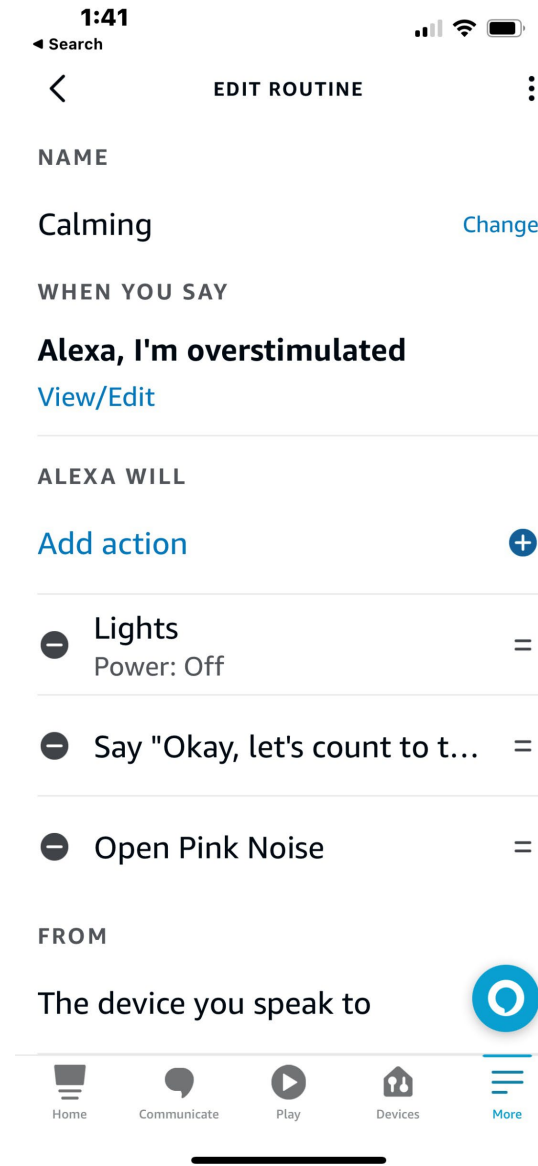


Flic smart buttons



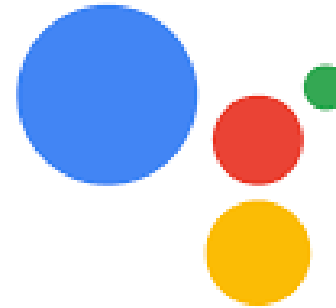
## Alexa Routines

- Completely customizable!
- Routine can be triggered by a voice command, a smart button, etc.
- Create different Routines based on individual needs
- Add custom phrases, smart home actions, i.e. lights on/off, play hard rock at 75% volume, send a notification, etc.



# Google Assistant Routines & Siri Shortcuts

- ▶ [Google Assistant](#)
  - ▶ [Google Assistant Routines](#)
- ▶ Siri/iOS
  - ▶ [iOS Automation in Shortcuts](#)



Google Assistant



# Try Before You Buy!

Free demonstrations and short-term loans of assistive tech are available through your state's AT Program!

## North Dakota Short-Term Loans



The screenshot shows the North Dakota ASSISTIVE TECHNOLOGY website. The header includes the logo and a search bar. The main content area welcomes visitors to "North Dakota ASSISTIVE TECHNOLOGY FOR ALL!" and describes the "ND Assistive's AT4All" program as a place to loan, sell, buy, or give away equipment. It mentions that the database is free to use for individuals and organizations and provides contact information for assistance.

North Dakota ASSISTIVE TECHNOLOGY

Courtney Ness Fuchs  
cness@ndassistive.org

Home

Announcement Add

Announcement List

ITEMS

Newly Listed Items

Item Add

Wanted Item Add

Item List

WELCOME TO North Dakota ASSISTIVE TECHNOLOGY FOR ALL!  
Technology to benefit individuals with disabilities

ND Assistive's AT4All

Your Place to Loan, Sell, Buy, or Give Away Equipment

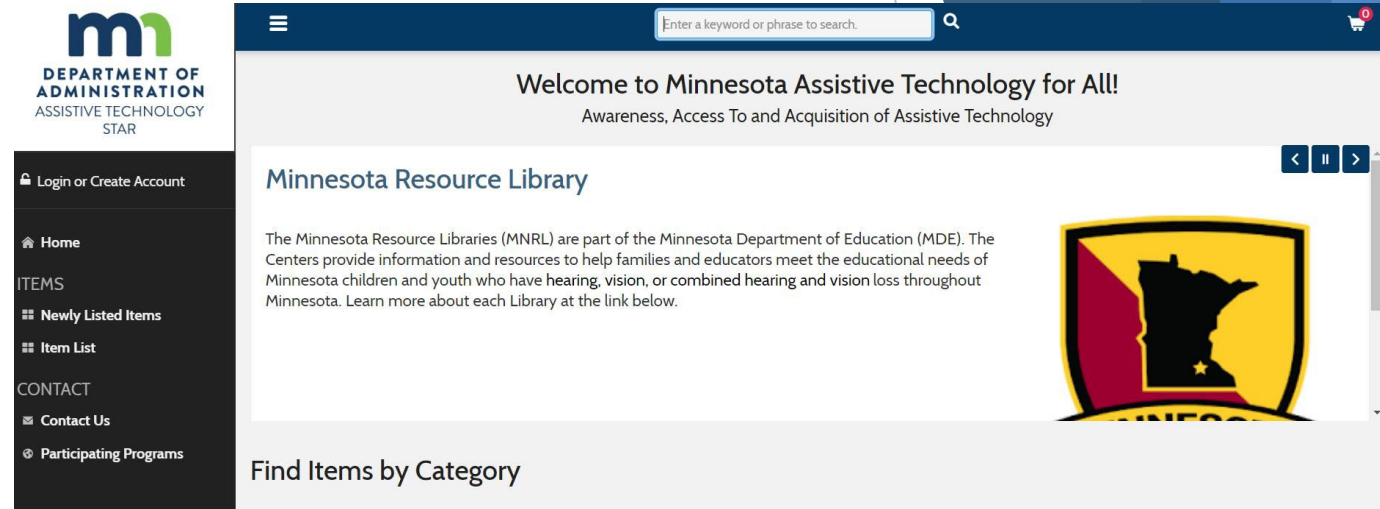
ND AT4All is ND Assistive's equipment database for our equipment loan library where we list our assistive technology for short and long-term loans for the public to easily locate and check out items.

In addition, ND Assistive provides use of this database at no charge to individuals and non-profit, state, and school-based organizations to host their assistive technology inventories. Individuals can simply create an account as indicated below. If you are interested in registering your organization, please contact us to get started.

Please make sure you are searching within the right program for your needs. Below are some steps to get you started. If you need assistance, please email us at [info@ndassistive.org](mailto:info@ndassistive.org) or call 1-800-895-4728.

- Create an account by clicking "Login or Create Account" and follow the prompts.

## Minnesota Short-Term Loans



The screenshot shows the Minnesota Department of Education website. The header includes the logo and a search bar. The main content area welcomes visitors to "Minnesota Assistive Technology for All!" and describes the "Minnesota Resource Library" as a place to find information and resources to help families and educators meet the educational needs of Minnesota children and youth who have hearing, vision, or combined hearing and vision loss throughout Minnesota.

DEPARTMENT OF ADMINISTRATION  
ASSISTIVE TECHNOLOGY STAR

Login or Create Account

Home

ITEMS

Newly Listed Items

Item List

CONTACT

Contact Us

Participating Programs

Welcome to Minnesota Assistive Technology for All!  
Awareness, Access To and Acquisition of Assistive Technology

Minnesota Resource Library

The Minnesota Resource Libraries (MNRL) are part of the Minnesota Department of Education (MDE). The Centers provide information and resources to help families and educators meet the educational needs of Minnesota children and youth who have hearing, vision, or combined hearing and vision loss throughout Minnesota. Learn more about each Library at the link below.

Find Items by Category

# Contact Us - North Dakota

**Courtney Ness Fuchs, ATP**  
Assistive Technology Training Specialist  
North Dakota Assistive  
cness@ndassistive.org



## North Dakota Assistive

[www.ndassistive.org](http://www.ndassistive.org)  
800-895-4728  
<https://www.facebook.com/NDAssistive/>

ND AT4ALL <https://nd.at4all.com/>

**Bismarck Office**  
4501 Coleman St, Suite 107  
Bismarck, ND 58503

**Fargo Office**  
3240 15<sup>th</sup> St S, Suite B (south door)  
Fargo, ND 58104

# Contact Us - Minnesota

## Jamis Wehrenberg

Assistive Technology Specialist

Minnesota STAR

Jamis.wehrenberg@state.mn.us

## Minnesota STAR

<https://mn.gov/admin/star/>

888-234-1267

Relay: 800-624-3529

<https://www.facebook.com/MNSTARProgram>

MN AT4ALL <https://mn.at4all.com/>

## Main Contact

STAR Program

358 Centennial Office Building

658 Cedar Street

Saint Paul, MN 55155

