



# Infant-Toddler Training: Opportunities for Engagement

Assistive Technology for Kansans



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# Learning Outcomes

Upon completion of the workshop, the participants will be able to:

1. List three benefits of proper positioning and seating for infants, toddlers, and young children.
2. Suggest at least 2 positions for a child to participate in an activity based on the child's abilities, the task, and the context.
3. Name 3 assistive technology devices that support active participation and learning in daily family routines.

# Workshop Topics (1 of 2)

- The role of active movement in learning.
- Strategies & devices to support movement & exploration in infants and toddlers with significant motor & sensory disabilities.
- The importance of good positioning for health & development.
- Strategies & devices to support engaged play & family routines.
- Positioning aids for:
  - Floor time,
  - Feeding and independent eating,
  - Safe bathing and toileting,
  - Supporting standing.
- Seating options at home, at store, & other community settings.

# Workshop Topics (2 of 2)

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- Mobility aids to support crawling, walking, and early wheelchair use (if needed).
- Positioning aids for safety in the car.
- Positioning for successful switch access.
- How assistive technology fits into the IFSP.
- Why is trial use important when finding the right equipment.
  - How to borrow things from the ATK Device Loan System.
- How to get information and help on funding equipment.

# Review of Typical Development - Promoting Achievement

- Growth begins with movement and interaction with one's surroundings.
- Individual interactions help develop strength, coordination, language skills, attention span and emotional development.
- Providing good positioning allows one to explore and provides opportunities that lead to learning.
- Good proximal stability and trunk control supports the emergence of fine motor skills, which leads to more exploring and thus more learning.

# Promoting Achievement

- Typically developing infants and toddlers are movers: tummy time, rollers, crawlers, sitting up, and walkers.
- They learn about their environment from the stimulation around them.
- Children with significant motor issues have a hard time managing all aspects of their body including head control, trunk control, and positioning their extremities.
- Infants and toddlers with special needs have to work really hard to maintain their body in position which takes their focus away from exploring and learning.
- By providing infants and toddlers needed stability, we are promoting learning opportunities.



# Team Activity

*We are a team*



# Introduction to Positioning

- Any use of assistive technology requires using some type of body action. We want to make it as easy as possible for the child to carry out the action.
- There are two questions to ask:
  - What position will the child be in?
  - What movement will the child use?
- The answers to these questions will depend on:
  - the characteristics of the child (age, weight, physical abilities).
  - the task to be accomplished (eating, playing, turning a page).
  - the context in which the task will be accomplished (at home, in bed, in a special chair).
- See more information on this topic at [National Center to Improve Practice in Special Education Through Technology, Media and Materials](#). (Slides 7, 8, 15, 16, 17, 19. )



# Nuts and Bolts of Positioning

- Discovery of the best ways of indicating responses is accomplished through systematically trying different combinations of possibilities. This is done by:
  - Deciding what the task is.
    - We may be looking for a way for the child to choose a preferred food, ask for a game to be played, or activate a toy.
  - Work with the task in several positions.

# Tailor Positioning to the Child

- Interventions should be child initiated, task-specific, and personalized to suit the child's enjoyment.
- Why? Because these types of interventions are the ones that induce neuroplasticity and produce functional gains. (Novak, 2017).
- Find more information at [How do you solve a problem like... Tummy Time?](#) (Slides 9, 10, 11, 13, 14)



## Floor Time – Skin Contact

- In the early months – aim for lots of skin contact with no equipment.
- Tummy to tummy – adult semi-reclined on sofa with baby on top (basically a cuddle).
- Infant held in adult arm with their head in the crook of the elbow to let them look about.
- Playing airplane with parent on their back, supporting the child on their legs.





## Floor Time – Elbow Prop

**As head lift develops – prop up on elbows, then on hands.**

- Over your lap with one knee higher than the other, elbows under shoulders. Chest-to-chest with adult on the floor and baby propped on elbows then hands. Peek-a-boo stimulates neck flexion and extension.
- Hypotonia requires more effort to oppose gravity. Using a ramp or wedge will decrease the effort required. The higher the ramp the easier it becomes. Gentle pressure on the bottom will provide stability and encourage push through the arms.

## Floor Time – Next Steps

### **As propping is mastered encourage single arm support and weight shift**

- Start by gentle rocking side-to-side to experience increased weight and balance shift.
- Hypertonia makes controlling movement more difficult to achieve. If child habitually adopts extended postures try to break the pattern with a chunky roll under the tummy with hips, knees, and ankles held flexed under the bottom.
- A new toy or even a chocolate button may help them let go and reach.
- Vary the toy, the position, the playmate. Other kids are great helpers here.



## Floor Time – Add Devices

- Gentle rolling on a large ball,
- Short periods in a prone stander with high tray. For hypertonia with habitual flexion, equipment can ensure proper alignment.
- Visual impairment necessitates creative strategies to engage and motivate. Use the other senses to provide distraction, such as a cloth infused with essential oils. Toys that crunch, chime, and rustle will spark curiosity.
- Lower limb activity in a well-supported walker will stimulate upper body extension – start with very short sessions.



## Floor Time – It's Work

### Prone is a demanding position.

- The child must work against gravity. Making it child centered means adapting the posture, environment, and expectations to suit the child. If parents can remember **awake, alert, and active** then they're going to have a positive impact on development.

# Floor Time – Back Lying

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- **Back Lying (supine) can be done** on the floor, in a caregiver's lap, or in a crib.
- Head should be in the middle and comfortable if child is unable to move it.
- Body/spine should be straight, support with rolled towels if needed.
- Bend the hips to release tension in lower back and release stiffness in the legs, add support under the knees to help with positioning.
- Keep legs open and uncrossed using a pillow for support if needed.
- Feet should be as close to a standing position as possible, if they push down talk to a therapist about ankle/foot orthoses.
- Shoulders and arms should be forward and supported, use a rolled towel or positioning aid if necessary. For more information on why positioning options are important, go to [39 Positioning Aids for Your Child with Special Needs & Why It Matters](#) (Slides 15, 17, 18, 19).

## Floor Time - Semi-reclining

- ↓ Semi-reclining. Here you will obtain the benefits of good support and helping the child to see his world. This position can also help muscles which tend to be stiff to be relaxed.
- ↓ Semi-reclining can be done:
  - ↓ in a caregiver's lap,
  - ↓ leaning back on bent legs,
  - ↓ facing caregiver in a baby recliner.

## Floor Time – Side Lying

- **Side Lying can be done** on the floor, in your lap, in a crib, in a sidelyer.
- Head should be supported so chin is level (in the middle with the head and spine in a straight line).
  - Back support should be given from the top of the head down to the feet.
  - Bottom leg should be straight.
  - Top leg should be bent at the knee and supported with a pillow or blanket, so the knee is level with the hip (to prevent hip dislocation and reduce stiffness in the legs).
  - Lower arm and shoulder should be brought forward so they are not trapped beneath.
  - Both arms should be forward encouraging hands to come together.



# Floor Time – Tummy Time

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- **Lying on the stomach (prone) can be done** on the floor, in your lap, or in a crib.
- The head should be in a straight line, encourage your child to lift their head and look at something in front of them on the floor (toy, sibling, etc.).
- Legs should be straight, not crossed, with straight hips.
- Arms should be in line or slightly in front of shoulders, ensure the towel or wedge pillow used to keep your child in position comes up to their armpits to help the arms stay forward.
- Encourage your child to open their hands and push down on them if possible (if too stiff, continue to help each time they are in this position).

# Floor Time – Sitting Up

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**Sitting can be done on the floor, in your lap, on a low bench, low child's chair, adapted chair, or wheelchair.**

- Head and back should be supported if child cannot hold their head up.
- Chest and hips should be supported if child can hold their head up to help with head control.
- Child should be sitting straight and using muscles to keep themselves upright.
- Bend hips to at least a right angle to prevent child from slipping off your lap and help keep their back in a proper position.
- Support the feet if possible.
- Shoulders should be slightly forward so hands are in front of the body for exploring objects and playing with toys.

# Floor Time Strategies

To make it easier to use an arm:

- ↓ Increase the amount of trunk support.
- ↓ Physically assist the child by holding between elbow and shoulder, guiding the movement.
- ↓ If the child is in an upright position, move to semi-reclining or side lying.

To provide more support to the child's trunk:

- ↓ Hold the child close against you, with the child on your lap facing out.
- ↓ If the child is in a chair, tuck rolled up towels behind and on either side of the child. Make sure the child's feet have a firm support.
- ↓ In side lying, place the child's back against the wall. A small rolled up towel between the legs may also help.

# ATK Device Loan System: Floor time items



➤ Tadpole



➤ Sidelyer Universal Tumble Forms

# ATK Device Loan System – More floor items

Leckey Squiggles Early Activity System

Appropriate for children 0-36 months





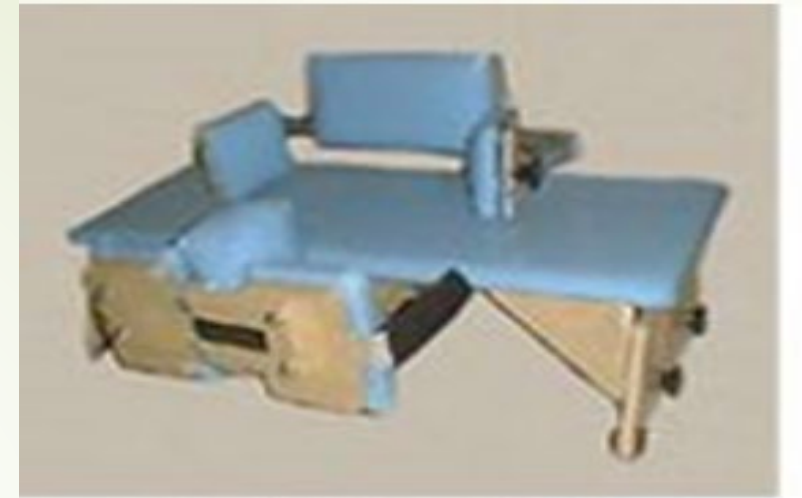
# ATK Device Loan System Items Can Grow

Universal  
Grasshopper  
Positioning System  
PreK-Young adults



## ATK Device Loan System Bench Seats

- Universal Posture System with bench.
- Pelvic support component and femoral stabilizer component included.



# Lilli Little Room

# Lilli Little Room

- An adapted play space for blind infants and children with severe disabilities.





# Lilli Nielson

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- The Lilli Little Room was invented by psychologist, Dr. Lilli Nielson, in 1992.
- She grew up with 4 siblings that were blind and maintained that this influenced her approach to people teaching those who are blind, especially in being respectful of hands and not grabbing them or making them touch things.
- Dr. Nielsen proposed that children have the opportunity to explore on their own to support independent tactile search strategies and learning of spatial concepts.
- She developed the Active Learning Approach which emphasizes that all individuals learn best by active participation.
- She created teaching strategies and equipment to support Active Learning.





## Why use a Lilli Little Room?

- ◀ Typically developing children are reaching for objects when they are 3-4 months.
- ◀ Blind children often are 10-12 months old before they achieve this ability.
- ◀ Some blind children develop a stereotyped motor behavior which is turned toward their own body instead of reaching behavior.
- ◀ It is important to offer blind infants a play space that can motivate them to reach for objects as early in life as possible.

# How the Little Room works

- ◀ The Little Room can be built in the size that best fits each child.
- ◀ Play items hang from the ceiling and the walls.
- ◀ Whatever movements the child makes, they will come in tactile contact with the objects.
- ◀ The child gain the experiences and understanding of space that typically developing children achieve by looking around.



# How big should the Little Room be?



## The size depends on the child's size

- ◀ It is important for the child to be able to touch the side panels and the ceiling as well as the objects hanging in the Little Room.
- ◀ LilliWorks currently sells three different sized Little Rooms which allow different configurations depending on the size of the child and whether or not the child can sit up inside without support.
- ◀ For children who cannot sit up the Little Room is typically 1' high. If the child can sit up, it is configured at 2' generally, though for older individuals it can also be configured at 3' high (large enough for a teen or adult.)



# ATK Device Loan System - Lilli Little Room

- The ATK Device Loan System currently has a short Little Room (2' x 2' x 1').
- Inventory can change based on interest.





## What kind of play items are used in the Little Room?

- ▶ Play items should be graspable or allow the child to pull or bring to their mouth.
- ▶ If the child is unable to grasp the item, items should produce some sound if the child pushes on it with head, hands, feet, or legs.
- ▶ The items should have an interesting variety of tactile, auditory and/or visual qualities that will arouse the child's curiosity to encourage exploration and learning.

## More tips on Little Room objects

- ◀ Providing sets of objects like measuring spoons and cups, provides the child an opportunity to work on number concepts (one, more than one) and/or size concepts (big spoon, little spoon).
- ◀ Hanging similar objects together allows for comparison (metal spoon, plastic spoon, wooden spoon) of things that are alike and different.
- ◀ Lilli Nielson has created a list of “Attractive Objects” that can be helpful.
- ◀ When you borrow the Lilli Little Room from the ATK Device Loan System several items from the Attractive Object list are included.



# Little Room Panels

- ← The Little Room comes with a variety of interchangeable panels.
- ← Each type of panel supports specific access and learning opportunities.
- ← The panels of the Little Room can be moved from one place to another and new play items can be added to support the curiosity and motivation for experimenting.
- ← Several different panels are included when you borrow the Little Room from the ATK Device Loan System.



# Resonance Boards

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- ◀ We tend to place children on soft surfaces such as blankets or rugs. A soft surface doesn't provide much information to a blind child. When the child drops a toy, there is no sound to indicate where it landed. It simply disappears.
- ◀ The Resonance Board is a thin, flexible sheet of wood that gives tactile and auditory feedback whenever the child moves.
- ◀ Any movement on its surface will produce amplified sound and matching vibration, and it will vibrate to music or voices aimed at it even if the sound-maker is not in direct contact with the wood.



## Resonance Boards can be used in different ways

- The child lies alone on the board with favorite items around them.
- An adult sits with the child and offers favorite items. The adult is the child's playmate, not a teacher. The adult does not talk or do hand-over-hand with the child.
- The child uses the board inside the Little Room. The adult is an observer. The adult notes what the child is doing and tries to determine which are the child's favorite items and activities.
- A Resonance Board is available from the ATK Device Loan System. It can be checked out alone or with the Lilli Little Room.

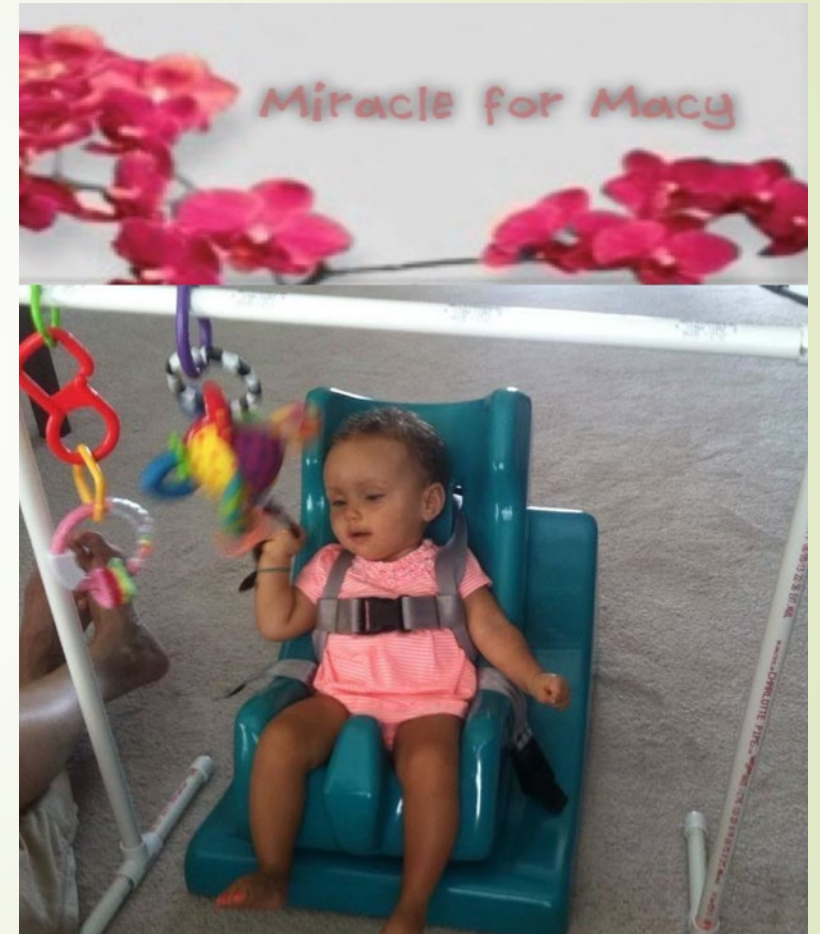


# Lilli Little Room Resources

Found in Resource Guide Appendix

# Seating

- ↴ Good proximal stability and trunk control support the emergence of
  - ↴ fine motor skills
  - ↴ which leads to more exploring
  - ↴ and more learning.



# Positioning and Seating Helpful Tips

- Make sure the child is sitting back in the chair.
- Fasten the pelvic belt/seat firmly.
- Replace any flip out or drop-down parts of the child's seating.
- Fasten any chest harness or should straps.
- Fasten foot straps.
- Feet are flat.
- Knees are in a straight line with the hip.
- Trunk and pelvis are in the middle.
- Head is in the middle with the chin tucked slightly.
- Elbows are at a right angle.
- Elbow support/tray support.
- Tray color.
- Chest should be upright.

Seating is important as it offers the child to look around and watch what is happening around them.

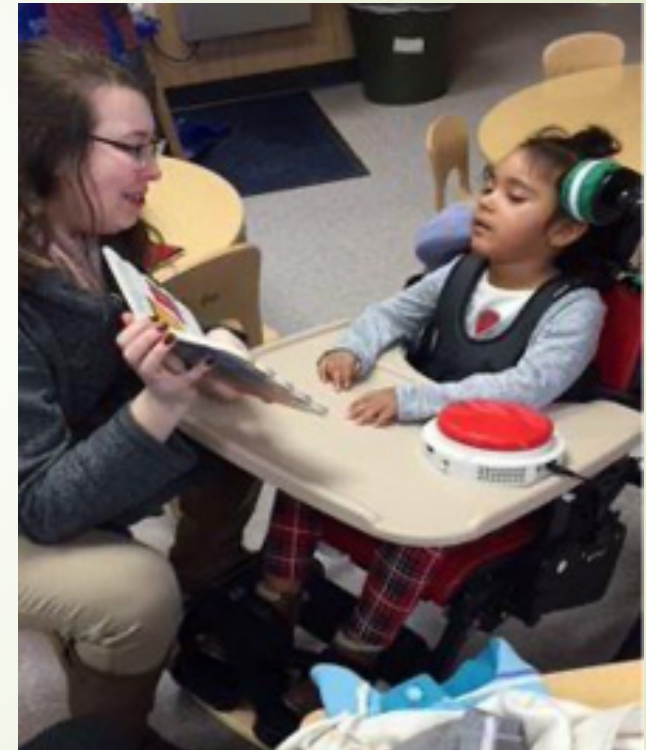


Assistive Technology for Kansans (ATK) - [www.atk.ku.edu](http://www.atk.ku.edu) - 800-526-3648





The child starts to manipulate toys in more complex ways and uses their hands to communicate using gestures, wave, or clap.





Sitting allows the child to develop the vestibular and proprioceptive systems together.



# Active Seating

## Benefits:

- ↴ Improves concentration.
- ↴ Improves posture.
- ↴ Sensory improvements.
- ↴ Improves blood flow.
- ↴ Diminish ADD/ADHD symptoms.
- ↴ [Find more on this topic at: 5 reasons why you should get your kid an active chair](#)



# Types of Seating Devices

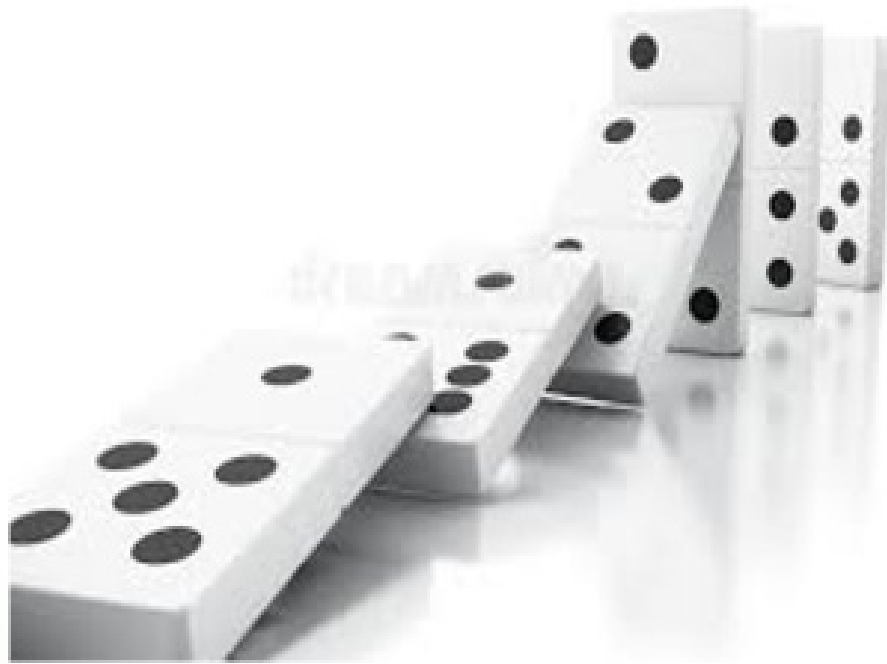


# Feeding

“A child’s efficient use of the mouth for eating depends heavily on the steadiness or stability of the trunk, neck, and head. Many children with neurological or postural difficulties are not able to independently assume or maintain good positions for optimum eating. Their muscle tone, postural asymmetries, and overall motor control may not provide the foundational support and stability needed for the refined motor skills of sucking, swallowing, chewing, or self feeding. The therapist may need to consider supportive or adaptive seating.”

(Trefler, 1993 from Pre-Feeding Skills Second Edition, Suzanne Evans Morris and Marsha Dunn Klein 2000)

# Feeding: the Domino Effect



When working with a child with feeding and swallowing issues it is important to realize the relationship between pelvic stability and oral motor control/skills as a causal sequence (i.e. domino effect). It is important to start with pelvic stability which will support trunk control and in the end influence head control, jaw stability, and tongue/lip movement.

Redstone and West (2004)



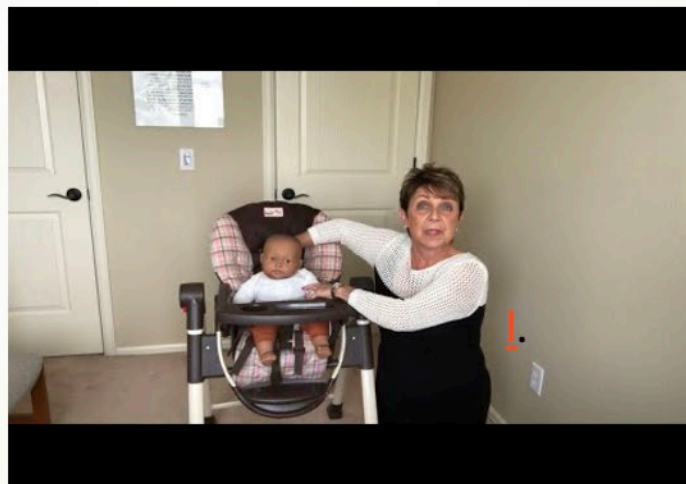
# Choosing the Best High Chair

## HOW TO CHOOSE the **BEST** feedinglittles **HIGH CHAIR** or **BOOSTER SEAT**

*expert tips from a  
feeding therapist*



Better positioning in the high chair  
helps improve mealtime behavior!



- Allows Baby to sit up at 90 degrees.
- Adjustable footrest.
- Removable tray at baby's elbow height.
- Easy to Clean.
- Judy Delaware from Feeding Little's' article found at:

[How to choose the best high chair or booster seat](#)

# Selecting Positioning Equipment to Support Feeding and Swallowing – Minimum to Maximum Support



# Specialized Feeding Positioning Items Available from the ATK Device Loan System (1 of 3)

Lecky Pal Seating System  
with Adjustable Tray



# Specialized Feeding Positioning Items Available from the ATK Device Loan System (2 of 3)

## Feeder Seat - Small – Tumble Forms

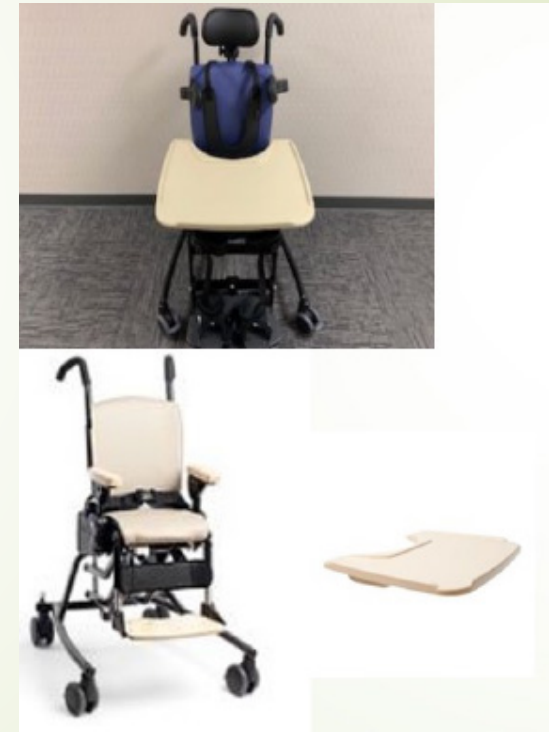
- Has pads for the seat and back and a knee separation block that rotates 90 degrees for more or less abduction. Floor tray can be used level or tilted up to 30 degrees. Trays adjust from 8" - 14" above the floor. Fits children up to 13" from seat to shoulder.





## Specialized Feeding Positioning Items Available from the ATK Device Loan System (3 of 3)

- Chair - Activity - Small - Rifton
- Activity Chair 850
  - Has armrests, footrests, headrest, straps, and tray.





# Traveling with a Child with Complex Needs

- ▶ Traveling Tips article, [Just Go by Amanda Upton](#). Article describes things to consider when traveling with children.
- ▶ Portable travel beds are convenient and safe.



## On-The-Go Positioning Items Available from the ATK Device Loan System - Scallop

- R82 Scallop can be used for floor sitting or extra support in a chair. It can even go outside!



## On-The-Go Positioning Items Available from the ATK Device Loan System – Firefly Go To

- Go To Seat - Size 2. Light weight, portable, postural support seat for children with special needs.
- Includes the advanced headrest, floor sitter, and a pressure relief cushion.



# Staying Safe in the Bath

- ▶ January is National Bath Safety month! The bathroom can be an oasis, a place of serenity and comfort. It's where we go to clean off the day and get refreshed. But if you're a caregiver or parent to a medically fragile child, bath time can be a painful struggle. Bathrooms can be notoriously dangerous places – which is why bath safety month exists. Hard, slippery surfaces make using a tub or shower a potentially hazardous experience without the proper equipment. ...It's important to remember that a shower or tub is a place that can create hazards to the child and parent or caregiver.
- ▶ Found at <https://mgahomecare.com/blog>

# Bathing Considerations

- Safe Transfer to the Tub/Shower
- Carrying/Lifting, Hoyer Lift, Ceiling Lift, Transfer Seat or Rolling Stand/Trolley, handrails, grab bars, etc.
- Shower Chairs
- Bath Chairs
- Combination Toileting/Bath Chairs
- Adapted Tubs (walk in tub)
- Bed Bath Head Washing System



# Bathing Items Available from the ATK Device Loan System

- Rifton Blue Wave Bath Chair - Small E541 or Medium E452
  - Shower Base
- Bathing and Transfer System



# Bathing Items Available from the ATK Device Loan System – Leckey Splashy

- ▶ Leckey Firefly Splashy Bath Seat Multipurpose is suitable for children aged 1 – 8 years with a maximum weight of 66 lb.
- ▶ Leckey Firefly Splashy Big is suitable for kids and teens aged 7 – 14 years with a maximum weight of 121 lbs.



## Bathing Items Available from the ATK Device Loan System – Otter bath, R82 Penguin



- Otter Bath Chair Large, with tub and rolling shower base option.
- R82 Penguin Bath Seat, basic support for children with mild to moderate positioning needs while in the bath. Weight limit of 44 lbs., uses suction cups to secure.

# Bathing Items Available from the ATK Device Loan System – Rifton HTS

- ▶ Rifton HTS (Hygiene & Toileting System)- Large with additional tub base. (Also listed in toileting equipment on ATK site).





# More Bathing Items Available from the ATK Device Loan System

- Bath Bench - Wrap Around Bath Support - Low Back
- Bath Bench - Wrap Around Bath Support - High Back
- Pony Corner/Positioning Chair (Maddock)





## Toileting – Optimal Positioning offers:

- Easier lifting & transfers.
- Adaptations to provide stability and sense of balance.
- Feeling relaxed, including abdominal muscles to allow the child to empty their bowel and bladder.
- Reduced risk for urinary tract infections, constipation and other complications.
- Use of an adapted toileting chair with a firm base for support with feet planted, good back support, and a grab bar or front hold bar. This encourages forward positioning in shoulders and upper extremities, knees slightly higher than hips, similar to a squatting position.
- Consider the same solution at home as at school.
  - [Achieving Optimal Toilet Positioning for People with Disabilities](#)

# Toileting Systems



# Health Benefits of Standing

- Helps bone density maintenance: bones stay strong through constant weight bearing activities.
- Helps muscle strength and posture in the trunk and legs.
- Helps improve bladder and bowel function.
- Helps heart and lung health
- This and more information can be found at [Special Needs Blog, featuring The Health Benefits of Standing and Stander Equipment](#)





# Standing can help develop stronger and more controlled head movements



## Other Benefits from Standing

- Standing activates the glutes and postural muscles which stabilize the trunk.
- Standing brings the environment to the child's field of vision - closer to people and objects.
- Standing promotes social and emotional benefits – eye level with peers, offers interaction opportunities.
- Standing increases arousal, alertness, encourages engagement,
- Standing helps develop a child's sensory system.



## Choosing a Stander - Prone, Supine, Vertical

- Growth rods for back and torso areas that can adjust to accommodate changes.
- Back tilt adjustment increases or decreases the degree of incline. Feet stabilizers permit proper foot positioning and minimize internal or external hip rotation.
- Footplates offer added stability by bearing weight and pressure. They make it easier for users to flex and extend of the ankles (dorsiflexion and plantar flexion).

# More Stander Components

- Adjustable chest pads encourage the user to bear weight on the lower extremities by supplying varying degrees of chest support.
- Adjustable knee blocks improve posture by controlling the knees' ability to bend while the user is in a passive standing position.
- Adjustable head and neck support serves two purposes, to accommodate changes in growth and to position the head and neck properly.
- Adjustable torso support and torso tilt knobs adjust the degree of support and the degree of incline in the user's torso area.

# Supine Stander

- Standing option for medically involved individuals.
- For gradual progression to an upright position.
- Upright interaction for improving head control.
- Easier transfers.



# Prone Stander

- For upright social interaction.
- For improving head and trunk control.
- To minimize extensor tone.
- For pressure relief.
- For gradual increase in weight bearing.
- For better hip extension & alignment.





# Vertical and Mobile Standers

- For individuals with fairly good balance and trunk control.
- Generally provide less support than a prone or supine stander.
- Mobile stander allows self-propulsion while the user is in a standing position.



## Vertical standers come in three types:

- A standing frame consisting of two uprights with pads or straps to provide a little extra stability.
- A standing box that enables the user to stand in a contained area.
- A standing table with a box-like area for standing support or stability, and a high table surface with a cutout for the trunk.



# Supine to Prone to Vertical (Upright)





# Loan to Reuse: Funding a stander





# Mobility

- Support provided depends on the child's abilities, needs, and prognosis. Benefits of mobility include :
  - Improved muscle function and skeletal growth.
  - Improved cognition growth with environmental exploration.
  - Improved visual awareness.
  - Improved socio-emotional and psychological aspects.
  - Promotes a more active lifestyle.
- The more you practice, the better you get.
- Read more at [Benefits of Early Mobility with an Emphasis on Gait Training.](#)

# Different Types of Mobility Devices



# Mobility Aids – Types of Devices



- Lying in prone, propelling with arms and feet.
- Seated and self-propelling with feet.
- Seated and self-propelling using wheels.
- Seated in the ride and being pushed by adult.

# Choosing a Walker or Gait Trainer

- Try several models to determine which is best for the child.
- Look at the child's needs and prognosis.
- How they are going to hold onto the walker.
- Consider the amount of support a child needs - trunk, head rest, pelvic support, forearm supports.
- Is there a need for an angle forward to better facilitate stepping?
- What is the leg positioning and tone?



# Selecting Walkers

## Non-Wheeled Walker

- Basic walker or a standard walker.
- Child place their hands on the handle of the walker and hold on while taking steps.
- Appropriate for children with normal arm strength.
- Four legs that have rubber tips to help prevent slipping.
- Learn more about walkers and stander selection at [Cerebral Palsy Walkers, Canes, and Standers.](#)



## Two Wheel Walkers

- Two wheels attached to the front of the walker.
- Child grasps the handles on the walker while walking.
- Wheels make it easier to maneuver around.
- Usually can fold easy for traveling.



## Four Wheel Walkers

- Child is not coordinated enough to handle a standard walker.
- Helps children move forward using their weight.
- Helps improve cadence and velocity and helps reduce the energy used.



# Gait Trainers



- Similar to four-Wheeled walkers.
- Usually comes with attached seat.
- Features can include trunk support, arm and leg support.
- Usually larger and more stable.
- Can provide partial weight bearing (ex: over a treadmill).



# Canes and Crutches

- Mobility aid for children who don't have severe symptoms in their legs.
- Ease of use, both indoors and outdoors and versatility (sports).
- Some are foldable.
- Child slides their arms through the adjustable holes.



# Strollers



- Don't call attention to any differences.
- Look less "medical".
- Usually fold up.
- Easier to transport.

# Wheelchairs

- More appropriate postural support.
- Find the balance between providing enough support for function while allowing the child to develop their postural muscles.
- Should maximize a child's functional potential in activities.
- Specialized seating is necessary for some people.
- Evaluations are available at seating clinics in KS (links in your resource packet).



# Impact of Powerchair Mobility



- Independent navigation
- Explore the environment.
- Independent mobility.
- Shown to affect self-awareness, spatial orientation
- Positive impact on visual/vestibular integration
- Personality traits such as motivation and initiation
- The goal is to provide equipment that allows a child to interact with their environment, family and peers as independently as possible.



# Car Seat Considerations



- Special needs children often take more road trips than a typical child as they may have medical appointments to see specialists further from their local doctors.
- Special needs children may not understand the importance of being secure in a car seat or
- It may be difficult to get a child's body in a comfortable position for long rides.

**Never modify the clips or straps in a child's safety seat.**

# More Car Seat Considerations



## Behavioral Needs:

- Special vest or harness.
- Soothing techniques to relax or distract the child:
  - favorite sensory toy,
  - soothing music coming from internal speakers,
  - tablet with distracting game or video,
  - weighted blanket if it helps keep a child calm.

## Autism:

- Chest clips or guards to prevent unfastening straps.
- Vests that zip up the back.
- Consider sensory needs - tight fitting vs lighter touch straps.

# Car Seat Considerations for Physical Needs



- Children with hip or leg casts can not fit safely in a conventional car seat.
- The added weight from the casts/braces may affect the performance of the restrain.
- If in a hip or leg cast- car bed, a specialized medical seat or modified vest may be needed.
- The International Hip Dysplasia Institute provides tips for parents and doctors at [Professional Resources including Options for Safe Transport](#)

# Car Seat Considerations for Head and Upper Body Control



- Stay in rear facing seat as long as possible to benefit from the incline position as it offer more head and trunk support.
- Consider rolled up towels for added trunk support.
- Look for added head support options in a seat,
- Forward-facing seats may need to be larger to support the trunk and need the option to recline.
- In the recline position, the child to lean their head back and maintain a clear airway.



# Additional Car Seat Considerations



- Child with hydrocephalus may have a larger head due to fluid in the brain.
- The head will need added support.
- A seat that can recline, can help with head positioning.

## Reference and Checklist

Car Seats: Product Listing for 2022 by [healthychildren.org](https://www.healthychildren.org)  
American Academy of Pediatrics.

A list of rear-facing and forward-facing seat options with weight and height limitations, belted boosters seats, and travel vests can be found at [the American Academy of Pediatrics, Healthy Children website](https://www.healthychildren.org).

Car seats for Children with Special Needs  
[examples can be found here, list is dated 2019.](#)

Note: Medicare will pay for a special car seat if the child attends a seating clinic.

Convaid Carrot, Columbus Medical IPS with abductor, Churchill Booster, Special Tomato, E-Z-On Universal Harness, Buckle Guard Pro, Buckle Boss Belt Guard



# Positioning for successful switch access

Change to Switch PowerPoint.



# Follow up on the team activity



# When and how to include Assistive Technology on an IFSP

- A Comprehensive Assessment is typically an ongoing process which involves input from the entire team.
- Examine the daily routine:
  - Is the child actively participating
  - Is assistance needed by peers or adult(s)
  - Are tools/devices need to trial and evaluate effectiveness
- If so contact the local Assistive Technology Consultant or your regional AT Access Site and the Assistive Technology for Kansans Device Loan System

# Assistive Technology on an IFSP

- Outcomes need to be functional, tied to a daily routine, in family friendly language, and reflecting the family's priorities.
- Refer to AT items by title rather than specific name. "Floor seating system" rather than "Rifton Floor Sitter"
- AT is not the goal, a tool that may help achieve a functional goal.
- In implementation select a frequency & length appropriate for the child's and family's needs.
- If it does not work:
  - is the child physically and mentally ready?
  - Is the family willing to include the AT into their routine?
  - Does the team need to look at other AT options
- If it works: how can the team secure it?

# Assistive Sample Individualized Family Service Plan (IFSP) Goals

- While positioned on her left side in a side lyer, Nikki will use her right arm to activate switch toys, taking turns with her brother.
- When provided with a fabric posture support, Crystal will sit upright in a shopping cart for a 30 minute trip to the grocery store.
- When provided with a posterior walker, Joey will walk from the kitchen to the family room with light physical support at the shoulders.
- When placed in a toddler wheelchair, Nikki will propel herself for five minutes at a time at the shopping mall.
- Billy will "walk" from the couch to the dining room table while pushing a cardboard box containing a five-pound bag of sugar for support.
- While positioned in a Feeder seat, looking at a picture book adapted with voice chips, Joey will use his thumbs to activate the chips to request interaction with his mother.



# What Services Does ATK Provide?

Short-term Device Loan, Device Demonstration, Assistance identifying funds, Device Reuse

# AT Device Loan – Short-term Loan

- Assistive Technology Device Loan System
- ATK provides short-term device loan of hundreds of devices across all categories of AT.
- Devices can be picked up or shipped via UPS at no cost.
  - Complete an ATK Device Loan System application.
  - Some devices require professional consultation forms.
- The ATK Device Loan System is subcontracted to OCCK in Salina. Call 785-827-9383 and ask for the ATK Device Loan System or Cassie Ramon.



# Device Demonstration

- AT Access Site staff can show devices to parents and service providers so you can compare features.
- Figure out what works.
- Figure out what you don't like.



# Getting Refurbished Devices: KEE Reuse

- ▶ Kansas Medicaid and ATK collaborate on a program to accept donated durable medical equipment that is **refurbished** by qualified, local vendors and given away to Kansans of all ages and disabilities.
- ▶ KEE reuse provides over 800 pieces of equipment each year, valued over \$700,000.
- ▶ For KEE Reuse to work effectively, we need **donations** and **requests**.





# Get Help Finding Funds for AT Devices

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- ATK staff help individuals, family members and service providers identify public and private resources to purchase needed technology.
- Resources can include Medicaid, private health insurance, KS foundations for children, organizations that support specific disabilities, and religious, nonprofits.
  - Individual and/or family must agree to this type of funding effort.

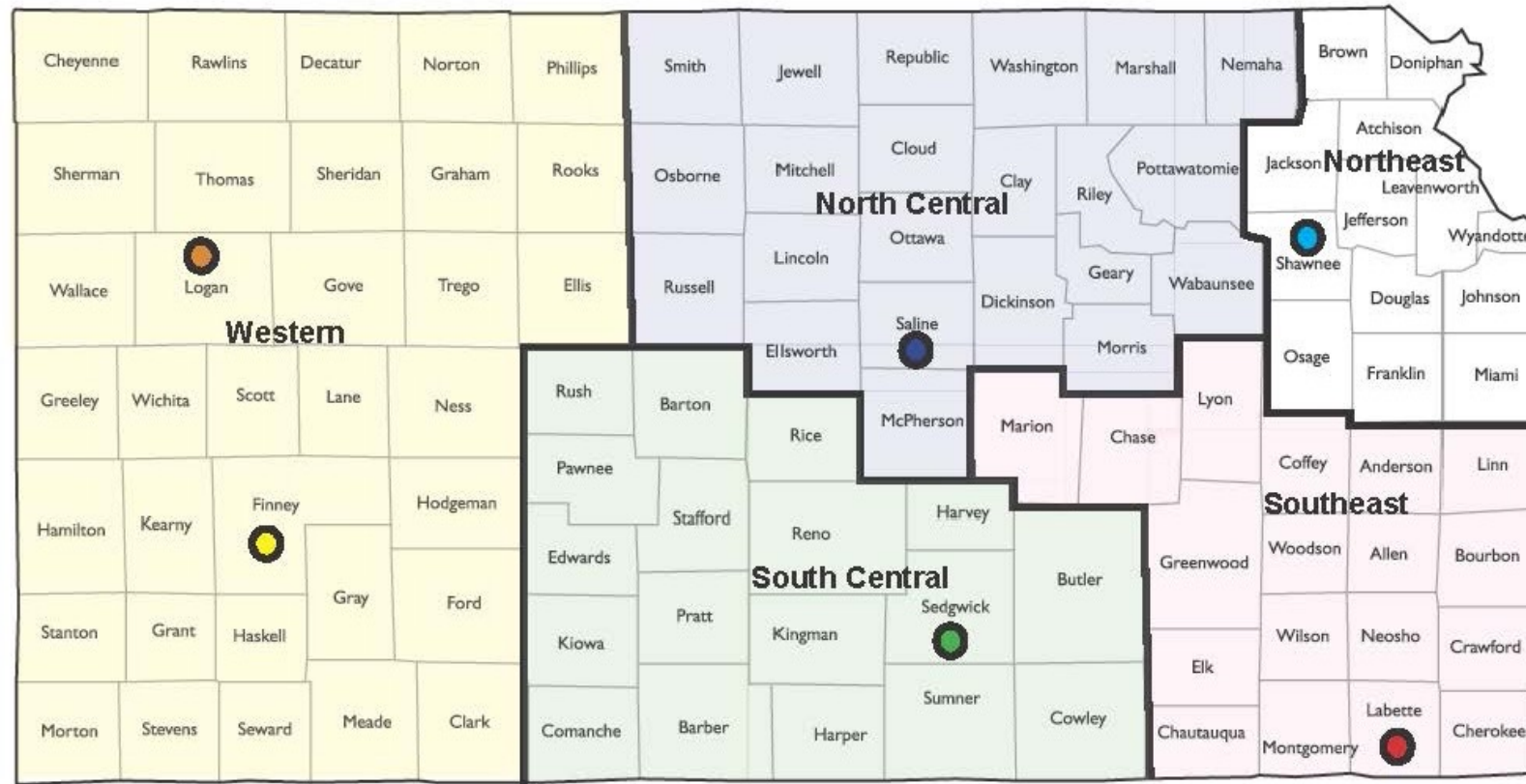


# Writing Support Letters for Funding (Resource Appendix)

- Writing an Effective Letter of Medical Necessity
  - [Rifton Equipment's Eleven Point Checklist is here.](#)
- Positioning Chart for funding justifications
  - Lists common seating challenges, causes, strategies and goals. These goals can also be used as funding justifications for the recommended strategy.  
[The Positioning Chart is online here.](#)
- Tip: Medicaid approved seating clinics will write the letter of medical necessity for the managed care organization (MCO).

# Assistive Technology for Kansans (ATK)

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ASSISTIVE TECHNOLOGY FOR KANSANS AT ACCESS SITES & ATK-KEE REUSE (Kansas Equipment Exchange) NETWORKS  
1-800 KAN DO IT (1-800-526-3648) ~ ATK website, <https://atk.ku.edu/contact-atk>



## Western AT Access Site

Assistive Technology Department of Northwest  
Kansas Educational Service Center (NKESC)  
703 West Second St., Oakley Kansas 67748  
PHONE: 800-KAN DO IT or 785-672-3125



## North Central AT Access Site

OCCK, Inc., Solution Outreach Center  
1605 W. Schilling Rd., PO Box 1160  
Salina, Kansas 67401  
PHONE: 800-KAN DO IT or 785-827-9383



## Northeast AT Access Site

Topeka Resource Center for Independent  
Living (TILRC)), 501 Southwest Jackson St.  
Topeka, Kansas 66603-3300  
PHONE: 800-KAN DO IT or 785-233-4572



## Southwest AT Access Site

302 N. Fleming, Suite 8E  
Garden City, Kansas 67846  
PHONE: 800-KAN DO IT or CELL: 785-673-9609  
PHONE at Western AT Access Site: 785-672-3175



## South Central AT Access Site

SKIL Resource Center Inc.  
3033 West Second St. North, Suite 106  
Wichita, Kansas 67203  
PHONE: 800-KAN DO IT or 316-942-5444



## Southeast AT Access Site

Southeast Kansas Independent Living (SKIL)  
1714 Main St., PO Box 957  
Parsons, Kansas 67357  
PHONE: 800-KAN DO IT or 620-421-6551

# Questions & Contacts

- AT Access Sites
- 800-526-3648
- [www.atk.ku.edu](http://www.atk.ku.edu)

- Karin Rasmussen, Western AT Site, Northwest KS Ed Service Center (NKEESC)
  - 785-672-3125
- Nancy Bolden  
North Central AT Site, OCCK
  - 785-827-9383
- Cassie Ramon  
ATK Device Loan System, OCCK
  - 785-827-9383
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  - 620-421-6551