

EZ AT 2

Simple Assistive Technology Ideas for Children Ages Birth to Three



A Guide for Increasing Young Children's Participation in Daily Activities and Routines



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PACER CENTER 
CHAMPIONS FOR CHILDREN WITH DISABILITIES®
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Introduction

Welcome to EZ AT II, a guide for parents and professionals who want to help infants and toddlers with disabilities participate more fully in daily activities. This guide shows how using simple assistive technology (AT) can help children with disabilities from birth to age 3 reach that goal.

AT refers to a wide range of products, devices and strategies that help increase or improve a person's ability to participate in life activities such as playing, reading, communicating, etc. AT opens doors of possibilities and can help infants and toddlers develop important developmental and early learning skills.

This guide is a collection of "Ideas to Share" from the Tots-n-Tech Project. The ideas have been expanded to include easy-to-follow directions, as well as a glossary and vendor list so materials, supplies and AT can be easily located. An item that is listed in the glossary will be tagged in the AT idea.

Children with disabilities have the potential to achieve great things. The more fully children can participate in activities, the more likely they are to reach that potential. The activities in this book can be a bridge to such success.

About Tots-n-Tech

Tots-n-Tech is a federally funded research institute that is conducting a series of national policy studies regarding AT with infants and toddlers. This inter-university collaboration between Thomas Jefferson University and Arizona State University investigates the use of AT to enhance the development of infants and toddlers with disabilities. Tots-n-Tech's mission is to provide effective AT training and professional development to families and early intervention (EI) service providers; to share knowledge and research findings with families, EI providers, administrators, educators and policy makers; and to partner with parents of children with disabilities and with individuals with disabilities.

About PACER Center

Incorporated in 1977, PACER Center is a Minnesota and national parent center that expands opportunities and enhances the quality of life of children and young adults with disabilities and their families. Based on the concept of parents helping parents, it is staffed primarily by parents of children with disabilities. PACER is a nonprofit organization. Since 1987, PACER Center's Simon Technology Center has been dedicated to helping children and adults with a variety of disabilities use assistive technology to enhance learning, play, work and independence.

Mouse in the House

Dylan likes to watch his father use the computer. His dad has tried to help Dylan play children's computer games using the mouse, but Dylan has a hard time clicking the buttons. Dylan's provider suggested adapting the mouse to make it easier to click. Dylan's dad made the adapted mouse using a three-ring binder, and now Dylan is able to use the mouse to play computer games.

Goal

Child will participate in computer play by using an adapted mouse as a switch to independently access the computer.

Subject Area and Skills Addressed

Fine motor, life skills/daily activities

Technology Used

Computer, mouse

Other Materials Used

1 ½ inch, three-ring binder, hot glue gun and glue stick, 15 inches of craft wood (¾ by ¾ inches), sponge or foam rubber, saw, scissors

Preparation

1. Build a wooden frame inside the three-ring binder. Use strips of wood that are ¾-inch wide and ¾-inch thick.
2. Use the saw to cut wood into two 5-inch pieces and one 4-inch piece.
3. Hot glue the wooden frame into binder. Center frame on the inside of the binder. The open end of the frame should face the rings at the center of the binder.
4. Use the scissors to cut off a piece of foam rubber or sponge which is ¾ inch by 3 inches long.
5. Hot glue the sponge to the 4-inch side of the wooden frame. The sponge will hold the top flap of the binder off the mouse.
6. Cut off a ¼ inch piece of glue stick. Glue this piece of glue to the inside of the lid of the binder. Put the mouse in the "house" to determine the best position for the small piece of glue stick. When the binder closes, the glue will press on the mouse button to activate it.
7. When the glue has dried, place the mouse inside the binder and press on the top flap to click the mouse.

Ways to Adapt this Activity

Other material could be used to create the frame that will stabilize the mouse, such as plastic, Styrofoam™ or Triwall™.

Sitting Pretty

During playtime, one of Conner's parents has to sit with him for support because he cannot sit on his own. Conner's provider suggested making a foam seating support so Conner could sit on his own and play independently. Using this device, Conner is now able to sit and play without his parent's support during playtime and during other activities that require him to sit.

Goal

Child will independently participate in playtime and other activities that require him to sit by using an adapted seating device for support.

Subject Area and Skills Addressed

Life skills/daily activities

Technology Used

None

Other Materials Used

ABS plastic, Ethefoam, 3M™ spray adhesive

Preparation

1. Cut ABS plastic into a square that is approximately 2 feet by 2 feet (large enough for child to sit on it).
2. Use 3M™ spray adhesive to attach Ethefoam to edges of plastic. Allow to dry.
3. Have child sit on plastic while using the foam to support upright seating.

Ways to Adapt this Activity

Any firm foam or material could be used to support a child.



Sitting pretty

Splish, Splash, Talking in the Bath

Bath time is one of Sharise's favorite activities of the day. She enjoys splashing in the water and playing with her bath toys. Because bath time is going so well, Sharise's mom would like to incorporate opportunities to communicate into the routine. Sharise already uses a communication board at home, but it would be ruined in the bathtub. Sharise's provider suggested using a floating communication board to solve their problem. The waterproof board can be used in the bath, pool or at the beach.

Goal

Child will participate in bath time by communicating simple words (e.g., all done, stop, towel, bath toy) to caregiver with the floating communication board.

Subject Area and Skills Addressed

Communication, life skills/daily activities

Technology Used

Picture communication symbol software, computer, printer, laminator (optional)

Other Materials Used

Foam garden kneeler, card stock paper, large ziplock bag, two Velcro® strips

Preparation

1. Create the communication board using picture communication symbol software.
2. Laminate the communication board (optional).
3. Put the communication board in the ziplock bag, pushing out excess air the bag lies flat.
4. Place Velcro® (loop side) on the garden kneeler.
5. Place Velcro® (hook side) on the backside of the ziplock bag. Communication symbols should face upward.
6. Attach the ziplock bag to the kneeler.



Floating communication device

Ways to Adapt this Activity

Use the floating communication board at the community pool or beach. Include symbols such as swimsuit, beach ball, goggles, sand castle, swim, etc.

What's Next?

Transitions from one activity to the next are difficult for Jamal, especially after preferred activities like playtime and story time. When it's time to clean up or start a new activity, Jamal throws a tantrum. Once the tantrum begins, Jamal's parents spend the next half hour trying to calm him down. His behavior disrupts their daily routines and makes the end of playtime and story time unpleasant. Jamal's parents asked their provider if there was a way to address his behavior. She suggested trying a device called an object calendar. The object calendar will help Jamal anticipate what activity comes next. His parents can place objects representing an activity on a shelf. Once the activity has ended, Jamal can place a dish towel over the object to show that he knows the activity is "all done."

Goal

Child will participate in daily activities like playtime and story time without throwing tantrums by using an object calendar. With the calendar, the child will communicate with others that he or she understands what is next on the daily schedule.

Subject Area and Skills Addressed

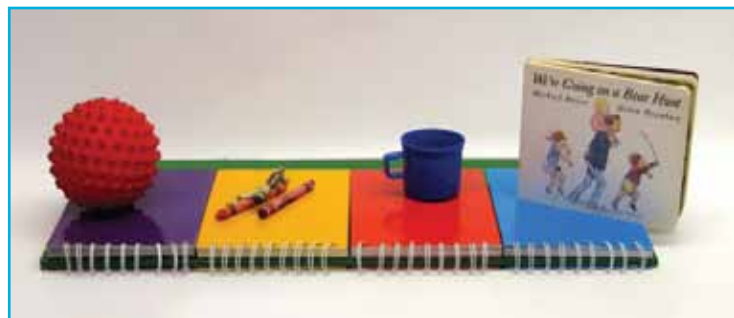
Communication, life skills/daily activities

Technology Used

None

Other Materials Used

A small shelf, masking tape, objects representing activities, dish towel



Object calendar

Preparation

1. Divide the shelf into sections using masking tape. The number of sections depends on how many activities will be in your child's schedule.
2. Decide which of your child's daily activities will be represented on the calendar.
3. Find small objects that represent those activities. For example, toy food could represent lunch time, or a doll's pillow could represent nap time.
4. Put the objects in the correct sequence.
5. Place them on the appropriate section of the divided shelf.
6. Lay the dish towel next to the calendar.

Ways to Adapt this Activity

Determine a specific routine your child performs daily, such as brushing teeth or getting ready for bed. Use objects to represent the sequence of the routine. This will help your child remember what happens next in the routine.

Fidget Fixer

Tyler can't sit still during meal times. He constantly squirms, kicks his legs, tries to stand up in his chair, and doesn't pay attention to the food in front of him. Once Tyler's parents explained the situation to their provider, she observed Tyler during snack time. She suggested that he was fidgeting because his feet didn't touch the ground. Tyler's parents put a box under the chair so Tyler could rest his feet on it and have a good base of support. The box greatly decreased Tyler's fidgeting and allowed him to concentrate on eating during meals.

Goal

Child will fully participate in family and play activities by using an adapted base support to increase attention span and stop fidgeting.

Subject Area and Skills Addressed

Attending, life skills/daily activities

Technology Used

None

Other Materials Used

Chair, wood or sturdy cardboard box, scissors

Preparation

1. Cut two holes in box. Holes should be large enough to fit the front legs of a chair. Box should be tall enough to have the child's knee bend at a 90 degree angle.

Ways to Adapt this Activity

The child could decorate and personalize the box with paint, markers, etc.



Fidget fixer

Get a Grip!

Because Luke has trouble holding his utensils, he often drops food and utensils on the floor by the end of meal time. Earlier in the year, Luke's mom used a prescription bottle to fatten Luke's crayons so he could grasp them better. This adaptation helped Luke participate in coloring activities. She decided to use the same idea with his utensils. Now, Luke can hold onto his utensils and mealtime is less messy!

Goal

Child will participate in mealtimes by independently holding an adapted spoon to feed himself or herself.

Subject Area and Skills Addressed

Fine motor, life skills/daily activities

Technology Used

None

Other Materials Used

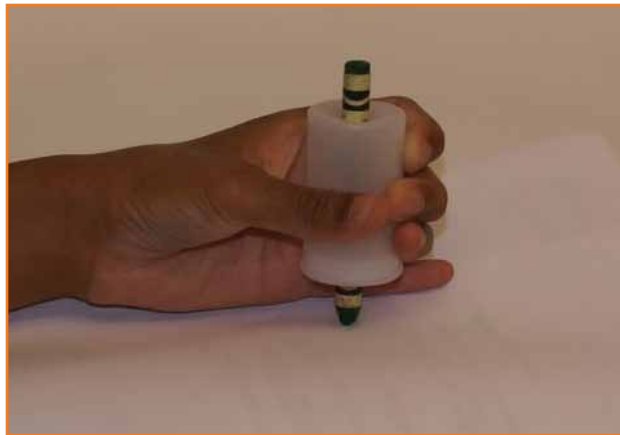
Empty prescription bottle or 35 mm film container, scissors, playdough or modeling clay

Preparation

1. If you are using a prescription bottle, select the size that seems most appropriate.
2. Remove the cap of the film container or prescription bottle.
3. With a scissors, make a small incision into the bottom of the film container or prescription bottle.
4. Insert the spoon into the incision.
5. If the spoon does not fit snugly, anchor it by placing playdough or modeling clay inside the container.

Ways to Adapt this Activity

Adapt a spoon by using tubular foam pipe insulation. Cut the pipe insulation into a 3-inch section. Place the spoon inside the insulation. If needed, cut the insulation so it fits snugly around the spoon. Wrap tape around the pipe insulation to secure it to the spoon.



Adapted grip

No More Mess!

Mealtime at Jackson's house can be really messy! His bowls and plates usually end up on the floor or across the table. While Jackson doesn't seem to be bothered by this, his parents are tired of cleaning up large messes in the middle of every meal. To make meal times less messy, Jackson's provider suggested using a weighted bowl that isn't easily knocked over.

Goal

Child will participate in mealtime by keeping his bowl on the table with the help of a sturdy and mess-free bowl.

Subject Area and Skills Addressed

Life skills/daily activities

Technology Used

None

Other Materials Used

Bowl with raised bottom, several pennies, glue or tape, large plastic container top, such as one used on a platter of food purchased in a grocery store

Preparation

1. Turn the bowl upside down and place the pennies into the raised bottom.
2. Apply glue or tape to the raised edge of the bottom of the bowl.
3. Turn the large plastic container top upside down, so that the edges of the top face upward. Apply glue or tape to the center of plastic container top.
4. Place the glued section of the container top onto the bottom of bowl so it is firmly connected. Apply more glue or tape as needed.
5. Turn the bowl over so that the plastic container is on bottom. Your bowl is ready to use!



Weighted bowl

Ways to Adapt this Activity

Use the bowl during playtime for sorting activities.

Table Top Communicator

When Zoe wants to communicate to her family that she's all done with mealtime or wants more food, she throws her plate on the floor and tries to crawl on the table. Zoe's mom asked her provider for a way to make mealtimes less stressful. Her provider suggested using a cheese grater to make a communication device! Now Zoe has a sturdy and accessible device that she can use at the table to communicate during mealtime.

Goal

Child will use a small adapted communication tool to communicate during meal and snack time.

Subject Area and Skills Addressed

Communication, life skills/daily activities

Technology Used

Computer, printer, picture communication symbol software

Other Materials Used

Four-sided grater, felt material, hot glue gun, communication symbols, Hook Velcro®, dark-colored marker, scissors

Preparation

1. Lay the four-sided grater on the felt material.
2. Trace the outline of both the wide and narrow sides of the grater.
3. From the felt, cut two of each size to cover all four sides of the grater.
4. Glue the fabric to the grater with hot glue.
5. Attach 'hook' Velcro® to the back sides of the communication symbols.
6. Attach the symbols to the felt on the grater.

Ways to Adapt this Activity

A different display could be used instead of the grater, such as a shoebox or other small cardboard box.



Table Top Communicator

Awesome Action Figures

Chloe and her brother love playing with action figures, but there's a problem. Chloe is easily frustrated because she has difficulty holding and manipulating the action figures without help. Chloe's provider suggested stabilizing the action figures by gluing poker chips to their bases so the figures could stand on the table or the floor. She also suggested adding a shower curtain ring to the back of the action figures for easier manipulation. Now Chloe is able to play with her action figures without help from her brother or parents.

Goal

Child will participate in playtime by independently holding and manipulating action figures.

Subject Area and Skills Addressed

Fine motor, social interaction

Technology Used

None

Other Materials Used

Action figures, poker chips, shower curtain rings, hot glue gun and glue stick

Preparation

1. Dab glue on each surface of the action figure that will be attached to the poker chip.
2. Mount the action figure onto the poker chip. Let it set for at least 2 minutes.
3. Stand the action figure in an upright position on the table top. Determine where the curtain ring should be fastened on the back of the figure. Hold the curtain ring vertically so it touches both the back of the figure and the table top.
4. Fasten a shower curtain ring to the back of each figure by applying a short strip of glue vertically on the ring. Hold the ring vertically against the glued strip and the table top for at least 30 seconds.
5. Strengthen the connection by applying more hot glue to the sides of the ring that are attached to the figure.



Adapted action figure

Ways to Adapt this Activity

Make it easier for your child to play board games by adapting game pieces.

Crayon Nibbles

Coloring is difficult for Emily. She has trouble grasping the small crayons and ends up throwing them or breaking them out of frustration. Emily's parents found an interesting idea on a website and thought it might lessen their daughter's frustration. Using their oven, a muffin pan and crayons, they created child-sized crayons that were much easier for Emily to use.

Goal

Child will participate in playtime by independently holding an adapted crayon.

Subject Area and Skills Addressed

Art/sensory, fine motor

Technology Used

None

Other Materials Used

Crayons, mini muffin pan

Preparation

1. Preheat oven to 265 degrees F.
2. Peel off all paper from the crayons.
3. Break the crayons into ½-inch to 1-inch pieces.
4. Arrange two or three crayons of the same color in each muffin slot.
5. Bake the crayons for 6 to 8 minutes. (Do not over bake! Crayons should be only slightly melted.)
6. Let the crayons harden a little on the counter.
7. Place the muffin pan in the freezer for 30 minutes.
8. Remove the pan from the freezer and “pop” out the crayon nibbles.



Crayon nibbles

Ways to Adapt this Activity

Use other oven molds to create different shapes. Use crayons of different colors to create a unique shade.

No More Dry Markers

Carter's parents don't allow Carter to draw with markers because he leaves the caps off and the markers dry out. When Carter's parents told this to their provider, he explained that they just needed to find a way for Carter to recap the markers by himself. Their provider suggested making a holder for the markers. After Carter's parents made the device, Carter was able to recap the markers independently and the markers stopped drying out!

Goal

Child will independently participate in drawing activities by using a weighted marker holder to select and recap markers.

Subject Area and Skills Addressed

Fine motor

Technology Used

None

Other Materials Used

Plastic container that will hold 1-inch base of plaster, plaster of paris, markers

Preparation

1. Add plaster of paris to the container.
2. Insert markers with the cap end down.
3. Allow plaster to harden.

Ways to Adapt this Activity

Modeling clay such as Crayola® Model Magic® that has hardened could be used to hold markers.



Markers in plaster of paris

Now Hear This!

Gavin's parents would like to find a way to make transitions between activities smoother for their son, who has a visual impairment. They like the idea of an object calendar, but Gavin cannot see the calendar very well. Gavin's provider had a great idea: Adapt the object calendar using simple voice output communication devices. This adds an auditory component that allows Gavin to hear his schedule.

Now when it's time to switch to a new activity, Gavin presses the object symbol attached to the message talker to hear what comes next. For example, when Gavin presses a small book, the message talker will tell him it's reading time. After Gavin participates in the activity, he removes the object symbol from the message talker, puts it into a plastic container and then pushes the next message talker. This continues until Gavin completes his scheduled activities.

Goal

Child will transition from one activity to the next with the use of a visual and auditory schedule.

Subject Area and Skills Addressed

Communication, life skills/daily activities

Technology Used

Simple voice output communication device such as a Talking Symbols™ Notepad by AbleNet, Inc. or a Personal Talker by Attainment Company

Other Materials Used

ABS Plastic, Velcro®, plastic food container, object symbols

Preparation

1. Cut ABS plastic into a long strip (approximately 5 inches wide by 20 inches long).
2. Use Velcro® to attach the plastic food container to the bottom of the plastic strip.
3. Record a message into each communication device.
4. Use Velcro® to attach each communication device to the plastic strip.
5. Use Velcro® to attach each object symbol to the appropriate communication device.

Ways to Adapt this Activity

Create picture symbols of the activities and outline the symbols with puff paint, or attach textured fabric that depicts the scheduled activity. Attach the symbols to the communication devices.



Message talker

All by Myself

Darius loves to read books before bedtime. His parents keep a pile of books at his bedside so he can choose one to read each night. While he prefers to read books by himself, he usually needs help turning the pages. Darius' provider suggested using daily contact lens cases to adapt the books. His mother's lens cases are attached to the pages of the book, allowing Darius to grasp them and turn pages independently. After adding these page fluffers, Darius can now read his book independently in bed before he falls asleep.

Goal

Child will participate in story time by independently turning the pages of a book.

Subject Area and Skills Addressed

Fine motor, language arts/literacy

Technology Used

None

Other Materials Used

A book, several daily contact lens cases, adhesive (glue or tape)

Preparation

1. Determine how many contact lens cases will be needed for the selected book.
2. Attach one contact lens case to a page using either glue or tape. If using glue, allow it to dry on the page before attaching the next contact lens case.

Ways to Adapt this Activity

Attach cotton balls or colored pompoms to each contact lens case to soften plastic edges or to color code pages.



Adapted book for easy page turning

Glued to a Book

Abby loves reading books with her grandmother, but she can't turn the pages without help. Sometimes this frustrates Abby and she has a temper tantrum. As a solution, Abby's grandma put small amounts of hot glue on each page. Once the glue dried, it separated the pages. The next time Abby and her grandmother read a story together, they used her adapted book. Abby was able to turn the pages independently because the glue separated them for her.

Goal

Child will independently turn the pages of a book.

Subject Area and Skills Addressed

Fine motor, language arts/literacy

Technology Used

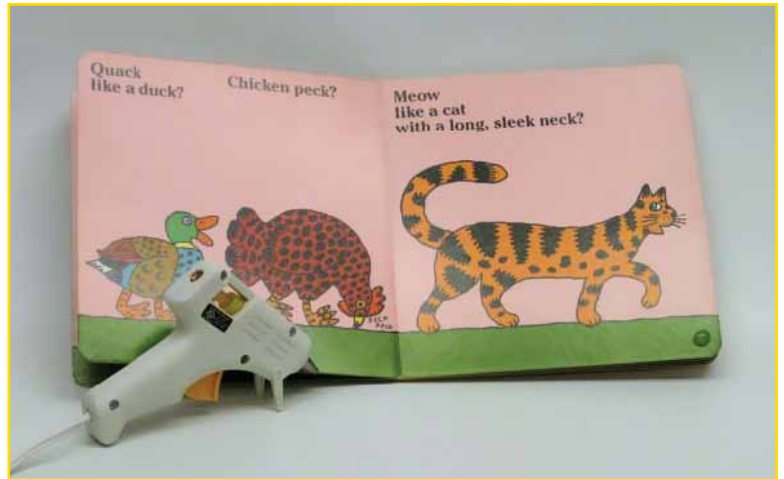
None

Other Materials Used

Hot glue gun, book

Preparation

1. Plug in hot glue gun and allow it to heat up.
2. Place a small amount of glue on the bottom right corner of each page in the book.
3. Be sure to allow glue to dry before turning the page.



Adapted book for easy page turning

Ways to Adapt This Activity

Small, round, felt chair leg protectors could also be used to separate the pages of the book.

My Favorite Book

Logan has difficulty attending to one task for an extended amount of time. This makes reading books with his parents and brother a frustrating activity. To make this time more interesting for Logan, his parents used family photos to create a book about the family. They also asked Logan and his brother to draw pictures of their favorite toys, places and foods, and included those drawings in the book. When it's reading time, Logan can now look at pictures of familiar faces and objects, which helps him to stay on task for an increased amount of time.

Goal

Child will participate in reading books by staying on task with the help of a personalized adapted book.

Subject Area and Skills Addressed

Attending, language arts/literacy

Technology Used

Digital camera, computer, printer

Other Materials Used

Three-ring binder, three-hole punch, page protectors

Preparation

1. Take photos of several people or items that are interesting to your child.
2. Import the photos into your computer and print each one on a separate page.
3. After using the three-hole punch on each printed page, insert each page into a page protector.
4. Insert the pages into the binder.



Personalized book

Ways to Adapt this Activity

Have your child take the photos. Page fluffers can be added to each page to make it easier for the child to turn the page independently.

See and Choose

Claire loves reading with her parents. Instead of choosing the book themselves, Claire's parents would like Claire to be able to select a book. Because Claire is unable to point or communicate through words, her provider suggested using a device that only requires Claire to see the choices and then choose one by looking at it. This homemade device, called an eye gaze frame, allows Claire to choose which book she would like to read without moving anything except her eyes. Her parents made a frame from PVC pipe, and then used Velcro® to attach picture symbols to opposite parts of the frame so Claire could make her choice with a look.

Goal

Child will participate in story time by choosing which book she wants to read.

Subject Area and Skills Addressed

Communication

Technology Used

Computer, board-making software, printer, laminator (optional)

Other Materials Used

Scissors, hot glue gun and glue stick, three lengths of plumber's (PVC) pipe (about 12 to 18 inches), two PVC elbow connectors (to fit PVC pipes together), two wooden blocks (3 to 5 inches long), Velcro®

Preparation

1. Create several picture communication symbols using the board-making software.
2. Cut out the symbols and laminate them (optional).
3. Attach Velcro® (fuzzy side) lengthwise to one PVC pipe.
4. Attach Velcro® (rough side) to the picture symbols and fasten them to the PVC pipe. Set that PVC pipe aside.
5. Hot glue one end of a PVC pipe to the middle of wooden block so the PVC pipe stands vertically. The wooden blocks are the base of the frame and will rest on the floor. Repeat this with the other PVC pipe and wooden block.
6. Fit the three pieces of pipe together with the elbow connectors to make a frame. The frame should stand independently on the blocks.



Eye gaze frame

Ways to Adapt this Activity:

Create picture symbols by taking photos with a digital camera instead of using a board-making software program.

Communication Key Chains

Jada's parents leave Jada's electronic communication device at home when the extended family gathers for picnics. They're afraid Jada might drop the device, get it wet, or lose it. Without a way to communicate effectively during the picnics, Jada often has tantrums. The tantrums continued until Jada's parents made a special key chain to help Jada communicate. The key chain was attached to Jada's belt loop and allowed her to share her food and activity choices without having a tantrum.

Goal

Child will participate in family gatherings by communicating with the use of a portable communication key chain.

Subject Area and Skills Addressed

Communication, social interaction

Technology Used

Computer, board-making software, printer, laminator (optional)

Other Materials Used

Key chain, scissors, paper puncher

Preparation

1. Create several picture communication symbols using board-making software.
2. Cut out the symbols and laminate (optional).
3. Using the paper puncher, punch one hole in the corner of the symbol.
4. Loop the key chain ring into the punched hole in the symbol.
5. Attach the key chain to your child's backpack zipper, belt loop or other convenient spot.

Ways to Adapt this Activity

Use a coil key chain bracelet instead of a regular key chain. Place the bracelet on your child's wrist for convenient access.



Communication key chains

Disappearing Grocery List

Grocery shopping can be a difficult task for Ryan's parents. When Ryan sees an interesting item on the shelf, he tries to grab it and put it in the cart. When his parents stop him, he screams and cries for the remainder of the visit or until they give him the item. To solve this problem, Ryan's provider suggested creating a communication board with items found at the grocery store. To do this, Ryan's parents connected symbols representing items on their grocery list by Velcro® to a piece of laminated construction paper. During a grocery store trip, Ryan is now given the task of looking for the items on his list. Once he finds an item, he puts its symbol into the "found" can. When all the items are found, the grocery store trip is over!

Goal

Child will participate in grocery shopping by identifying items with the help of a communication board.

Subject Area and Skills Addressed

Communication, life skills/daily activities

Technology Used

Board-making software, computer, printer, laminator (optional)

Other Materials Used

Empty can, Velcro® squares, scissors, construction paper

Preparation

1. Create, print and cut picture symbols of several items on your grocery list.
2. Laminate the picture symbols (optional).
3. Attach a Velcro® square to each symbol.
4. Attach the other side of the Velcro® squares to a laminated piece of construction paper.
5. Place picture symbols on construction paper.

Ways to Adapt this Activity

Use this activity at home by creating symbols of items around the house. Have your child find the items and bring them to you.



Communication board

Noodle Protection

Ella and her grandmother love to grocery shop together. Ella enjoys choosing grocery items, but she has difficulty sitting in the shopping cart due to myoclonic jerks. To prevent Ella from injuring herself while in the cart, Ella's grandmother decided to put foam pool noodle pieces over the metal edges of the shopping cart. Because the pool noodles are lightweight and easy to carry, she can easily bring them to the grocery store to transform the shopping cart and protect Ella.

Goal

Child will safely participate in grocery shopping by sitting independently in the shopping cart with the help of foam pool noodles.

Subject Area and Skills Addressed

Life skills/daily activities, safety skills

Technology Used

None

Other Materials Used

Swimming pool noodle, scissors

Preparation

1. Cut the swimming pool noodle into sections according to the size of the shopping cart. (More than one noodle may be used depending on the size of the cart.)
2. Cut a slit along the side of the noodles.
3. Place noodles on the front handle and the sides of the cart.



Foam pool noodles on shopping cart

Ways to Adapt this Activity

Swimming pool noodles can be used on other carts or household items that may cause harm to your child. For example, noodles can be attached to sharp edges of tables or counters to protect your child from being injured.

Walking and Wheeling

Emma's parents enjoy taking walks around the neighborhood. They would like to bring Emma with them, but Emma tries to unbuckle her wheelchair's seatbelt, making it unsafe for her to be in the chair. Their provider suggested an easy solution. They used fabric to sew a sleeve that covers the seatbelt, making it difficult for Emma to unbuckle it. After they made the adaptation, Emma stopped trying to unbuckle her seatbelt. Her parents have also started to use the seatbelt cover during car rides.

Goal

Child will be securely fastened in wheelchair with an adapted sleeve covering the seatbelt, making it difficult for the child to unfasten the seatbelt.

Subject Area and Skills Addressed

Life skills/daily activities, safety skills

Technology Used

None

Other Materials Used

Flannel material, sewing machine or needle, sewing thread, straight pins

Preparation

1. Lay flannel material on flat surface with back side of flannel facing upwards. Flannel material should be approximately 36 inches long and 7 inches wide.
2. Using straight pins, pin edges together lengthwise along material.
3. Using sewing machine or needle, stitch along line lengthwise.
4. Turn material right side out and slip onto one end of wheelchair seatbelt.
5. Fasten seatbelt and slide material over fastener. Scrunch the material up to make it difficult to access the release button on the seatbelt.
6. To unfasten, push material to one side. The soft material will protect the user from scratches and discomfort.

Ways to Adapt this Activity

Soft material such as fleece could be used instead of flannel.

Easy Cardholder

Hannah loves playing Go Fish with her grandmother, but she has a hard time holding onto the cards and needs help. Hannah's grandmother would like Hannah to hold the cards independently, so she used an adapted phonebook as a cardholder. Now when they play Go Fish, Hannah puts her cards in the phone book and doesn't need help to hold her cards.

Goal

Child will participate in a card game by using a phonebook to hold the cards.

Subject Area and Skills Addressed

Life skills/daily activities, social interaction

Technology Used

None

Other Materials Used

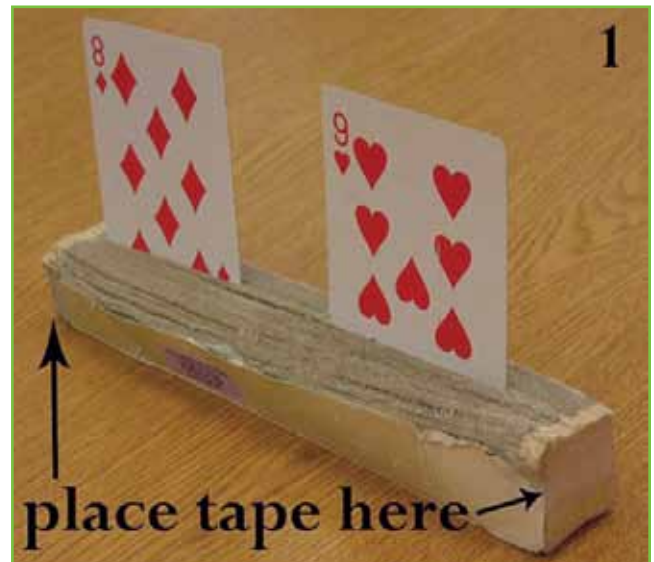
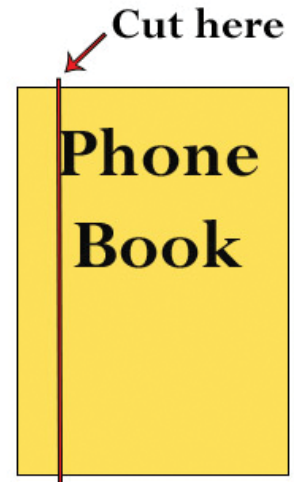
Phonebook, sharp knife or small saw, masking tape, playing cards

Preparation

1. Cut the phonebook about 1 ½ inches away from the spine. Discard the loose pages and keep the section that is still connected to the spine.
2. Apply masking tape to the ends of this piece to keep the pages together.
3. Place cards in between pages.

Ways to Adapt this Activity

A phonebook cardholder could be used to hold picture communication symbols. A hairbrush could also be used to hold cards.



Cardholder

Great Games

Mia loves to play board games at home with her family. Because the board game pieces are small and hard for her to hold, Mia's parents created new pieces out of old prescription bottles. These bigger pieces were much easier for Mia to grasp. During game time, Mia and her siblings would fight over the pieces. To solve this problem, Mia's parents attached a photo of each child to the prescription bottle, so that each child had a special board game piece.

When Mia was invited to her friend's house, her parents worried that she and her friend would argue over board game pieces. To prevent this from happening, Mia's parents brought the adapted game board piece to her friend's house. The friend's parents loved the idea and made one for their child also. Mia and her friend were able to hold the board game pieces independently and play the game without fighting.

Goal

Child will play games with peers.

Subject Area and Skills Addressed

Fine motor, social interaction

Technology Used

None

Other Materials Used

Old prescription bottle or 35mm film container, small photo of child mounted on firm backing (cardboard/plastic), Velcro®, felt, hot glue

Preparation

1. Attach felt around prescription bottle using hot glue.
2. Place Velcro® on back of child's photo. Attach Velcro® to prescription bottle.

Ways to Adapt this Activity

Attach Velcro® to each space on the game board. Attach Velcro® to bottom of the prescription bottle to hold the game piece on the board.



Adapted game board piece

Pool Playtime

Anna's parents would love to take Anna to the community pool during the summertime, but they aren't sure how to do this without both of them supporting Anna in the pool. Anna is unable to support herself and it may be difficult for her to hold on to her toys in the water. Anna's provider suggested using a bath ring seat in the pool so Anna could sit upright. The provider also suggested placing pool noodles nearby for Anna to grab onto for support, as well as using a hula hoop into the pool. The hoop could be placed around Anna to keep her small toys from floating away.

Goal

Child will use adapted tools to support interactive pool play.

Subject Area and Skills Addressed

Gross motor, life skills/daily activities

Technology Used

None

Other Materials Used

Hula hoop, bath ring seat, pool noodles

Preparation

1. Use a bath ring seat in the water to help the child sit upright in the pool.
2. Place a hula hoop around the child to keep small floating items at hand.
3. Place pool noodles near the child for extra support.

Ways to Adapt this Activity

Several pool noodles could be attached together to form a floating ring around the child. This would help support the child and keep toys from floating away.

Trick or Treating!

Alyssa is always excited to dress up for Halloween and see other children's costumes. She also loves visiting the other houses in the neighborhood with her family and watching her bag fill with candy. Due to Alyssa's success with her BIGmack® communication device during mealtimes, her parents thought that using the device during trick or treating would increase Alyssa's participation in the night's activities. Before heading out for the night, her parents recorded "Trick or Treat!" into her communication device. Alyssa brought her communication device with her during trick or treating and used it to say "Trick or Treat!" Alyssa loved being able to dress up, see the other kid's costumes and communicate!

Goal

Child will use communication device to participate in Halloween activities.

Subject Area and Skills Addressed

Communication

Technology Used

Simple voice output communication device such as a BIGmack® by AbleNet, Inc.

Other Materials Used

None

Preparation

1. Record "Trick or Treat!" into your child's communication device.
2. Visit neighboring houses on Halloween. Have your child use the communication device to say "Trick or Treat!"

Ways to Adapt this Activity

Have a sibling or other young child record the message to make it sound childlike.

Assistive Technology Glossary

3M™ Spray Adhesive:

3M™ Super 77™ Multipurpose Adhesive is an extremely versatile, fast-drying adhesive that bonds a wide range of lightweight materials, such as paper, cardboard, fabric or cushion foam to plastic, metal or wood. It can be purchased from art and hardware supply stores for approximately \$10.

ABS Plastic:

Acrylonitrile butadiene styrene (ABS) is a common thermoplastic used to make light, rigid, molded products, such as piping, protective head gear, automotive body parts and toys, including Lego bricks. It can be ordered online at various plastics manufacturers for approximately \$10.

Digital Camera:

A digital camera takes pictures and saves them as digital images. It does not use film. Digital pictures can be easily imported into a variety of computer programs and applications. These cameras vary in price and can usually be purchased wherever electronics are sold.

Ethefoam:

Ethefoam is a strong, resilient, medium-density, closed-cell polyethylene foam ideal for cushioning and protecting fragile items. Ethefoam is easily cut into different shapes and can be used for various purposes, such as displaying items, creating cushioned housings or protecting children during transportation. Ethefoam varies in price depending on size and can be purchased at art or hardware supply stores.

Hot Glue Gun/Glue Sticks:

Hot glue is a form of thermoplastic adhesive commonly supplied in solid sticks of various diameters. It's designed to be melted in an electric hot glue gun. The gun uses heat to melt the plastic glue, which is pushed through the gun with a

trigger. The glue is tacky when hot and hardens in anywhere from a few seconds to one minute. It can be purchased at art or hardware supply stores for approximately \$10.

Laminator:

A laminator encases sheets of paper in protective plastic. Available at office supply stores, laminators range in price from \$60 to \$200, depending on the model.

Object Symbols:

Any object or item that symbolizes and represents the activity or word you are presenting to the child. Example: A toy block could represent playtime on a daily schedule.

Picture Communication Symbols (PCS):

Picture communication symbols are a set of color and/or black and white drawings or photos that represent words, objects, numbers and more. An augmentative and alternative communication system, these symbols are commonly used in schedules, calendars and books for non-verbal individuals. They can be created on computers or purchased through a variety of assistive technology (AT) vendors. Visit the Alliance for Technology Access (ATA) Resource HUB (ataccess.org) for contact information on AT vendors. More information about the ATA can be found in the EZ AT 2 Resource List.

Plaster of Paris:

Plaster of paris is a type of plaster used in art, architecture, fireproofing and medical applications. Many art and hardware supply stores sell eight-pound pails of plaster of paris for approximately \$10.

Plastic Food Container:

Any small plastic container, which can be purchased at local grocery or retail stores, usually for less than \$5.

Puff Paint:

Also called dimensional fabric paint, puff paint is paint squeezed out of a small bottle that appears “puffy” when dry. It can be purchased from Michael’s Arts and Crafts stores (michaels.com) or other art supply stores. Approximate cost ranges from \$2 for a one-ounce bottle to \$10 for a package of six one-ounce bottles.

PVC Pipe:

A polyvinyl chloride (PVC) pipe is made from a plastic and vinyl combination material. The pipes are durable, hard to damage and long-lasting. A PVC pipe does not rust, rot or wear over time. For that reason, PVC piping is most commonly used in water systems, underground wiring and sewer lines. PVC pipe varies in price depending on size and can be purchased from hardware supply stores.

Single Message Talker:

A small, simple voice-output device that records one 10-second message. One can be purchased from assistive technology (AT) vendors for between \$12 and \$15. Visit the Alliance for Technology Access (ATA) Resource HUB (ataccess.org) for contact information on AT vendors. More information about the ATA can be found in the EZ AT 2 Resource List.

Tri-wall:

Tri-wall (also known as triple wall) is manufactured from a heavy grade corrugated cardboard that gives maximum rigidity and is crush resistant. Tri-wall varies in price depending on size and can be purchased from the packaging company Uline (uline.com).

Velcro®:

Velcro® is a brand name of fabric hook-and-loop fasteners. It has two sides: a “hook” side, which is fabric covered with tiny hooks, and a “loop” side, which is covered with even smaller, fuzzy loops. When pressed together, the hooks catch in the loops and hold the pieces together. Velcro® can be purchased from office supply stores for approximately \$22 for a 15-foot roll.

Disability Organizations

If you are interested in learning more about disability organizations or vendors of assistive technology products, the following resources may be useful to you. This list reflects companies with products referenced in this booklet, and each of these organizations offers a range of expertise and services.

Please note: This is not an exhaustive list. We include these companies simply as a convenient starting point. Inclusion on this list does not imply an endorsement. All information is subject to change.

AbleData, the National Institute on Disability and Rehabilitation Research, provides information about assistive technology and related issues.

8630 Fenton St., Suite 930
Silver Spring, MD 20910
Phone: 800-227-0216 (Voice); 301-608-8912 (TTY)
Fax: 301-608-8958
E-mail: abledata@orcmacro.com
Website: abledata.com

The Alliance for Technology Access (ATA) is a nationwide network of computer resource centers and technology vendors.

1119 Old Humboldt Road
Jackson, TN 38305
Phone: 731-554-5282; TTY: 731-554-5284
Fax: 731-554-5283
E-mail: ATAinfo@ATAccess.org
Website: ataccess.org

The American Speech-Language and Hearing Association (ASHA) is a resource for ASHA members, people interested in information about communication disorders, or those wanting career and membership information.

2200 Research Blvd.
Rockville, MD 20850
Phone: 800-638-8255
E-mail: actioncenter@asha.org
Website: asha.org

Center for Early Literacy Learning (CELL)

offers a series of practice guides that parents and professionals can use to create fun literacy experiences for infants, toddlers or preschoolers. CELL is a research-to-practice technical assistance center funded by the U.S. Department of Education's Office of Special Education Programs (OSEP), Research to Practice Division.

8 Elk Mountain Rd.
Asheville, NC 28804
Phone: 800-824-1182
Fax: 828-255-9035
E-mail: info@puckett.org
Website: earlyliteracylearning.org

Center on the Social and Emotional Foundations for Early Learning (CSEFEL)

promotes the social emotional development and school readiness of children from birth to age 5. Funded by the Office of Head Start and the Child Care Bureau, CSEFEL disseminates research and evidence-based practices to early childhood programs across the country.

Vanderbilt University
Department of Special Education
Box 328 GPC Nashville, TN 37203
Phone: 615-322-8150
Fax: 615-343-1570
E-mail: ml.hemmeter@vanderbilt.edu
Website: csefel.vanderbilt.edu

Family Center on Technology and Disability is a resource designed to support organizations and programs that work with families of children and youth with disabilities.

1825 Connecticut Ave. NW, 7th Floor
Washington, DC 20009
Phone: 202-884-8068
Fax: 202-884-8441
E-mail: fctd@aed.org
Website: fctd.info

Get Ready to Read! offers research-based strategies that parents, early education professionals and childcare providers can use to help children learn to read and write. Get Ready to Read! is an initiative of the National Center for Learning Disabilities.

National Center for Learning Disabilities
381 Park Ave. S., Suite 1401
New York, NY 10016
Phone: 888-575-7373
Fax: 212-545-9665
E-mail: help@getreadytoread.org
Website: getreadytoread.org

International Society of Augmentative and Alternative Communication (ISAAC) offers a variety of information on their website, including publications, upcoming conferences, links to other resources and an interactive forum.

49 The Donway West, Suite 308
Toronto, ON
M3C 3M9, Canada
Phone: +1 416-385-0351
Fax: +1 416-385-0352
E-mail: mona.zaccak@isaac-online.org
Website: isaac-online.org

The Let's Play! Project is designed for parents and professionals in early intervention programs. The site content reflects the strategies and supporting materials useful when considering play options for infants and toddlers with disabilities.

University at Buffalo
Center for Assistive Technology
322 Kimball Tower
Buffalo, NY 14214
Phone: 716-829-3141
Fax: 716-829-2420
E-mail: info@letsplayprojects.com
Website: letsplay.buffalo.edu

National Dissemination Center for Children with Disabilities provides referrals to other organizations or sources, answers specific questions and provides technical assistance to parents and professionals. (Formerly the National Information Center for Children and Youth with Handicaps [NICHCY].)

1825 Connecticut Ave. NW, Suite 700
Washington, DC 20009
Phone/TTY: 800-695-0285
Fax: 202-884-8441
E-mail: nichcy@aed.org
Website: www.nichcy.org

National Early Childhood Technical Assistance Center (NECTAC) strengthens service systems to ensure that young children with disabilities and their families receive and benefit from high-quality, culturally appropriate and family-centered supports and services.

University of North Carolina
Campus Box 8040, UNC-CH
Chapel Hill, NC 27599-8040
Phone: 919-962-2001
Fax: 919-966-7463
E-mail: nectac@unc.edu
Website: nectac.org

PACER Center is a parent center for families of children and young adults with all disabilities. PACER provides individual assistance, workshops, publications and other resources to help families make decisions about education and other services for their child or young adult with a disability.

8161 Normandale Blvd.
Minneapolis, MN 55437
Phone: 888-248-0822
Fax: 952-838-0199
E-mail: PACER@PACER.org
Website: PACER.org

PACER Center's Simon Technology Center website features the interactive A.T. Finder and other online services.

E-mail: STC@PACER.org
Website: PACER.org/STC

RESNA Technical Assistance Project provides information about assistive technology to help people with disabilities achieve their goals with technology.

1700 N. Moore St., Suite 1540
Arlington, VA 22209-1903
Phone: 703-524-6686
Fax: 703-524-6630
Website: resna.org

Tots-n-Tech (TnT) provides technical assistance to states to help them enhance the use of adaptations with infants and toddlers and conducts a national research program about use of adaptations and assistive technology. TnT is a federally funded research institute that provides effective assistive technology training and professional development to families and early intervention service providers.

Website: tnt.asu.edu

Contact your local Parent Center: