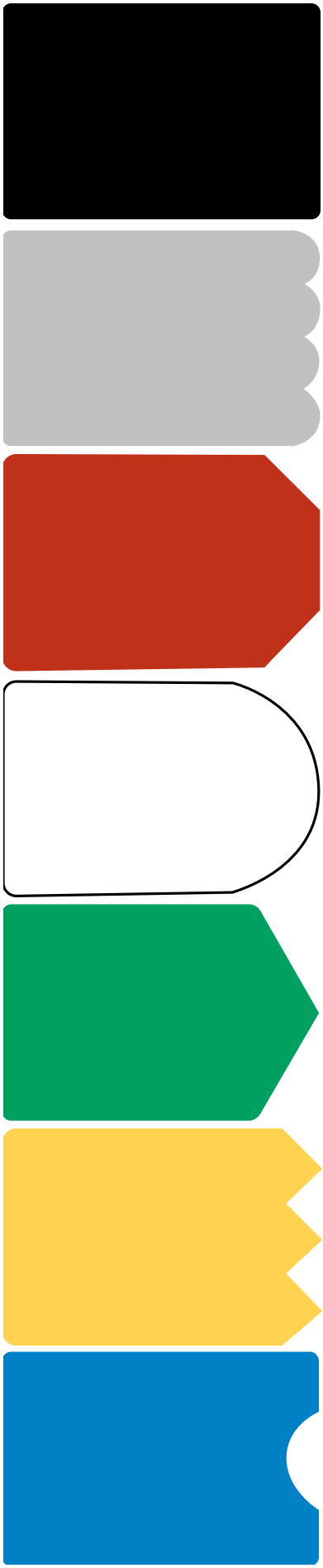


Tactile Connections

Symbols for Communication

Kimberly Conlin

Kay Jahnel

Tristan Pierce

Karen Poppe

Karen Erickson

Lori Geist

Revised and Expanded Edition

AMERICAN PRINTING HOUSE

Printed in the United States of America

Catalog Number: 7-08837-00

This publication follows the APA Style as set forth in the Publication Manual of the American Psychological Association, 7th Edition.

Table of Contents

Acknowledgements

Thank you to Dr. Karen Erickson and Dr. Lori Geist from the Center for Literacy & Disability Studies, Department of Health Sciences at the University of North Carolina at Chapel Hill for their contributions to this revised and expanded edition of the Tactile Connections: Symbols for Communication guidebook.

Field-test evaluators: Kathy Bannan, PA; Ineatha Brice, PA; Beth Cohen, MD; Andrea Hausz, KY; Margie Goldware, CA; Elizabeth Hartmann, CA; Michelle Kornberg, NY; Mary E. McFarland, MO; Robert McLendon, AL; Diane Mitchell, OR; Dave Seyfert, NY; Elizabeth Torrey, MA; Laurie Wilde, PA; Vicki Wollzyk, TN

Tactile Symbols Planning Committee: Karen Poppe, APH Product Manager/Facilitator; Kay Jahnel, IA; Joan Pease, IA; Kim Conlin, TX; Beth Cohen, MD; Jacey Shumaker, MA

Multiple Disabilities Focus Group: Tristan Pierce, APH Product Manager/Facilitator; Marie Amerson, GA; Scott Crawford, LA; Steve Davis, MA; Marilyn Gense, OR; Bernadette Kappen, PA; Kathy Morgan, CT; Karen Nagel, ON; Millie Smith, TX.

Tactile Connections: Symbols for Communication is produced through the special talents of many individuals at APH who performed necessary tasks to produce and package the kit.

Preface

Prior to the development of Tactile Connections: Symbols for Communication, APH convened two educational specialty groups, the Tactile Symbols Planning Committee in 2000 and the Multiple Disabilities Focus Group in 2001. APH learned common approaches to the use of tactile symbols from those who had successfully implemented symbol systems of their own. These educators discussed desired product outcomes and potential applications relative to technology adaptations.

The Tactile Symbols Planning Committee explored how APH could facilitate the production of a standardized symbol system. By reviewing each participant's school's symbol system regarding categories (e.g., food, emotions, scheduling), symbol structure/design, selection process, appropriate target populations, implementation methods/activities, concrete versus abstract representations, and strengths and limitations.

The Multiple Disabilities Focus Group concentrated their discussion on the appropriate cognitive stage of development for successful use of symbol communication and encouraged a redirection toward creating a more flexible system that is not strictly standardized, but one that could, if needed, be personalized for each individual based on what object/action/person is meaningful to the learner.

Both groups defined the appropriate target population as students with low vision, blindness, or deafblindness who have multiple disabilities, are nonverbal, or lack a formal language system, but who have acquired intentional and purposeful methods of communication.

Should tactile symbols be individualized or standardized? That is a question best answered by each learner's team. In some cases, a learner may need an individualized approach because they only respond to who or what they like, or attend to what has personal meaning, such as their modified spoon, as a beginning step. The learner can then transition to a more standardized approach once the learner shows communicative intent (Hagood, 2016).

Tactile Connections: Symbols for Communication meets the defined needs of everyone—standardized and individualized. Schools or school districts may collaborate, define, and build a standardized tactile communication system using Tactile Connections. For learners who require a more personalized approach, Tactile Connections allows teachers and families to build individualized tactile communication cards. All learners will need some individualized cards to identify themselves, family members, teachers, personal events, and so forth.

This revised and expanded edition of Tactile Connections: Symbols for Communication introduces how the kit can augment the development of core vocabulary. Words identified as core vocabulary are the most common words in spoken and written English. While

attending educational conferences, APH was inspired by speech language pathologists who demonstrated the use of Tactile Connections while following the Project Core implementation model, which is a stepping-up technology implementation grant directed by the Center for Literacy and Disabilities Studies at the University of North Carolina at Chapel Hill. This discovery prompted APH to update this long-standing and versatile product by incorporating the use of core vocabulary as an option when using tactile symbols with your learners.

Introduction

Tactile Connections: Symbols for Communication is a comprehensive set of materials from which one can make tactile communication cards for use by learners with low vision, blindness, or deafblindness who lack a formal means of communication or literacy.

All persons, regardless of their individual abilities, should be allowed to communicate their personal needs in an appropriate way, and expect a response. Communication is a basic skill allowing people to manage their lives and maintain their independence.

What are tactile symbols?

Tactile symbols are graphic forms of communication, created when part of an object is mounted on a portable, hand-sized piece of background material. Thus, they are tactile representations of people, places, actions, and objects that are meaningful to the learner. The nature of the symbol will change from iconic (concrete) to abstract and arbitrary as a learner increases their understanding of symbolic representation.

Tactile symbols are tools for teaching important communication and functional literacy skills; they are not specific learning goals. A learner's Individualized Educational Program (IEP) should focus on acquiring skills such as choice-making, organizing language, and increased independence. Tactile symbols are a

modification or a type of assistive technology used to help the learner acquire these skills. An example of an IEP goal for which tactile symbols could be used is the following:

> Aaron will independently transition from one class to another by traveling a simple route. Criteria for success: 4 of 5 charted trials

When the tone sounds for the change of classes, the tactile symbols can be used in a learner's calendar to give information about where to go next.

Calendar strip showing a day's activities

Tactile symbols are also used as location markers at the destination so that learner can confirm arrival at the correct place.

Student arriving at music class

Target Population

The symbols are designed for individuals who are low vision, blind, or deafblind and need an augmentative communication system or need a functional literacy medium. The individual may be communicating intentionally, with the expectation that a communication partner will respond. This communication could be in the form of object symbols, hand guiding, vocalizations, gestures, aggressive behaviors, words, or signs. Understanding of symbolic representation is another prerequisite skill. The individual may also be a pre-intentional communicator, and communication partners can use the symbols to teach more intentional and conventional understanding and use over time. Using the symbols when they are first presented requires an understanding of symbolic representation, but it is possible to teach symbolic representation using the symbols. Whenever possible, the symbols are iconic (e.g., brush teeth is represented by part of a toothbrush), but many are arbitrary and require the individual to attach meaning to an abstract representation (e.g., Dad is represented

by a piece of leather), or represent abstract conceptual vocabulary that does not have iconic representation.

Two groups of individuals for whom tactile symbols have been successful are those in the early stages of communication and literacy and those with low vision, blindness, or deafblindness accompanied with multiple disabilities who do not have the prerequisite skills to learn braille or print. Tactile symbols can serve the same purposes as pictures. For example, a parent or teacher could use the symbols to adapt a book for a learner who is blind or visually impaired. In a special education classroom, tactile symbols could be used similarly to Mayer-Johnson pictures on communication boards or in calendar systems.

Platform Communicator in combination with tactile cards

The authors have used tactile symbols successfully with some individuals who have neurological visual impairments. These individuals might access the symbols visually as well as tactually. An important consideration might also be the auditory learner who has the potential to be a tactual learner. Tactile symbols can be useful tools for teaching tactile skills to the learner who has not previously had an opportunity to develop them within a meaningful context.

Teaching Strategies

How to Get Started with Tactile Symbols

Deciding how to get started with tactile symbols will differ depending on the skills of each learner. Ideas for getting started with two distinct groups of students are described below. The two groups are:

1. Students who are intentional communicators and already understand symbolic representation.

2. Students who are pre-intentional communicators who do not understand symbolic representation.

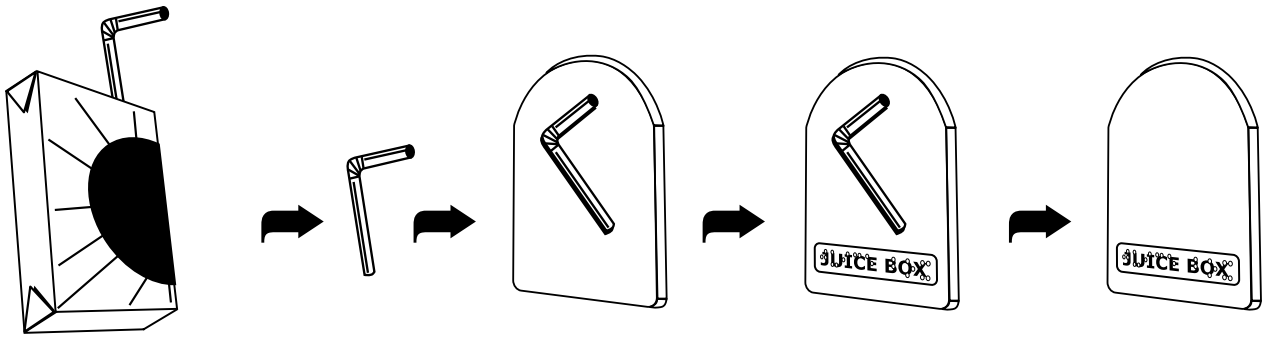
Getting Started with Learners who are Intentional Communicators and Understand Symbolic Communication

Intentional communication may be in the form of handing an object to the teacher, guiding the hand of the communication partner to a desired toy to play, vocalizing to communicate contentment or disapproval, turning the head, or using aggressive behaviors. Any of these acts are done by the learner with the expectation of a response from another individual.

When these intentional communication acts are focused on objects, learning symbolic representation can progress from whole objects, to partial objects, to partial objects mounted on cards with labels, to the labels themselves. Though the progression cannot begin with objects when individuals are communicating things like their level of comfort, contentment, and approval,

there is still a natural progression in the development of language that leads to the understanding of the symbolic representation of print, braille, sign, or tactile icon.

Hierarchy of abstraction for students learning tactile symbols to represent objects



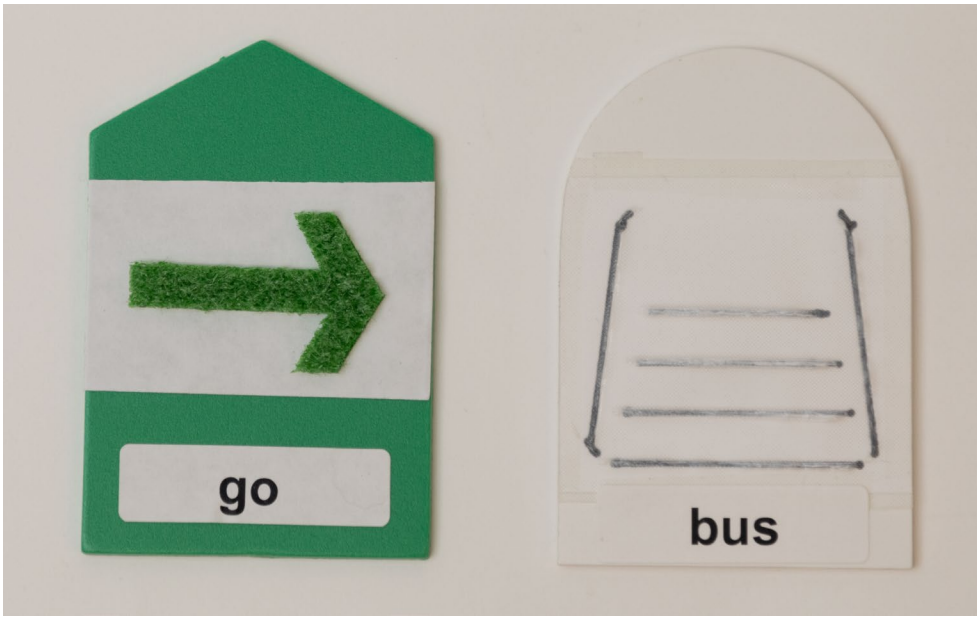
Whole object | Piece of object | Piece of object mounted | Piece of object on card with label | Label only

Note that a student at the "whole object" stage may be at a pre-symbolic cognitive level and therefore may not understand tactile symbols when they are introduced. The time needed to transition from whole objects to partial objects to symbols (iconic or abstract) will vary greatly from child to child, requiring a couple of weeks to a full year or more.

When learning symbols that represent whole objects, the emergent learner generally experiences the whole object within the meaningful context of an activity or a routine (e.g., choosing a preferred drink by interacting with the containers themselves). When the learner understands that the object represents an activity, the object can gradually be reduced to a part of the whole object, which continues to be used within the context of an activity or routine.

Eventually this object part can be mounted on a background. This tactile symbol can then be labeled with an even more abstract form of graphic language, large print, and braille. This is done to ease communication with a partner who might not be familiar with the tactile symbols, and it also exposes the learner using the tactile symbols to braille or print representation. Eventually, the learner may progress to the point where only the most abstract level of symbolic representation, the print or braille word, is presented. Allowing the learner to progress through these stages of developing symbolic language is important to the learner's success in using tactile symbols for receptive and expressive communication.

When teaching symbols that represent concepts rather than objects (e.g., like, not, want, go) to learners who are intentional communicators and already understand symbolic communication, tactile symbols representing the concepts are presented during activities or situations where adults can help the learner associate the symbol with their action, feeling, or general concept. For example, the adult might present the learner with the tactile symbol representing GO each time the individual is going to GO to a new location. The adult might present the learner with the tactile symbol representing LIKE each time the adult recognizes signs of contentment from the learner. In contrast, the adult might present the learner with the tactile symbol representing NOT each time the adult recognizes disapproval or discontent. In each case, the symbol would be paired with a spoken or signed message such as, "You do NOT like that" or "Let's GO to the bus."



Associated symbols cards: go and bus

Getting Started with Learners who are Pre-intentional Communicators and who do not Understand Symbolic Communication

Learners who are pre-intentional communicators may engage in many of the same behaviors as intentional communicators, but they do so without understanding the communicative power of their behavior. For example, they may reach for a desired object or move their bodies to continue an action, but they do so without reference to a communication partner.

When these pre-intentional behaviors are focused on objects, communication partners can begin to assign meaning to the behaviors by presenting the whole object of interest within the meaningful context of an activity or a routine (e.g., focusing on the containers or cups used for preferred drinks). During these meaningful interactions with objects, the adult pairs the objects

with spoken or signed messages. For example, as the learner reaches for or searches for their cup, the adult might hand the learner the cup and sign or say "Drink. You want your drink." Overtime, the learner will come to reference the adult when reaching or searching for the cup turning pre-intentional behavior into a communication act. As this intentional communication is achieved, communication partners begin working from whole objects to partial objects as described previously.

Communication partners can also work to help pre-intentional communication develop intentional communication in other contexts. For example, they can teach learners to be intentional in their communication about concepts (e.g., like, not, want, go). Partners can present tactile symbols representing these concepts during activities or situations where adults feel they can attribute meaning to a learner's action, feeling, or general concept. For example, the adult might present the learner with the tactile symbol representing GO each time the individual is going to GO to a new location. The adult might present the learner with the tactile symbol representing LIKE each time the adult recognizes signs of contentment from the learner. In contrast, the adult might present the learner with the tactile symbol representing NOT each time the adult recognizes disapproval or discontent. In each case, the symbol would be paired with a spoken or signed message such as, "You do NOT like that" or "Let's GO to the bus." The learner's behaviors do not have to be intentional for the communication partner to present symbols and pair them with a message.

Regardless of the current level of communication intent and symbolic understandings demonstrated by the learner, the way the tactile symbols are presented to the learner is important to the success of developing and understanding this conceptual use of language. To encourage language and communication skills we often model language while the learner is handling an object or experiencing an activity or response. In this way the learner receives information through the kinesthetic, olfactory, visual, tactual, and auditory channels. What is being experienced firsthand is named or labeled, thus attaching meaning to the abstract spoken language symbol. Key to making this connection to the symbolic representation, whether spoken word, printed word, braille, sign, or tactile symbol is a consistent presentation of that symbol within a meaningful context. For example, the tactile symbol for bathroom will best be learned and generalized if it is consistently presented as the learner is taken to the bathroom, or if the learner touches the tactile symbol for book/reading every time they start to read on their own or with an adult. Similarly, the tactile

Learner touching bathroom sign and card simultaneously

Learner exploring books in library setting

symbols for conceptual vocabulary will best be learned and generalized when it is taught in meaningful contexts.

Additionally, using the same strategies of overlapping the experience, verbal language, and symbol in all settings in which the learner functions on a daily basis will enhance the learner's perception of this symbolic system as a valuable and effective way to communicate and meet personal needs.

For some low vision learners, the presentation of the symbols on high contrast background can bring their visual focus to the symbol even though they will tactually explore the symbol for detail. Other materials that are helpful for presenting tactile symbols include the following:

a) headliner fabric, which is sensitive to the rough scratchy side of hook and loop fasteners, makes a great mounting surface to store symbols on a wall; use rope to divide categories;

b) indoor/outdoor carpet (e.g., Berber) which can serve as a schedule or sequence strip at the table;

c) a fanny pack for portable storage for the student who needs to take symbols along as a transition is made from one activity to another; and

d) a personal planner or small binder to allow the older more mobile learner to plan and refer to a daily schedule.

The manner in which symbols are presented can also teach emergent literacy skills, such as identifying the top and the bottom of a book, moving left to right, tracking across a line, moving to the next line, and recognizing the end of text on a page. For example, a schedule board would be read beginning at the top and progressing left to right or top to bottom. A similar tactile schedule for an older learner might be in the form of a personal planner that has a page for the morning schedule and a second page for the afternoon schedule. This format can be useful in teaching the student all of the aforementioned emergent literacy skills.

Another example of a way to teach emergent literacy skills is a storybook that has been tactually adapted by affixing a tactile symbol to a page to represent comments the learner might make while reading with others. As the learner participates in reading the adapted book with a partner, several skills are used, such as identifying the top of the page, locating the symbol on the page, and turning to the next page at the appropriate time in the story.

When assessing potential use of tactile symbols for a learner with a physical disability and limited motor skills, it is important to allow the learner access to tactually explore the symbols or to improve their visual access.

Consider providing access to tactile symbols by presenting them on a slant board, such as APH's All-in-One Board. Another option is to use a voice output device, such as the Tactile Symbol Communicator by Enabling Devices. This is a good way to present core

vocabulary symbols with preference-based symbols a learner is used to using.

Examples of core symbols used with preference-based symbols presented on 1) slant board and 2) voice output device.

Using Tactile Symbols with Learners who Cannot Independently Explore

Learners who have physical disabilities can also benefit from tactile symbols, even when they cannot explore them independently. Though these learners may use other forms of augmentative and alternative communication in the long run (e.g., auditory scanning), exposure to tactile symbols early on can help them develop the symbolic understandings they need to advance to other systems.

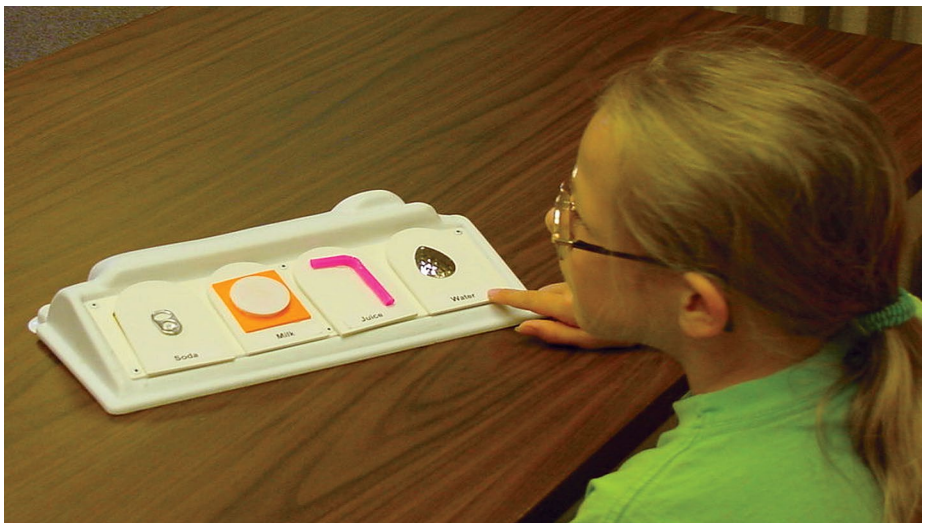
When learners have physical disabilities, adults may need to position symbols very near a movable body part to encourage independent touch, or when necessary place the symbol in the hand, or secure the symbols in a way that allows the learner to move their hand across the symbol. However the symbols are presented, these learners require the same opportunity to have adults demonstrate the use of symbols to communicate while

attributing meaning to the learner's non-symbolic, sometimes pre-intentional communication.

Applications

Tactile Symbols as a Communicative Form

For individuals who have delayed speech and language development, tactile symbols can be used as an alternative form of communication. By handing a tactile symbol to a communication partner or by pressing a tactile symbol attached to a voice output device, a learner can request, reject, make a choice, ask a question, answer a question, report on an experience, declare their content or discontent, or give directions to a peer. For example, when presented with a choice of juice or milk, the learner would hand the symbol representing juice (the preferred drink) to the communication partner, or when feeling content in a situation, the learner might select the symbol representing LIKE from a collection of symbols on a voice output device. Learners with deafblindness can learn to use tactile symbols to communicate with people who do not sign. Tactile symbols can also be used on many voice output devices (e.g., Cheap Talks®,



Learner using a CheapTalk® to choose a drink

Logan® ProxTalker®) to allow the learner with low vision or blindness to access this technology.

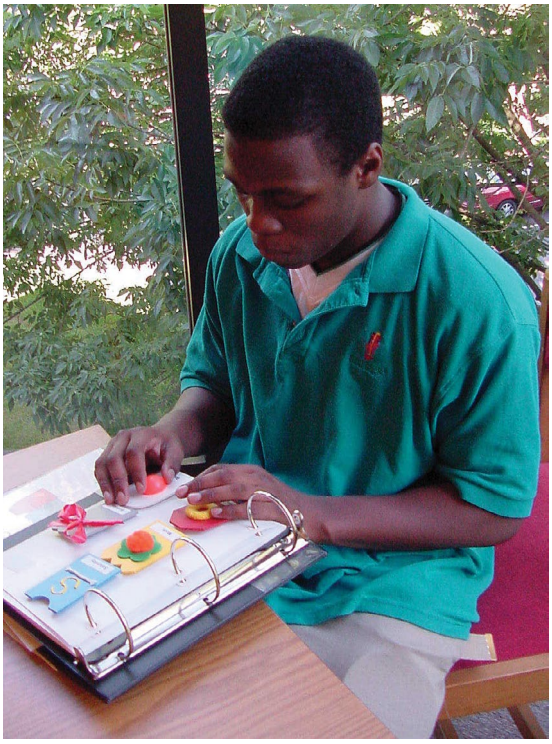
Tactile Symbols as a Strategy to Teach Communication and Other Related Skills

Calendar Systems/Time Concepts

A meaningful way to introduce tactile symbols is through calendar conversations. Calendars provide information about a learner's schedule in a clear and consistent format. Tactile symbols provide a concrete referent to support engaging conversation about his personal schedule or experiences, both past and future. A tactile symbol calendar can be easily manipulated to reflect change in routine and will facilitate smoother transitions for some learners. Calendars using tactile symbols are great tools for teaching time concepts such as "now" and "finished," "before" and "after," "morning" and "afternoon," days of the week, months, and holidays. For the more advanced learner, his daily schedule could be recorded in a personal planner. Such a planner would likely go with the individual throughout the day as a referent.

Expanded calendar for grocery purchases

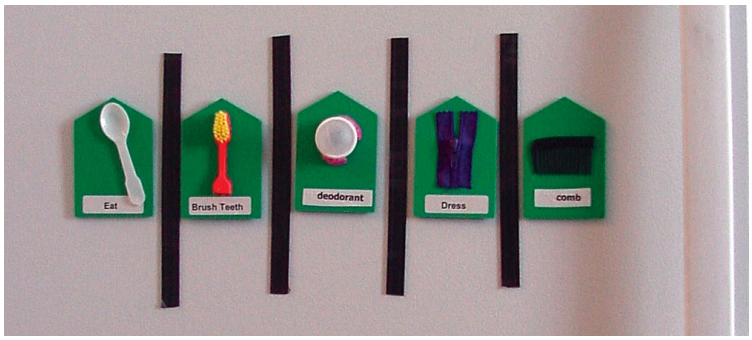
Monthly calendar



Learner with personal planner in binder.

Independence

Effective use of a tactile symbol sequence strip can allow the user increased opportunity for independence in transitioning from one step in an activity to another, or making decisions regarding the sequence of steps within an activity. For example, the steps of a morning routine could be sequenced using tactile symbols (e.g., eat, brush teeth, apply deodorant, comb hair, and get dressed). The user can read the steps from left to right to move through the routine with greater independence.



Cards mounted on the refrigerator

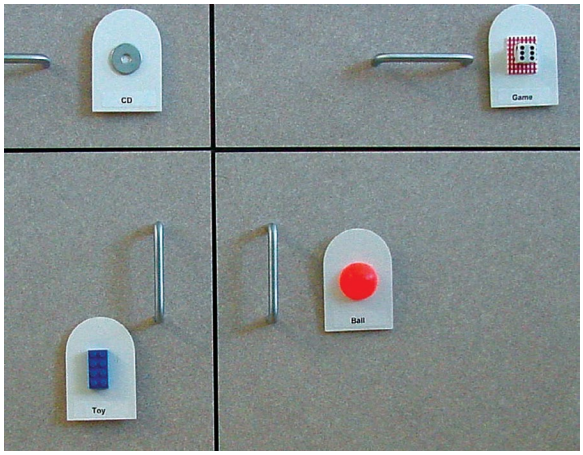
Orientation and Mobility Skills

Tactile location markers can facilitate greater independence in orientation and mobility. The learner

can refer to her calendar to get information about where she is going next. She can then carry the tactile symbol representing the destination as a concrete reminder that can be matched to the location marker confirming she is in the correct place. In addition, tactile symbols can be used to make landmarks more obvious for individuals learning new routes.

Personal Organization

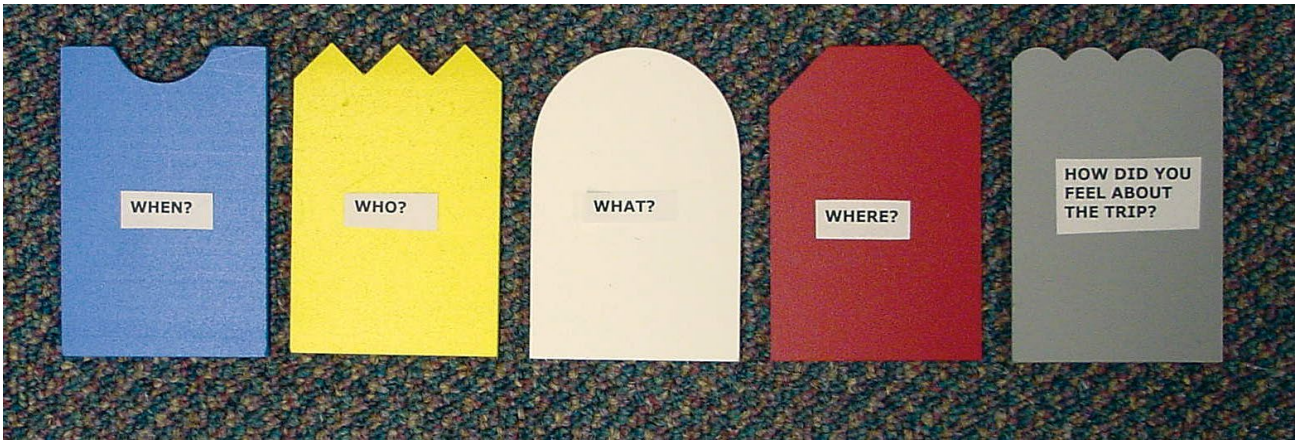
Another component of independence is personal organization. Tactile symbols may be used to label personal belongings. For example, cabinets may be labeled with the tactile symbol to indicate recreational items are stored in that location. Music collections can be labeled with tactile symbols to indicate the type of music they contain.



Cards affixed to recreational cabinets

Language/Communication Skills

For individuals with receptive and expressive language impairments, tactile symbols can provide the support needed to increase understanding and expression. The symbols can be used as a prompt to help an individual give an organized account of a personal experience. For example, a learner could have tactile symbols representing the important information about his experience (who, what, when, where, why, and how) in a sequence when telling his story to the class.



Sequence cards for telling a story

Learners could also have this information in front of them to assist them in answering questions about the experience. The authors have had success using tactile symbols with students who have echolalia. The tactile symbols may be helpful in teaching the word boundaries within sentences and helping those with echolalia to form new utterances. You can demonstrate how changing one word in a sentence changes the meaning in a concrete way ("Johanna drinks cold tea" vs. "Johanna drinks hot tea").

Learner drinks cold tea.

Learner drinks hot tea.

Building Conceptual Understandings

Tactile symbols developed to represent conceptual vocabulary generally reflect some of the most frequently used words in spoken and written English. Often called core vocabulary, these conceptually referenced words and the tactile symbols created to represent them can build conceptual understanding and use. For example, a collection of tactile symbols representing core vocabulary can be used in flexible ways across contexts, purposes, and partners. As a result of this repetition with variety, learners go beyond understanding concrete symbolic representations to understanding abstract, conceptual representations.

Consider the core vocabulary words like, want, not, and go. Each can be used for many different reasons. A learner might express what they would like for a snack or choice time. They might express that they like a favorite teacher. They might indicate that they like listening to music. In each case, the communication partner can pair the tactile symbol for like with the experience.

Similarly, the communication partner might present the symbol representing not when a student seems unhappy to get off the bus, does not want to transition to a new

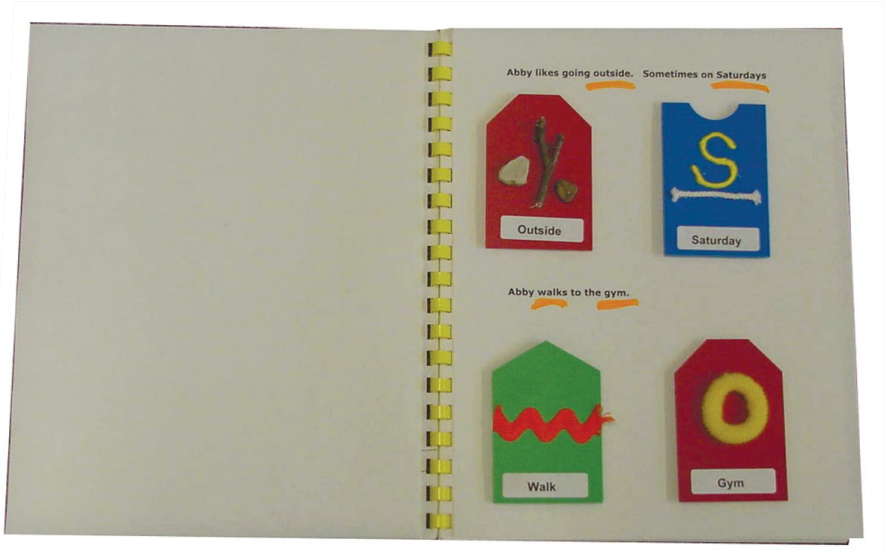
Pair core vocabulary word LIKE with experience words, such as MUSIC.

activity, does not like a loud noise, or does not want to cooperate in any number of ways. When communication partners pair the tactile symbols representing like and not with each of these experiences while providing an accessible, simple description of the connection to the symbol, students learn to use these conceptual symbols. This learning does not happen overnight. However, the repetition with variety that can result from tactilely representing and using conceptual, core vocabulary can result in important learning over time.

Tactile Symbols as a Form of Functional Literacy

Experience Stories

Tactile symbols may become more meaningful symbols of language when extended to a form of functional literacy. The emergent reader may choose and arrange tactile symbols to recount a personal experience or a story. While the text of these experience stories may be refined with the assistance of an adult or peer, the content and sequence of the stories can be dictated by the learner's choice of tactile symbols. For example, the symbols might be presented in random arrangement on a carpet square or board for the individual to sequence.



Personal experience story

Logan® ProxTalker®

Learners can participate in and create interactive communication using a Logan ProxTalker, a speech augmentation device by LoganTech. Using a program tag, record a symbol's meaning on the Logan ProxTalker. Attach a Tactile Connections symbol card to a sound tag using a pressure sensitive adhesive. A learning partner provides choices of people, actions, and objects for the learner to create requests, ask questions, and tell short stories. Press each card sequentially to read the sentence aloud or press the "speak all tag" and the ProxTalker reads the complete sentence.

Word choices for an interactive story using a Logan® ProxTalker®.

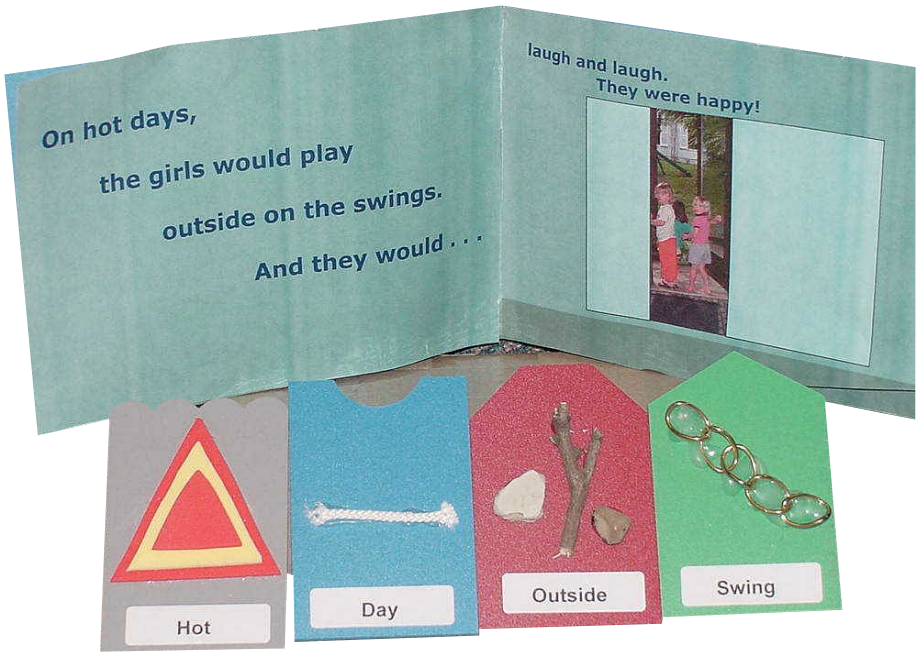
Social Stories

Social stories, which can be an effective way to shape positive behaviors, can be made accessible and more meaningful using tactile symbols (Gray, 2000). Similar options can be used for creating the social story as were used to create the experience story. Since a social story is generally, but not always, planned and written by an adult, the learner might be involved in choosing the appropriate tactile symbol(s) for each page of the story.

Adapted Books

Children's literature can be adapted for a child who is blind or visually impaired using tactile symbols. By placing tactile symbols relevant to the text on each page, the visually impaired child has opportunities to anticipate

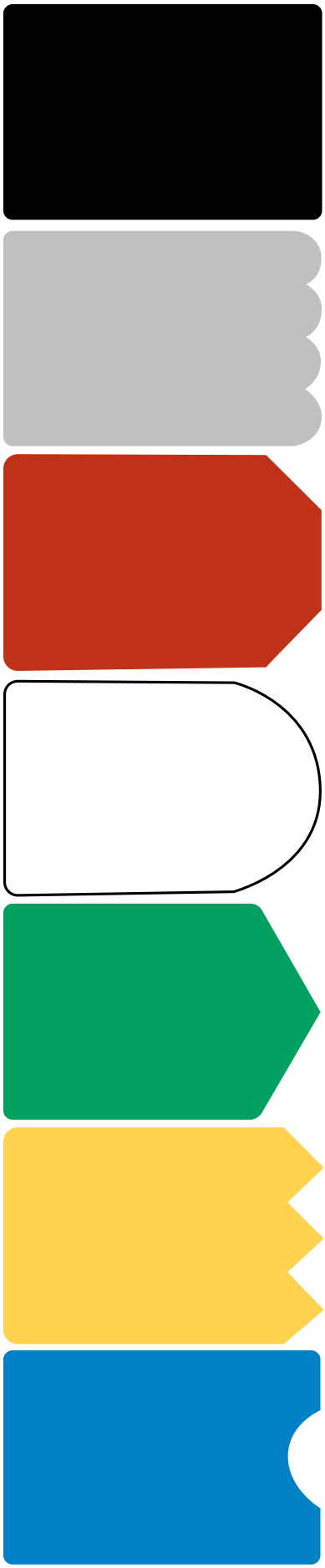
the text much like a sighted child would access the pictures.



Adapted storybook

Other

Other examples of functional literacy activities to which tactile symbols can be applied are letters, shopping lists, and recipes.



Pictorial Library

Pictorial Library

Introduction

The mounting cards supplied with *Tactile Connections: Symbols for Communication* provide visual contrast and tactile diversity, both of which are beneficial to the intended audience. Pre-cut from various colors of Sintra®, these cards are very durable. As illustrated in the Pictorial Library in this section, both the color and shape of the mounting cards define each core vocabulary category. Card assignments are as follows:

Category	Mounting Card
Person	Yellow "Crown" shape
Place	Red "Barn" shape
Action	Green "House" shape
Time	Blue "Puzzle" shape
Object	White "Bread" shape
Expression	Black "Rectangle" shape
Expansion	Gray "Scalloped" shape

As you begin to build your library of tactile symbols, always let the learner's needs determine the collection and construction of meaningful symbols, the use of uncontracted vs. contracted braille labels, color selections, material usage, and so forth. Although the individualization of a learner's tactile symbol system is stressed and encouraged, there are some basic

guidelines for constructing cards in a manner that ensures both durability and functionality. Before you embark on the actual assembly of the tactile symbols, become acquainted with the following instruction tips:

General Instruction Tips

- The Pictorial Library suggests a tactile symbol for each card, along with step-by-step construction tips. However, keep in mind that the tactile symbol suggested is merely that—a suggestion. The best symbol is one that the learner can bring meaning to and understand its symbolic representation. If at all possible, engage the learner in selecting his own symbols, especially for his own name card and other name (PERSON) cards.

- 

Exercise caution when selecting and using tactile objects for the communication cards. Small items or parts of objects will need to be adhered to the cards. Since adhered items may come off, adult supervision is highly recommended. Attention should be given to choosing Latex®-free materials for those learners who may have allergic reactions to such items (e.g., rubber balloons or rubber gloves).

- Facilitate proper orientation of the cards by assigning the straight edge of each card as the bottom of the card and the unique die-cut shape as the top of the card.

- Provided with this kit is one tube of adhesive caulking to adhere objects or parts of objects to the cards. Other adhesives can be used depending on the environment. For example, glue dispensed from a hot glue gun may become brittle in extremely cold climates, allowing parts to crack off of the cards. Likewise, certain caulks may remain excessively pliable in extremely hot and humid climates. Choosing the best adhesive for construction purposes may require some experimentation. Keep in mind that while adequate adhesive is important to secure the object to the card, it is equally important not to use too much. Excessive adhesive that oozes over the edges of the object can alter the salient tactile features of the symbol. Periodic inspection of the cards is recommended, continual maintenance of the cards should be expected, and occasional repair is likely. Keep an inventory of objects, scrap materials, donated items, etc., that can be used for future card assembly.

- To ensure enough space and proper placement of the objects on the cards, it is recommended that you attach print/braille labels along the lower edge of the cards (see *Pictorial Library* for examples). It is important to always place the labels in the same position from one card to the next; this consistent placement of the labels facilitates proper orientation of the cards for the learner. Clear adhesive sheets are provided for your braille labeling tasks. To prepare print labels either write directly on the label with a high-contrast marker or pen, or electronically

prepare master label sheets with all core vocabulary and then photocopy onto the provided adhesive-backed white label sheets.

- After building the cards, use the provided hook (rough) tabs to finish the construction. The hook (rough) tabs should be placed in the center on the back of the cards. The hook allows multi-placement of the cards from calendar boxes to carpet strips, tactile storybooks, and adaptive keyboards. Magnets (although not supplied in the kit) may be utilized for attachment purposes to magnetic boards or refrigerators for home use.

- It is always important to develop a convenient filing and storage system for the tactile symbols. Tactile symbols should be stored in an accessible place in an organized manner to assure that the learner and partner have easy access to them at all times. The cards may be organized by word category or by an individual learner's unique vocabulary.

Teacher and learner looking at a tri-fold board

Contracted Braille

⠃⠥⠎ ⠙⠗⠊⠧⠻

Uncontracted Braille

⠃⠥⠎ ⠙⠗⠊⠧⠻

Bus Driver

Materials:

Small rubber tire approximately 1-inch to 1½-inches from a toy car

Assembly Instructions:

Adhere the rubber tire to the center of the card above the print/braille label.

Tip:

After placing the adhesive on the underside of the tire and adhering it to the card, squeeze more adhesive into the cavity of the tire to hold it more securely in place.

Other Possible Symbols:

Personalize the card if possible.

Dad

Materials:

Small piece of suede/leather, approximately 1-inch square

Assembly Instructions:

Adhere the suede/leather piece to the center of the card above the print/braille label.

Other Possible Symbols:

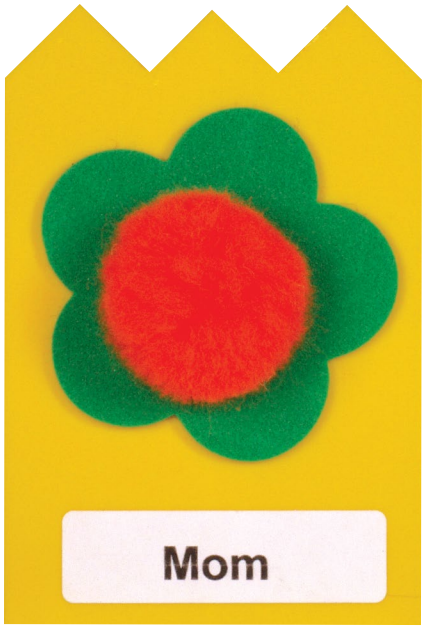
Personalize the card if possible.

Contracted Braille

⠙⠁⠙

Uncontracted Braille

⠙⠁⠙



Contracted Braille

⠍

Uncontracted Braille

⠍⠕⠍

Mom

Materials:

Pre-cut or handmade craft foam flower/crazy daisy (approximately 1½-inches wide) in a contrasting color; one 1-inch pompom in a different color (e.g., orange pompom centered on a green flower).

Assembly Instructions:

Adhere the foam flower to the center of the card above the print/braille label. Center and adhere the pompom on top of the foam flower.

Other Possible Symbols:

Personalize the card if possible (e.g., earrings, perfume-sprayed cotton ball, etc.).

Doctor

Materials:

One cotton swab

Assembly Instructions:

Adhere the cotton swab diagonally on the card, avoiding the print/braille label.

Other Possible Symbols:

Personalize the card if possible.

Contracted Braille

⠙⠕⠉⠞⠕⠗

Uncontracted Braille

⠙⠕⠉⠞⠕⠗

O&M Instructor

Materials:

One cane tip

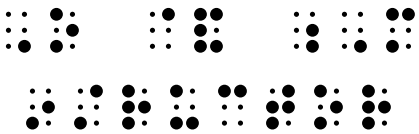
Assembly Instructions:

Adhere cane tip diagonally on the card, avoiding the print/ braille label.

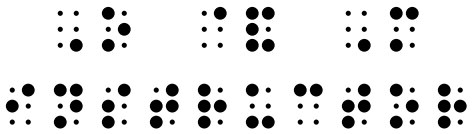
Other Possible Symbols:

Cane handle; personalize the card if possible.

Contracted Braille



Uncontracted Braille



Occupational Therapist (OT)

Materials:

A wooden dowel approximately 1-inch to 1½-inches long

Assembly Instructions:

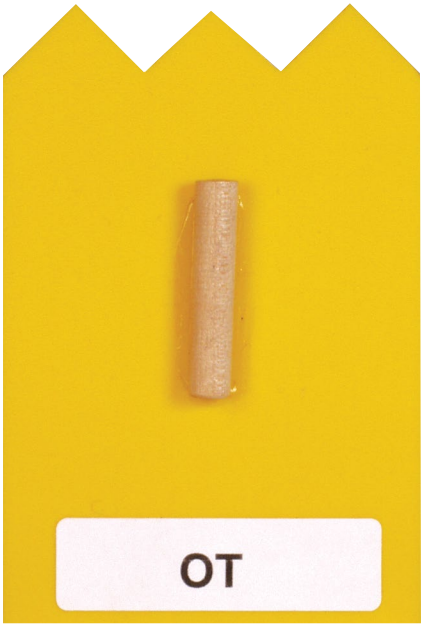
Center and adhere the dowel horizontally or vertically on the card above the print/braille label.

Tip:

It might be helpful to paint the dowel in a contrasting color for low vision students.

Other Possible Symbols:

Personalize the card if possible.



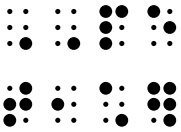
Contracted Braille

⠕⠞

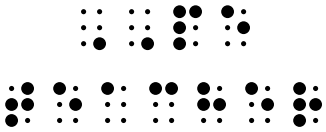
Uncontracted Braille

⠕⠞

Contracted Braille



Uncontracted Braille



PE Teacher

Materials:

One small terry cloth elastic for the hair in a bright contrasting color

Assembly Instructions:

Apply adhesive to one side of the elastic band and position in the center of the card above the print/braille label.

Other Possible Symbols:

Personalize the card if possible.

Physical Therapist

Materials:

Small rubber ball similar to that sold with jumbo jacks. Select a ball of contrasting color.

Assembly Instructions:

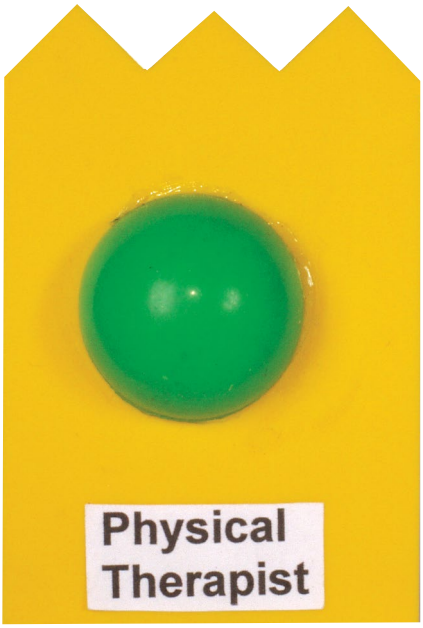
Using a matte/utility knife, carefully slice the ball in half. Adhere one half of the ball to the center of the card above the print/braille label.

Tip:

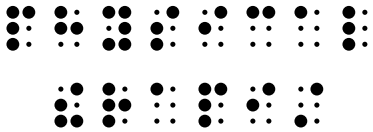
Save the other half of the ball for making another card.

Other Possible Symbols:

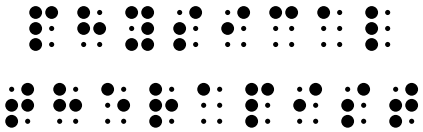
Personalize the card if possible.



Contracted Braille



Uncontracted Braille



Contracted Braille

⠠⠎⠏⠑⠑⠉⠓
⠠⠞⠓⠻⠁⠏⠊⠎⠞

Uncontracted Braille

⠠⠎⠏⠑⠑⠉⠓
⠠⠞⠓⠻⠁⠏⠊⠎⠞

Speech Therapist

Materials:

A wooden cube approximately one-half inch square that can be obtained from craft stores

Assembly Instructions:

Adhere the cube to the center of the card above the print/braille label.

Tip:

Low vision students may need the cube painted in a contrasting color.

Other Possible Symbols:

Personalize the card if possible.

VI Teacher

Materials:

One jumbo pipe cleaner of a contrasting color

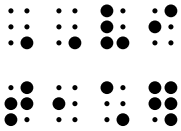
Assembly Instructions:

Form the pipe cleaner into the shape of eyeglasses. Once formed, trim the two ends of the pipe cleaner leaving about one-half inch on either side to form the temples. Turn the two ends of the pipe cleaner down to avoid sharp edges. Adhere the "glasses" to the center of the card above the print/braille label.

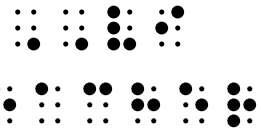
Other Possible Symbols:

Piece of reflective Mylar®; personalize the card if possible.

Contracted Braille



Uncontracted Braille



Contracted Braille

⠠⠠⠃⠁⠞⠓⠗⠕⠕⠍

Uncontracted Braille

⠠⠠⠃⠁⠞⠓⠗⠕⠕⠍

Bathroom

Materials:

Bathroom floor tile(s), preferably in a contrasting color

Assembly Instructions:

Center the tile above the print/ braille label.

Tip:

To ensure tactile diversity, choose tiles that are unique in shape. Many tile vendors/suppliers will give you a few samples.

Other Possible Symbols:

Cardboard tube from toilet paper roll.

Cafeteria

Materials:

White plastic spoon; yellow puff paint or dried beans

Assembly Instructions:

Cut spoon just below the bowl and sand any rough edges. Place small yellow dots of puff paint or glue on beans in the bowl of the spoon. After drying is complete, add another layer of puff paint dots or beans. Additional layers may be added until desired height is attained. Position the spoon on the card above the print/braille label.

Contracted Braille

⠉⠁⠋⠑⠞⠑⠗⠊⠁

Uncontracted Braille

⠉⠁⠋⠑⠞⠑⠗⠊⠁

Contracted Braille

⠠⠉⠕⠍⠍⠥⠝⠊⠞⠽

Uncontracted Braille

⠠⠉⠕⠍⠍⠥⠝⠊⠞⠽

Community

Materials:

White plastic grocery bag; bread twist tie

Assembly Instructions:

Cut a 4-inch by 4-inch piece from the plastic bag, gather the piece in the middle, and wrap a twist tie around it to form a bow. Apply glue to the back of the twist tie and surrounding plastic area, and secure to the center of the mounting card above the print/braille label.

Tip:

An APH pre-drilled card may be used. Tie the twist tie through the holes.

Computer Lab

Materials:

One computer keyboard cap

Assembly Instructions:

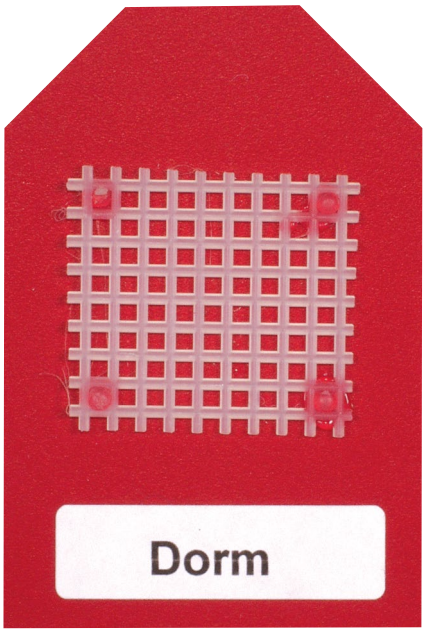
Fill the inside cavity of the key cap with adhesive, including the edges. Place the key cap in the center of the card above the print/braille label. The print letter on the key cap should be in the upright position.

Contracted Braille

⠉⠕⠍⠏⠥⠞⠻
⠇⠁⠃

Uncontracted Braille

⠉⠕⠍⠏⠥⠞⠑⠗
⠇⠁⠃



Contracted Braille

⠙⠕⠗⠍

Uncontracted Braille

⠙⠕⠗⠍

Dorm

Materials:

Plastic needlepoint canvas

Assembly Instructions:

Cut approximately 1½-inch square piece of needlepoint canvas. Apply a glue drop to each of the four corners. Spread a very thin layer of glue on the center of the card. Place the needlepoint canvas over the thin layer of glue and press so that the four corners bleed through the top, adhering the canvas to the card. The needlepoint canvas should be centered on the card above the print/braille label.

Gym

Materials:

One small terry cloth elastic for the hair in a bright contrasting color

Assembly Instructions:

Apply adhesive to one side of the elastic band and position in the center of the card above the print/braille label.

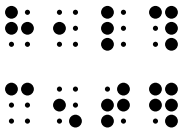
Contracted Braille

⠛⠍

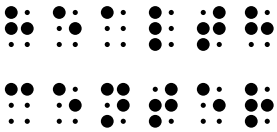
Uncontracted Braille

⠛⠽⠍

Contracted Braille



Uncontracted Braille



Health Center

Materials:

One small adhesive bandage

Assembly Instructions:

Apply some adhesive to the white gauze part of the adhesive bandage and peel away the protective strips on each side. Place the adhesive bandage diagonally, fitting as much as possible on the card without covering up the print/braille label.

Tip:

The adhesive bandage may need to be trimmed before applying.

Home

Materials:

One house key

Assembly Instructions:

Apply adhesive to one side of the key and place it in the center of the card above the print/ braille label.

Contracted Braille

⠠⠓⠕⠍⠑

Uncontracted Braille

⠠⠓⠕⠍⠑

Contracted Braille

⠇⠊⠃⠗⠜⠽

Uncontracted Braille

⠇⠊⠃⠗⠁⠗⠽

Library

Materials:

Colorful piece of heavy stock paper to be used as cover of miniature book (approximately 3-inches by 2-inches); five pieces of white copy paper cut slightly smaller; clear packing tape; stapler

Assembly Instructions:

Cover the heavy stock paper with clear tape. Fold each piece of paper in half and stack them together. Staple along centerfold. Adhere the back cover of the miniature book to the mounting card above the print/braille label.

Tip:

Greeting cards can be recycled to achieve or create the colorful front cover. For simpler construction, omit inner text pages of book.

Outside

Materials:

Small rocks and twigs

Assembly Instructions:

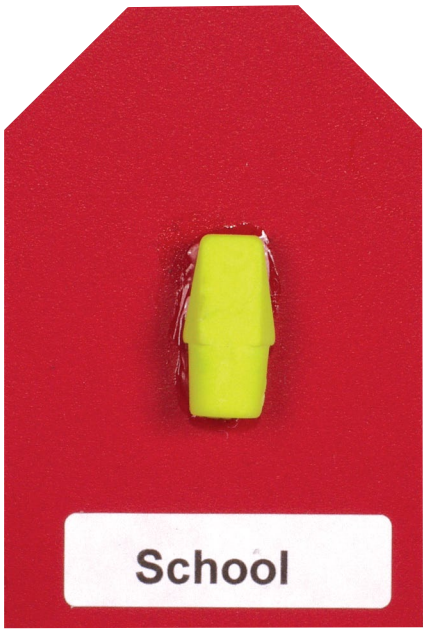
Glue rocks and twigs to the center of the card above the print/braille label.

Contracted Braille

⠠⠕⠥⠞⠎⠊⠙⠑

Uncontracted Braille

⠠⠕⠥⠞⠎⠊⠙⠑



Contracted Braille

⠠⠎⠉⠓

Uncontracted Braille

⠠⠎⠉⠓⠕⠕⠇

School

Materials:

One traditional pencil-top eraser in a contrasting color

Assembly Instructions:

Adhere the eraser to the center of the mounting card above the print/braille label.

Other Possible Symbols:

Eraser tip cut from end of a pencil

Swimming Pool

Materials:

Piece of swimming pool noodle in a contrasting color

Assembly Instructions:

Cut cross-section of swimming pool noodle and glue to the center of the card above the print/braille label.

Other Possible Symbols:

Portion of swimming diaper

Contracted Braille

⠠⠎⠺⠊⠍⠍⠔⠛
⠠⠏⠕⠕⠇

Uncontracted Braille

⠠⠎⠺⠊⠍⠍⠔⠛ ⠠⠏⠕⠕⠇

Contracted Braille

⠠⠺

Uncontracted Braille

⠠⠺⠕⠗⠅

Work

Materials:

Hexagonal metal nut approximately one-half inch in diameter

Assembly Instructions:

Adhere the nut to the center of mounting card above the print/ braille label. Apply an extra amount of adhesive inside the hole of the nut.

Other Possible Symbols:

Paperclip

Art

Materials:

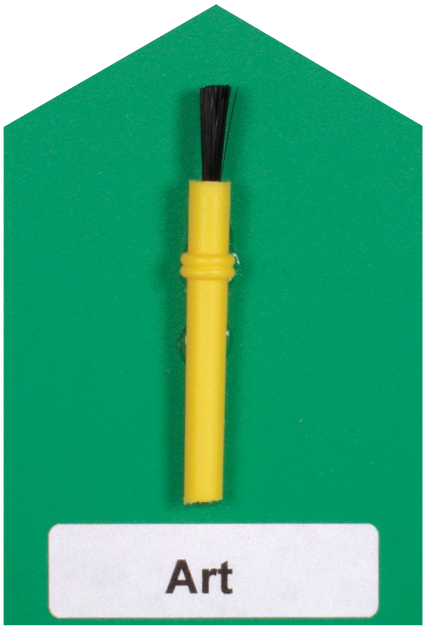
Child's plastic or wooden paintbrush in bright contrasting color.

Assembly Instructions:

Cut paintbrush approximately 2¼-inches long (including bristles). If needed, sand the rough cut edge. Position the cut paintbrush vertically in the center of the card above the print/braille label.

Tip:

If using a wooden paintbrush, consider painting the wooden handle a contrasting color, including the cut edge.

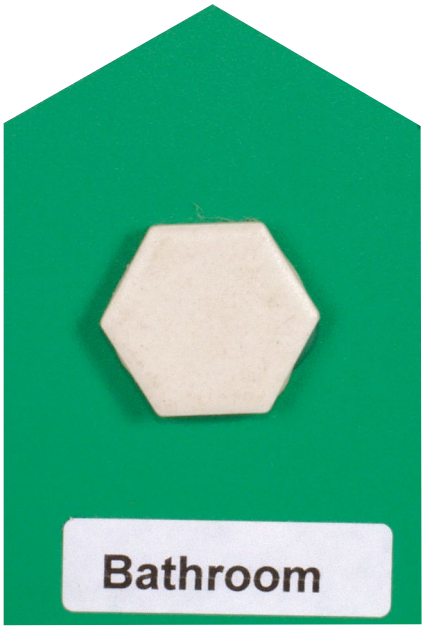


Contracted Braille

⠁⠗⠞

Uncontracted Braille

⠁⠗⠞



Contracted Braille

⠠⠠⠃⠁⠞⠓⠗⠕⠕⠍

Uncontracted Braille

⠠⠠⠃⠁⠞⠓⠗⠕⠕⠍

Bathroom

Materials:

Bathroom floor tile(s)

Assembly Instructions

Center the tile above the print/ braille label.

Tip:

To ensure tactile diversity, choose tiles that are unique in shape. Many tile vendors/suppliers will give you a few samples.

Brush Teeth

Materials:

Child's toothbrush in bright contrasting color. Choose a solid-colored brush.

Assembly Instructions:

Cut the toothbrush approximately 2¼-inches long. If needed, sand the rough edge. Position the cut toothbrush vertically in the center of the card above the print/braille label.

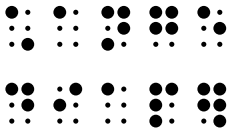
Contracted Braille

⠠⠠⠠⠠
⠠⠠⠠⠠

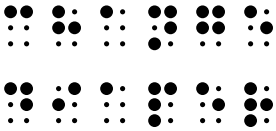
Uncontracted Braille

⠠⠠⠠⠠⠠
⠠⠠⠠⠠⠠

Contracted Braille



Uncontracted Braille



Change Diaper

Materials:

Rubber glove

Assembly Instructions:

Cut the finger portion of the glove off, fold cut-edge under, and glue to the center of the card above the print/braille label.

Caution:

Do not use with learners who have Latex allergies.

Other Possible Symbols:

Cut portion of disposable diaper

Clean

Materials:

One paint sponge in contrasting color

Assembly Instructions:

Cut a 1-inch square piece of a sponge and adhere it to the card, centering it above the print/ braille label.

Tip:

Avoid using sponges purchased from the grocery store that contain a solvent that becomes hard over time. Paint sponges remain soft.

Contracted Braille

⠠⠉⠇⠑⠁⠝

Uncontracted Braille

⠠⠉⠇⠑⠁⠝

Contracted Braille

⠠⠉⠕⠕⠅

Uncontracted Braille

⠠⠉⠕⠕⠅

Cook

Materials:

Approximately 6 inches of black insulated wire

Assembly Instructions:

Bend the wire into a coiled shape like a stovetop burner. Place adhesive on back of coil. Adhere the coil in the center of the card above the print/braille label.

Tip:

Needle-nose pliers may be helpful in bending the wire into the desired shape. Leave a minimum of ¼-inch between concentric circles, making the coil wide enough for easy tactile recognition.

Dress

Materials:

One zipper in a contrasting color

Assembly Instructions:

Cut the zipper to a 2-inch length from the top, retaining the pull tab. Adhere the cut zipper to the card, centering it above the print/braille label.

Tip:

Apply the adhesive only to the fabric part of the zipper, allowing for some functional movement of the pull tab.

Contracted Braille

⠠⠙⠗⠑⠎⠎

Uncontracted Braille

⠠⠙⠗⠑⠎⠎

Contracted Braille

⠙⠗⠊⠝⠅

Uncontracted Braille

⠙⠗⠊⠝⠅

Drink

Materials:

One plastic water bottle cap in contrasting color

Assembly Instructions:

Spread adhesive around the interior sides of the cap, including the edge. Then apply a large amount into the cap. Place the cap in the center of the card above the print/braille label.

Eat

Materials:

One plastic miniature tasting spoon (from an ice cream shop) or a full-size plastic spoon (cut off close to the bowl of the spoon)

Assembly Instructions:

If using a cut plastic spoon, sand rough edge. Adhere the miniature spoon diagonally in the center of the card above the print/braille label.

Contracted Braille

⠑⠁⠞

Uncontracted Braille

⠑⠁⠞

Contracted Braille

⠍⠥⠎⠊⠉

Uncontracted Braille

⠍⠥⠎⠊⠉

Music

Materials:

Two jingle bells; a piece of strong wire; an APH card with pre-drilled holes

Assembly Instructions:

String the two jingle bells onto the center of the wire. Feed the two ends of the wire through the two drilled holes in the mounting card. Twist the two wire ends on the back of the card and flatten as much as possible for easier application of the hook and loop.

Other Possible Symbols:

Toy kazoo; musical greeting card

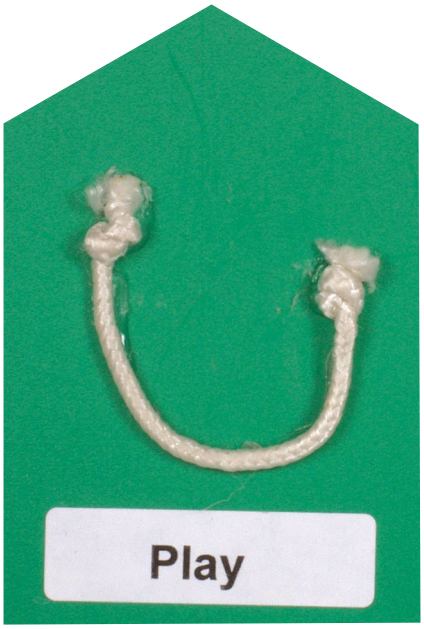
Play

Materials:

One piece of thin rope or shoelace, approximately one-eighth inch wide

Assembly Instructions:

Cut a 4-inch piece of rope and tie a knot at both ends. Place adhesive along one side of the rope, including good coverage of the two knots. Form the rope in a U-shape (similar to a jump rope) and adhere to the center of the card above the print/braille label.



Contracted Braille

⠏⠇⠁⠽

Uncontracted Braille

⠏⠇⠁⠽

Contracted Braille

⠠⠗⠫

Uncontracted Braille

⠠⠗⠑⠁⠙

Read

Materials:

Colorful piece of heavy stock paper to be used as cover of miniature book (approximately 3-inches by 2-inches); five pieces of white copy paper cut slightly smaller; clear packing tape; stapler

Assembly Instructions:

Cover the heavy stock paper with clear tape. Fold each piece of paper in half and stack them together. Staple along centerfold. Adhere the back cover of the miniature book to the mounting card above the print/braille label.

Tip:

Greeting cards can be recycled to create the colorful front cover. For simpler construction, omit inner text pages of book.

Swing

Materials:

Approximately 2½-inches of decorative chain-like belt purchased at fabric store

Assembly Instructions:

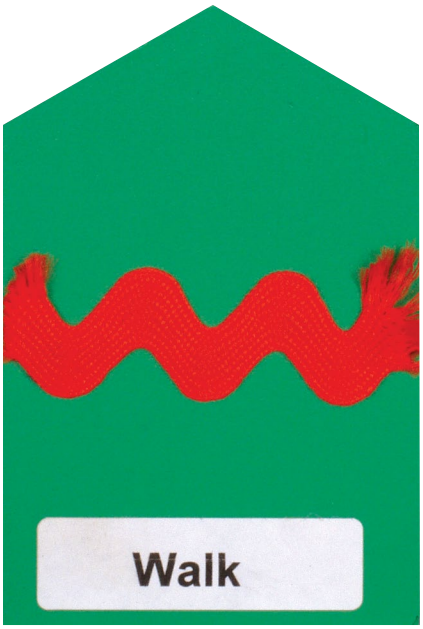
Adhere the chain in the center of the card above the print/ braille label.

Contracted Braille

⠎⠺⠊⠝⠛

Uncontracted Braille

⠎⠺⠁⠊⠝⠛



Contracted Braille

⠠⠺

Uncontracted Braille

⠠⠺

Walk

Materials:

Approximately 2¼-inches of colorful rick-rack purchased at fabric store

Assembly Instructions:

Center and adhere the rick-rack horizontally across the card above the print/braille label.

Wash

Materials:

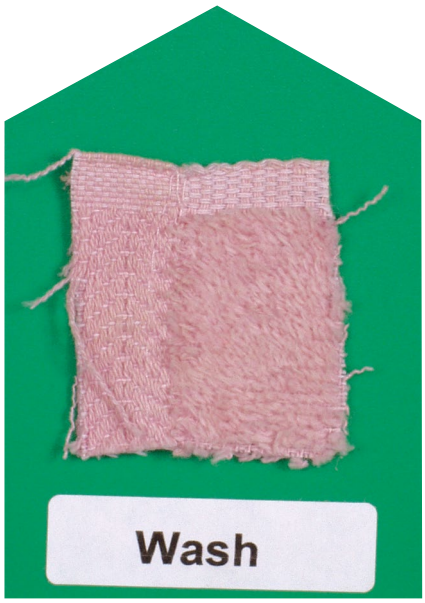
Scrap piece of terry cloth towel approximately 1½-inches square

Assembly Instructions:

Adhere the towel to the center of the mounting card above the print/braille label.

Tip:

The plusher the towel the more tactually distinctive it will be.

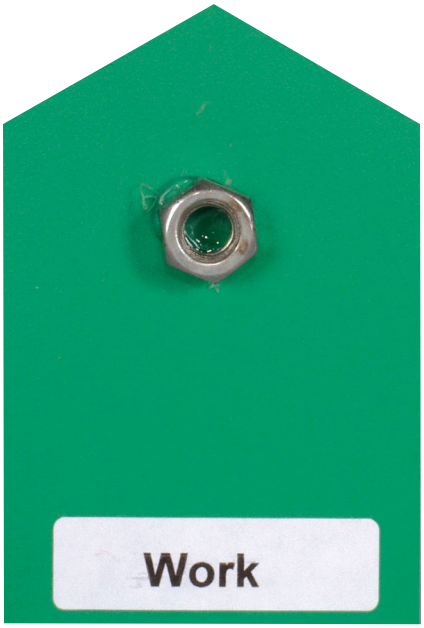


Contracted Braille

⠠⠺

Uncontracted Braille

⠠⠺⠁⠎⠓



Contracted Braille

⠠⠺

Uncontracted Braille

⠠⠺⠕⠗⠅

Work

Materials:

Hexagonal metal nut approximately ½-inch in diameter

Assembly Instructions:

Adhere the nut to the center of the mounting card above the print/braille label. Add an extra amount of adhesive inside the hole of the nut.

Other Possible Symbols:

Paperclip

Ball

Materials:

Small rubber ball similar to that sold with jumbo jacks. Select a ball of contrasting color.

Assembly Instructions:

Using a matte/utility knife, carefully slice the ball in half. Adhere one half of the ball to the center of the card above the print/braille label.

Tip:

Save the other half of the ball for making another card.

Contracted Braille

⠠⠠⠠⠠

Uncontracted Braille

⠠⠠⠠⠠

Contracted Braille

⠃⠕⠇⠎⠞⠻
⠎⠺⠊⠝⠛

Uncontracted Braille

⠃⠕⠇⠎⠞⠻
⠎⠺⠊⠝⠛

Bolster Swing

Materials:

Rubber handle or piece of rolled vinyl in a contrasting color

Assembly Instructions:

Glue the handle or the rolled piece of vinyl to the center of the card above the print/braille label.

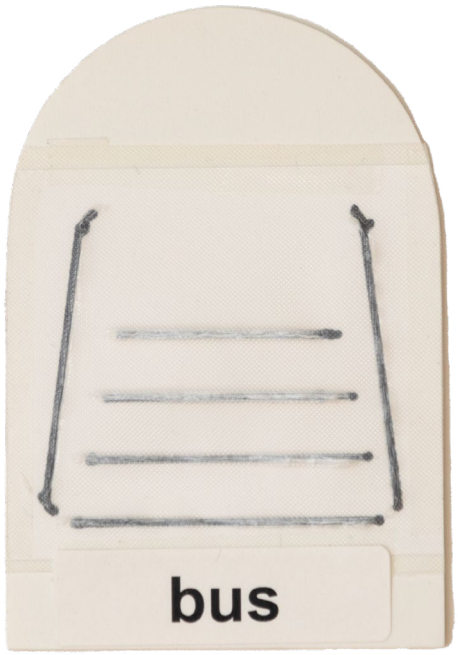
Bus

Materials:

White adhesive paper, black marker, and tactile drawing film (APH)

Assembly Instructions:

On the white paper, draw a number of parallel lines that represent the number of steps in the learner's school bus. Next, draw one or two vertical lines to represent the hand rail(s) on the bus. Place the drawing under the tactile drawing film and trace. Adhere the two drawings, paper first and then film on top to the card.



Contracted Braille

⠃⠥⠎

Uncontracted Braille

⠃⠥⠎

Contracted Braille

⠠⠉

Uncontracted Braille

⠠⠉⠁⠗

Car

Materials:

Black nylon webbing used on belts, backpack straps, etc., similar to car seat belt material

Assembly Instructions:

Cut a strip of webbing approximately ½-inch shorter than the width of the mounting card. Adhere the strip to the center of the card above the print/braille label.

Computer

Materials:

One computer keyboard cap

Assembly Instructions:

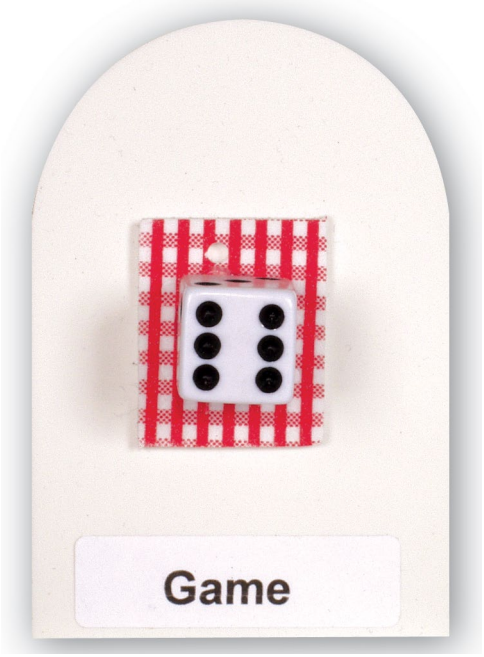
Fill the inside cavity of the key cap with adhesive, including the edges. Place the key cap in the center of the card above the print/braille label. The print letter on the key cap should be in the upright position.

Contracted Braille

⠠⠉⠕⠍⠏⠥⠞⠑⠗

Uncontracted Braille

⠠⠉⠕⠍⠏⠥⠞⠻



Contracted Braille

⠠⠛⠁⠍⠑

Uncontracted Braille

⠠⠛⠁⠍⠑

Game

Materials:

One piece of craft foam approximately 1-inch to 1½-inches square; one game die or game token

Assembly Instructions:

Adhere the foam piece to the center of the card above the print/braille label. Apply a layer of glue on one side of the die or game token and place it on the center of the foam.

Tip:

Craft stores sometimes have small bags of pre-cut foam shapes in a variety of colors and designs.

Juice

Materials:

One brightly colored drinking straw with an accordion neck

Assembly Instructions:

Cut the straw 1-inch above the accordion and 1½-inches below the accordion. Bend the accordion portion at a 90-degree angle. Apply adhesive to one side and place on the card avoiding the print/braille label.

Tip:

A juice box straw may be an appropriate substitute for the large drinking straw.

Contracted Braille

⠚⠥⠊⠉⠑

Uncontracted Braille

⠚⠥⠊⠉⠑

Contracted Braille

⠍⠊⠇⠅

Uncontracted Braille

⠍⠊⠇⠅

Milk

Materials:

One plastic pop-off cap from a single-serving milk bottle; one 2-inch square piece of contrasting craft foam

Assembly Instructions:

Apply foam piece in the center of the card above the print/braille label. Fill in the cavity of the milk cap with adhesive and place in the center of the foam.

Music Keyboard

Materials:

Three white plastic spoons; two black spoons; piece of craft foam

Assembly Instructions:

Cut the foam to a 2-inch square and adhere to the center of the card above the print/braille label. Measuring from the ends of the white spoon handles, cut 1½-inch pieces and sand edges if needed. Cut 1-inch pieces from the middle of the black spoon handles and sand edges if necessary. Adhere the three white spoon handles side by side on the foam. Glue the black pieces on top of the white pieces spaced slightly apart to create a piano keyboard.

Contracted Braille

⠍⠥⠎⠊⠉
⠅⠑⠽⠃⠕⠁⠗⠙

Uncontracted Braille

⠍⠥⠎⠊⠉
⠅⠑⠽⠃⠕⠁⠗⠙

Contracted Braille

⠠⠏⠕⠏⠉⠕⠗⠝

Uncontracted Braille

⠠⠏⠕⠏⠉⠕⠗⠝

Popcorn

Materials:

Approximately one dozen kernels of unpopped popcorn

Assembly Instructions:

Squeeze a small amount of adhesive in the center of the mounting card above the print/braille label. Push the kernels down into the adhesive forming a cluster.

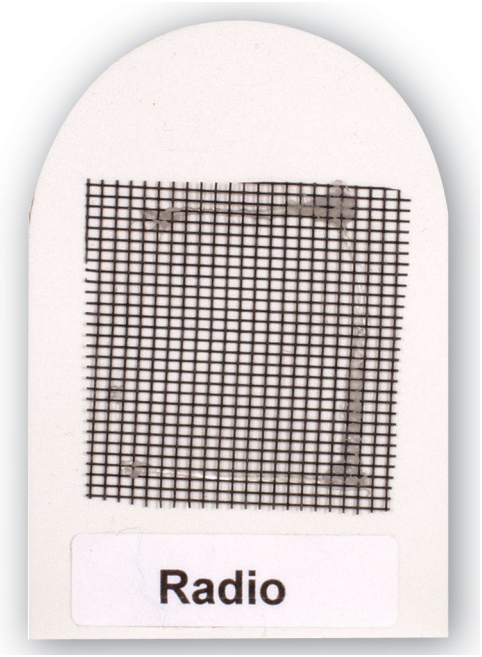
Radio

Materials:

A 1¾-inch square piece of fiberglass wire screen acquired at a hardware store

Assembly Instructions:

Apply a thin layer of adhesive onto one side of the wire screen. Place the screen in the center of the card above the print/ braille label.



Contracted Braille

⠠⠗⠁⠙⠊⠕

Uncontracted Braille

⠠⠗⠁⠙⠊⠕

Contracted Braille

⠠⠗⠕⠉⠅⠊⠝⠛
⠠⠉⠓⠁⠊⠗

Uncontracted Braille

⠠⠗⠕⠉⠅⠊⠝⠛ ⠠⠉⠓⠁⠊⠗
⠠⠗⠕⠉⠅⠊⠝⠛ ⠠⠉⠓⠁⠊⠗

Rocking Chair

Materials:

A crescent moon shape

Assembly Instructions:

Adhere the crescent shape in the center of the card above the print/braille label. The shape should form a "smile."

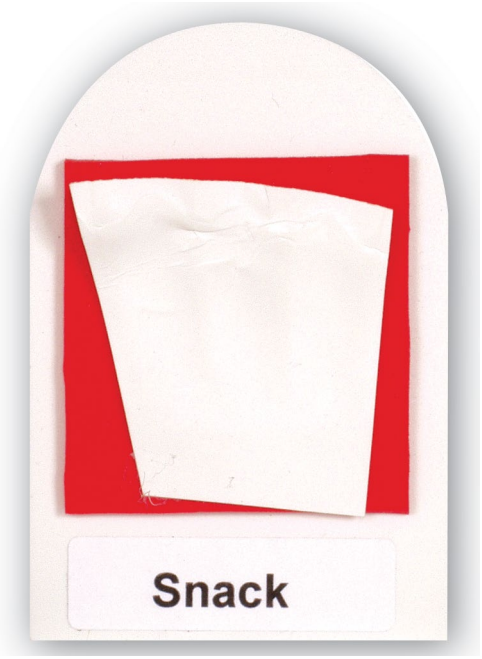
Snack

Materials:

White paper plate with ridges. One 2-inch square of brightly colored craft foam

Assembly Instructions:

Adhere the foam square to the center of the card above the print/braille label. Cut a small section of the paper plate retaining about 3 ridges of the plate. Apply adhesive to the underside of the ridges and adhere on top of the foam, allowing for a visible border of the colored foam.



Contracted Braille

⠎⠝⠁⠉⠅

Uncontracted Braille

⠎⠝⠁⠉⠅

Contracted Braille

⠠⠎⠕⠙⠁

Uncontracted Braille

⠠⠎⠕⠙⠁

Soda

Materials:

One metal pull tab from an aluminum drinking can

Assembly Instructions:

Adhere the pull tab to the center of the card above the print/braille label. Apply glue to any sharp edges remaining on the pull tab.

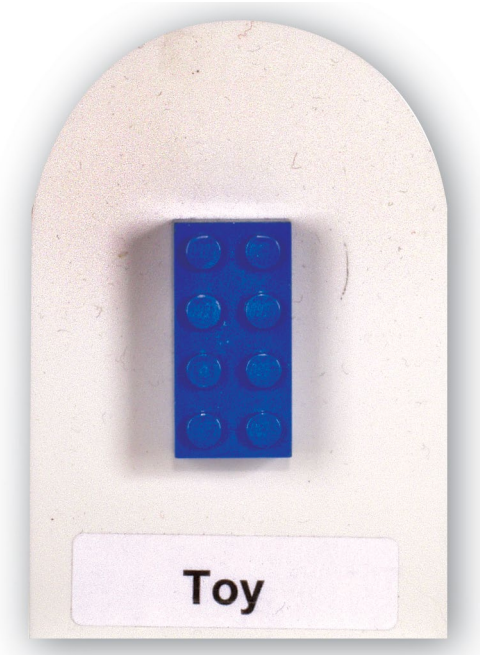
Toy

Materials:

A Lego® piece (not white)

Assembly Instructions:

Adhere the Lego piece to the center of the card above the print/braille label.



Contracted Braille

⠠⠞⠽

Uncontracted Braille

⠠⠞⠕⠽

Contracted Braille

⠠⠞⠧

Uncontracted Braille

⠠⠞⠧

TV

Materials:

One piece of dark craft foam approximately 1¾-inches square

Assembly Instructions:

Fold the foam square diagonally and cut out a triangle leaving a ¼-inch frame. Adhere the frame to the center of the card above the print/braille label.

Water

Materials:

One metal fishing lure

Assembly Instructions:

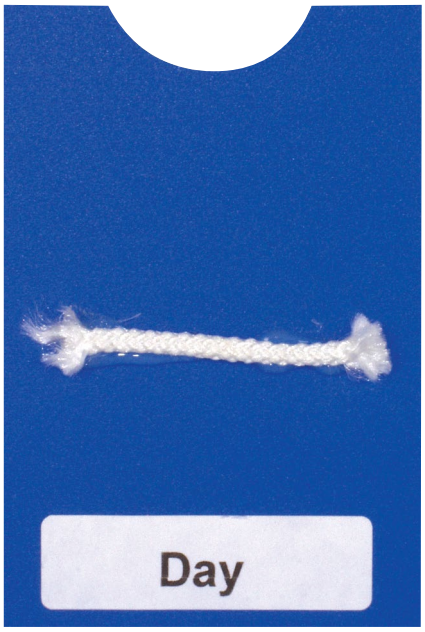
Fill the cavity of the fishing lure with adhesive and place in the center of the card above the print/braille label. The fishing lure should be positioned in a way that forms a tear-drop shape.

Contracted Braille

⠠⠺

Uncontracted Braille

⠠⠺⠁⠞⠻



Contracted Braille

⠙⠁⠽

Uncontracted Braille

⠙⠁⠽

Day

Materials:

A piece of 1/8-inch wide rope or shoelace cut approximately 1¾-inches long

Assembly Instructions:

Apply glue to the complete length of the rope. Be sure to apply enough glue at the ends of the rope to prevent unraveling. Center the rope horizontally on the mounting card above the print/braille label.

Sunday

Materials:

Same rope as for "DAY" symbol; a ¾-inch colorful, plastic rhinestone star obtained from a craft store

Assembly Instructions:

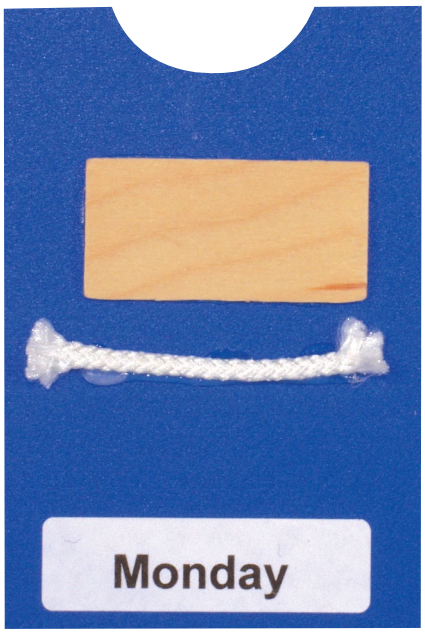
Position and adhere rope as in "DAY" card. Center and adhere star above the rope.

Contracted Braille

⠠⠎⠥⠝⠙⠁⠽

Uncontracted Braille

⠠⠎⠥⠝⠙⠁⠽



Contracted Braille

⠍⠙⠁⠽

Uncontracted Braille

⠍⠕⠝⠙⠁⠽

Monday

Materials:

Same rope as for "DAY" symbol; 1½-inches by ¾-inch piece of thin wood available from craft store

Assembly Instructions:

Position and adhere rope as in "DAY" card. Center and adhere the wood above the rope.

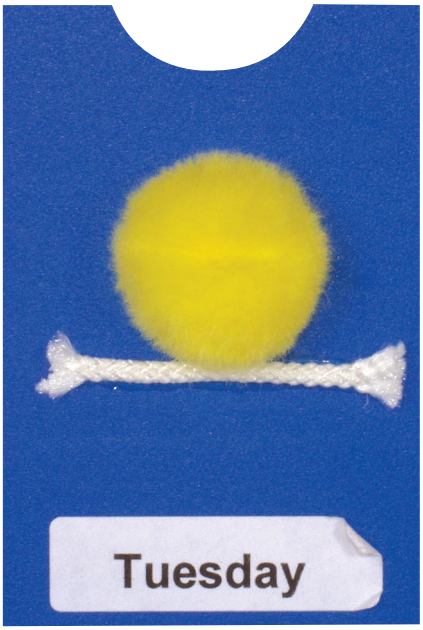
Tuesday

Materials:

Same rope as for "DAY" symbol; one brightly colored, 1-inch diameter pompom from a craft store

Assembly Instructions:

Position and adhere rope as in "DAY" card. Center and adhere pompom above the rope.

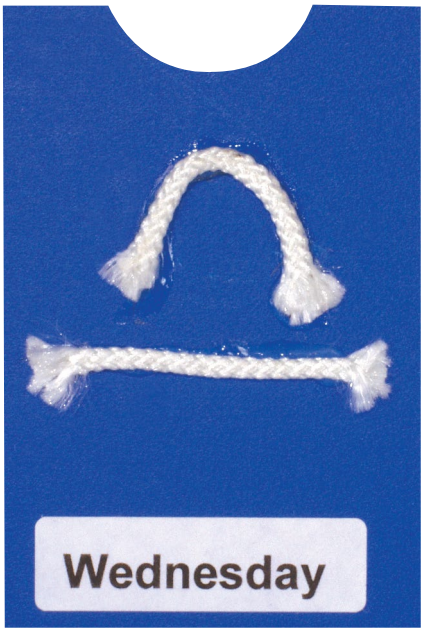


Contracted Braille

⠠⠞⠥⠑⠎⠙⠁⠽

Uncontracted Braille

⠠⠞⠥⠑⠎⠙⠁⠽



Contracted Braille

⠠⠺⠻

Uncontracted Braille

⠠⠺⠑⠙⠝⠑⠎⠙⠁⠽

Wednesday

Materials:

Same rope as for "DAY" symbol; a second piece of the same rope cut approximately 2-inches long.

Assembly Instructions:

Position and adhere rope as in "DAY" card. Bend the second piece of rope to form a hump-like ("Hump Day") shape and adhere it above the horizontal rope.

Thursday

Materials:

Same rope as for “DAY” symbol; a 2-inch by 1½-inch piece of Dycem® (non-skid shelf liner)

Assembly Instructions:

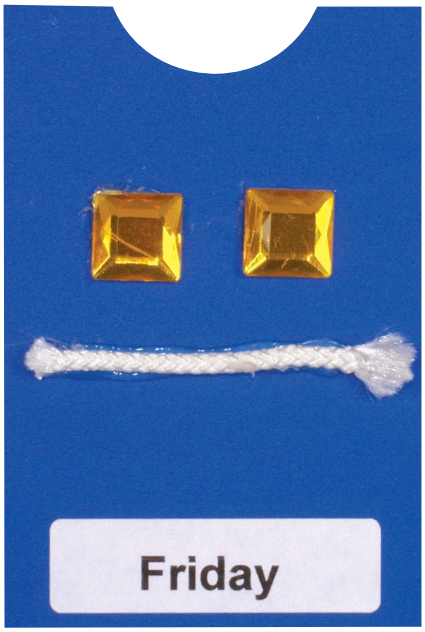
Position and adhere rope as in “DAY” card. Center and adhere the Dycem shape above the rope.

Contracted Braille

⠠⠹⠥⠗⠎⠐⠙

Uncontracted Braille

⠠⠞⠓⠥⠗⠎⠙⠁⠽



Contracted Braille

⠠⠋⠗⠊⠙⠁⠽

Uncontracted Braille

⠠⠋⠗⠊⠙⠁⠽

Friday

Materials:

Same rope as for “DAY” symbol; two plastic rhinestone squares

Assembly Instructions:

Position and adhere rope as in “DAY” card. Leaving a small gap between the squares, adhere them side by side above the rope.

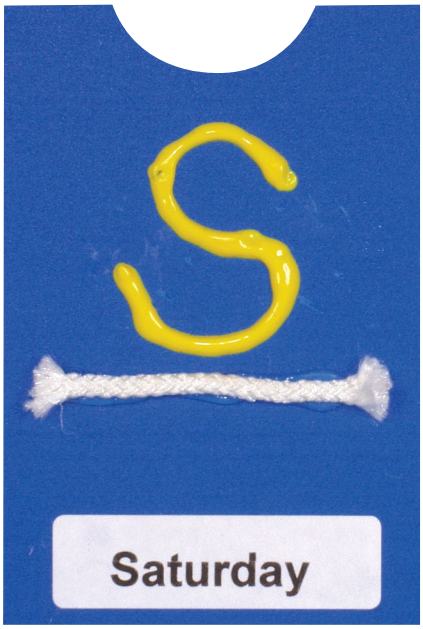
Saturday

Materials:

Same rope as for "DAY" symbol; a contrasting color of puff paint from craft store

Assembly Instructions:

Position and adhere rope as in "DAY" card. Draw the letter "S" with puff paint above the rope.

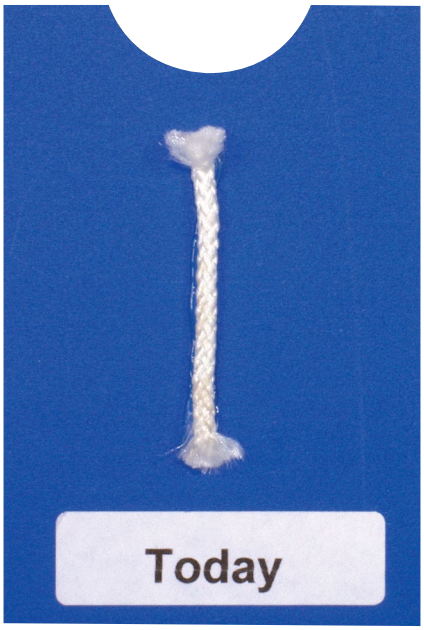


Contracted Braille

⠎⠁⠞

Uncontracted Braille

⠎⠁⠞⠥⠗⠙⠁⠽



Contracted Braille

⠠⠞

Uncontracted Braille

⠠⠞⠕⠙⠁⠽

Today

Materials:

Same rope as used for "DAY" symbol

Assembly Instructions:

Center and adhere the rope VERTICALLY in the center of the card above the print/braille label.

Yesterday

Materials:

Same as “TODAY” symbol; one colorful plastic rhinestone star from a craft store

Assembly Instructions:

Adhere the star to the LEFT of the vertically positioned rope above the print/braille label.

Contracted Braille

⠠⠽⠑⠎⠞⠻⠙⠁⠽

Uncontracted Braille

⠠⠽⠑⠎⠞⠻⠙⠁⠽

Contracted Braille

⠠⠞

Uncontracted Braille

⠠⠞⠕⠍⠕⠗⠗⠕⠺

Tomorrow

Materials:

Same as “TODAY” symbol; one colorful plastic rhinestone star from a craft store

Assembly Instructions:

Adhere the star to the RIGHT of the vertically positioned rope above the print/braille label.

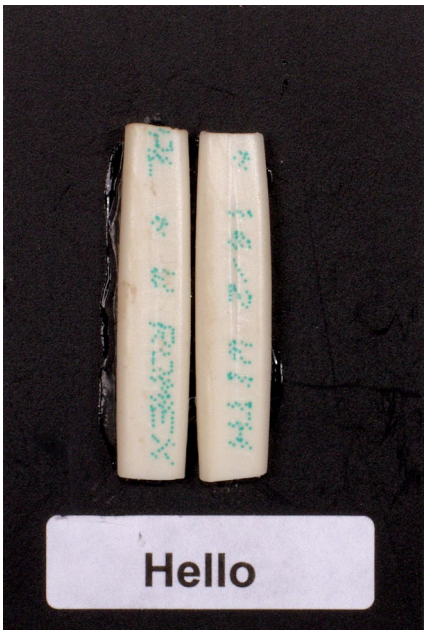
Hello

Materials:

White rubber casing for insulated wires, large rubber bands, or nylon cable ties, approximately 4-inches long and 3/8-inch wide

Assembly Instructions:

Leaving a small gap between them, center and adhere the rubber pieces vertically and above the print/braille label.

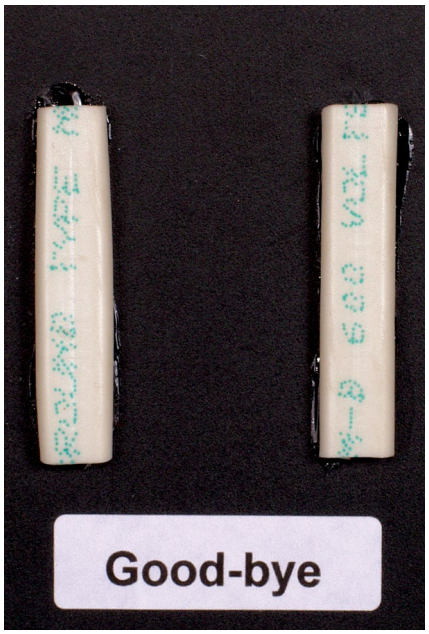


Contracted Braille

⠓⠑⠇⠇⠕

Uncontracted Braille

⠓⠑⠇⠇⠕



Goodbye

Materials:

White rubber casing for insulated wires, large rubber bands, or nylon cable ties approximately 4-inches long and 3/8-inch wide

Assembly Instructions:

Adhere the rubber pieces close to the vertical edges of the card and above the print/braille label.

Contracted Braille

⠠⠛⠕⠕⠙⠤⠃⠽⠑

Uncontracted Braille

⠠⠛⠕⠕⠙⠤⠃⠽⠑

Yes

Materials:

Yellow jumbo pipe cleaner

Assembly Instructions:

Make a circle large enough to fit on the card. Twist the two ends of the pipe cleaner together making sure the sharp edges are underneath. Adhere to the center of the card above the print/ braille label.

Contracted Braille

⠠⠽⠑⠎

Uncontracted Braille

⠠⠽⠑⠎

Contracted Braille

⠠⠝

Uncontracted Braille

⠠⠝⠕

No

Materials:

Red jumbo pipe cleaner

Assembly Instructions:

Form a large circle similar in size to that used in “YES.” Twist the two ends of pipe cleaner together making sure the sharp edges are underneath and not exposed. Attach a piece of pipe cleaner diagonally within the circle to form the international symbol for “NO.” The two ends of the diagonal piece should be turned under to avoid sharp edges. Adhere the symbol to the card above the print/braille label.

Cancel

Materials:

Puff paint that contrasts with black background.

Assembly Instructions:

Using the puff paint, form a large "X" in the middle of the card above the print/braille label.

Tip:

To give the "X" added texture and visual interest, shake glitter on top of the paint and let dry.

Contracted Braille

⠠⠉

Uncontracted Braille

⠠⠉⠁⠝⠉⠑⠇

Contracted Braille

⠠⠉⠓⠕⠕⠎⠑

Uncontracted Braille

⠠⠉⠓⠕⠕⠎⠑

Choose

Materials:

Red and yellow jumbo pipe cleaners

Assembly Instructions:

Make miniature (approximately 1-inch in diameter) versions of "YES" and "NO" shapes using yellow and red pipe cleaners. Center and adhere the pipe cleaner shapes side by side on the card above the print/braille label.

Finished

Materials:

A pre-made miniature cardboard box obtained from a craft store.

Assembly Instructions:

Adhere opened box above the print/braille label.

Contracted Braille

⠠⠋⠊⠝⠊⠎⠓⠫

Uncontracted Braille

⠠⠋⠊⠝⠊⠎⠓⠫

Contracted Braille

⠠⠓

Uncontracted Braille

⠠⠓

Help

Materials:

Piece of medium-grade sandpaper

Assembly Instructions:

Cut the sandpaper into a plus sign approximately 1½-inches square. Center and adhere the sandpaper shape above the print/braille label.

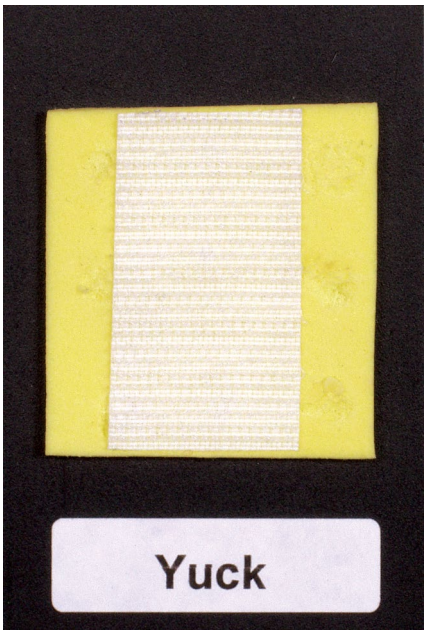
Yuck

Materials:

Hook (rough) piece and square piece of yellow craft foam

Assembly Instructions:

Center and adhere the foam square to the card above the print/braille label. Adhere the hook (rough) piece on top of the foam square.



Contracted Braille

⠽⠥⠉⠅

Uncontracted Braille

⠽⠥⠉⠅

Birthday

Materials:

Ribbon for gift wrapping (any type); APH card with pre-drilled holes

Assembly Instructions:

Thread the ribbon from the backside of the card so that the two ends can be tied into a bow on the front of the card. Fluff or curl the ribbon as needed.

Contracted Braille

⠠⠃⠊⠗⠞⠓⠙⠁⠽

Uncontracted Braille

⠠⠃⠊⠗⠞⠓⠙⠁⠽

Hot

Materials:

Yellow craft foam; red craft foam

Assembly Instructions:

Cut a red triangle to fit the size of the card and adhere to the center of the card above the print/braille label. Cut a yellow triangle, ¼-inch smaller than the red triangle. Cut another red triangle ¼-inch smaller than the yellow triangle. Adhere one on top of the other. The resulting symbol should be layered in appearance.

Contracted Braille

⠠⠓

Uncontracted Braille

⠠⠓⠕⠞

Contracted Braille

⠉⠕⠇⠙

Uncontracted Braille

⠉⠕⠇⠙

Cold

Materials:

Craft foam circle approximately 1½-inches in diameter in a contrasting color, but different from those used for "HOT;" aluminum foil

Assembly Instructions:

Adhere the foam circle to the center of the card above the print/braille label. Squeeze and press the aluminum foil into a flat circle approximately ¼-inch smaller than the foam circle. Adhere the foil circle on top of the foam circle.

Happy

Materials:

Two decorative iridescent pebbles (like those used to fill glass flower vases) or decorative buttons; one red jumbo pipe cleaner

Assembly Instructions:

Adhere the pebbles side by side forming the eyes in the upper portion of the card. Bend the pipe cleaner into a smile to fit the card and cut off the excess. Turn the two cut ends under to avoid sharp edges. Adhere the mouth below the eyes and above the print/braille label.

Contracted Braille

⠠⠓⠁⠏⠏⠽

Uncontracted Braille

⠠⠓⠁⠏⠏⠽

Contracted Braille

⠎⠁⠙

Uncontracted Braille

⠎⠁⠙

Sad

Materials:

One piece of medium grade sandpaper; one red jumbo pipe cleaner

Assembly Instructions:

Cut two circles (eyes) out of the sandpaper and adhere in the upper portion of the card. Bend the pipe cleaner into a frown to fit the card and cut off the excess. Turn the two cut ends under to avoid sharp edges. Adhere the mouth below the eyes and above the print/braille label.

Sick

Materials:

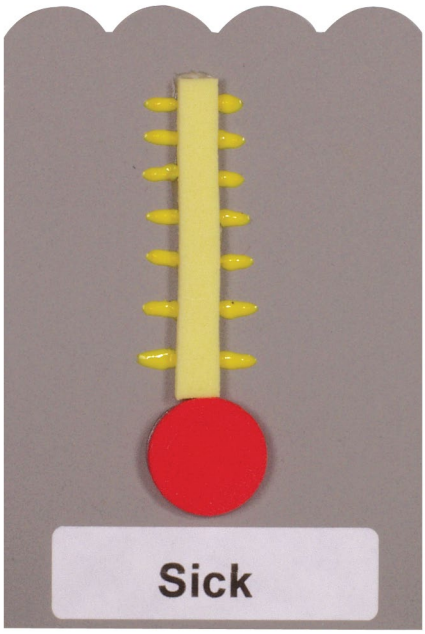
One yellow strip of craft foam about 1¾-inch by ¼-inch; red foam paper circle about the size of a dime; yellow puff paint

Assembly Instructions:

Adhere the red circle just above the print/braille label. Adhere the yellow foam strip above the red circle forming a vertical "mercury column." Use the puff paint to draw degree lines, about seven on each side with ¼-inch gaps between them, on both sides of the "thermometer."

Tip:

Craft stores sometimes have small bags of pre-cut foam shapes in a variety of colors and designs.

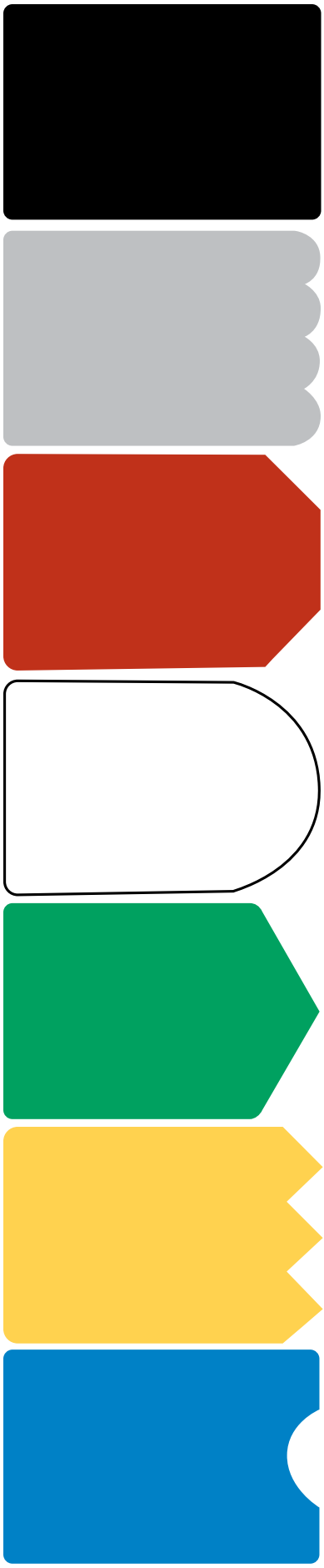


Contracted Braille

⠠⠎⠊⠉⠅

Uncontracted Braille

⠠⠎⠊⠉⠅



Core Vocabulary

Introducing Core Vocabulary to Your Learners

As part of Project Core (https://project-core.com) at the Center for Literacy & Disability Studies at the University of North Carolina at Chapel Hill, four words from the 36 words in the universal core vocabulary were selected as a starting place for learners who required tactile symbols. In Project Core, these four words (go, like, not, want) were represented by tactile symbols that were printed as whole symbols on a 3-D printer. As part of this update to Tactile Connections, tactile representations of five words from the universal core have been incorporated into the card system by way of APH's Tactile Graphics Image Library (aph.org/an-inside-look-at-the-tgil/). Now, teams can create cards that include these words as part of their Tactile Connections system of symbols. The Project Core team suggests mounting the symbols on backgrounds that reflect their most common usage and then teach flexibility in the use of the words along the way.

If you do not have access to a 3-D printer, you can still create core vocabulary tactile communication cards using available materials. If your learner is best served using the standardized approach and your school, school district, or state does not have one established, consider accessing the files on the Project Core website and match your crafted symbol as best you can. If a standardized system is established already in your area, you may wish to follow it.

Go

Materials:

Contrasting color adhesive label (1.5 x 2.5 inches), textured green adhesive material

Assembly Instructions:

Position the adhesive label in the upper two-thirds of the card and trim the side edges. Cut an arrow shape out of the textured material and press it onto the center of the adhesive label.

3-D Specifications:

Triangle (2” equilateral x 1/8” high) with dental edging

- front: arrow (1/16” to 1/8” high), braille ⠛⠕ or ⠛
- back: 20 pt. go incised

Assembly Instructions:

Adhere to card using two-sided tape, covering the back as much as possible. Press firmly.

Like

Materials:

Contrasting color adhesive label (1.5 x 2.5 inches), fashion paint or Feel 'n Peel smiley face sticker

Assembly Instructions:

Position the label in the upper two-thirds of the card and adhere a smiley face sticker onto it or paint a smiley face.

3-D Specifications:

Triangle (2" equilateral x 1/8" high) with dental edging

- front: four ripples/humps (1/16" to 1/8" high), braille ⠇⠊⠅⠑ or ⠇
- back: 20 pt. like incised

Assembly Instructions:

Adhere to card using two-sided tape, covering the back as much as possible. Press firmly.

Want

Materials:

Contrasting textured self-adhesive material, any shaped bead, cord, masking/duct tape

Assembly Instructions:

String the bead onto the cord and thread each end through a hole in the card, tie at the back. Cut a ¼ x 2.5-inch strip from the textured material and press it on the card just below the bead. Tape all cord flat on back.

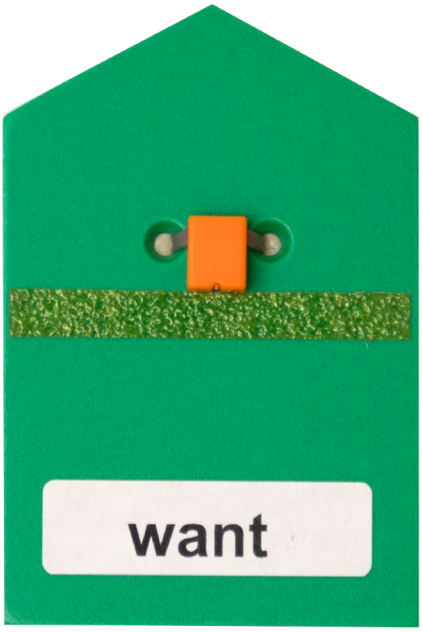
3-D Specifications:

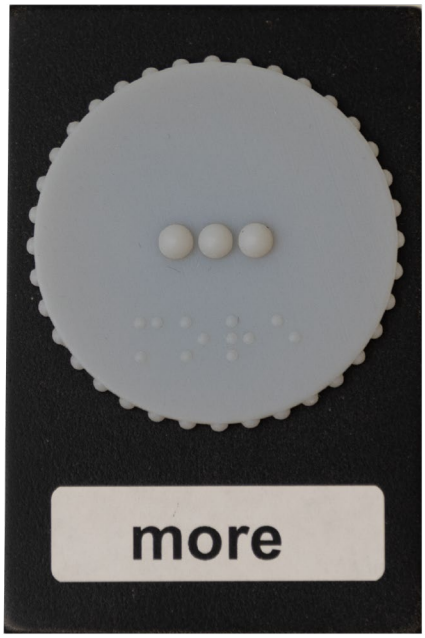
Triangle (2” equilateral x 1/8” high) with dental edging

- front: shelf symbol (1/16” to 1/8” high), braille ⠺⠁⠝⠞
- back: 20 pt. want incised

Assembly Instructions:

Use two-sided tape to attach to the card. Press firmly.





More

Materials:

Three Pony beads (single color or mixed), cord (4 inches), masking/ duct tape. Optional: self-adhesive label for contrast.

Assembly Instructions:

String the three beads onto the cord and thread each end of cord through a hole in the card, tying tightly at the back. Tape all cord flat on back.

3-D Specifications:

Circle (2” x 1/8” high) with semicircle edging

- front: three dome posts (1/8 x 1/4” high), braille ⠍⠕⠗⠑ or ⠍
- back: 20 pt. more incised

Assembly Instructions:

Use two-sided tape to attach to the card. Press firmly.

Not

Materials:

White or other contrasting color adhesive material, such as smooth or textured plastic, foam sheet, or thick fabric.

Assembly Instructions:

Cut out the letter "X" from the adhesive material. Position and adhere the symbol to the upper two-thirds of the card.

3-D Specifications:

Circle (2" x 1/8" high) with semicircle edging

- front: X symbol (1/8" high), braille ⠭⠊⠎ or ⠭
- back: 20 pt. not incised

Assembly Instructions:

Adhere to card using two-sided tape, covering the back as much as possible. Press firmly.

Appendix

Sample Cards from Field Test Sites

Throughout this section is a sampling of actual tactile cards constructed by a few participating field test sites. These cards reflect the philosophy stressed in the guidebook that encourages the individuality of each learner's visual and tactual needs. Again, the Pictorial Library provides a starting point, and not a recipe, for tactile card creation. Use your own expertise and the unique learning style of your learners to build ideal communication systems.

Cards from California School for the Blind

1. bathroom bucket
2. brush teeth (10x)
3. mattress
4. milk
5. playground
6. ride bike
7. swim diaper
8. wagon ride

Cards from Tennessee School for the Blind

1. eat
2. play music
3. school
4. take medicine

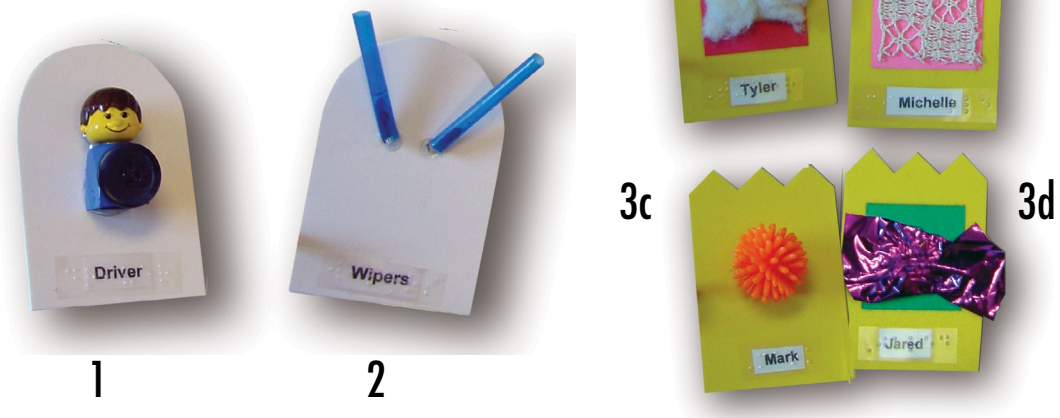
5a-5c. work (3 triangle work symbols)

1 2 3 4 5a 5b 5c

Cards from Perkins School for the Blind

1. driver
2. wipers

3a-3d. personal name cards for students



1 2 3a 3b 3c 3d

Cards from Home of the Innocents

1. ball pit
2. coloring

1 2

Additional Reading

Blaha, R. (2001). *Calendars for students with multiple impairments including deafblindness.* Austin, TX: Texas School for the Blind and Visually Impaired.

Blischak, D.M. (1995). Thomas the writer: Case study of a child with severe physical, speech, and visual impairments. *Language, Speech, and Hearing Services in Schools*, *26*(1), 11-10.

Brughera, A.R., Dlehorne, L.A., Durlach, N.I., Hall, S.M., Luongo, E., Plant, G. L., et al. (n.d.). *Tactile communication of speech* (RLE Project Report No 142). Cambridge, MA: Massachusetts Institute of Technology, Research Laboratory of Electronics. Retrieved May 15, 2002, from http://rieweb.mit.edu/Publications/pr142/reed142.pdf.

Cress, C.J., Mathy-Laiko, P., & Angelo, J. (1989). *Augmentative communication for children with deaf-blindness: Guidelines for decision-making.* (Report No. 300-83-0237). Monmouth, OR: Office of Special Education and Rehabilitation Services. (ERIC Document Reproduction Service No. ED328005).

Goldware, M., & Silver, M. (1998, March). *AAC strategies for young children with vision impairment and multiple disabilities.* Paper presented at the CSUN Conference, Los Angeles, CA. Retrieved May 3, 2002, from cod.csun.edu/conf/1998/proceedings/csun98135.htm

Gray, C. (2000). *Writing social stories with Carol Gray.* Arlington, TX: Future Horizons, Inc.

Hagood, L. (1992, July). *A standard tactile symbol system: Graphic language for individuals who are blind and unable to learn braille.* P. S. News. Retrieved April 29, 2002, fromtsbvi.edu/outreach/seehear/archive/tactile.html

Heller, K.W., Alberto, P.A., & Bowdin, J. (1995). Interactions of communication partners and students who are deaf-blind: A model. *Journal of Visual Impairment & Blindness, 89*(5), 391-401.

Heller, K.W., Ware, S., Allgood, M.H., & Castelle, M. (1994). Use of dual communication boards with students who are deaf-blind. *Journal of Visual Impairment & Blindness, 88*(4), 368-376.

Mirenda, P. (1999). Augmentative and alternative communication techniques. In Downing, J.E. (Ed.), *Teaching communication skills to students with severe disabilities* (pp. 119-138). Maryland, PA: Paul H. Bookes Publishing Co., Inc.

Mirenda, P., & Locke, P.A. (1989). Comparison of symbol transparency in nonspeaking persons with intellectual disabilities. *Journal of Speech and Hearing Disabilities*, *54*(2), 131-140.

Murray-Branch, J., Udavari-Soiner, A., & Bailey, B. (1991). Textured communication systems for individuals with severe intellectual and dual sensory

impairments. *Language, Speech, and Hearing Services in Schools, 22*(1), 260-268.

Rowland, C., & Schweigert, P. (2000). *Tangible symbol systems (second edition), making the right to communicate a reality for individuals with severe disabilities.* Oregon: Design To Learn.

Smith, M., & Levack, N. (1996). *Teaching students with visual and multiple impairments: A resource guide.* Austin, TX: Texas School for the Blind and Visually Impaired.

Tactile colour in augmentative communication. (n.d.). Retrieved April 15, 2002, from http://ww.tactile.org/Tactile%20Manual.html

Texas School for the Blind and Visually Impaired (2001, September). *Tactile symbols directory to standard tactile symbol list.* Retrieved May 15, 2002, from tsbvi.edu/Education/vmi/tactilesymbols.htm

Tactile Connections:
Symbols for Communication

Kit Catalog Number: 1-08837-00
Large Print Guidebook: 7-08837-00

1839 Frankfort Avenue
Louisville, Kentucky 40206
502-895-2405 • 800-223-1839
aph.org • info@aph.org