

Warm Up Activities

Tickle Touch

Children who are familiar with the Perkins Braille Writer are used to pushing hard on the manual braille writer keys in order to produce solid braille dots. However, the iPad responds best to a gentle, quick touch. Before asking the child to create the desired gesture, introduce the “tickle touch”.

How to Teach the Tickle Touch

1. With the child’s permission, lightly brush your index finger along their arm in small, half-inch movements while whispering about a **feather-soft tickle touch**.
2. Have the child practice making a tickle touch on their own arm and then on the tabletop.
3. Compare the firm pressure needed for a Braille with the gentle touch required for an iPad.
4. Model the tickle touch often and use it as a warm-up activity before each lesson to build muscle memory.

Coin Hockey Drag

This is a fun game to help teach the drag gesture.

After learning about straight lines or spatial concepts, the Coin Hockey Drag game can be modified to include more advanced dragging skills such as dragging in a straight line and spatial concepts.

Materials

- Metal baking sheet (raised edges create a defined space and produce sound feedback).
- Coin (used as a hockey puck).

How to Play

The goal of the game is to “score” by dragging the hockey puck (coin) until it hits the short end of the baking sheet.

Drag Anywhere:

1. Place the baking sheet on the table in landscape position.
2. Have the child place their finger on the coin and drag it to the goal.
 - a. The coin and the goal can be placed anywhere on the baking sheet.

Drag in a Straight Line:

1. Follow the top edge of the baking sheet to drag the coin in a straight line to the right.
2. Place the coin in the top left corner of the baking sheet.
3. Place the goal in the top right corner of the baking sheet.
4. Follow the top edge of the baking sheet to drag in a straight line from left to right.

5. Practice dragging in a straight line without an edge: Start halfway down the left edge of the baking sheet and drag too the goal that is halfway down the right edge.
6. Repeat the activity starting from the bottom left corner and following the bottom edge to the bottom right corner.
7. Repeat activities dragging from right to left.

Spatial Concepts:

1. Switch goal locations to encourage dragging in different directions (top, middle bottom, right, left, corners).
2. Switch starting locations (top, bottom, right, left, corners)
3. Try starting from the middle to strengthen mental mapping.

Straight Line Activities

Practicing straight-line tracing helps reinforce spatial awareness.

How to Practice

- Use a variety of tactile lines (Braille dots, masking tape, dried glue, or puff paint).
- Have the child trace along the edge of a table or book.
- Transition to the iPad by tracing the top edge of the screen.
- Use a Wikki Stix guide on the iPad screen to encourage straight-line dragging.

Note: Tactile activities are for initial learning only. Once the child understands straight-line movement, transition to listening for sonified lines instead of relying on tactile cues.

Hide and Seek (Spatial Concept Game)

Materials

- 3-shelf bookshelf
- Favorite toy

How to Play

1. Place the toy on one of three shelves (top, middle, or bottom).
2. Give the child a clue using spatial terms and ask the child to find the toy.
3. Encourage the child to systematically search along the desired shelf, starting on the left and moving the hands to the right.
4. Encourage the child to describe the toy's location after finding it.
5. Progress to two-part directions (e.g., "Find the truck on the top shelf, left side").
6. Let the child hide the toy and give you verbal directions to find it!

Hot and Cold (Directional Feedback Game)

This game reinforces **left/right** concepts.

How to Play

1. Quietly place a toy on a desk or small table without giving the child a sound clue.
2. Ask the child to find the toy, giving left/right verbal clues instead of "hot" and "cold."
3. As the child moves toward the toy, say the direction faster/louder.
4. As they move away, say the direction slower/quieter.
5. Introduce additional cues like top, bottom, and corners.

If the child can reach all four corners of the table, teach "corners" as spatial locations.

Two-Dimensional Hide and Seek or Hot and Cold

This expands spatial awareness from 3D (real objects) to 2D (paper or tactile boards).

Materials

- Small magnetic board, foam board, or baking sheet
 - The child should be able to easily reach all four corners.
- Tactile sticker or tactile shape

How to Play

1. Guide the child in exploring the edges and corners of the board.
2. Quietly place tactile shape on the board along the edge or corner.
3. Ask the child to find it.
4. Give verbal Hide and Seek (spatial terms) cues to find the object.
5. Have the child quickly tap the correct location upon finding it.
6. Instead of physically placing an object, transition to simply calling out a spatial term and have the child quickly tap that area of the board.
 - a. Encourage light tapping to prevent habits that could damage an iPad screen.

Squigz Spatial Game

Squigz are colorful suction-cup toys that make a fun "pop" sound when pulled off a surface.

How to Play

1. Place a Squigz toy on the iPad screen.
2. Encourage the child to systematically search for it by dragging one finger.
3. Once located, have them pull it to hear the "pop" sound.
4. Use verbal spatial directions to guide them (e.g., "Find the Squigz in the bottom-left corner").
5. Transition to having the child name where the Squigz is located.

Bonus: Pulling off Squigz also improves finger strength and motor coordination!

[Squigz](#) toys come in different sizes and shapes and can be found on Amazon in a variety of packages.

Resource: [Squigz: Toy to Promote Improvement of Developmental Skills and Independence](#) (includes video).

Tactile Models

Tactile models of the iPad's screen help children understand screen layouts, especially for children who are developing spatial awareness and building mental maps.

How to Create a Tactile Model for tabletop exploration

- Use sticky-backed foam shapes to represent icons, buttons or items on the screen.
- Use graphic art tape or Wikki Stix to outline menus or lines.
- Secure the model to the tabletop for hands-on review before using the iPad.

Using Tactile Overlays on an iPad

Some tactile images can be used as tactile overlays, allowing a child to touch the model while interacting with the iPad screen.

Key Considerations for Tactile Overlays

- Sonified lines will NOT work if the overlay is too thick, as this can interfere with the iPad's ability to detect touch.
 - Example: Puff paint creates a thick tactile line.
- Graphic art tape (Washi tape) on paper works well as a thin, functional overlay.
- A tactile overlay allows the child to explore the screen tactually while listening to VoiceOver announcements.
- Use painter's tape to secure the overlay to the iPad—it will not leave sticky residue.

When to Use and Remove Tactile Overlays

- Use overlays only for initial learning to help the child understand screen layouts.
- Quickly transition away from overlays as the child gains confidence in spatial awareness and navigation.
- Overlays should be limited to early-stage training and not relied upon long-term.

Resource: [Tactile to Digital Part 3: Creating a Tactile Overlay on the Go! post](#) (includes video demonstration)

Tactile Lines Activity

Straight-line dragging is a pre-reading skill for both braille and print readers.

How to Make a Tactile Worksheet (Non-Digital Activity)

1. Place a strip of graphic art tape (Washi tape) in a straight line on a sheet of paper.
 - a. Tape comes in multiple widths.
 - b. Choose the width that works best for your child – the narrower the better.
2. Add a small foam sticker shape at the end of the line for the child to find and explore by touch.
3. Encourage the child to trace the line to build tactile tracking skills.

How to Make a Tactile iPad Overlay

Prepare the Overlay

- Cut a sheet of paper to match the size of the iPad's touchable screen.
- Take a screenshot of the Teaching Tool lesson by pressing the Home and On/Off buttons simultaneously.
- Place the paper over the screenshot image and use a pencil to trace the digital lines from the screenshot.

Create the Tactile Line

- Stick graphic art tape directly over the pencil-traced lines on the paper.

Use the Overlay on the iPad

- Open a lesson, such as the Sonified Drag Lesson, on the iPad.
- Place the tactile overlay on top of the screen.
- Secure it with two small pieces of painter's tape to keep it from shifting.
 - Painter's tape will not leave a sticky residue on the screen.

Once child understands the layout, remove the tactile overlay to encourage reliance on auditory cues. This shift helps the child develop digital navigation skills by following sonified lines using only auditory feedback.

Resources:

- [Tactile to Digital Part 3: Creating a Tactile Overlay on the Go!](#) (Includes a video on how to create a tactile overlay for the iPad)
- [Graphics Literacy: Tracing Lines](#) (Includes information about tracing activities. Some of the demonstrated activities include tracing wavy or zig-zag lines – these activities can be modified by using straight lines.)

Knuckle Swipe (1-Finger Swipe Gesture)

Often children with visual impairments will initially make the 1-finger swipe gesture by starting high, swooping down, and dragging the finger from the left side of the screen to the right side and take off again - like a bird swooping down and skimming across the water! In reality, the proper swipe gesture should be a half inch (1.25 cm) movement.

How to Teach the 1-Finger Swipe Right Using the Knuckle Swipe Method

Position the Left Hand

- Make a fist with the left hand.
- Extend the left index finger and point it to the right.

Practice the Swipe Motion

- Use the right index finger to quickly swipe from the first knuckle of the left index finger to its tip.
- The movement should be small and controlled.
- Repeat this motion multiple times in quick succession.

Demonstrate Using Hand-Under-Hand Guidance

- Show the child how to perform the swipe.
- Encourage them to imitate the movement using their own hand.

Teach the Left Swipe

- Reverse the process: Start at the tip of the left index finger and swipe left to the first knuckle.
- Have the child repeat the motion.

Tip: Emphasize that a correct swipe is a quick flick, not a drag or swoop.

Coin Hockey SWIPE (1-Finger Swipe Gesture)

The **Coin Hockey Drag game** can be modified to teach swipe gestures in a fun and engaging way.

Materials Needed

- Metal baking sheet with raised edges (provides sound feedback and keeps the coin contained).
- Coin (hockey puck) for swiping practice.

How to Play

The goal of the game is to “score” by **swiping** the hockey puck (coin) so that it hits the short end of the baking sheet.

Set up the game

- Place the baking sheet on the table in landscape position.
- Identify the goal areas at the left and right short edges of the sheet.

Practice the Swipe Gesture

- The child places their finger on the coin.
- They make a quick swipe motion (lifting their finger at the end) to send the coin flying toward the goal.
- The goal can be either the left or right side—be sure to practice swiping in both directions!

Tip: Emphasize that the swipe should be a small, quick flick, not a drag.

Knock-Knock! (1-Finger Double Tap Gesture)

Before introducing the 1-finger double tap gesture on the iPad, use this fun Knock-Knock activity to develop gesture rhythm and muscle memory.

How to Teach the Knock-Knock Gesture

Start with a fist knock

- Using a closed fist, model knocking twice quickly on the table.
- Have the child gently knock twice on the table.
- This helps them hear and feel the rhythm of a quick double tap.

Repeat to build muscle memory

- Ask the child to mirror the two quick knocks with their own fist.
- Repeat until they consistently match the correct rhythm.

Introduce the Whisper Knock

- Model the Whisper Knock by gently double tapping with your index finger.
- Have the child hover their index finger above the table (similar to a light iPad tap).
- Instead of using a fist, they now tap twice quickly with just one finger.

Transfer the skill to the iPad

- Once they master the whisper knock, have them try the same quick 1-finger double tap on the iPad.

Tip: Remind the child that the double tap should be quick and light, just like their whisper knock!

EXPANDED Coin Hockey (With Mental Mapping)

This variation of **Coin Hockey** encourages mental mapping while practicing dragging to a desired location.

This game works best on a metal baking sheet with raised edges; the metal makes a fun sound when the coin hits it; the raised edges define the space and contain the coin.

How to Play

1. Place a goal marker on the cookie sheet.
2. Have the child drag their finger to locate the goal before starting.
3. Begin with the coin in the center, then drag it toward the goal.
4. Switch up the goal locations and say the goal location so that the child must remember where the goal is and then drag to it (top, bottom, right, left or corners) of the cookie sheet!
 - a. To develop mental mapping, place goals in various locations using different shaped goal markers. (Foam sticker shapes work well for goal markers.)
 - b. Ask the child to name the location of the desired sticker before finding it!

Tactile Rows Activity (Modify for Tactile Columns Activity)

Children first learn to drag a finger in a straight horizontal line across the iPad screen using sonification and/or tactile overlays. Once they can do this successfully, the next step is to understand the concept of a row.

Step 1: Introducing Rows with Physical Objects

Start with small, engaging objects that interest the child, such as:

- Toy cars
- Counting blocks
- Large beads
- Favorite snacks (cookies, cereal pieces)

Activities

1. Arrange 5-6 items in a row.
2. Use hand-under-hand guidance to demonstrate tracing over the items in a row.
3. Initially, allow the child to lightly drag over the top of the objects (ensuring they don't move).
4. Reinforce the concept by saying:
 - “We are moving from left to right.”
 - “These objects are lined up in a row.”

Encourage the child to trace the row independently!

Step 2: Adding a Tactile Line

The goal is to trace the line below the objects.

- Place a tactile line (graphic art tape, Wikki Stix, or raised lines) below the objects.

- Explain that the items sit on the line in a row from left to right.
- Ask the child to trace along the tactile line while following the row of objects.

Step 3: Placing and Counting Objects

- Have the **child** place objects along the tactile line.
- Encourage them to trace the line.
- Repeat tracing and count each item in the row as they move from left to right.

Step 4: Introducing Multiple Rows

- Once the child understands a single row, introduce multiple rows of objects.
- Let the child explore the rows and practice finding the beginning of the next row. before moving on to grid concepts.

Do NOT introduce columns yet. Focus on rows first, using VoiceOver Playground lessons and iPad games to reinforce the concept.

Multiple rows and columns will later lead to learning about grids.

Resource: [Spatial Tech Standards 2: Rows](#) post

Twist Cap Activity (2-Finger Twist)

The 2-finger twist gesture can be physically challenging for young children. Turning a **plastic bottle cap** mimics the 2-finger twist needed for VoiceOver's rotor gesture.

Practicing the Twist Motion Using a Bottle Cap

This activity helps children develop finger dexterity and coordination needed for the 2-finger twist gesture.

- Demonstrate hand-over-hand how to open a twist cap water or soda bottle.
- Exaggerate the motion, ensuring the child uses only their thumb and index finger.
- Practice twisting the cap on and off.
- Introduce "clockwise" and "counterclockwise" terms.
 - Even if the child does not fully understand these terms, they should recognize that twisting different directions is important.
- Have the child practice twisting before applying the motion to the iPad.

Additional Ways to Practice

- Spin a bottle cap:
 - Place the plastic bottle cap upside down on a table.
 - Demonstrate using thumb and index finger to spin it.
 - Encourage the child to try spinning it on their own.
- Use real items with twist knobs:

- Old-fashioned radio dial
- Older washing machine dial
- Combination lock
- The paper feed knob on the Perkin's Braille
- Toy with a twist knob

Viper/Shh! Gesture (2-Finger Tap)

The 2-finger tap gesture pauses/starts VoiceOver speech.

Two Fun Ways to Teach It

- **Shhh! Tap**
 - Gently tap 2-fingers to your lips while whispering "Shhh!" to model the gesture.
 - Ask the child to mimic the "Shhh!" motion.
- **Viper Gesture** – Extend two bent fingers like a snake forked tongue, then strike (quick 2-finger, single tap) forward while making a "sss" sound.

Kids love these associations, making the gesture easier to remember!

Scrolling with a Book (3-Finger Swipe Left/R)

Introduce the concept of scrolling using physical books before teaching 3-finger swipe left/right on an iPad.

How to Teach Scrolling

Use a braille book or create a book with tactile pages by placing different tactile stickers in the bottom right corner of each page to help the child identify pages and the correct position of each page.

- **Book Method:** Have the child scroll through pages from left to right (3-finger swipe left or right).
 - Place a closed book on the table.
 - Ask the child to open the book saying, "Grab the right edge of the cover and pull it to the left."
 - Repeat to turn to the next page.
 - Ask the child to the previous page saying, "Grab the left edge of the paper and pull it to the right."
 - Model movements as needed.

Scrolling with a Calendar (3-Finger Swipe Up/Down)

Introduce the concept of scrolling using a physical calendar before teaching 3-finger swipe up/down on an iPad.

How to Teach Scrolling

Use a braille calendar or create a calendar by placing a different sticker on the bottom right corner of each page to help the child identify pages and the correct position of each page.

- **Calendar Method:** Have the child scroll through pages from top to bottom. (3-finger swipe up or down).
 - Place a closed calendar on the table, with the spiral at the top.
 - Ask the child to open the calendar saying, “Grab the bottom of the page and pull it to the top.”
 - Repeat to turn to the next month.
 - Ask the child to turn to the previous month saying, “Grab the top of the page and pull it to the bottom.”
 - Model movements as needed.
- **Modified Calendar:**
 - If a calendar is not available, take a piece of paper and fold it in half, placing the fold at the top.

This physical movement helps build the concept of **scrolling right/left or up/down** on a touchscreen.