VP-MTS

Practical kit for teaching **VB-MAPP** skills to **autistic children**

AbaTools

Program Overview

The Visual Perception/Matching-to-Sample (VP-MTS) programs are designed to systematically build visual discrimination, attention, and cognitive skills. Each program includes specific mastery criteria, goals, and teaching procedures to guide implementation.

VP/MTS 1: Tracking Moving Objects with Eye Gaze

VP/MTS 2: Using a Pincer Grasp for Small Items

VP/MTS 3: Sustaining Visual Attention to Preferred Materials for a Defined Duration

VP/MTS 4: Manipulating and Organizing Objects in Small Series (stacking, placing in containers or holders)

VP/MTS 5: Correctly Grouping Pairs of Identical Items

VP/MTS 6: Matching Identical Pictures or Objects in Random Arrays

VP/MTS 7: Sorting Items by Color or Shape

VP/MTS 8: Identifying Exact Matches in Complex Arrays with Similar Stimuli

VP/MTS 9: Establishing Correspondence Between Non-Identical Stimuli in Varied Arrangements

VP/MTS 10: Relating 3D Objects to Corresponding 2D Images

VP/MTS 11: Spontaneously Reproducing Observed Graphomotor Actions

VP/MTS 12: Generalizing Correct Choices Among Non-Identical Stimuli in Random Layouts

VP/MTS 13: Completing Structured Activities with Manipulatives (blocks, puzzles, etc.)

VP/MTS 14: Grouping Items into Conceptual Categories Without a Visual Model

VP/MTS 15: Recognizing and Extending Patterns and Logical Sequences

VP/MTS 1 – Tracking Moving Objects with Eye Gaze

Mastery Criterion	The learner tracks a moving stimulus with their eyes for several seconds, consistently across multiple trials.
Program Goal	To strengthen eye–environment coordination, expanding visual tracking and joint attention skills in social and academic contexts.
Discriminative Stimulus (SD)	"Look at this!" while moving the object.
Target Behavior	The child visually follows the trajectory of the moving stimulus.
Prerequisite Skills	Responds to their own name and is able to briefly establish eye contact.

Teaching Procedure

- Position yourself in front of the learner.
- Use a visually salient object (e.g., small flashlight, transparent ball with glitter, wind-up toy car).
- Move the object in different directions, pausing briefly.
- Observe whether the learner follows the movement with their eyes.

Begin with simple horizontal trajectories

Introduce vertical and diagonal movements

Increase speed and alternate between short and long paths

Additional Information

Materials Needed	Dynamic visual items: bubbles, handheld pinwheel, laser pointer (with supervision).
Prompting Strategies	Gestural: pointing in the direction of movement. Verbal: "Look at the airplane going up!" Physical: gently adjusting head position if necessary.
Reinforcement Plan	Varied reinforcers: social praise, brief access to a sound toy, or permission to blow bubbles.
Error Correction	If the child looks away, pause the object, lightly tap the shoulder, and repeat the instruction in an enthusiastic tone.
General Notes	If the learner shows frustration when unable to maintain gaze, reduce the speed or use more predictable movements before progressing.

VP/MTS 2 – Using a Pincer Grasp for Small Objects

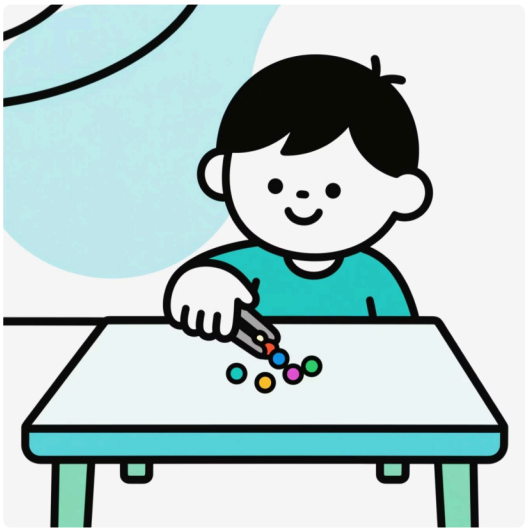
Mastery Criterion	The learner uses the thumb and index finger (with middle finger support if needed) to pick up small objects of varying shapes.
Program Goal	To strengthen fine motor coordination, essential for writing, utensil use, and daily living skills.
Discriminative Stimulus (SD)	"Pick this up."
Target Behavior	The child uses a pincer grasp to hold the object.

Teaching Procedure

- Provide safe small objects (e.g., bottle caps, small playdough balls, large plastic beads).
- Briefly model how to grasp.
- Encourage independent attempts.

Teaching Steps

1. Start with larger objects (e.g., oversized pebbles).
2. Gradually reduce item size.
3. Alternate between right and left hands.



Materials Needed	Items with varied textures: buttons, Velcro pieces, small rubber animals.
Prompting Strategies	Hand-over-hand support initially. Verbal: "Use just these two fingers." Visual: show how peers hold items.
Reinforcement Plan	Each success grants access to a "surprise jar" with a small toy or short song.
Error Correction Procedures	If the child uses the whole palm, the therapist says, "Try just with two fingers," while providing partial physical support.
General Notes	Avoid overly rigid or heavy objects at the start to prevent fatigue and loss of motivation.

Precision

Develops the precise control needed for manipulating small objects

Pre-writing

Builds the foundation for pencil grip and writing skills

Daily Living

Supports independence in tasks like eating and dressing

VP/MTS 3 – Sustaining Visual Attention to Preferred Stimuli for a Defined Duration

Mastery Criterion	The learner maintains gaze on a preferred stimulus (book, toy, or light-based activity) for a continuous period without distraction.
Program Goal	To extend attention span, critical for academic learning and sustained social interactions.
Discriminative Stimulus (SD)	"Look at this for a moment."
Target Behavior	The child maintains visual attention for the specified duration.

Teaching Procedure

- Select a highly motivating material.
- Present it directly in front of the learner and orient their gaze.
- Time progressively longer intervals.

Begin with 5 seconds

Increase gradually to 10, 20 seconds

Progress to 40 seconds

Introduce varied positions (table, floor, shelf)

Materials Needed	Interactive picture books, light-up toys, visual tablet apps.
Prompting Strategies	Gestural: pointing to the item. Verbal: "Look how it shines!" Environmental: dim nearby distractions.
Reinforcement Plan	Immediate praise and access to the item after sustaining attention.
Error Correction Procedures	If the child looks away before the set interval, shorten the duration and reinforce even small progress.
General Notes	Distinguish functional attention from self-stimulatory fixation (e.g., staring excessively at a restricted-interest item). Rotate materials to avoid stereotyped behaviors.

VP/MTS 4 – Manipulating and Organizing Objects in Small Sets

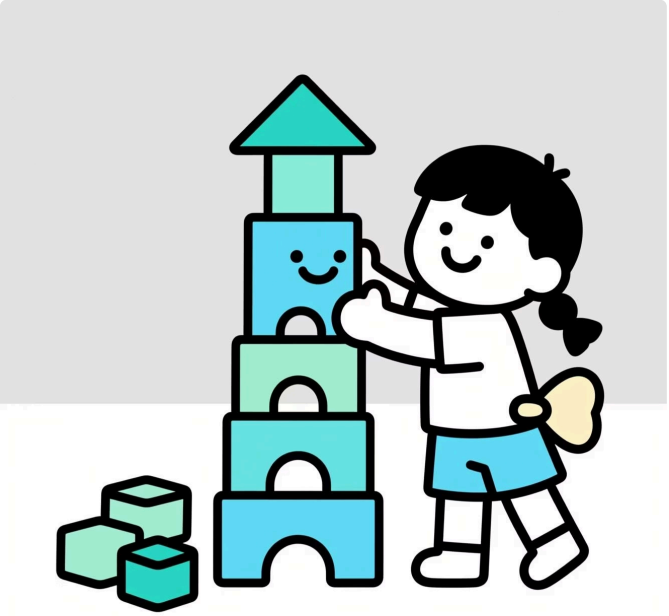
Mastery Criterion	The learner places objects into containers, stacks them, or arranges them onto holders independently and in an organized manner.
Program Goal	To develop motor coordination, spatial organization, and sequencing skills.
Discriminative Stimulus (SD)	"Put it here / Make the tower."
Target Behavior	The child correctly places, stacks, or organizes the objects.

Teaching Procedure

- Use backward chaining (leave the task nearly completed so the learner can finish).
- Gradually fade support until independence is achieved.

Teaching Steps

1. Start with only one piece.
2. Expand to 3–4 items.
3. Introduce different materials (rings, blocks, cups).



Materials Needed	Wooden blocks, plastic rings, spoons with cups.
Prompting Strategies	Gestural: pointing to the placement spot. Physical: guiding the hand lightly. Verbal: "Just one more!"
Reinforcement Plan	Differential reinforcement: access to stacking toys or specific praise.
Error Correction Procedures	If the child places the block incorrectly, reposition it, model again, and invite them to try once more.
General Notes	Varying tasks (stacking, lining up, storing) prevents the skill from being limited to one type of material.

Stacking

Building towers with blocks or cups

Placing

Putting objects into containers or specific locations

Arranging

Organizing items in a specific order or pattern

VP/MTS 5 – Matching Identical Items

Mastery Criterion	The learner identifies and pairs objects or pictures that are exactly the same.
Program Goal	To promote fine visual discrimination and attention to detail, foundational for academic skills such as reading and math.
Discriminative Stimulus (SD)	"Find the one that's the same."
Target Behavior	The child correctly groups identical pairs.

Teaching Procedure

- Present one item to the learner.
- Provide two or more options on the table.
- Instruct the learner to place the item next to its identical match.

Begin with 2 pairs

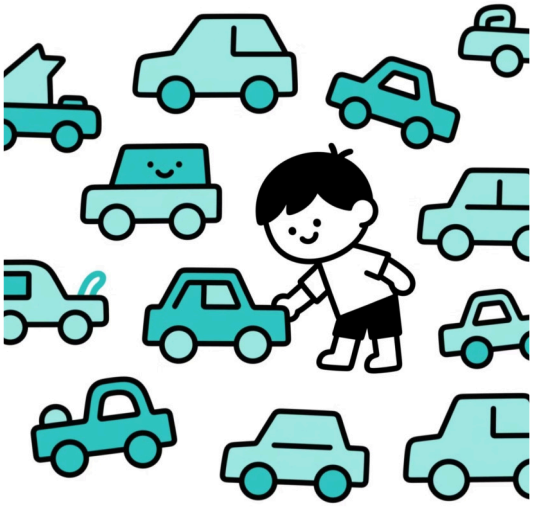
Progress to 5 pairs

Expand to larger sets across varied contexts

Materials Needed	Animal picture cards, memory game pieces, small everyday items (toy spoon, toy key, mini brush).
Prompting Strategies	Gestural: pointing to the correct match. Verbal: "Which one is the same as this?" Physical: gently guiding the hand during early trials.
Reinforcement Plan	Use social praise ("Great job, you found the match!") and access to a brief preferred activity.
Error Correction Procedures	If the child places the item incorrectly, the therapist says: "That doesn't match, look again," and gives another trial with minimal prompting.
General Notes	For learners with difficulty noticing details, vary size, color, and item position before increasing complexity.

VP/MTS 6 – Matching Identical Pictures or Objects in Random Arrays

Mastery Criterion	The learner locates and correctly matches identical stimuli within an unstructured array of multiple items.
Program Goal	To strengthen visual discrimination, attentional focus, and the ability to manage less predictable environments.
Discriminative Stimulus (SD)	"Find the one that's the same."
Target Behavior	The child identifies and matches identical stimuli even when placed irregularly.



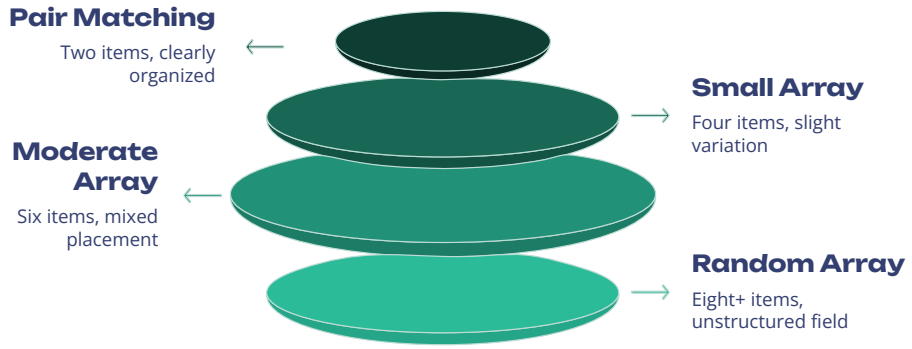
Teaching Procedure

- Arrange items in a disorganized array.
- Provide a model item and instruct the learner to find its match.
- Gradually increase the number of stimuli presented.

Teaching Steps

1. Start with 3 options.
2. Increase to 6.
3. Progress to larger, varied arrays.

Materials Needed	Fruit picture cards, miniature vehicles, identical colored blocks.
Prompting Strategies	Gestural: subtly pointing toward the correct group. Verbal: "Look carefully, which one is exactly the same?" Physical: guide the hand only in initial attempts.
Reinforcement Plan	Immediate reinforcement with praise ("You found it quickly!") or a few seconds of access to a preferred game.
Error Correction Procedures	If the child selects incorrectly, the therapist models the correct comparison: "Look, this is the same picture. See the details?" and provides another chance.
General Notes	Avoid overly large arrays at first to reduce cognitive overload. Gradual increases prevent frustration.



VP/MTS 7 – Sorting Items by Color or Shape

Mastery Criterion	The learner organizes materials according to color or shape.
Program Goal	To develop basic categorization skills, foundational for early reading and math.
Discriminative Stimulus (SD)	"Put each one with the same color."
Target Behavior	The child sorts objects by color or shape.

Teaching Procedure

- Present visual models of colors or shapes.
- Instruct the learner to group new items by the criterion.
- Vary contexts and gradually increase quantity.

Begin with two primary colors

Expand to three or more colors

Introduce basic geometric shapes

Progress to more complex shapes

Materials Needed	Colored plastic cups, LEGO pieces sorted by shape, geometric shape cards.
Prompting Strategies	Gestural: pointing to the correct pile. Verbal: "Which one does this go with?" Visual: place one sample in the correct group as a model.
Reinforcement Plan	Provide choice-based reinforcers, such as letting the child play with the completed category.
Error Correction Procedures	If sorted incorrectly, the therapist asks: "Look closely at the color—is it the same?" and allows correction.
General Notes	For learners with difficulty generalizing, vary materials (clothing, utensils, toys).

VP/MTS 8 – Identifying Exact Matches in Complex Arrays with Similar Stimuli

Mastery Criterion	The learner locates identical pairs in a larger array containing distractors with similar features.
Program Goal	To strengthen fine discrimination and sustained visual attention in more challenging contexts.
Discriminative Stimulus (SD)	"Show me the one that's exactly the same."
Target Behavior	The child correctly identifies the identical match despite similar distractors.

Teaching Procedure

- Present an array of 5–8 items, with at least 3 similar stimuli.
- Provide a model item.
- Ask the learner to find the identical one.

Teaching Steps

1. Start with few distractors.
2. Gradually increase number and similarity.
3. Progress to complex, dense arrays.

Materials Needed	Animal cards of the same species in different positions, kitchen utensils in similar colors, vehicle pictures with minor differences.
Prompting Strategies	Gestural: indicate the area with the correct match. Verbal: "Look at the details, which one is identical?" Modeling: demonstrate comparison with an example.
Reinforcement Plan	Use praise and social reinforcement, plus brief access to a fun activity (e.g., pressing a toy buzzer).
Error Correction Procedures	If the child chooses a similar but incorrect stimulus, highlight the difference: "This one is close, but see—this detail matches yours exactly."
General Notes	Encourage verbalizations about differences ("This one has a long tail, this one doesn't") to consolidate learning.

Exact Matching

Finding the precise duplicate among similar options

Detail Focus

Noticing small differences between similar items

Distractor Management

Maintaining focus despite similar competing stimuli

VP/MTS 9 – Matching Non-Identical but Related Stimuli

Mastery Criterion	The learner matches stimuli that are not identical but share relevant features.
Program Goal	To develop relational discrimination, important for picture comprehension, concepts, and categorical reasoning.
Discriminative Stimulus (SD)	"Find the one that's similar."
Target Behavior	The child matches stimuli based on shared features (function, color, shape), even if not identical.

Teaching Procedure

- Present a model item.
- Provide additional items with shared characteristics.
- Instruct the learner to pair them.

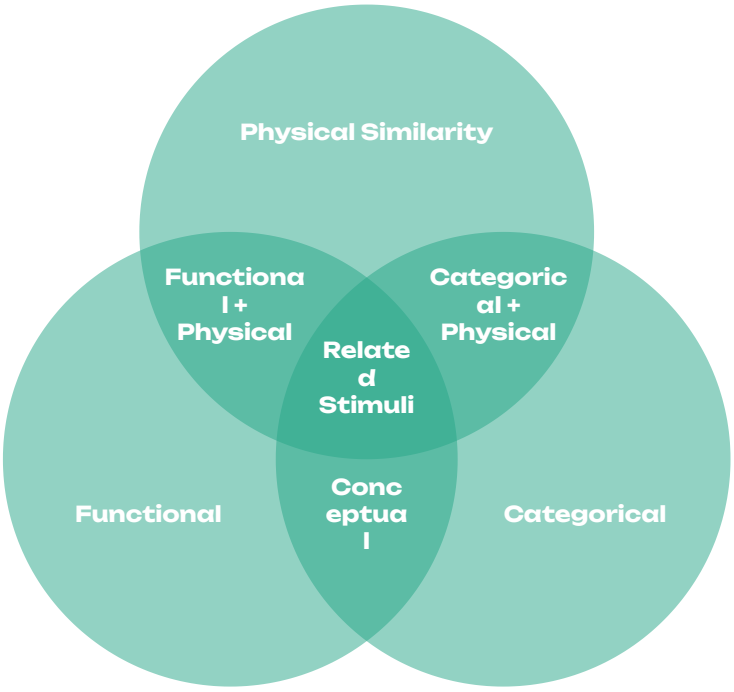
Begin with 3 items

Expand to 5 items

Progress to 8-10 items

Vary contexts and arrangements

Materials Needed	Spoon and fork, bus and truck, soccer ball and basketball, jacket and t-shirt.
Prompting Strategies	Gestural: point to a similar item. Verbal: "Which one is also used for eating?" Visual: highlight similarity (same color, same function).
Reinforcement Plan	Immediate praise and opportunity to play with the matched pair.
Error Correction Procedures	If matched incorrectly, therapist prompts: "What do we also use for eating? Does this one work too?" and guides correction.
General Notes	This program expands functional vocabulary. Encourage short verbalizations with matching ("Spoon is for eating too").



VP/MTS 10 – Relating 3D Objects to Corresponding 2D Images

Mastery Criterion	The learner correctly associates a real object with its picture, and vice versa.
Program Goal	To promote generalization across different representations of the same stimulus, essential for reading and real-world comprehension.
Discriminative Stimulus (SD)	"Put the object with the picture that shows the same thing."
Target Behavior	The child matches a real object to its corresponding image.

Teaching Procedure

- Provide concrete objects and corresponding picture cards.
- Ask the learner to associate 3D with 2D.
- Gradually increase number of items and contexts.

Begin with simple pairs (cup ↔ picture of cup)

Progress to varied sets (clothing, furniture, animals)

Change positions and contexts until independent

Materials Needed	Toy key ↔ photo of key, toy car ↔ drawing of car, real fruit ↔ illustrated card.
Prompting Strategies	Gestural: point to the matching picture. Physical: guide hand to place object on picture. Verbal: "Where's the picture of this object?"
Reinforcement Plan	Allow brief play with the object or interaction with the picture, plus social praise.
Error Correction Procedures	If mismatched, therapist repositions object near the correct picture and prompts again with gestural support.
General Notes	Expand this program to functional everyday items (utensils, clothing, furniture) to prepare for practical use in natural settings.

VP/MTS 11 – Spontaneously Reproducing Observed Graphomotor Actions

Mastery Criterion	The learner spontaneously imitates some aspect of a graphomotor activity demonstrated by another person.
Program Goal	To strengthen visual–motor coordination, support the development of writing and drawing skills, and encourage observational learning and copying in social contexts.
Discriminative Stimulus (SD)	"Do it like me."
Target Behavior	The child reproduces a graphomotor action performed by the model.

Teaching Procedure

- The therapist makes a mark on paper (line, circle, color stroke).
- Prompt the learner to reproduce a similar mark.
- Provide physical modeling if necessary.

Teaching Steps

1. Start with simple marks (straight line).
2. Progress to shapes (circles, crosses).
3. Advance to more complex patterns (zig-zag, waves).

Materials Needed	Thick crayons, triangular pencils, paintbrushes, sheets with simple templates.
Prompting Strategies	Gestural: point to the model mark. Verbal: "Try to do it like I did." Physical: hand-over-hand support initially.
Reinforcement Plan	Immediate praise and showing the comparison ("Look, yours looks like mine!").
Error Correction Procedures	If the learner scribbles unrelated marks, the therapist highlights: "See, I made a circle—yours is different. Let's try again."
General Notes	Acknowledge any approximation at first, even if imperfect, to avoid discouragement.

Simple Lines

Vertical, horizontal, and diagonal strokes

Basic Shapes

Circles, squares, and crosses

Complex Patterns

Zig-zags, waves, and spirals

Combined Forms

Simple pictures combining multiple elements

VP/MTS 12 – Generalizing Correct Responses Among Non-Identical Stimuli in Random Arrays

Mastery Criterion	The learner identifies relevant similarities between different stimuli, even when presented in a disorganized array.
Program Goal	To promote cognitive flexibility, categorization, and visual reasoning in less structured contexts.
Discriminative Stimulus (SD)	"Find the one that looks similar."
Target Behavior	The child selects the item most similar to the model stimulus, even if not identical.

Teaching Procedure

- Place items in a random arrangement.
- Provide a model stimulus.
- Prompt the learner to match with the most similar one.

Begin with 3-item arrays

Expand to 5-item arrays

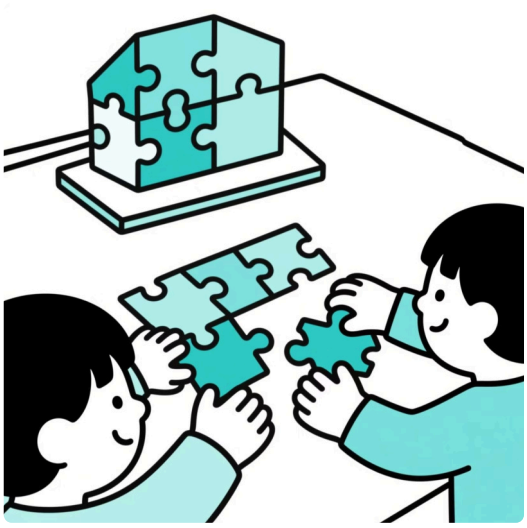
Progress to 8-10 item arrays

Vary categories (food, transportation, animals)

Materials Needed	Examples: apple ↔️ pear, bus ↔️ truck, shirt ↔️ jacket.
Prompting Strategies	Gestural: subtly point toward the correct category. Verbal: "Which one do we also wear?" Visual: provide initial cues (e.g., similar color).
Reinforcement Plan	Praise, social reinforcement, and brief access to the item.
Error Correction Procedures	If mismatched, therapist asks: "Is this one also for eating? Which other one could work?" and provides another chance.
General Notes	Helps reduce cognitive rigidity, especially for learners who default to identical matching only.

VP/MTS 13 – Completing Structured Activities with Manipulatives

Mastery Criterion	The learner completes constructions or puzzles by organizing pieces correctly until the final model is achieved.
Program Goal	To build problem-solving skills, fine motor coordination, and sequential attention.
Discriminative Stimulus (SD)	"Finish the construction."
Target Behavior	The child places pieces correctly, completing the activity.



Teaching Procedure

- Provide a partially completed puzzle or tower.
- Prompt the learner to finish.
- Gradually increase the number of pieces required.

Teaching Steps

1. Start with 2 remaining pieces.
2. Progress to 4, then 6, up to 8 or more.
3. Vary construction models (blocks, shapes, puzzles).

Materials Needed	Interlocking blocks, simple puzzles, geometric board pieces.
Prompting Strategies	Gestural: point to where the piece goes. Verbal: "Look where the piece is missing." Physical: guide the hand to the correct position.
Reinforcement Plan	Praise, clapping, and access to the completed game once finished.
Error Correction Procedures	If placed incorrectly, the therapist repositions the piece and invites the learner to try again with clearer prompting.
General Notes	Vary contexts (table, floor, group activity) to promote generalization and prevent restriction to a single puzzle type.

Puzzles

Fitting pieces into a frame to complete a picture

Block Constructions

Building structures according to a model

Pattern Boards

Placing pegs or shapes to match a template

VP/MTS 14 – Grouping Items into Conceptual Categories Without a Visual Model

Mastery Criterion	The learner organizes different items into the correct categories without a visual model for reference.
Program Goal	To stimulate conceptual reasoning and expand functional vocabulary.
Discriminative Stimulus (SD)	"Put each one in the right group."
Target Behavior	The child correctly groups items by category.

Teaching Procedure

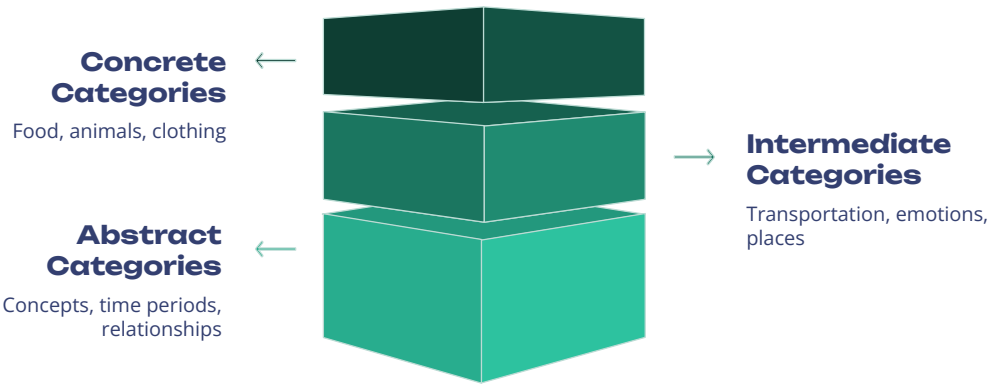
- Provide cards or objects from different categories.
- Prompt the learner to sort by category (e.g., clothing, animals, furniture).
- Gradually expand variety and complexity of categories.

Start with 3 simple categories

Increase gradually to 5 or more

Introduce abstract categories (places, modes of transport, emotions)

Materials Needed	Cards representing food, clothing, toys, places.
Prompting Strategies	Verbal: "Do we use this for eating or for wearing?" Gestural: move the item closer to the correct category. Physical: hand guidance only in early attempts.
Reinforcement Plan	Immediate social praise and opportunity to play with the completed group.
Error Correction Procedures	If misclassified (e.g., dog in "furniture"), therapist corrects: "The dog is not furniture, it's an animal. Where do animals go?"
General Notes	Introducing abstract categories prepares learners for formal academic content.



VP/MTS 15 – Recognizing and Extending Patterns and Sequences

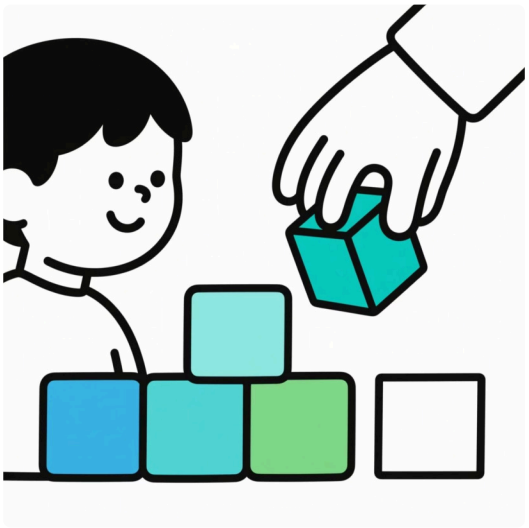
Mastery Criterion	The learner identifies a pattern within a sequence and completes it correctly.
Program Goal	To enhance logical reasoning, recognition of regularity, and working memory.
Discriminative Stimulus (SD)	"What comes next in the sequence?"
Target Behavior	The child correctly completes the given sequence.

Teaching Procedure

- Present a simple pattern (e.g., blue ball, red ball, blue ball, __).
- Prompt the learner to complete.
- Gradually increase complexity.

Teaching Steps

1. Start with 2-element sequences.
2. Progress to 3 and 4 elements.
3. Introduce variations with shapes and sizes.



Materials Needed	Colored cards, shape blocks, series-based toys.
Prompting Strategies	Gestural: point to the next spot in the sequence. Verbal: "Which one comes after the circle?" Physical: guide hand during initial trials.
Reinforcement Plan	Praise, social reinforcement, and access to the completed sequence as a game.
Error Correction Procedures	If placed incorrectly, therapist asks: "What is repeating? Which comes next?" and gives another chance.
General Notes	In addition to visual patterns, motor sequences can be trained (clap hands, raise arms, stomp feet).

Simple Alternating (AB)

Red-blue-red-blue

Three-Element (ABC)

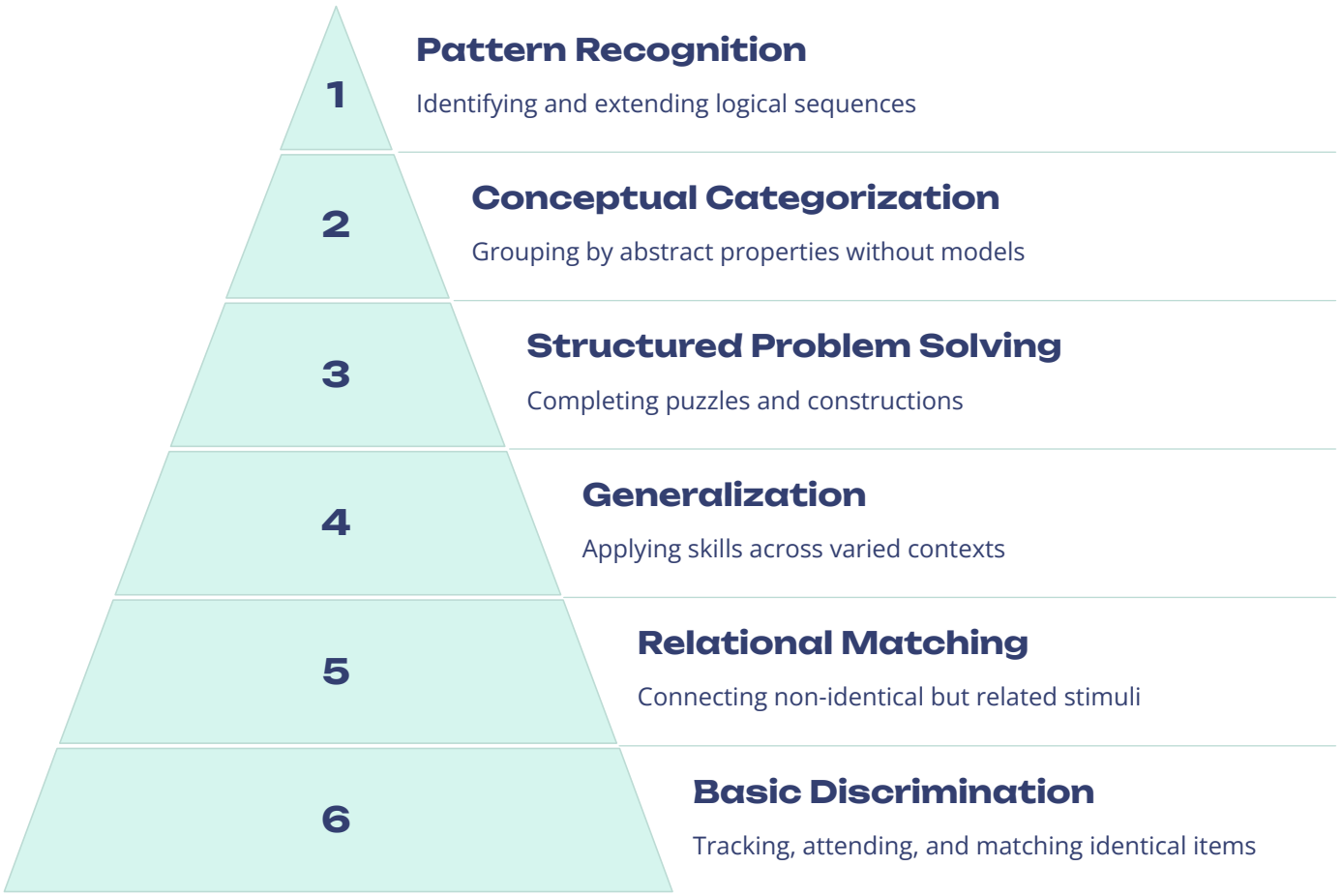
Circle-square-triangle-circle-square-triangle

Complex Patterns (AABB)

Red-red-blue-blue-red-red-blue-blue

Developmental Progression of Visual Perception Skills

The VP/MTS programs follow a developmental sequence that builds from basic visual skills to complex cognitive operations. Understanding this progression helps practitioners implement the programs effectively.



This hierarchical structure ensures that foundational skills are established before introducing more complex tasks. Each level builds upon previously mastered abilities, creating a comprehensive framework for visual perception development.

Implementing VP/MTS Programs: Key Considerations

Before beginning implementation, consider these important factors:

Assessment

Conduct a thorough assessment of the learner's current visual perception abilities to determine the appropriate starting point in the program sequence.

Environment

Create a distraction-free environment with appropriate lighting and seating to optimize visual attention and performance.

Materials

Prepare a variety of high-quality, age-appropriate materials that align with the learner's interests and developmental level.

Data Collection

Establish a consistent system for tracking progress, including frequency of correct responses, types of prompts required, and generalization across settings.

Successful implementation requires careful planning, consistent application, and ongoing assessment. By addressing these key considerations, practitioners can maximize the effectiveness of the VP/MTS programs and support optimal learning outcomes.

Adapting VP/MTS Programs for Different Learning Profiles

The VP/MTS programs can be modified to accommodate diverse learning needs while maintaining their core objectives.

For Learners with Attention Challenges:

- Shorten sessions to 5-10 minutes initially
- Use high-contrast, visually salient materials
- Incorporate movement breaks between trials
- Gradually extend duration as attention improves

For Learners with Motor Difficulties:

- Use larger, easier-to-grasp materials
- Provide stabilizing surfaces (non-slip mats)
- Consider adaptive tools if needed
- Allow additional response time

For Learners with Visual Processing Challenges:

- Reduce visual complexity initially
- Increase contrast between materials
- Use consistent, predictable arrangements
- Gradually introduce more complex visual fields

For Advanced Learners:

- Combine multiple programs in integrated activities
- Introduce time constraints for fluency building
- Create generalization activities in natural settings
- Add verbal reasoning components

Thoughtful adaptations ensure that all learners can access the benefits of the VP/MTS programs, regardless of their individual learning profiles. The core principles remain consistent while implementation details are customized to meet specific needs.

Integrating VP/MTS Skills into Daily Routines

For maximum effectiveness, visual perception skills should be practiced beyond structured teaching sessions and incorporated into everyday activities.

Mealtime

- Sorting utensils by type
- Matching food containers to lids
- Following visual recipes with pictures
- Creating patterns with food items

Dressing

- Matching socks
- Sorting clothes by color
- Identifying front/back of clothing
- Sequencing dressing steps with pictures

Play

- Scavenger hunts for similar objects
- Memory games with household items
- Building block patterns
- Sorting toys during cleanup

By embedding visual perception practice into daily routines, learners receive more opportunities for skill development and generalization. This approach also helps caregivers understand how to support visual perception skills throughout the day, not just during formal teaching sessions.

Tracking Progress in VP/MTS Programs

Consistent data collection is essential for monitoring progress and making informed decisions about program adjustments.

Data Type	Collection Method	Frequency	Purpose
Accuracy	Percentage of correct responses	Each session	Determine mastery level
Independence	Level of prompting required	Each session	Track progress toward autonomy
Generalization	Performance across settings/materials	Weekly	Ensure skill transfer
Maintenance	Periodic probes of mastered skills	Monthly	Verify retention over time

Visual Progress Charts

Create visual representations of progress that the learner can understand and celebrate.

Digital Tracking

Consider apps or digital tools that streamline data collection and generate progress reports.

Team Communication

Share data consistently with all team members to ensure coordinated implementation.

Effective progress monitoring allows practitioners to make data-based decisions about when to advance to more complex programs, when to provide additional practice, and how to tailor instruction to maximize learning outcomes.

Common Challenges and Solutions in VP/MTS Implementation

Anticipating potential obstacles and having strategies ready can help ensure smooth program implementation.

Challenge	Solution
Learner loses interest quickly	Rotate materials frequently, incorporate special interests, use shorter sessions with higher reinforcement.
Difficulty transitioning between programs	Create overlap periods where both the mastered and new program are practiced, gradually shifting emphasis.
Skills not generalizing to natural environment	Practice in multiple settings, vary materials, involve peers and family members in practice opportunities.
Regression in previously mastered skills	Schedule regular maintenance sessions, embed review opportunities in new programs, create visual reminders.
Inconsistent performance across sessions	Check for environmental variables (time of day, hunger, fatigue), ensure consistent implementation, consider medical factors.

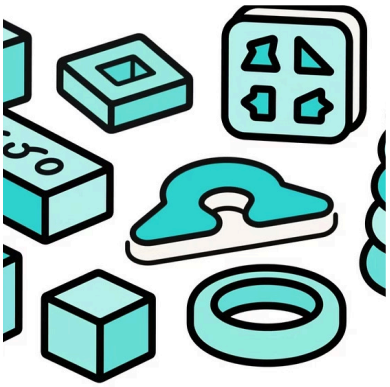
By proactively addressing these common challenges, practitioners can maintain momentum in the VP/MTS programs and ensure that learners continue to make progress even when difficulties arise.

Materials and Resources for VP/MTS Programs

Having the right materials readily available is essential for effective implementation of the VP/MTS programs.

Visual Discrimination Cards

Sets of cards with identical and similar images for matching activities.



Manipulatives

Blocks, shape sorters, stacking toys, and puzzles for construction activities.

Real Object Sets

Everyday items with corresponding picture cards for 3D to 2D matching.

Additional Resources:

- Drawing and writing tools (thick crayons, triangular pencils, paintbrushes)
- Sorting containers (colored bins, compartment trays)
- Visual timers for tracking attention duration
- Data collection sheets customized for each program
- Storage systems to keep materials organized and accessible

Investing in high-quality, durable materials ensures that the VP/MTS programs can be implemented consistently and effectively over time. Many materials can be used across multiple programs, making them cost-effective resources for comprehensive visual perception training.

The Role of Reinforcement in VP/MTS Programs

Strategic reinforcement is crucial for maintaining motivation and building positive associations with visual perception activities.

Principles of Effective Reinforcement:

- **Immediacy:** Provide reinforcement immediately following the target behavior
- **Specificity:** Clearly connect the reinforcement to the exact behavior being reinforced
- **Variety:** Use different types of reinforcers to prevent satiation
- **Individualization:** Select reinforcers based on the learner's preferences
- **Fading:** Gradually reduce external reinforcement as intrinsic motivation develops

Types of Reinforcers:

- **Social:** Praise, high-fives, smiles
- **Activity-based:** Brief access to preferred games or activities
- **Tangible:** Stickers, tokens, small toys (used sparingly)
- **Natural:** The satisfaction of completing the task itself

Reinforcement Schedules

Begin with continuous reinforcement for new skills, then gradually transition to intermittent schedules as proficiency increases.

Preference Assessments

Conduct regular assessments to identify current preferences, as these may change over time.

Token Systems

For older learners, consider implementing token economies that allow for delayed reinforcement.

Thoughtful reinforcement strategies not only increase motivation but also help build positive associations with learning activities, promoting long-term engagement with visual perception tasks.

Promoting Generalization in VP/MTS Programs

Generalization—the ability to apply learned skills across different settings, materials, and people—is essential for meaningful learning outcomes.

Vary Materials

Use different objects, pictures, and media for the same skill

Natural Contexts

Embed practice in everyday activities

Change Settings

Practice in different locations and environments

Multiple People

Involve various instructors, peers, and family members

Different Instructions

Use varied wording for the same task

Strategies to Enhance Generalization:

- Program for generalization from the beginning, not as an afterthought
- Teach explicitly how the skill applies in different contexts
- Gradually introduce variations while maintaining success
- Celebrate and reinforce spontaneous applications of skills
- Involve caregivers in identifying generalization opportunities

By systematically planning for generalization, practitioners ensure that visual perception skills become functional tools that enhance the learner's daily life, rather than isolated abilities demonstrated only in structured teaching sessions.

Connecting VP/MTS Skills to Academic Learning

Visual perception skills form the foundation for many academic abilities. Understanding these connections helps practitioners emphasize the most relevant skills for educational success.

Reading

- Letter/word discrimination (Programs 5, 6, 8)
- Left-to-right tracking (Program 1)
- Symbol-meaning correspondence (Program 10)
- Visual attention to text (Program 3)

Mathematics

- Number recognition (Programs 5, 6)
- Pattern recognition (Program 15)
- Spatial organization (Program 4)
- Grouping and categorization (Programs 7, 14)

Writing

- Letter formation (Program 11)
- Spatial organization on paper (Program 4)
- Fine motor coordination (Program 2)
- Visual-motor integration (Programs 11, 13)

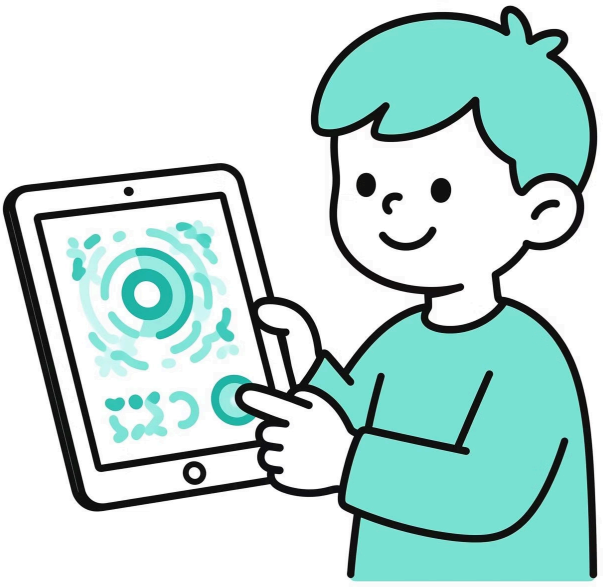
By highlighting these connections, practitioners can help educators and parents understand the importance of visual perception skills and create targeted interventions that support specific academic challenges. This approach ensures that VP/MTS programs contribute meaningfully to educational progress.

Technology Tools for VP/MTS Programs

While traditional materials remain essential, technology can enhance VP/MTS programs by providing additional practice opportunities and engaging formats.

Benefits of Technology Integration:

- Increased engagement through interactive elements
- Immediate feedback on performance
- Consistent presentation of stimuli
- Ability to track progress automatically
- Customization options for individual needs
- Accessibility features for diverse learners



Apps and Software

Visual discrimination games, pattern recognition activities, and digital puzzles that align with VP/MTS objectives.

Interactive Whiteboards

Group activities for matching, sorting, and pattern completion that allow for physical interaction with digital content.

Augmented Reality

Tools that blend physical objects with digital elements to create engaging visual perception challenges.

Data Collection Tools

Digital systems for tracking progress, generating reports, and analyzing patterns in performance.

While technology offers valuable supplements to VP/MTS programs, it should complement rather than replace hands-on experiences with physical materials. A balanced approach ensures that learners develop the full range of visual perception skills needed for real-world functioning.

Collaborating with Families on VP/MTS Programs

Family involvement significantly enhances the effectiveness of VP/MTS programs by providing additional practice opportunities and promoting generalization across settings.

Parent Training

Provide demonstrations and guided practice to help parents implement VP/MTS activities correctly at home.

Home Materials

Create simple activity kits with instructions that families can use to reinforce visual perception skills.

Regular Communication

Establish consistent channels for sharing progress, challenges, and strategies between home and therapy settings.

Strategies for Effective Collaboration:

- Respect family priorities and cultural contexts when designing home activities
- Start with brief, highly structured activities that can be easily incorporated into routines
- Provide visual guides and video models of techniques
- Celebrate and acknowledge family efforts and contributions
- Adjust expectations based on family capacity and resources
- Create opportunities for families to share observations and insights

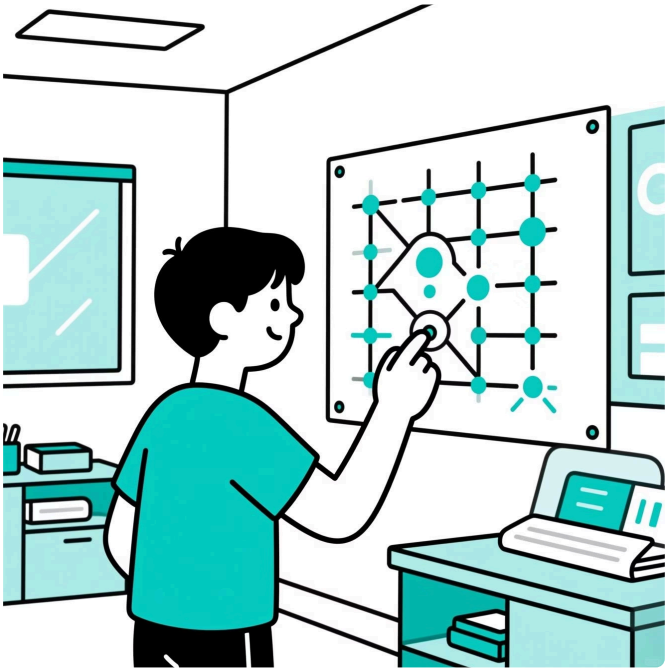
When families are empowered as active partners in VP/MTS programs, learners benefit from consistent support across environments, accelerating progress and enhancing the meaningful application of visual perception skills.

VP/MTS Programs for Older Learners

While VP/MTS programs are often associated with early intervention, they can be adapted for older learners who continue to need support with visual perception skills.

Age-Appropriate Adaptations:

- Use materials that reflect older learners' interests and experiences
- Connect activities explicitly to academic and vocational skills
- Incorporate technology and digital tools when possible
- Emphasize self-monitoring and independence
- Create opportunities for peer collaboration



Academic Applications

Focus on visual perception skills needed for advanced reading, mathematics, and science (data interpretation, diagrams, charts).

Vocational Relevance

Connect visual perception activities to job-related skills like organizing materials, following visual instructions, and quality control.

Life Skills Context

Embed practice in functional activities such as cooking (following visual recipes), shopping (finding items), and navigation (using maps).

By adapting VP/MTS programs to respect the dignity and interests of older learners, practitioners can address persistent visual perception challenges while supporting age-appropriate independence and skill development.

Combining VP/MTS with Other Intervention Approaches

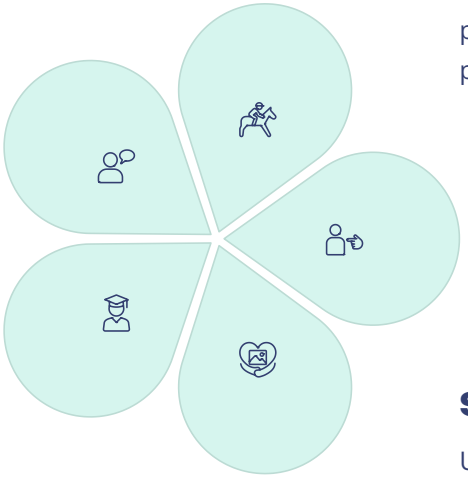
VP/MTS programs are most effective when integrated with complementary intervention approaches that address related skill areas.

Speech-Language Therapy

Combine visual matching with vocabulary development and concept formation

Academic Instruction

Align visual perception activities with curriculum content and learning objectives



Occupational Therapy

Integrate fine motor and sensory processing activities with visual perception tasks

Behavioral Interventions

Apply consistent reinforcement strategies and systematic instruction across domains

Social Skills Training

Use visual supports to enhance understanding of social cues and interactions

Collaborative planning among different specialists ensures that VP/MTS programs complement other interventions, creating a comprehensive approach that addresses the learner's needs holistically. This integration maximizes efficiency and promotes generalization across skill domains.

Assessing Readiness for VP/MTS Programs

Before implementing VP/MTS programs, it's important to assess whether the learner has the prerequisite skills needed for success.

Prerequisite Skill	Assessment Method	Minimum Requirement
Basic visual attention	Observation of response to visual stimuli	Briefly looks at presented objects
Response to name	Call name in neutral tone	Turns toward voice at least occasionally
Ability to sit	Structured sitting task	Remains seated with support for 1-2 minutes
Reaching and grasping	Presentation of motivating objects	Attempts to reach for desired items
Response to reinforcement	Preference assessment	Shows clear preferences for certain items/activities

Pre-Teaching

If prerequisites are partially present, focused pre-teaching can build the necessary foundation.

Modified Entry Points

Adaptations to early programs can accommodate learners with emerging prerequisite skills.

Reassessment

Regular checking of prerequisite skills ensures the learner remains ready for current program demands.

Thorough assessment of readiness helps ensure that learners begin VP/MTS programs at the appropriate level, setting the stage for successful skill development and positive learning experiences.

Cultural Considerations in VP/MTS Implementation

Cultural responsiveness is essential for effective implementation of VP/MTS programs across diverse populations.

Key Cultural Considerations:

- **Materials Selection:** Include culturally diverse and representative images in matching activities
- **Familiar Objects:** Use items that are common in the learner's cultural environment
- **Language:** Incorporate key terms in the learner's home language when appropriate
- **Family Practices:** Respect cultural variations in play, learning, and interaction styles
- **Reinforcement:** Consider cultural norms regarding praise and rewards
- **Expectations:** Understand cultural perspectives on development and learning goals

Cultural Humility

Approach differences with curiosity and respect, recognizing the value of diverse perspectives.

Family Collaboration

Partner with families to ensure that VP/MTS activities align with cultural values and practices.

Ongoing Learning

Continuously expand cultural knowledge and adapt practices based on new insights.

Culturally responsive implementation enhances the relevance and effectiveness of VP/MTS programs, ensuring that all learners have equitable opportunities to develop visual perception skills in meaningful contexts.

Research Foundations of VP/MTS Programs

VP/MTS programs are grounded in established research across multiple disciplines, providing a solid foundation for evidence-based practice.

Developmental Psychology

Research on typical visual-cognitive development sequences informs program progression

Behavioral Science

Principles of systematic instruction, reinforcement, and data-based decision making guide implementation

Cognitive Neuroscience

Understanding of neural pathways involved in visual processing informs intervention approaches

Key Research Findings Supporting VP/MTS Programs:

- Visual perception skills develop in a generally predictable sequence across cultures
- Structured practice with systematic feedback improves visual discrimination abilities
- Early visual perception skills predict later academic performance in reading and mathematics
- Explicit instruction in visual matching transfers to improved performance in related tasks
- Neural plasticity allows for significant improvement in visual processing with targeted intervention

Ongoing research continues to refine our understanding of visual perception development and effective intervention approaches, informing updates and enhancements to VP/MTS programs.

Future Directions in Visual Perception Training

As our understanding of visual perception continues to evolve, several promising directions are emerging for the future development of VP/MTS programs.

Technology Integration

Virtual and augmented reality applications that create immersive visual perception training environments

Personalized Approaches

AI-driven systems that adapt visual perception activities based on individual learning patterns

Neuroscience Applications

Interventions informed by advanced understanding of visual processing pathways in the brain

Cross-Domain Integration

Holistic approaches that connect visual perception with other developmental domains

As these innovations develop, the core principles of VP/MTS programs will remain relevant: systematic instruction, careful assessment, individualized approaches, and meaningful application of skills. By combining established practices with emerging technologies and research insights, visual perception training will continue to evolve to meet the needs of diverse learners.

> The future of visual perception training lies in the thoughtful integration of evidence-based practices with innovative approaches that expand access, enhance engagement, and optimize outcomes for all learners.