



# SEQUENCES



Neurological  
Steps  
for  
Skills

## Content of This Unit

The only purpose of this unit is to provide some neurological twists to the typical developmental sequences we see in our field.

I have specifically chosen each of these sequences to show a particular concept or change.

Once you see some of these manipulations, you will be able to create many more on your own. Have fun and feel free to adapt as needed. You will know your students' needs the best.



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# Bead Stringing Sequence

The bead-stringing sequence provides the basic steps for the following toy variables:

1. String (transfer control demanded: one hand to two hand usage)
2. Hole number (accuracy and eye-hand coordination)
3. Hole size (accuracy and fine motor dexterity)
4. Bead length (bi-lateral control and hand transfer)

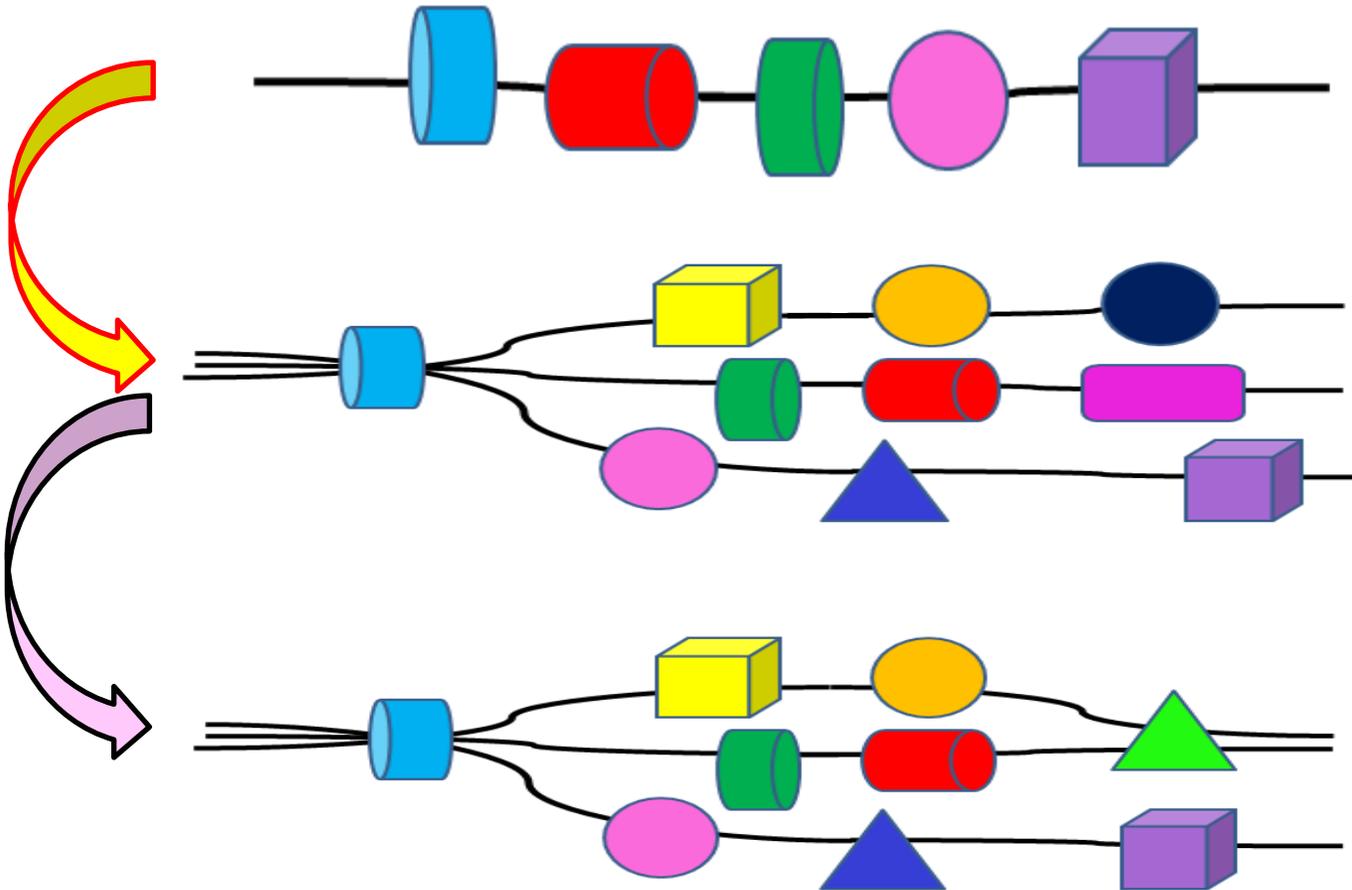
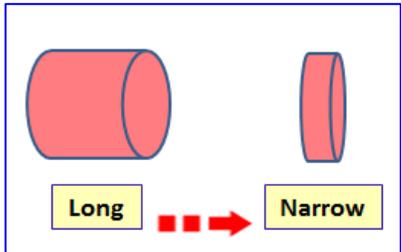
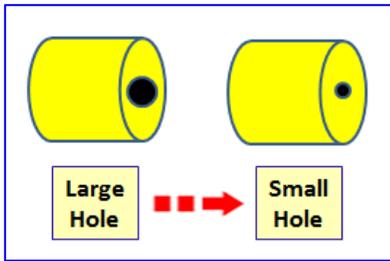
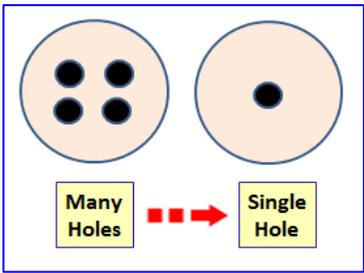
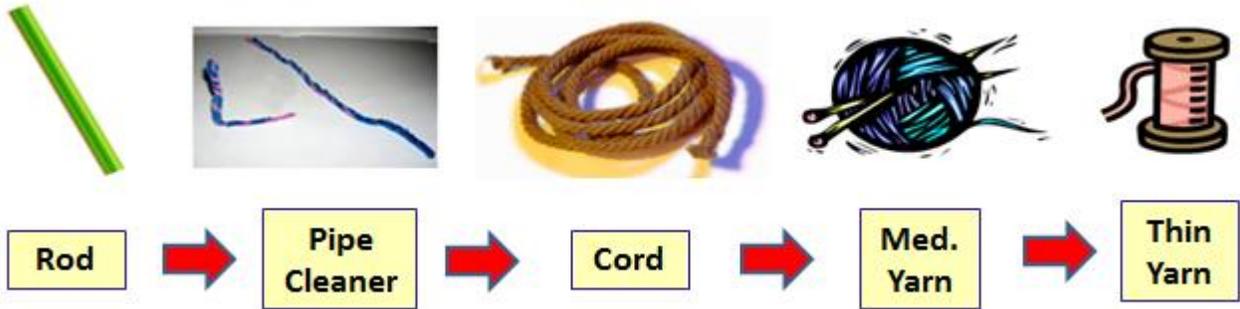
By varying the combinations of 1-4, a teacher can develop a multitude of fine motor activities targeted to the child's individual level.

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The second section provides a cognitive sequence as follows:

1. Traditional bead stringing (simple patterns)
2. Two or Three strings (management of multiple single patterns)
3. Three strings with variable patterns (concrete weaving)
4. Not shown (traditional weaving with less concrete materials)

# Bead Stringing Sequence



# Linked Play Sequence

This technique is covered in Chapters 4 and 5.

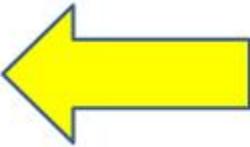
Linked play is an intervention designed to combat the weak Visual Cue Sequences that are inherent in today's toys. It moves children systematically through the Visual Cue Levels up to literacy. The product is designed to provide easy-to-use kits that allow the teacher use this intervention across the following centers/activities:

1. House-keeping (concrete and real-size imitations)
2. Doll Houses (miniature)
3. Flannel boards, magnet boards or paper dolls (all 2-D levels which include photos, colored pictures and silhouettes)
4. Literacy cards (provides words for language experience transfers)

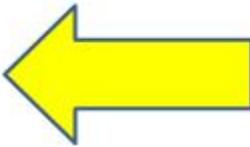
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House-keeping is the toy shown here. Kits can also be made for many centers (blocks, library, etc.) and for many themes. Some examples are provided, but there is no limit to the ones that can be created.

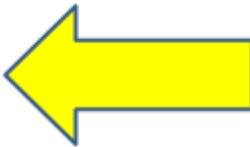
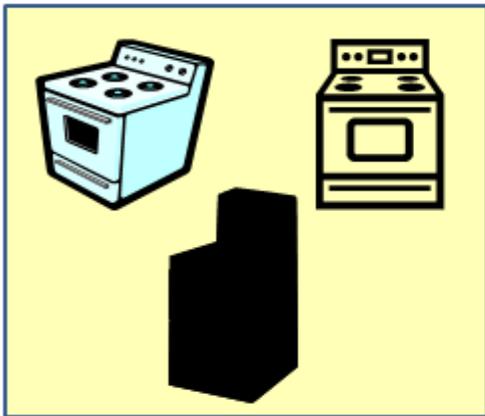
# Linked Play Sequence



Dramatic Play contains concrete items (if possible) as well as real size imitations and some moderate-level miniatures.

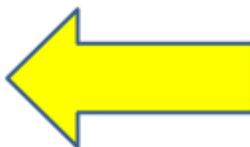


Miniatures moves the play from whole-body to a low-level symbol form. Many children find even this small transition difficult.



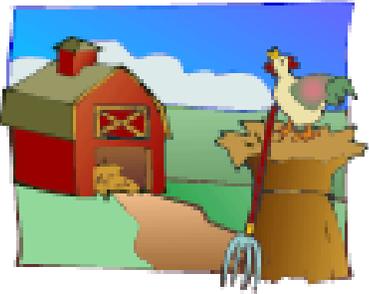
The two-dimensional level can include flannel boards, magnet boards, "color-forms" and any other 2-D product. It includes colored picture or black-white line level...and silhouette when appropriate.

stove	cook	cake
food	dish	pot
spoon	stir	hot

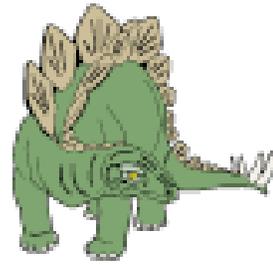


Language-experience cards allow the child to produce "scripts" which guide their play and help them transfer action and thought to print.

# Linked Play Options



**Farm**



**Dinosaurs**



**Gymnastics/  
Cheer**



**Farm**



**Fairy  
Tales**



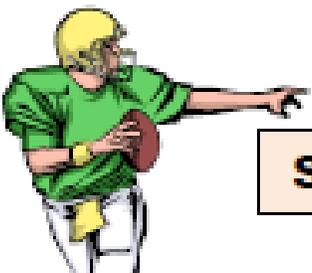
**School**



**Farm**



**City /  
Stores  
/Vet  
/Doctor**



**Sports**



**Holidays**

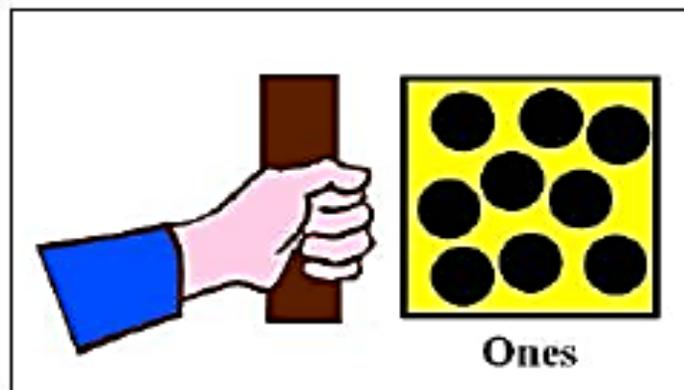
## **PLACE VALUE SEQUENCE**

This is an example of how to adapt existing toys and materials to become true teaching cues. It is a slight adaptation of the current product that is widespread in the market but is unfortunately not as well designed as it could be.

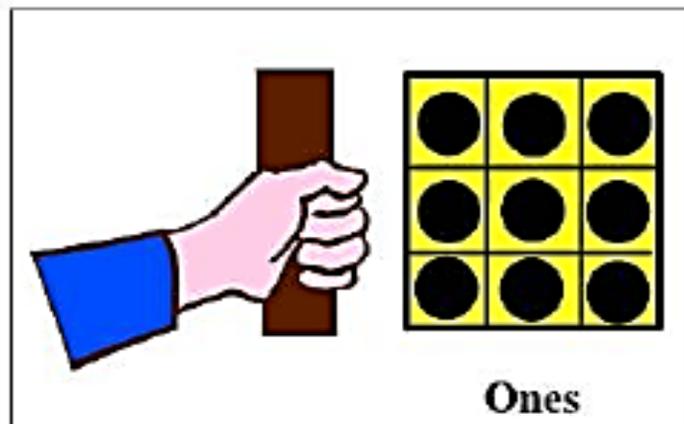
This example is only one level of this sequence and can be expanded all the way through negative numbers, percentages and decimals.

NOTE: There are many more products like this that could use updating and improvement....

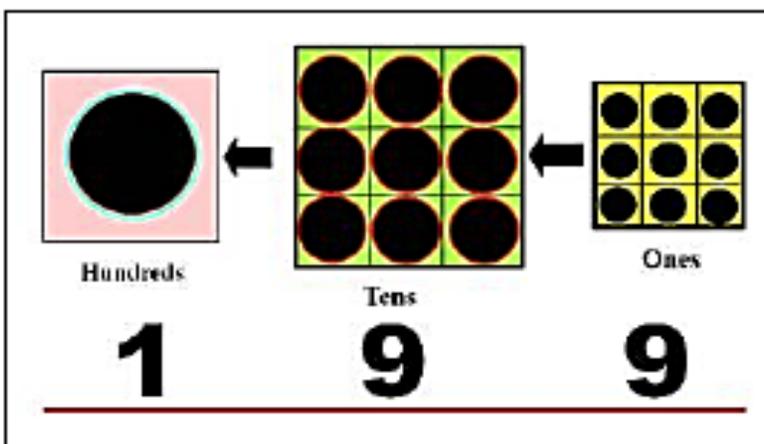
# PLACE VALUE SEQUENCE



Current materials have the children place an item (straw) into a pocket or container. This does NOT teach place value (concept that no more than nine can be in that value location).



By separating the value location into nine slots, children understand that the "ones" slot will not hold more than nine. It makes place value real...



The full sequence can be seen to the left. This approach makes the overall value sequence clear as well as preparing children for re-grouping and eventual work with decimals and percentages.

## **FINE MOTOR / VISUAL TRACKING SEQUENCE**

The car-tracking sequence provides fine motor practice that is especially targeted to children who prefer a center like blocks.

Sequences are provided for the following variables:

1. String dimension (eye-hand coordination)
2. String color (visual discrimination)
3. Car size (fine motor dexterity)
4. Car with pencil attachment (transition to pincer grasp/writing)

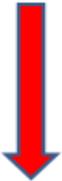
Games can be played where strings are thrown in the air so they fall on floor as “roads”. The children can then “drive” the tracks they create. Children can also “make roads” by purposefully laying strings, adding another fine motor dimension to the activity.

By varying the combinations of 1-3, a teacher can develop a multitude of fine motor and visual activities targeted to the child’s individual level.

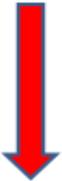
In addition, cars can be transferred to paint and run on paper so roads can be created with the car itself. This can be done in the block area if heavy paper is used.

This is especially effective with the pencil attachment level since works best with thinner paper on a table. This will often entice the child to work in the art area, at least for a while.....

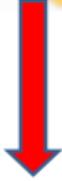
# FINE MOTOR / VISUAL TRACKING SEQUENCE



**Wood Rod**  
Can be completed with one hand



**Pipe Cleaner**  
Transitions from one hand to two hands if taped down



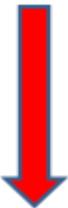
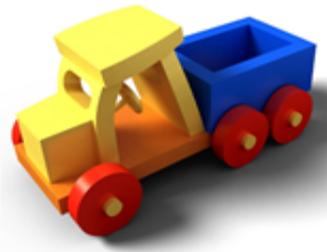
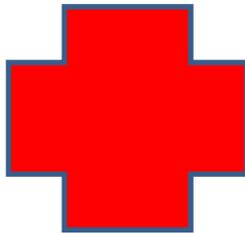
**Cord**  
Large track for simple tracking



**Med. Yarn**  
Medium track for moderate tracking



**Thin Thread**  
Thin track for challenging tracking



**Large with High Back**  
For simple grasp and control



**Med. with Low Back**  
Slightly more challenging control



**"Micro Machine" Size Truck or Car**  
For complex tracking and control



**Modified Car with Handle**  
Car with handle (pencil sized)

By varying "road" color (different versus same) you can increase or decrease visual tracking challenge.

# Cursive Handwriting Strokes

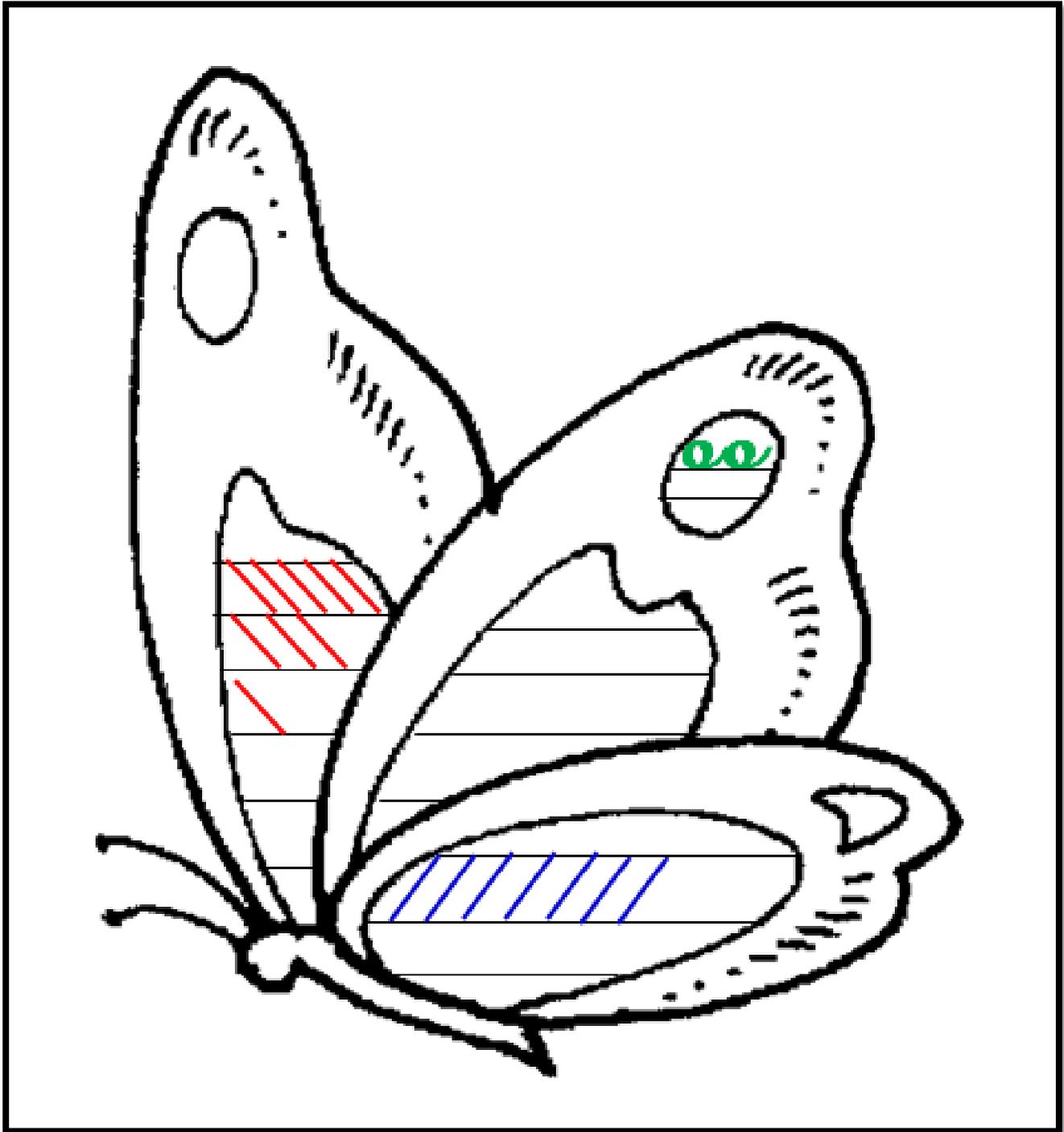
This is an example of worksheet books that can be produced to support some of the activities that can be used to support implicit memory to increase the development of cursive handwriting.

If we skip this practice, something that is becoming increasingly common in modern classrooms, children never develop the *unconscious* control of the handwriting process. This causes them to have more difficulty retrieving memories from the brain---especially when they write cursive. This, in turn, causes them to have lower work and test scores than their intelligence should be producing.

So, MAKE SURE TO DEVELOP IMPLICIT MEMORY FOR HANDWRITING. Do not listen to those who speak of drill as an inappropriate practice. Just remind them of how their favorite football team, ballet troupe or orchestra prepares, and we can see how much drill is valued by those who want and need to “free up the brain” to problem solve and think quickly.

Does this mean that drill has to be dull? Well, the reality is that it won't always be a thrilling task, but we CAN make it a bit more interesting if we try. Here is just one way to do so 😊

# Cursive Handwriting Strokes



**Sheets can be produced for both print and cursive.**

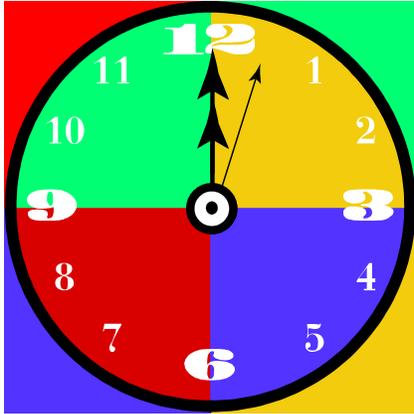
**Sheets can be sequenced to introduce different strokes in the appropriate order.**

# Visual Cues for Telling

This sheet provides one example of how to produce a product that targets visual learners.

In this case, the materials would include cue sheets/posters that show how the system should be taught as well as clocks that can be used with or without the “boy” and “girl” cues on the clock hands.

# Visual Cues for Telling



One of the most difficult aspects of “telling time” is developing a memory for the difference between the hands of the clock. Here is a visual cue system to assist children with this skill.

Visually cue the “small” hand with a small child, and the “big” hand with a big child.

**5:--**

**LITTLE HAND**

- too little to wait, so she has to go first
- can only count from 1 to 12
- too little to count, so she counts by ones

**5:35**

**BIG HAND**

- is older, so he can wait for his turn
- can count from 1 to 60
- older, so he can count by 1's, 5's and 10's

# Classroom Cue Sequence: Schedule

This concept is covered in chapters 4, 5 and 11.

This set of materials allows the teacher to adapt the schedule for various purposes. It is covered in Chapter 4. The following variables can be targeted:

## **1. Clear Pockets (not shown):**

*By using clear pockets, the schedule becomes a teaching tool that can be changed over time to meet the needs of different schedules, rooms or age groups. It also allows the teacher to use the product from year to year.*

## **2. Color Coded Edges or Backs (not shown):**

*By color coding pictures and having multiples of cards, the teacher can adapt schedules from day to day. This allows them to deal with specials, different events, etc. by quickly switching the cards (i.e. Yellow for Mon, Wed and Fri; then Blue for Tues and Thurs, etc.)*

## **3. Multiple Cards (not shown):**

*Having multiple of the same card in the pocket allows the teacher to pull the card to use as an interactive/Physical Cue for the children who needed it without disrupting the Visual Cue for the children who may be looking at the schedule during the transition. Technique is described in Chapter 4*

## **4. Multiple Schedule Levels (top):**

*By providing the teacher information on the Developmental Sequence of Tracking Time (calendar) they can use the schedule to move children to a traditional calendar over time. Additional products (not shown) can be created for the transition to tracking the weekly activities (#3) and using a visual concrete calendar (#4).*

## **5. Various Cue Levels:**

*By providing the total Visual Cue Sequence, the teacher can meet the needs of diverse groups of children, various disabilities and age groups. This allows the teacher to also use the product over time as a teaching tool instead of a casual environmental prop.*

**NOTE:** This is one example of using this approach. Other environmental cues such as classroom rules, job charts, choice charts, etc. are also possible.

# Classroom Cue Sequence: Schedule

**1. Daily Schedule with only main time periods**  
(opening circle, snack, outside, closing circle)

**2. Daily Schedule with all time periods**

**3. Schedule over course of week**

**4. Schedule conversion to calendar**  
(see calendar sequence for more information)



or

**CIRCLE**



**Time and symbol level**  
(word)



**Black and White Level**  
(outline)



**Colored picture level**



**Photo level**



**Concrete or  
miniature level**

# Easel Sequence

I built this product for a field test. It really was a hit 😊

The idea was to create a multi-purpose easel that not only could be used with various surfaces but that also could be adapted via inserts that could be seen through the acrylic surface.

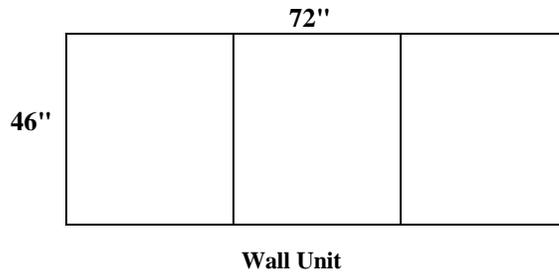
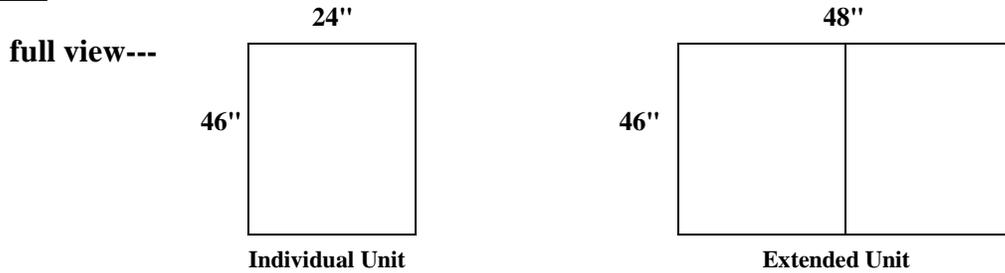
Once that part of the easel is in place, there is no limit to the number of options or skills that can be targeted. The only piece that did not work well was the magnet adhesion through the acrylic plastic. The other options were no problem, at least in that field test of four years..... Fiddle around with the idea and see what you can do!

# "Six-In-One" Miracle Easel

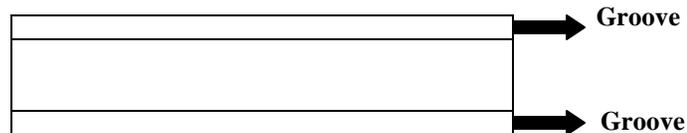
## Dimensions:

Model Unit: 11.5" (H) x 6" (W) x 7.5" (D)  
Individual Unit (Standard): 46" (H) x 24" (W) x 26" (D)  
Extended Unit: 46" (H) x 48" (W) x 26" (D)  
Wall Unit: 46" (H) x 72" (W)

## Graphic:



## side view---



## **Six Surfaces:**

1. Traditional Paint Easel Using Paper
2. Clear Acrylic Paint Easel
3. White-Board Surface
4. Magnet Board
5. Flannel Board
6. Chalk Board

## **Panels:**

The exterior vertical groove allows the customer to insert additional panels (panel B or C) to expand the easel usage.

### **STANDARD SURFACE:**

- A. Clear Acrylic Easel with Clips → #1 (Traditional Paint Easel) +  
#2 (Clear Acrylic Paint Surface)

### **ADD-ON PANELS:**

- B. Magnetic White-Board  
Reversible to Flannel Board → #1 (Traditional Paint Easel) +  
#2 (Clear Acrylic Paint Surface) +  
#3 (White-Board) +  
#4 (Magnet Board) +  
#5 (Flannel Board)

- C. Magnetic White-Board  
Reversible to Flannel Board → #1 (Traditional Paint Easel) +  
#2 (Clear Acrylic Paint Surface) +  
  
#4 (Magnet Board) +  
#5 (Flannel Board) +  
#6 (Chalk Board)

## **Grooved Inserts:**

The grooves located on the vertical interior allows poster/paper inserts that are viewable through the acrylic surface. These panels may be used with either wipe-off markers and/or paint. If a source of clear acrylic material that has magnetic properties can be located, then the inserts could be used with magnets as well.

1. LINED PAPER:
  - a. Black Line: General Teacher Usage
  - b. Large Space with Interior Dotted Line: Student Writing Practice
  - c. Colored Line with Interior Dotted Line: Student Writing Practice
  - d. Letter Form: Misc. Usage
  - e. List Form: Misc. Usage
  - f. Calendar Block (Blank): Misc. Usage
  
2. COLORS:
  - a. Basic Colors (Red, Blue, Yellow and Purple)
  - b. Basic Colors (Green, Orange, Brown and Black)
  - c. Advanced Colors (shades: light and dark colors)
  - d. Advanced Colors (mixtures: i.e. blue-green)
  - e. Make-A-Pattern (A-B Pattern blanks/color only)
  - f. Make-A-Pattern (A-B-B Pattern blanks/color only)
  - g. Make-A-Pattern (A-A-B-B Pattern blanks/color only )
  - h. Make-A-Pattern (A-B Pattern blank shapes/two attributes)
  - i. Make-A-Pattern (A-B-B Pattern blank shapes/two attributes)
  - j. Make-A-Pattern (A-A-B-B Pattern blanks shapes/two attributes)
  - k. Make-A-Pattern (blank strings to create own)
  
3. SHAPES:
  - a. Basic Shapes (Circle, Triangle, Square and Rectangle-colored)
  - b. Basic Shapes (Circle, Triangle, Square and Rectangle-black line)
  - c. Advanced Shapes (Crescent, Star, Heart, Oval, Pentagon, Diamond)
  - d. Basic Shape Drawing (full guide, dotted guide and blank practice)
  - e. Advanced Shape Drawing (full guide, dotted guide and blank practice)
  - f. Make-A-Picture (Circle, Heart and Oval)
  - g. Make-A-Picture (Square, Diamond and Rectangle)
  - h. Make-A-Picture (Crescent, Star and Pentagon )
  - i. Make-A-Pattern (A-B Pattern Using Shapes)
  - j. Make-A-Pattern (A-B-B Pattern Using Shapes)
  - k. Make-A-Pattern (A-A-B-B Pattern Using Shapes)
  - l. Make-A-Pattern (blanks strings to create own)

4. NUMBERS:
- a. Numbers 1-10 (colored numbers with counting shapes)
  - b. Numbers 1-10 (black numbers)
  - c. Numbers 10-20
  - d. Number Writing 1, 2 and 3 (full guide, dotted guide and blank practice)
  - e. Number Writing 4, 5 and 6 (full guide, dotted guide and blank practice)
  - f. Number Writing 7, 8 and 9 (full guide, dotted guide and blank practice)
  - g. Number Line (0→15)
  - h. Counting (blanks to draw in correct number of objects; numbers 1-10)
  - i. Counting (blanks to draw in correct numeral; numbers 1-10)
  - j. Addition Blank (basic equation with blanks and space to draw objects)
  - k. Subtraction (basic equation with blanks and space to draw objects)

5. ALPHABET:
- a. Letters (A→I) with initial sound objects)
  - b. Letters (J→R) with initial sound objects)
  - c. Letters (S→Z) with initial sound objects)
  - d. Letter Writing A, B, C & D (full guide, dotted guide & blank practice)
  - e. Letter Writing E, F, G & H (full guide, dotted guide & blank practice)
  - f. Letter Writing I, J, K and L (full guide, dotted guide & blank practice)
  - g. Letter Writing M, N, O & P (full guide, dotted guide & blank practice)
  - h. Letter Writing Q, R, S & T (full guide, dotted guide & blank practice)
  - i. Letter Writing U, V & W (full guide, dotted guide & blank practice)
  - j. Letter Writing X, Y & Z (full guide, dotted guide & blank practice)
  - k. Make-A-Word (\_\_\_\_at, \_\_\_\_an & \_\_\_\_ed)
  - l. Make-A-Word (\_\_\_\_it, \_\_\_\_ot & \_\_\_\_un)

6. PICTURE STARTERS:

- a. Draw-A-House (half-drawn)
- b. Draw-A-Car (half-drawn)
- c. Draw-A-Star (full guide, dotted guide & blank practice)
- d. Draw-A-Heart (full guide, dotted guide & blank practice)
- e. Moon Landscape (light, colored background)
- f. Prehistoric Landscape (light, colored background)
- g. Farm Landscape (light, colored background)
- h. Racetrack (light, colored background)
- i. Sports Arena (light, colored background)
- j. Castle (light, colored background)
- k. Rainforest (light, colored background)
- l. Stage (light, colored background)
- m. Draw-A-Face (blanks)

7. MAZES:

- a. Easy-Level One
- b. Easy-Level Two
- c. Easy-Level Three
- d. Moderate-Level One
- e. Moderate-Level Two
- f. Moderate-Level Three
- g. Challenging-Level One
- h. Challenging-Level Two
- i. Challenging-Level Three
- j. Make-A-Maze (Square with entry and exit locations)
- k. Make-A-Maze (Circle with entry and exit locations)
- l. Make-A-Maze (Castle with entry and exit locations)

8. DOT-TO-DOT:

- a. Easy-Level One (Numbers 1→5)
- b. Easy-Level Two (Numbers 1→5)
- c. Easy-Level Three (Numbers 1→5)
- d. Moderate-Level One (Numbers 1→10)
- e. Moderate-Level Two (Numbers 1→10)
- f. Moderate-Level Three (Numbers 1→10)
- g. Challenging-Level One (Numbers 1→20)
- h. Challenging-Level Two (Numbers 1→20)
- i. Challenging-Level Three (Numbers 1→20)
- g. Difficult-Level One (Numbers 1→50)
- h. Difficult-Level Two (Numbers 1→50)
- i. Difficult-Level Three (Numbers 1→50)

9. HOLIDAY BACKGROUNDS:

- a. Draw-A-Heart (blank Valentine Hearts)
- b. Draw-A-Shamrock (half-drawn)
- c. Draw-A-Basket (empty Easter Basket)
- d. Draw-A-Bunny (half-drawn)
- e. Draw-A-Ghost (blank)
- h. Draw-A-Jack-O-Lantern (blank pumpkin)
- f. Draw-A-Turkey (half-drawn)
- g. Draw-A-Tree (blank Christmas Tree)
- i. Draw-A-Menorah (half-drawn)
- j. Draw-A-Santa (half-drawn)

## 10. SEASONAL BACKGROUNDS:

- a. Draw-A-Flower (blank stems/leaves)
- b. Draw-A-Tree (blank tree form)
- c. Draw-A-Snowman (blank snowman form)
- d. Snowy Landscape with Hill (light, colored background)
- e. Snowy Landscape-Flat (light, colored background)
- f. Spring Woods (light, colored background)
- g. Beach (light, colored background)
- h. Summer Carnival (light, colored background)
- i. Fall Football Field (light, colored background)
- j. Fall Landscape (light, colored background)

## **PUZZLE-BACK SEQUENCE**

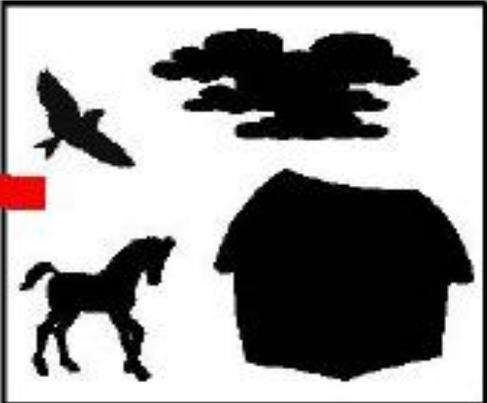
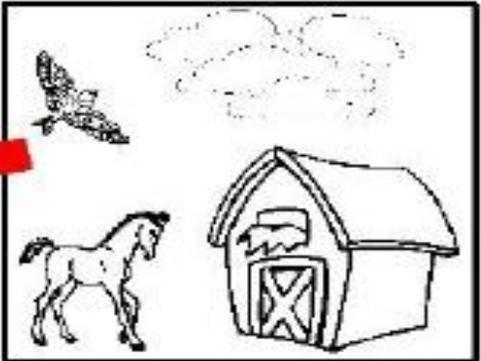
This allows the teacher to meet the needs of children who have varying levels of visual discrimination. Based on the Visual Cue Sequence, it provides inserts that allows the puzzle back to be easily switched by either teacher or child.

Additional levels not shown include cognitive overlays that may include the following:

1. Word recognition (name of object or piece)
2. Color recognition
3. Stickers with scents (for sensory experiences and visual impairments)
4. Different textures (for sensory experiences and visual impairments)
5. Item associations (i.e. cow piece associated with cheese or milk back)

.....just to name a few

# PUZZLE-BACK SEQUENCE



Insert  
Slot

## **PUZZLE-PIECE SEQUENCE**

This allows the teacher to meet the needs of children who have varying levels of visual discrimination and fine motor. Based on the cognitive, motor and visual sequences for puzzles, it provides various piece-number kits that allow both teachers and children to change the number and difficulty level of the puzzle pieces being used.

Kits examples provided are representative only. Additional variations are possible including the following:

1. Any number of pieces depending on puzzle size
2. Any level of visual sequences (i.e. black and white line, color, silhouette, etc.)
3. Any size knob (large too small for children with motor disabilities)
4. Pieces with scent stickers (sensory experiences as well as visual impairments)
5. Pieces with small tactile tags (sensory experiences as well as visual impairments)
6. Cognitive overlays of numbers, words, etc.

....to name a few....

# PUZZLE-PIECE SEQUENCE



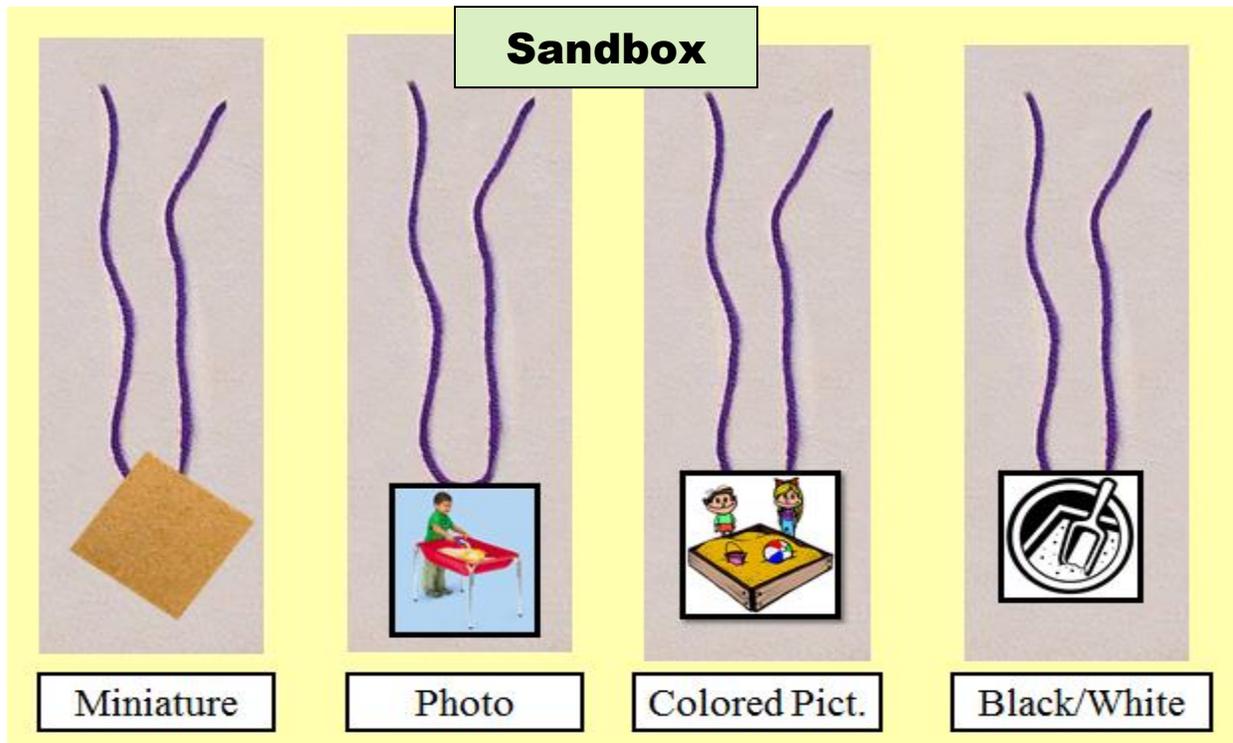
# Classroom Cue Sequence: Centers

Classroom cues can be developed across the visual cue sequence. Traditionally programs usually pick one level and use this all year. This approach provides all of the visual cue levels so the skill can be targeted as part of the curriculum and children moved to higher developmental levels over time.

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The second section shows how choice-making itself can also be placed into a sequence. Again, most programs have children make only one choice at a time, a rather low developmental level. By providing the right product supports, teachers can be encouraged to teach this skill as a sequence, thus targeting higher levels over time.

# Classroom Cue Sequence: Centers



**One choice with necklace or other visual cue**



**One choice + required task during course of period**



**One choice + required task during course of week**



**Repeat above sequence with multiple choices  
(planned day)**