



GRAFOMOTRICITÀ

Prof.ssa Ilària D'Angelo

Dot.ssa Chiara Gentilozzi

Prof.ssa Simone Aparecida Capellini

SCRITTURA

- Coinvolge diverse aree del cervello:
 - Occipitale
 - Parietale
 - Frontale

(Schirmer et al., 2004)

OCCIPITALE

PROCESSAMENTO

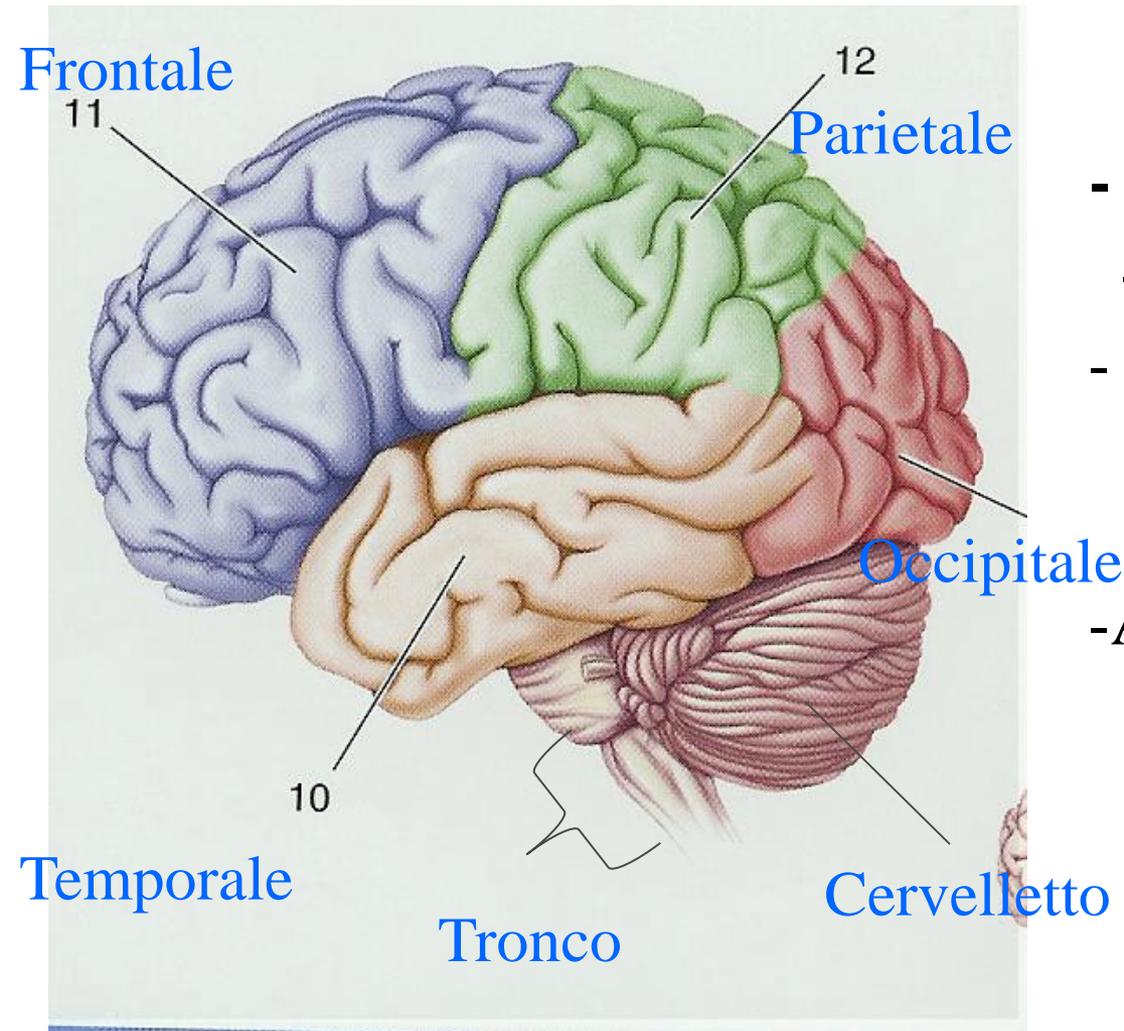
Memoria viso-motoria

Attività

- Percezione visiva
- Memoria
- Integrazione visiva, visiva-costruttiva e spaziale

Disfunzione

- Alterazione della dimensione delle forme, lettere, numeri e percorsi motori
- Alterazione della fluidità



PARIETALE

PROCESSAMENTO

- Funzione motoria

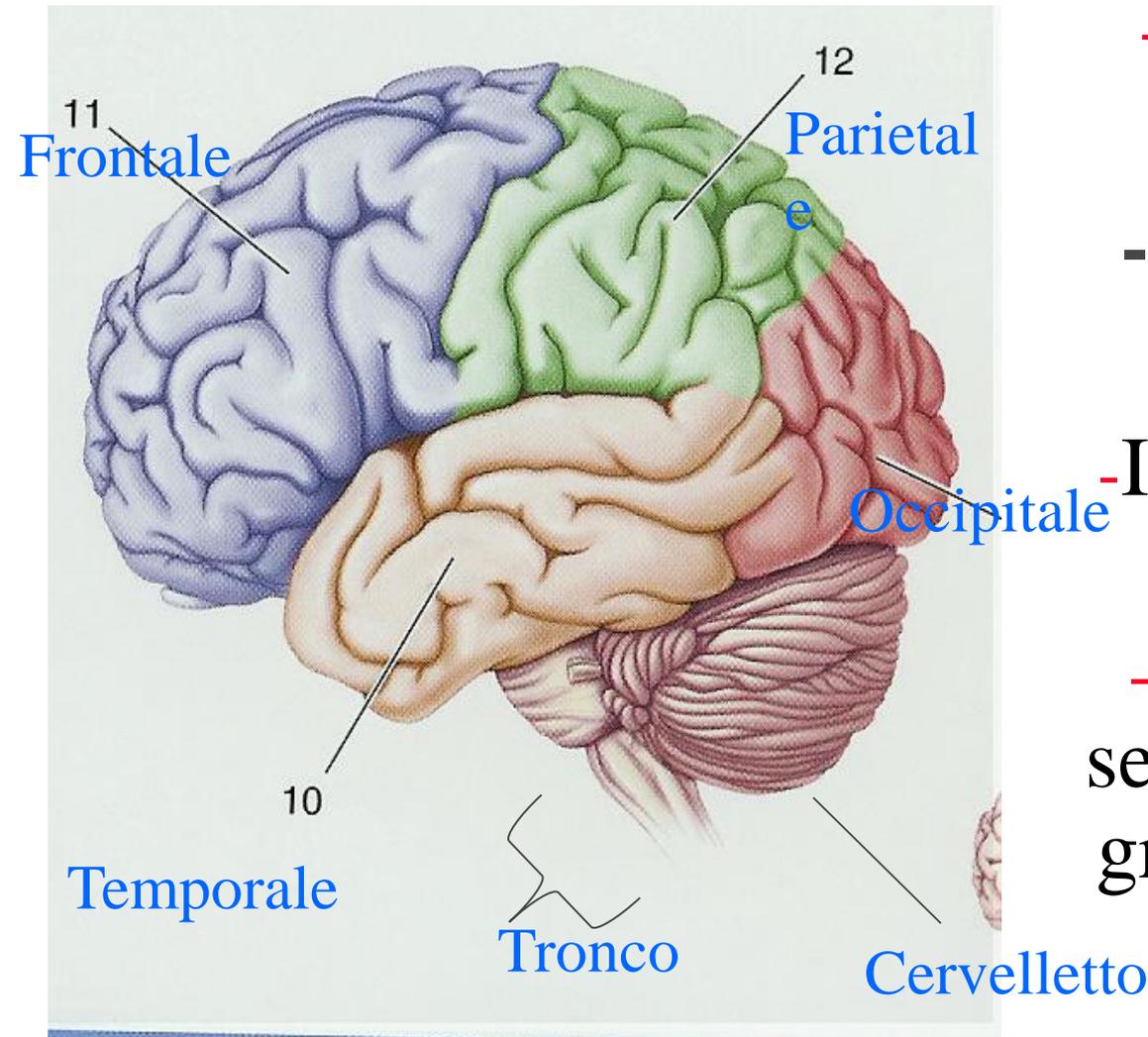
Attività

- Sequenza motoria

Disfunzione

- Inversione (lettura e scrittura)

- Alterazione con la sequenza nei percorsi grafo-motori, parole, cifre



FRONTALE

PROCESSAMENTO

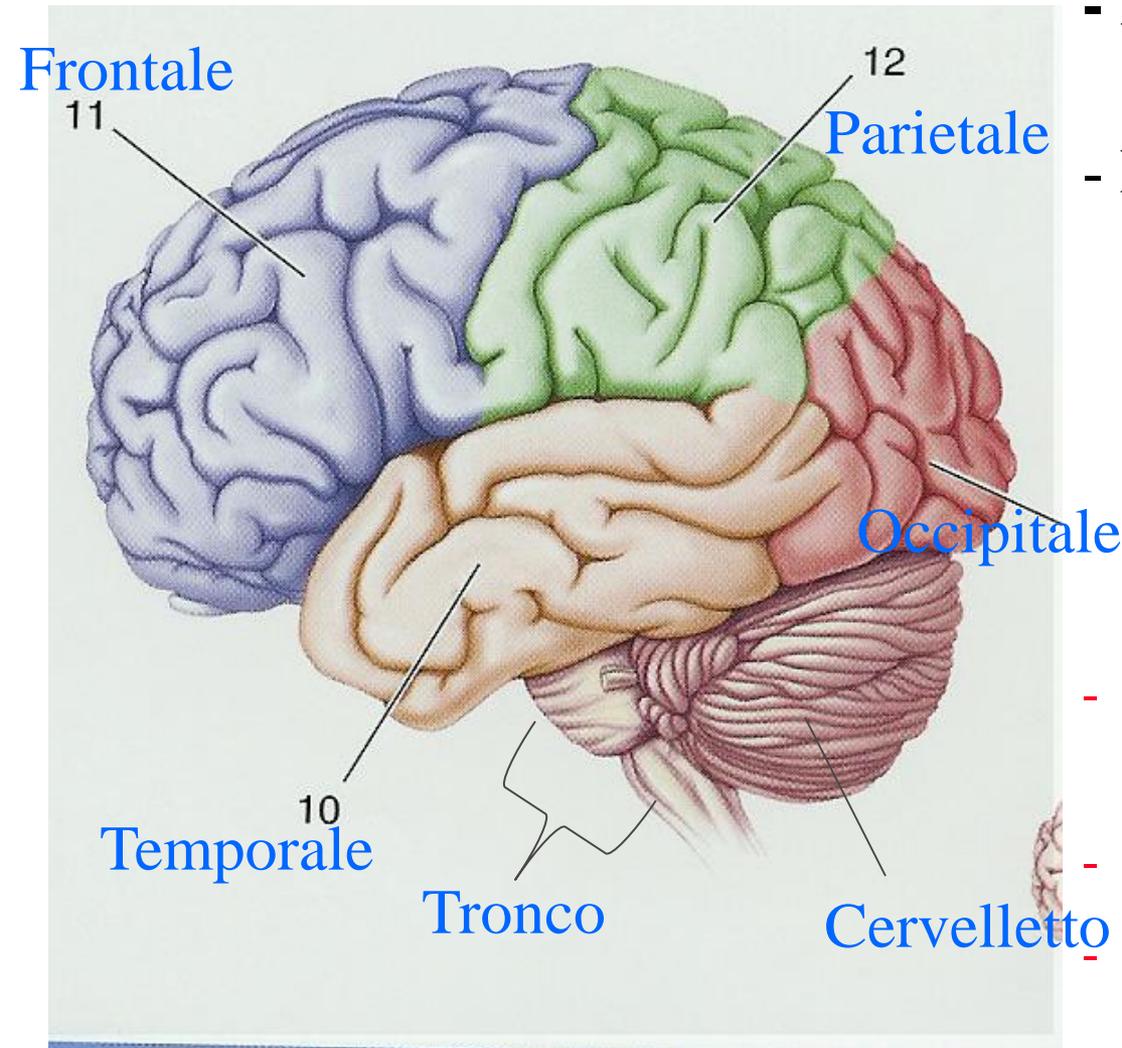
- Discriminazione visiva complessa
- Funzioni visivo-posturali

Attività

Pianificazione, organizzazione ed esecuzione di movimento

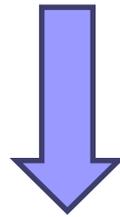
Disfunzione

- Difficoltà nell' attenzione focale
- Iper-ipo-velocità esecutiva
- Pianificazione di percorsi, frasi, testi



FUNZIONE MOTORIA

Nello studio di FM, si deve comprendere che il **controllo del movimento** si ottiene dall'attività integrata delle strutture cerebrali.



Informazioni sensoriali hanno un ruolo importante nel controllo del movimento

Es. Pressione nell'esecuzione grafica, nella presa di un oggetto

FUNZIONE MOTORIA FINE

Le attività necessarie per l'esecuzione del movimento comprendono:

- OSSERVARE le caratteristiche fisiche dell'oggetto,
- RECUPERARE IN MEMORIA riferimenti dell'oggetto (memoria),
- INVIO NEUROMUSCOLARE, che porta ad applicare una certa forza,
- CONTROLLO MUSCOLARE (contrazione-decontrazione graduale)
- LASCIARE l'oggetto dalla presa e riporlo correttamente.

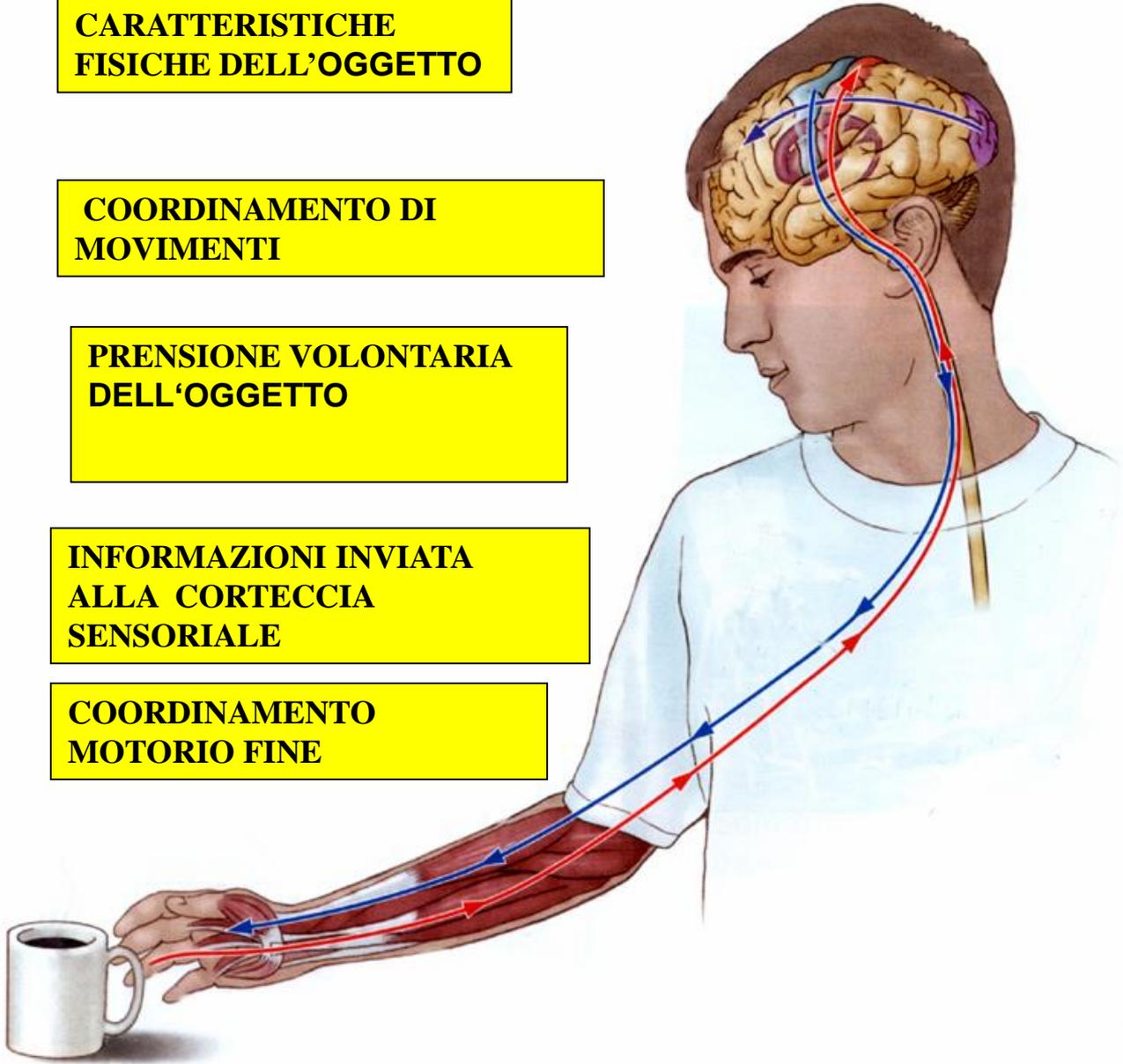
**OSSERVARE LE
CARATTERISTICHE
FISICHE DELL'OGGETTO**

**COORDINAMENTO DI
MOVIMENTI**

**PRENSIONE VOLONTARIA
DELL'OGGETTO**

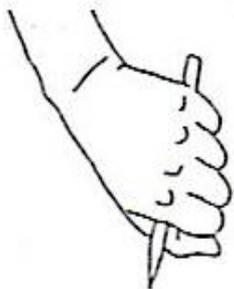
**INFORMAZIONI INVIATA
ALLA CORTECCIA
SENSORIALE**

**COORDINAMENTO
MOTORIO FINE**



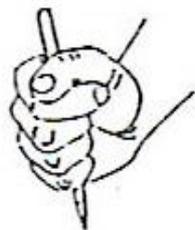
IMPUGNATURA DELLO STRUMENTO DI SCRITTURA

(Rosa Neto, 2001)



(a)

3 anni
(cerchio)



(b)

3 a. e 6 m
(cerchio)



(c)

4 anni
(coord. motoria "libera")



(d)

4 anni e 6 mesi
(coord. mot. libera)



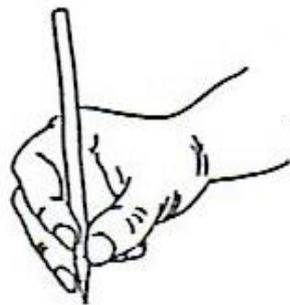
(e)

5 anni
(quadrato)



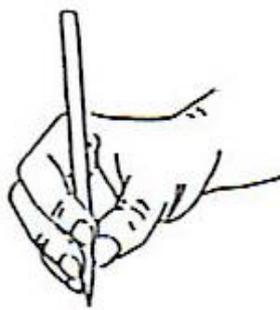
(f)

5 anni e 6 mesi
(quadrato)



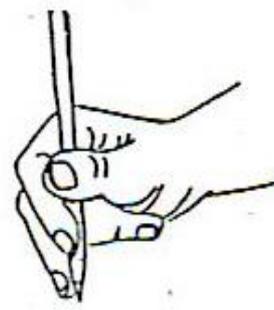
(g)

6 anni
(triangolo)



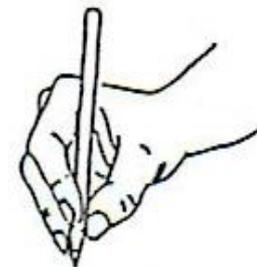
(h)

6 anni e 6 mesi
(triangolo)



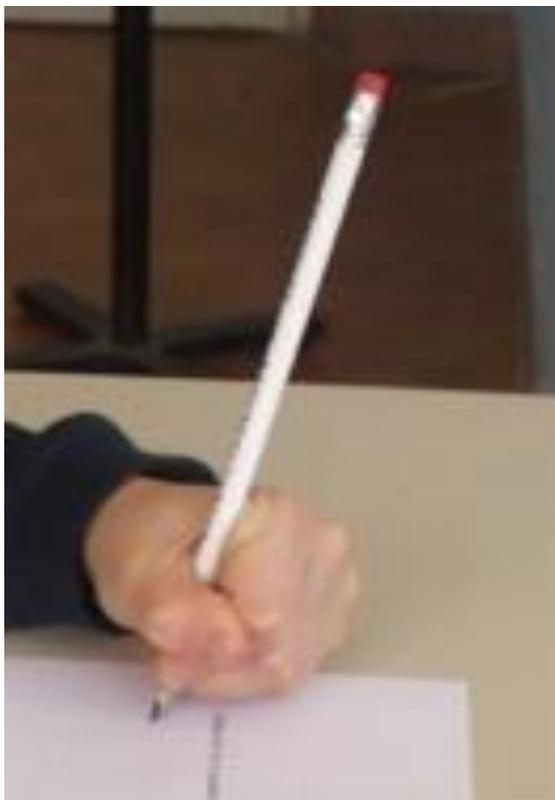
(i)

7 anni
(corsivo)



(j)

7 anni e 6 mesi
(corsivo)





Cosa serve per scrivere?



PERCETTIVO-VISUO-MOTORIA

- COORDINAZIONE VISUO-MOTORIA (CVM)
- DISCRIMINAZIONE FIGURA-SFONDO (FS)
- CHIUSURA DI FORME (CF)
- COSTANZA DI FORME (CosF)
- POSIZIONAMENTO NELLO SPAZIO (PS)
- RELAZIONE NELLO SPAZIO (RS)
- VELOCITA' VISUO-MOTORIA (VVM)

PERCETTIVO-VISUO-MOTORIA

■ COORDINAZIONE VISUO-MOTORIA

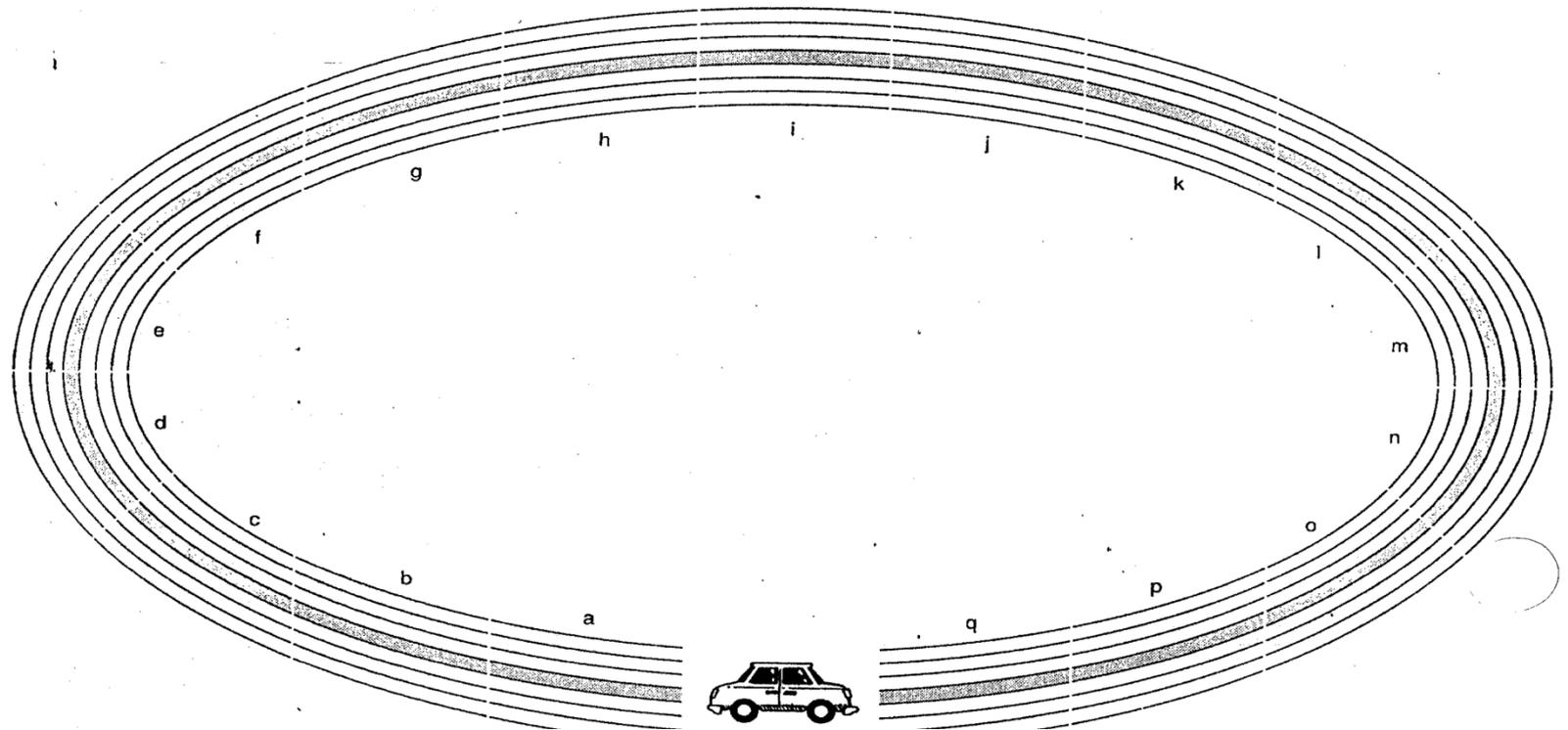
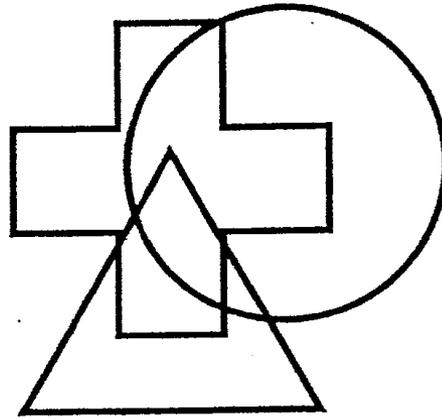
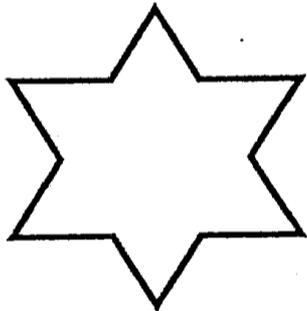


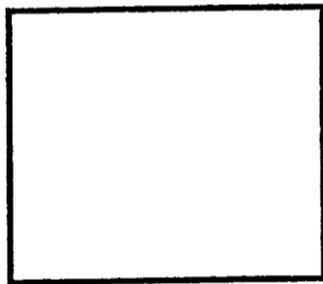
FIGURA-SFONDO



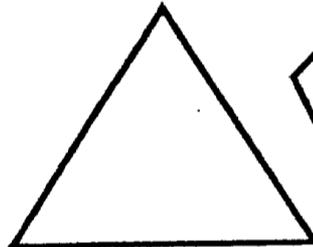
1



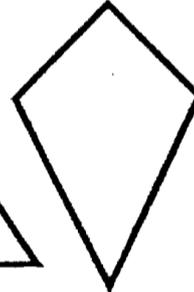
2



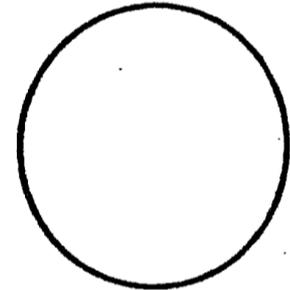
3



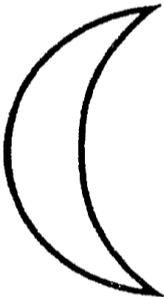
4



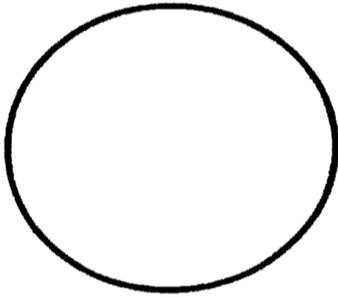
5



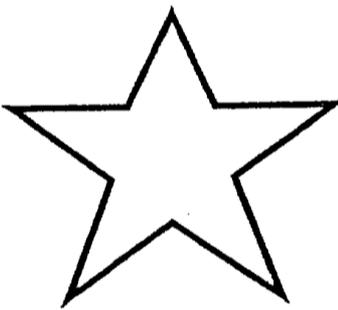
6



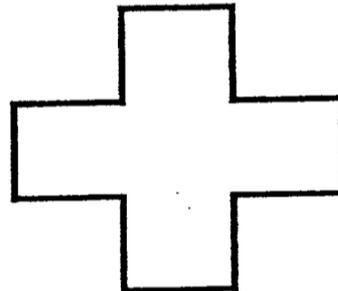
7



8



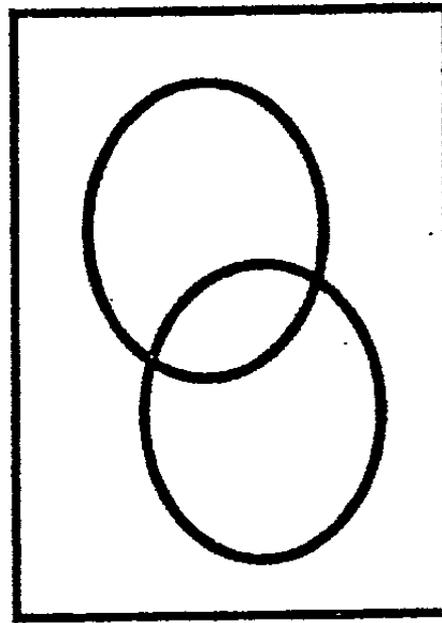
9



10



CHIUSURA DI FORME



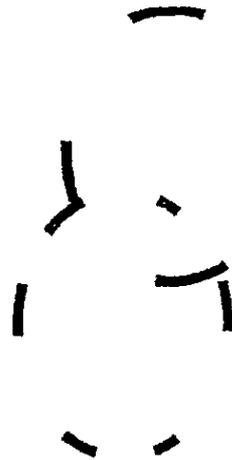
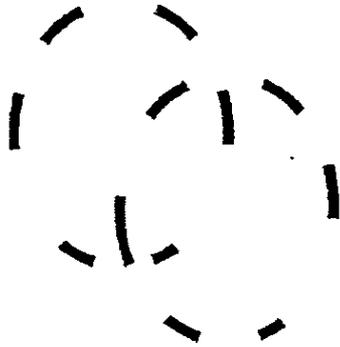
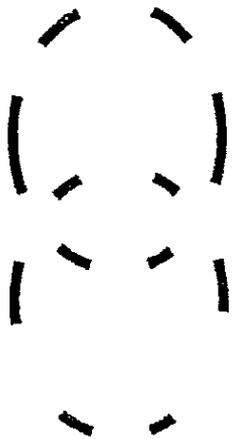
1

2

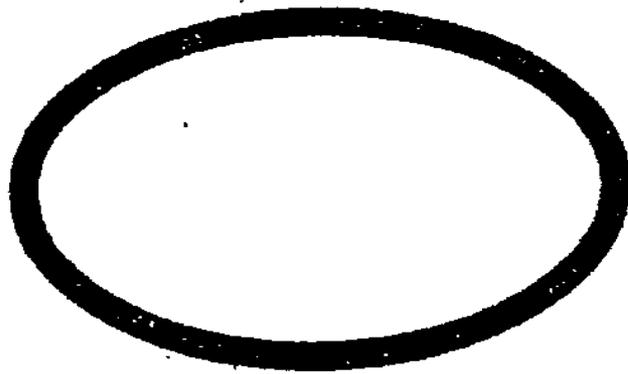
3

4

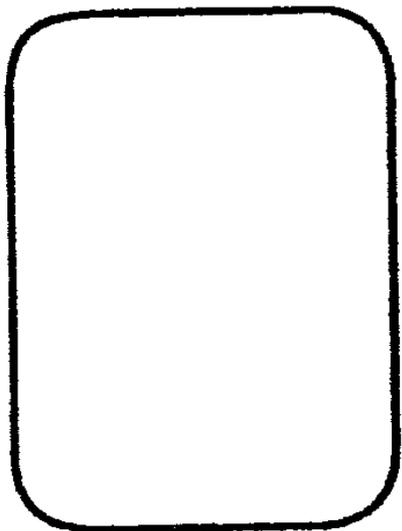
5



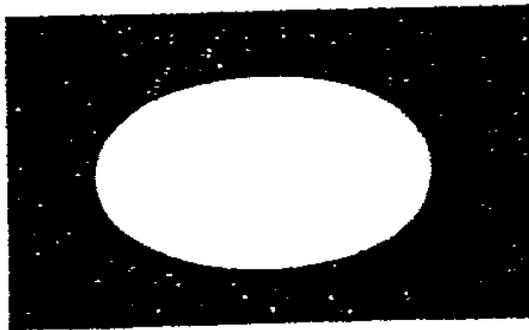
COSTANZA DI FORME



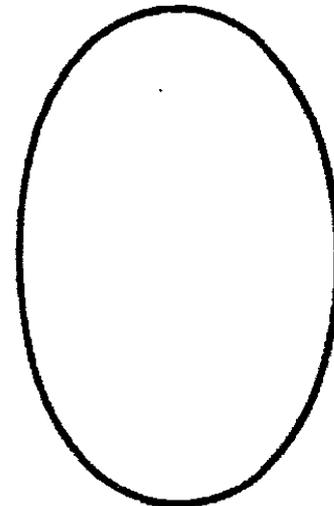
1



2



3



POSIZIONAMENTO NELLO SPAZIO

1

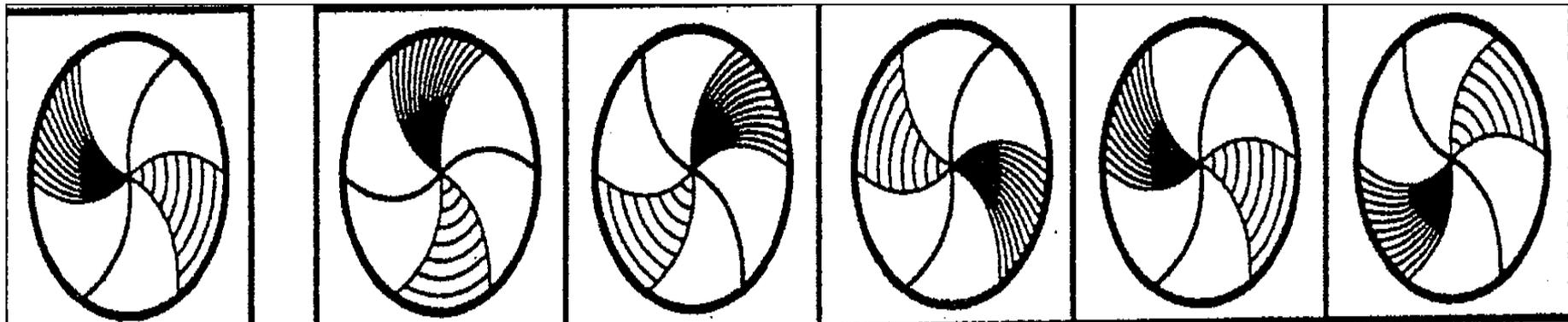
2

3

4

5

21



1

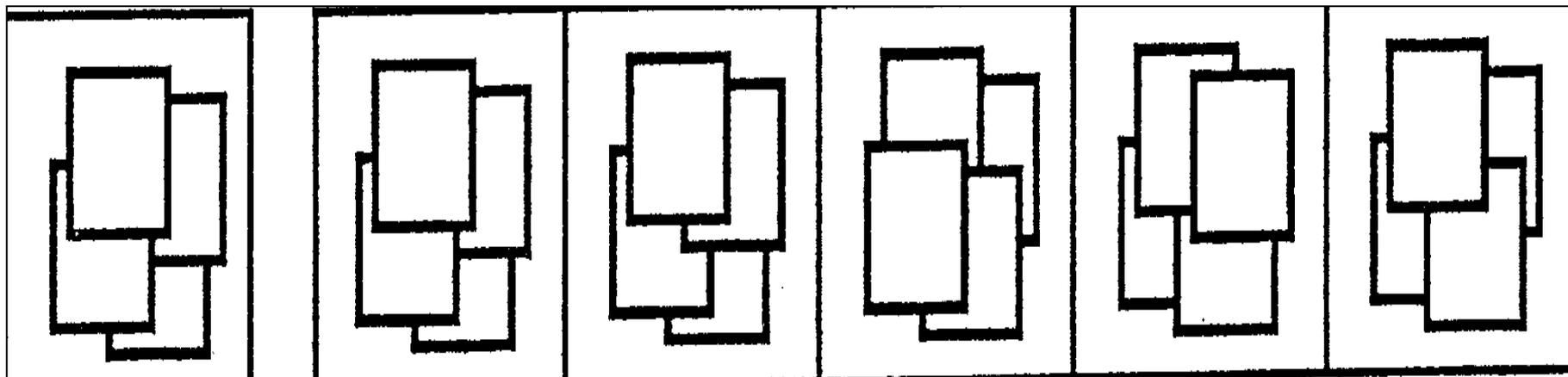
2

3

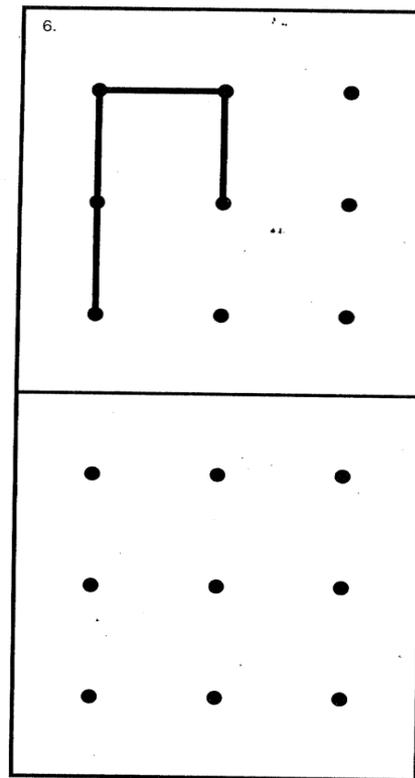
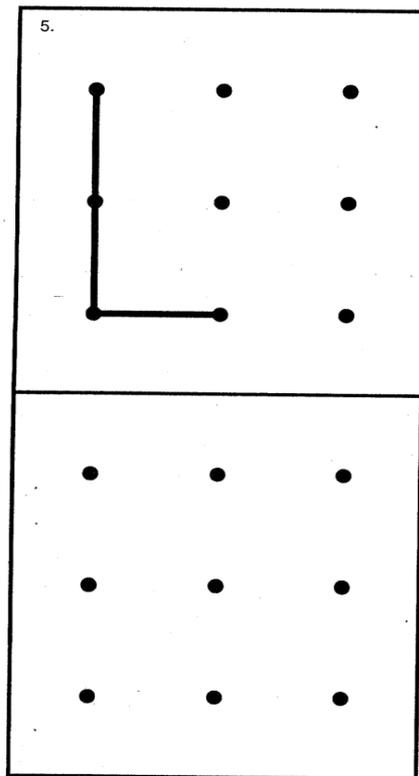
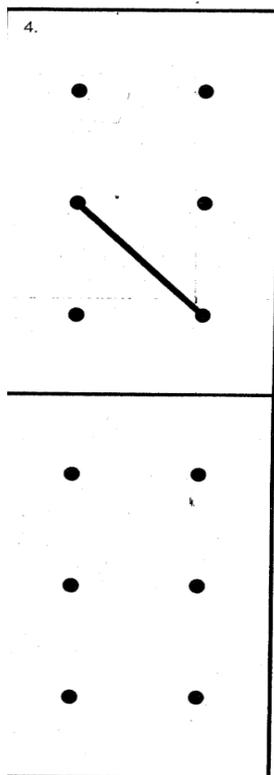
4

5

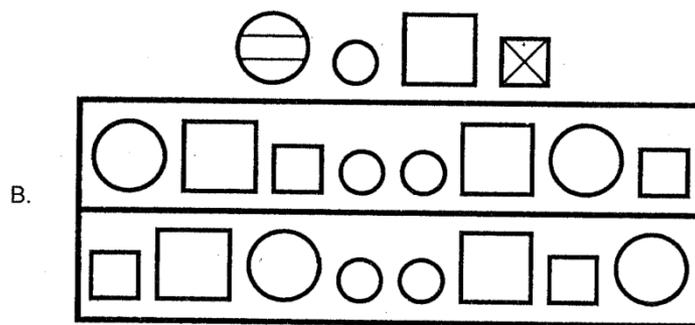
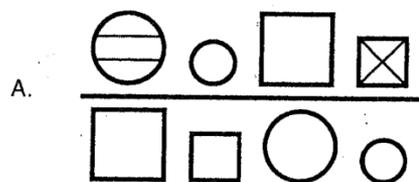
22



RELAZIONE NELLO SPAZIO



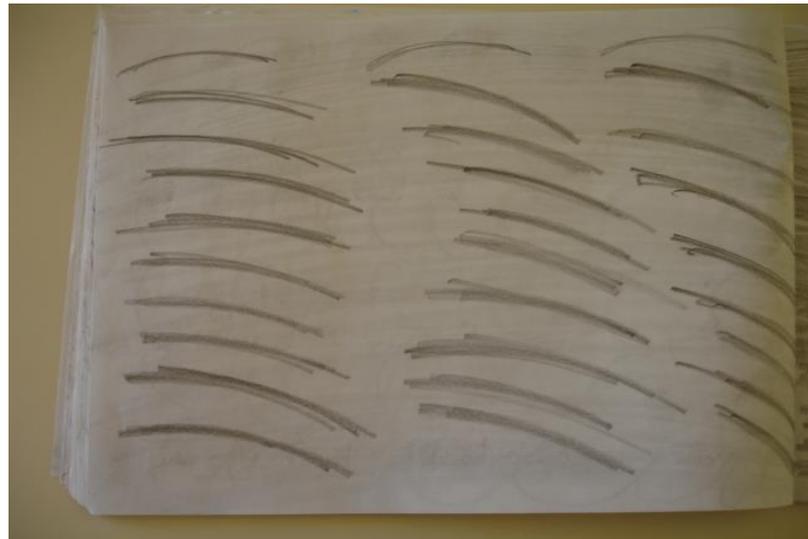
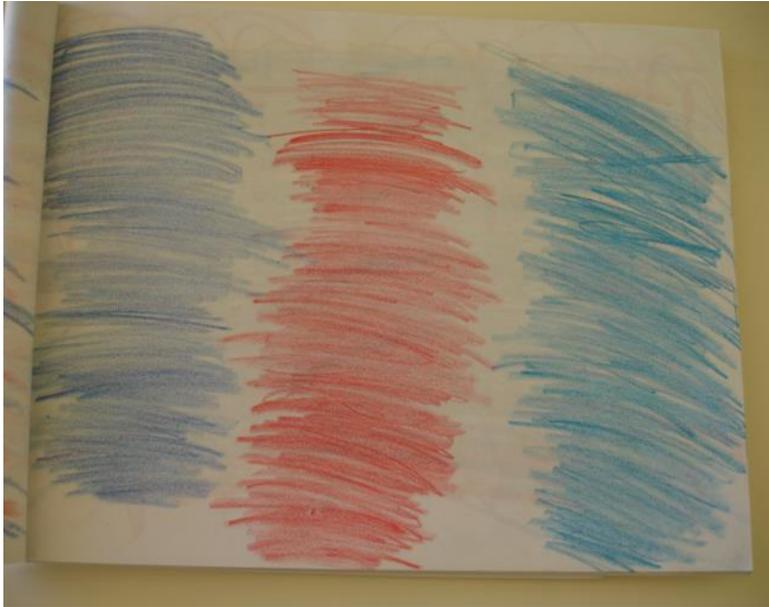
VELOCITA' VISUO-MOTORIA



MOVIMENTI DI DISSOCIAZIONE (spalla e gomito)

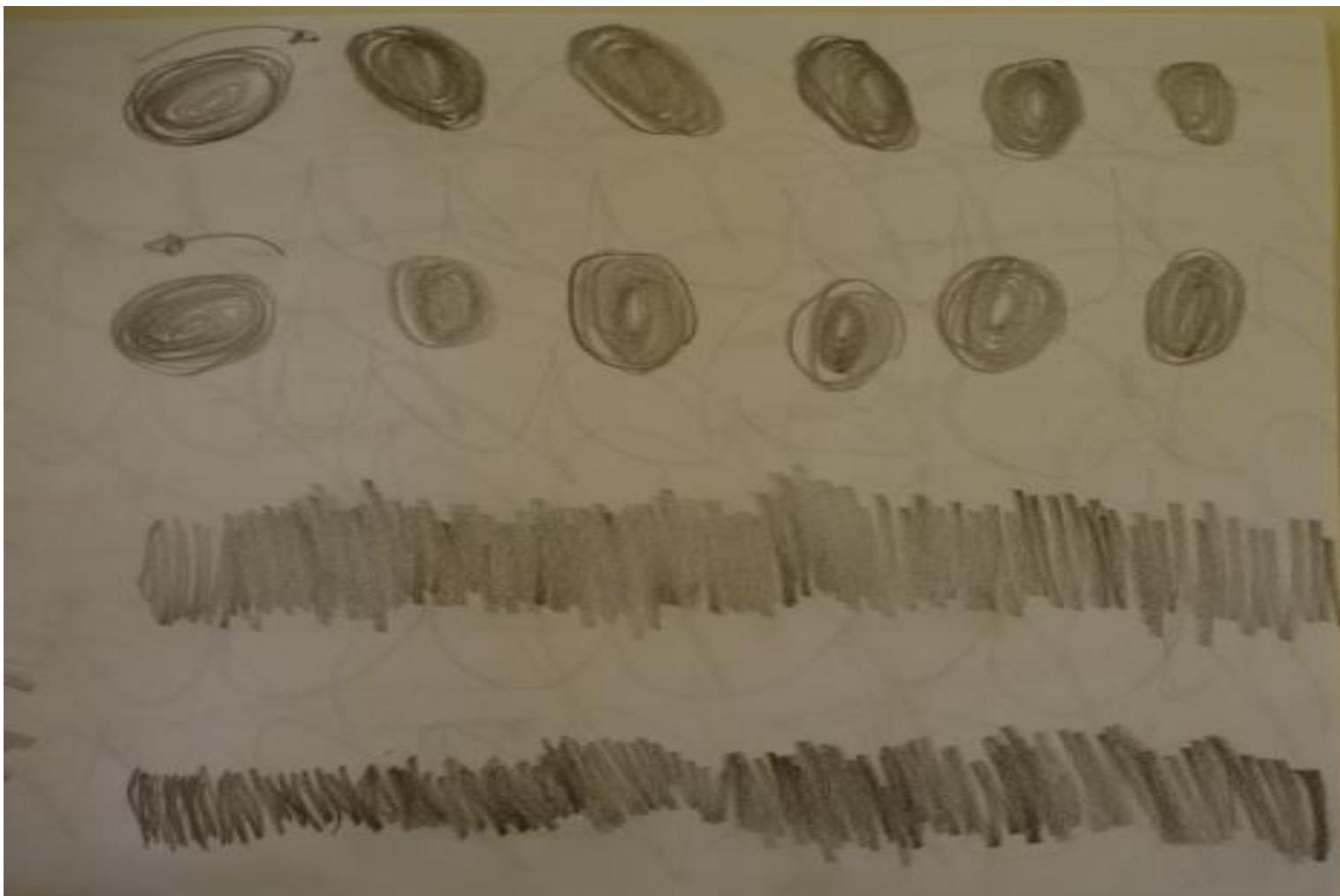


DISSOCIAZIONE (polso e tridigitale)



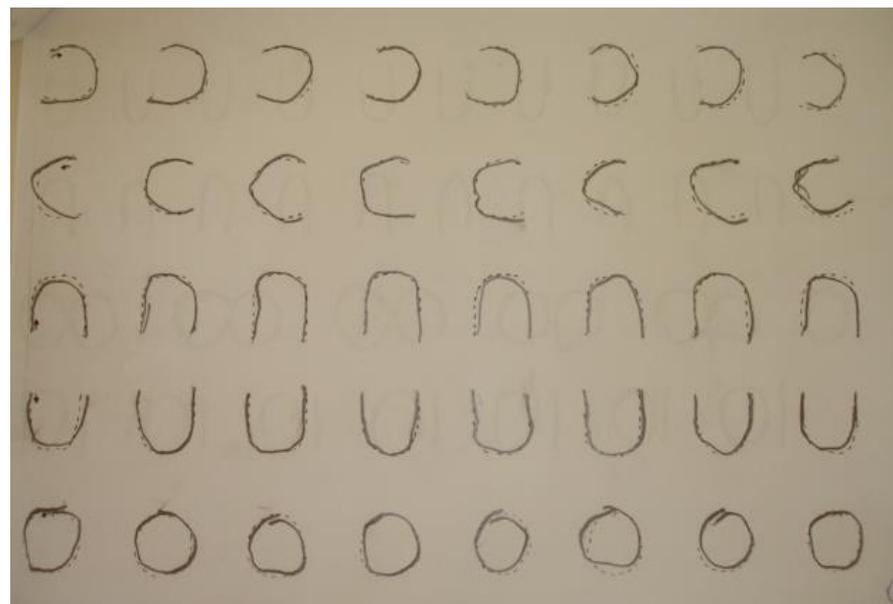
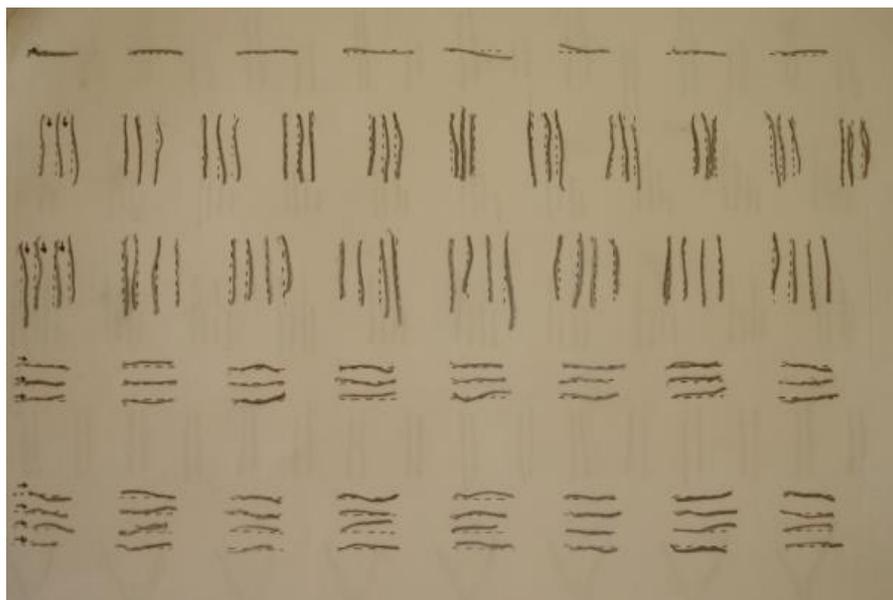
DISSOCIAZIONE – dita e tridigitale

(6B con adattore)

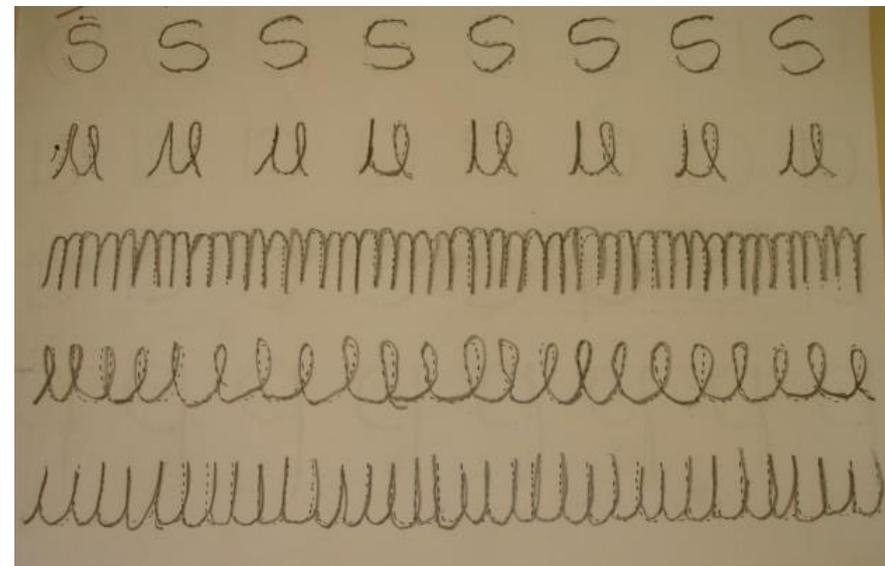
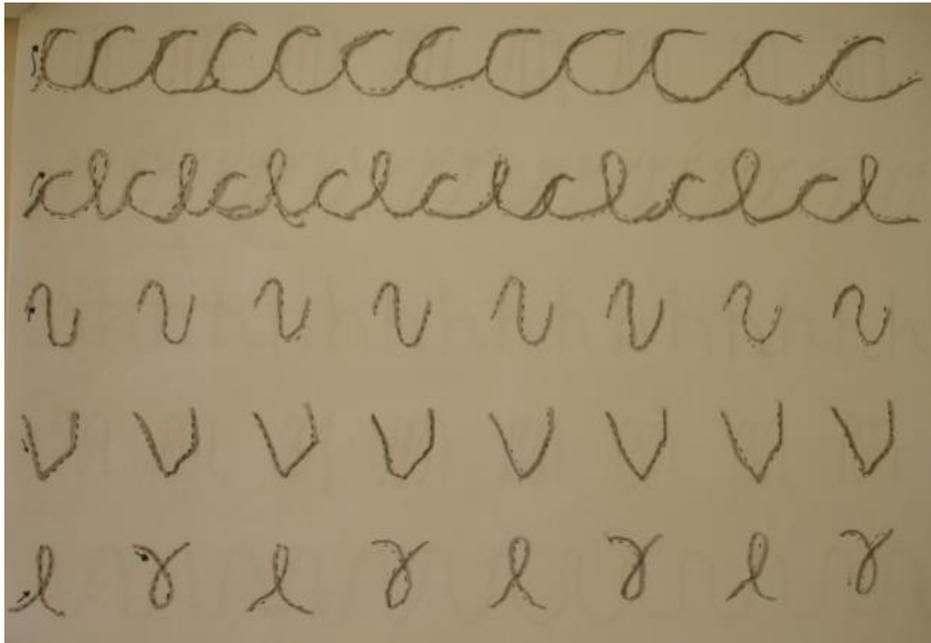


Sequenza di linee, semicerchi, cerchi

6B con e senza adattore

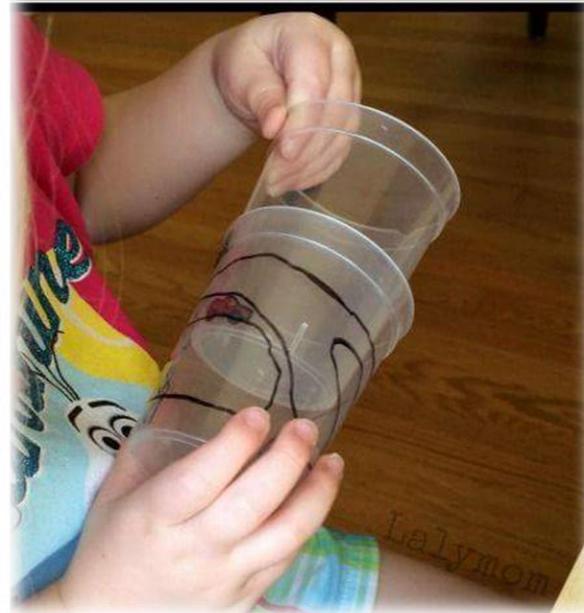


6B con e senza adattore

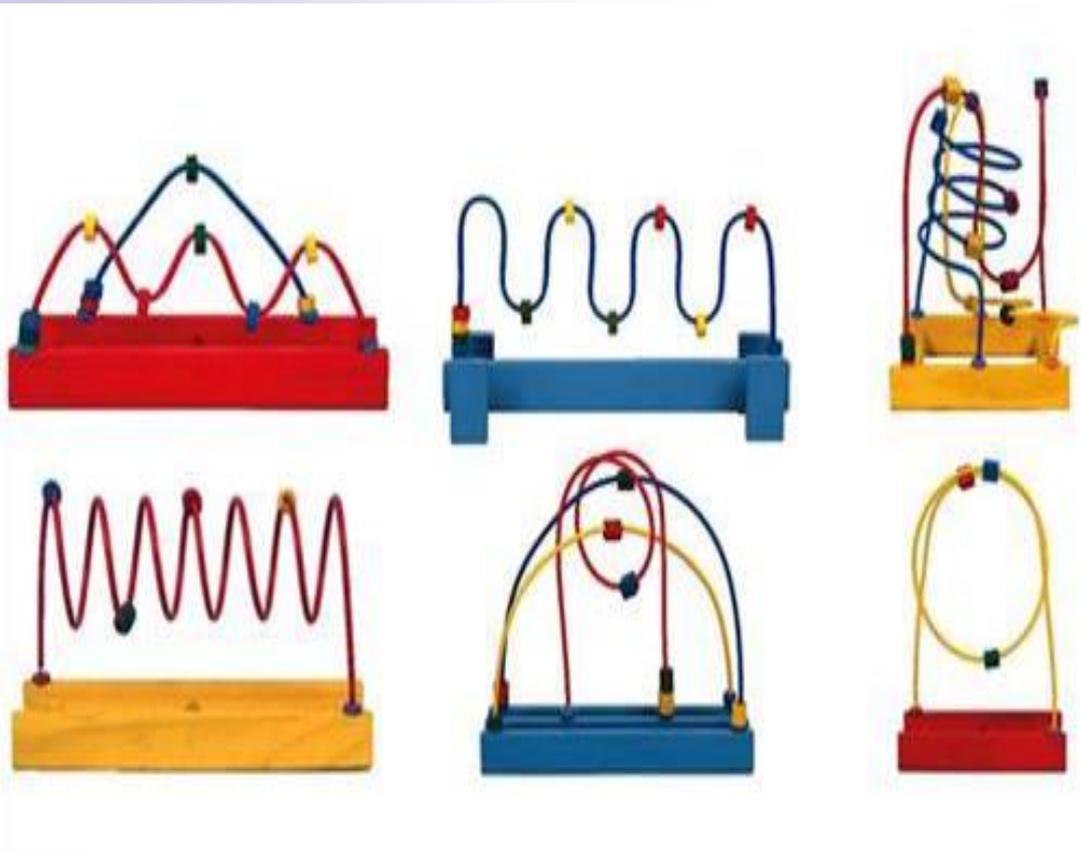




3 TWISTY TURNY CUP GAMES



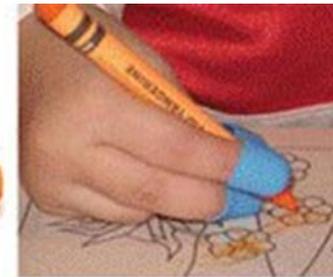
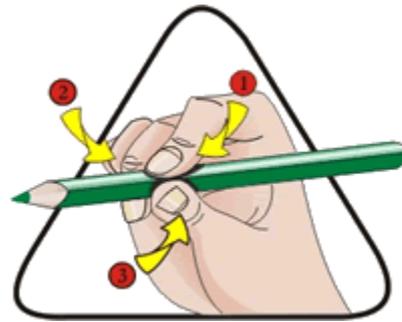
CONTROLLO FINE MOTORIO



Printable Lacing cards
NUMBERS 0-10





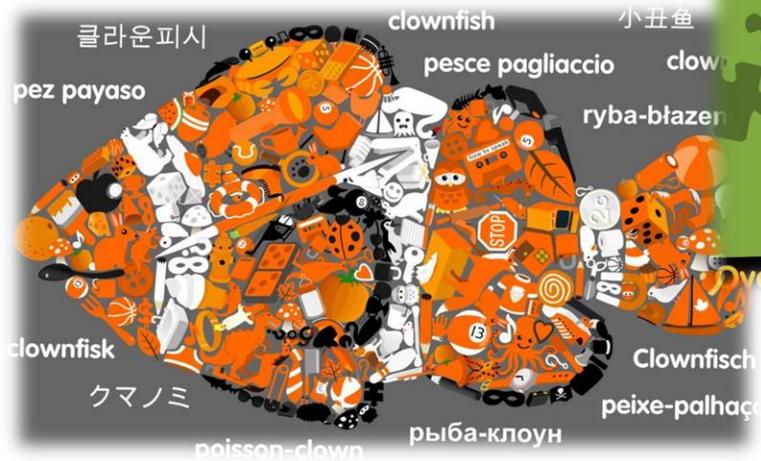








Little Things® Forever



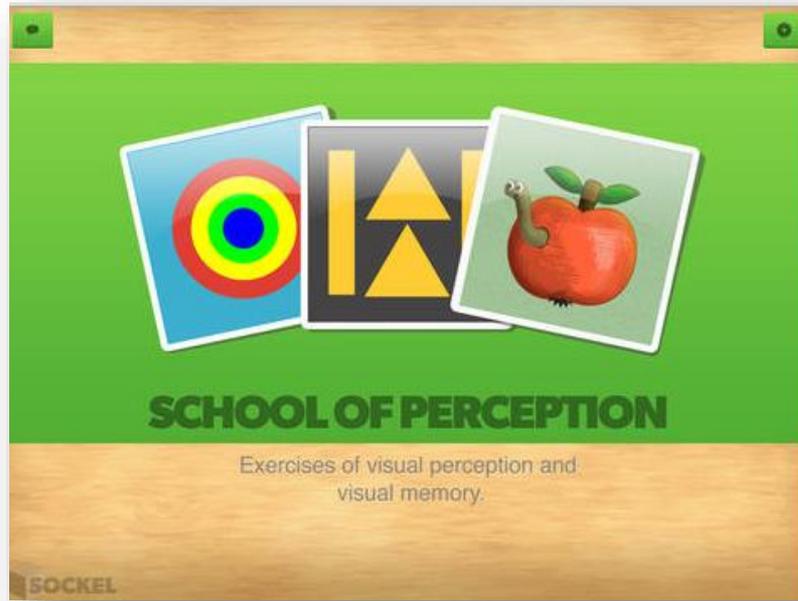
Over a hundred puzzle pieces to collect and solve.

https://play.google.com/store/apps/details?id=com.klicktock.littlethings2&hl=pt_BR

<https://itunes.apple.com/br/app/little-things-forever/id520762327?mt=8>

School Of Perception

De Marc Sockel



► <https://itunes.apple.com/br/app/school-of-perception/id576718211?mt=8>

Dexterity



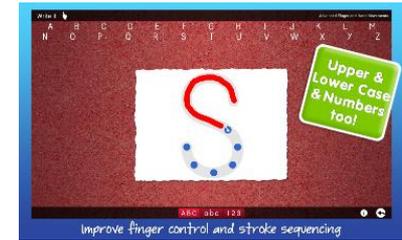
BLI **Dexterity™**
Improve your Fine Motor Skills with daily practice

Write it **Pinch it** **Tap it**

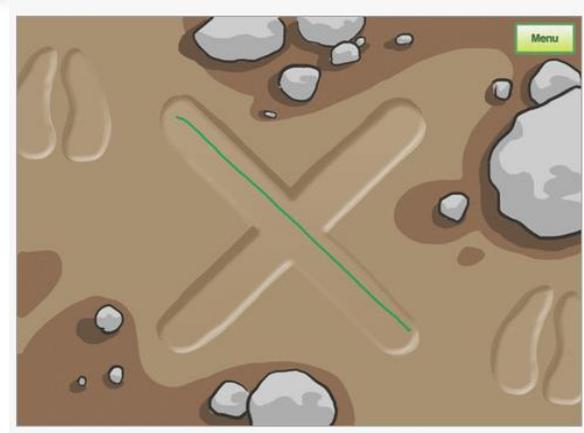
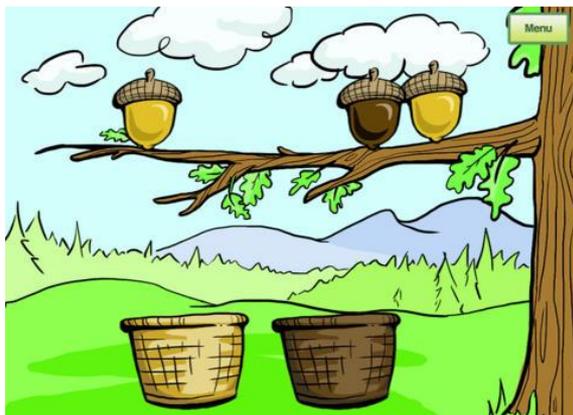
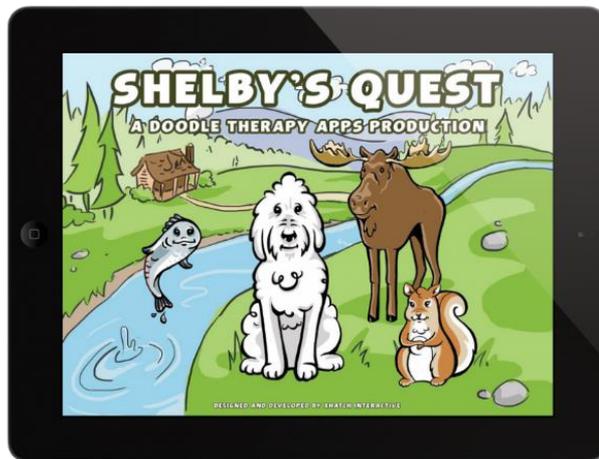
Options Report

© 2011 BinaryLabs, Inc.. All rights reserved.
Three activities to help develop fine motor skills

<https://itunes.apple.com/br/app/dexterity-fine-motor-skill/id420464455?mt=8>

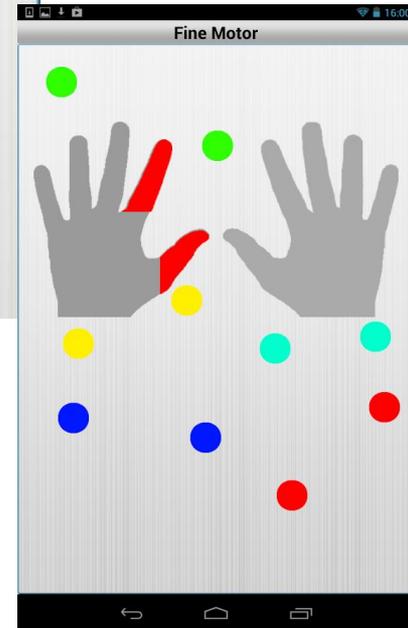


Shelby's Quest



<https://itunes.apple.com/us/app/shelbys-quest/id554328210?mt=8>

IOT session



<https://itunes.apple.com/br/app/iot-session/id682260594?mt=8>



www.eyecanlearn.com

Apps Academic writing in ... Biomecánica Online ... Children with devel... Developmental Coo... Developmental mot... Galeria do Web Slice Harvard System of R... Motor Skills

HOME EYES CAN LEARN >> GETTING STARTED **TRACKING >>** PERCEPTION >> TEAMING >> FOCUSING >> VMI

TRACKING: FIXATION TRACKING: CENTRAL-PERIPHERAL INTEGRATION

TRACKING: SACCADES TRACKING: PURSUITS

assessment

How are parents to know if their children's attention and/or school struggles are related to poor vision skills? One way to determine if vision is playing a significant role is to evaluate their symptoms. A simple assessment tool gives you a realistic measure of the chances that your child's visual system is interfering with his/her ability to read, learn, and remain on task.

Read More

MOST RECENT ARTICLES

EYE CAN LEARN IS GETTING A FACELIFT!

An Important Word to Parents

Eye Can Learn has enjoyed a decade of providing fun exercises to help improve

www.eyecanlearn.com/tracking/

<http://www.eyecanlearn.com/>



A screenshot of the website www.eyecanlearn.com. The browser's address bar shows the URL. The navigation menu includes: HOME, EYES CAN LEARN >>, GETTING STARTED, TRACKING >>, PERCEPTION >>, TEAMING >>, FOCUSING >>, and VMI. A yellow arrow points to the 'PERCEPTION >>' menu item, which has opened a dropdown menu. The dropdown menu lists: VISUAL DISCRIMINATION, VISUAL SPATIAL RELATIONS, VISUAL CLOSURE, VISUAL MEMORY, SEQUENTIAL MEMORY, VISUAL FIGURE GROUND, and VISUAL FORM CONSTANCY. Below the navigation menu is a large banner image showing a young boy in a red shirt playing with colorful geometric blocks. To the right of the banner is a text box that reads: 'concentrate on developing good tracking, focusing, eye teaming, and perceptual skills to help your child have the visual tools he or she needs in today's visually demanding world. Let's get started!' with a 'Read More' link. Below the banner is a row of eight small thumbnail images showing children engaged in various activities. At the bottom of the page, there are two sections: 'MOST RECENT ARTICLES' and 'EYE CAN LEARN IS GETTING A FACELIFT!'. The first article is titled 'An Important Word to Parents' and the second article begins with 'Eye Can Learn has enjoyed a decade of'.

<http://www.eyecanlearn.com/>



<http://www.eyecanlearn.com/>

A **B** **C** **D** **E** **F**

1 2 3 4

5 6 7 8

9 10 11 12 13

14 15 16

Detailed description: This is a visual discrimination task. At the top, six reference icons are labeled A through F. A horizontal line separates them from 16 numbered options below. Option B is circled in red, and option D is circled in green. The icons consist of various combinations of shapes: a circle, a square, a triangle, and a pair of scissors. Option A: Circle on the left, square on the right, triangle on top right. Option B: Circle on the left, square on the right, triangle on top right. Option C: Circle on top, square on bottom left. Option D: Circle on top, square on bottom left. Option E: Circle on the left, triangle on the right. Option F: Scissors. Option 1: Scissors. Option 2: Circle on top, square on bottom left. Option 3: Circle on the left, square on the right, triangle on top right. Option 4: Circle on the left, triangle on the right. Option 5: Circle on the left, square on the right, triangle on top right. Option 6: Circle on the left, triangle on the right. Option 7: Scissors. Option 8: Circle on top, square on bottom left. Option 9: Scissors. Option 10: Scissors. Option 11: Circle on top, square on bottom left. Option 12: Circle on the left, square on the right, triangle on top right. Option 13: Circle on the left, triangle on the right. Option 14: Circle on the left, square on the right, triangle on top right. Option 15: Circle on the left, triangle on the right. Option 16: Circle on top, square on bottom left.



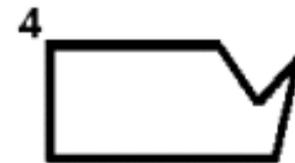
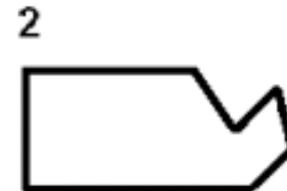
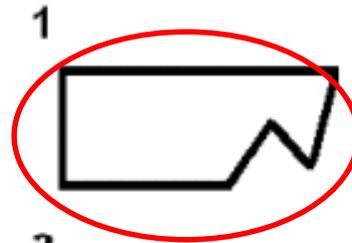
<http://www.eyecanlearn.com/>

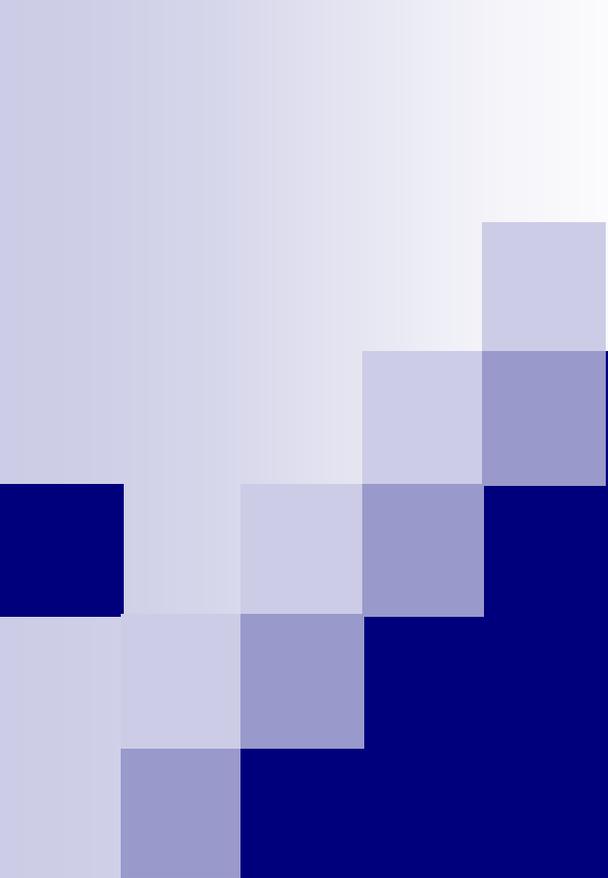




<http://www.eyecanlearn.com/>

**Which shape was cut out of the box?
The shape can be turned.**





**Grazie per la vostra
attenzione!!**

Prof.ssa Ilària D'Angelo

Dot.ssa Chiara Gentilozzi

Prof.ssa Simone Aparecida Capellini