

破解障礙之謎： 從感覺統合理論出發

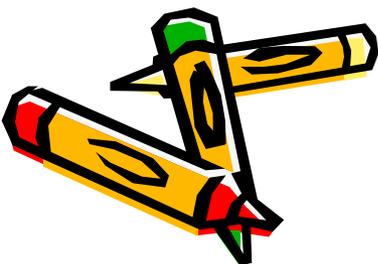
Dr. Yvonne Han 韓明怡博士



破解障礙之謎：從感覺統合理論出發

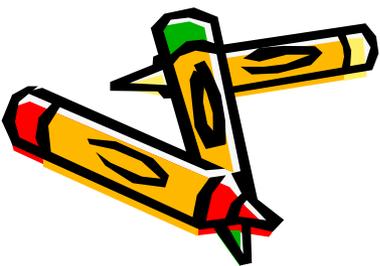
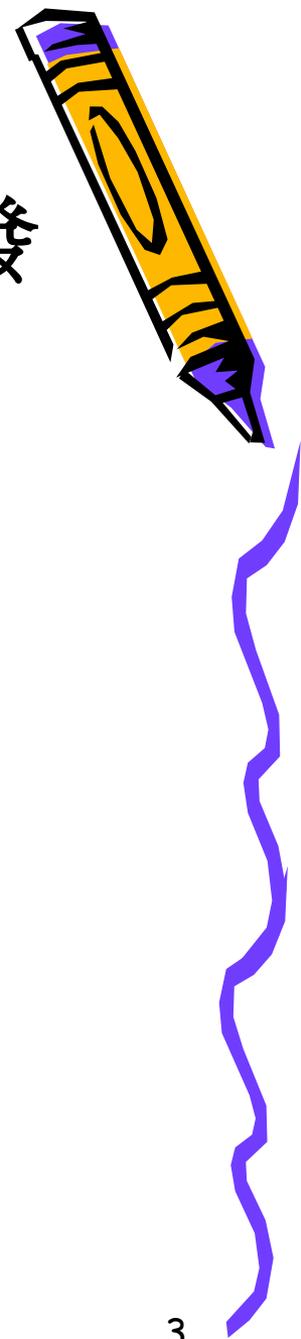
目的：

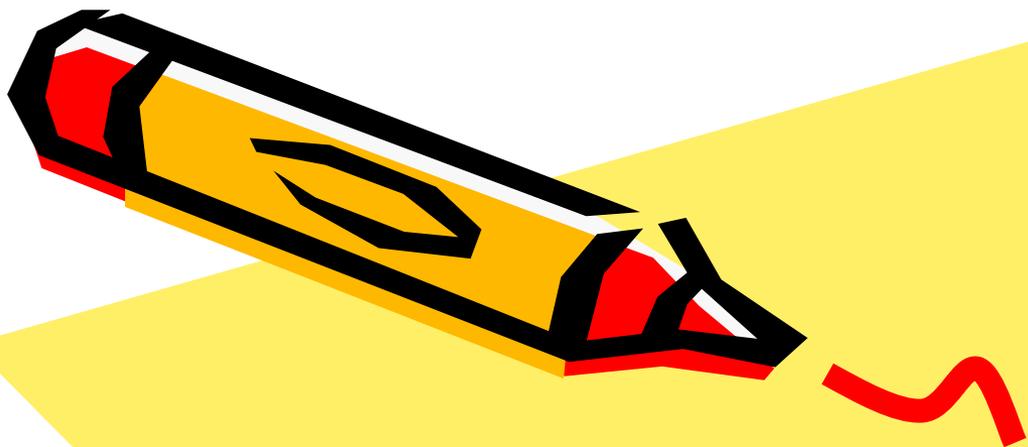
從感統角度理解各類學習障礙的原因與相應教學法的安排



破解障礙之謎：從感覺統合理論出發

- 感覺統合治療
- 多感官訓練法
- 相應教學法

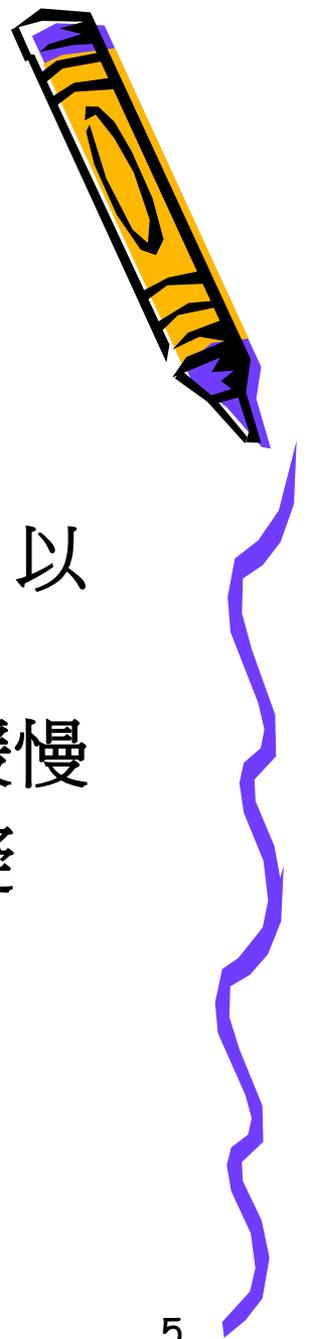




感覺功能障礙



感覺統合障礙與兒童發展



學習過程：

- 不同感官接收資料
- 經過有效的統合
- 傳達致大腦部份
- 發出適切的反應

常見障礙：

- 感官刺激不足，以致信息微弱
- 傳遞速度過份緩慢
- 傳遞通路有障礙

<http://www.youtube.com/watch?v=ygEWrYCubKg>

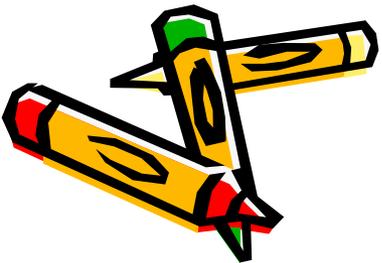


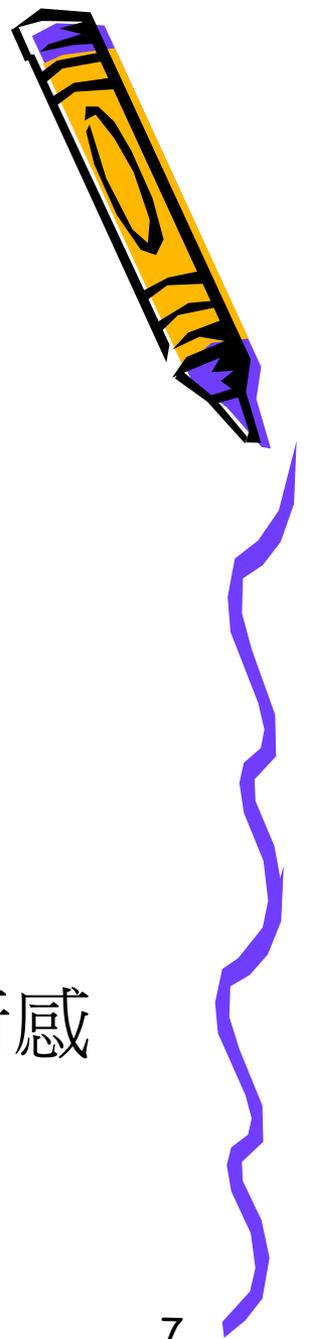
感覺功能障礙



感覺失調 (Sensory Modulation Dysfunction)

- 大腦對感覺刺激不能作正常的提升或抑制，因此影響警覺性、情緒和行為表現。
- 主要有四方面：
 1. 感覺負荷過量 (sensory avoiding)
 2. 感覺過敏 (sensitivity)
 3. 尋找刺激 (sensory seeking)
 4. 感覺註冊能力過弱 (low registration)

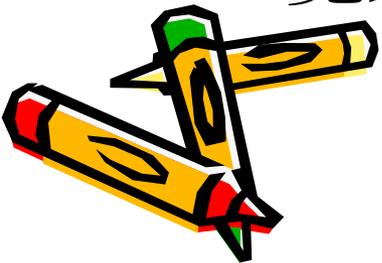




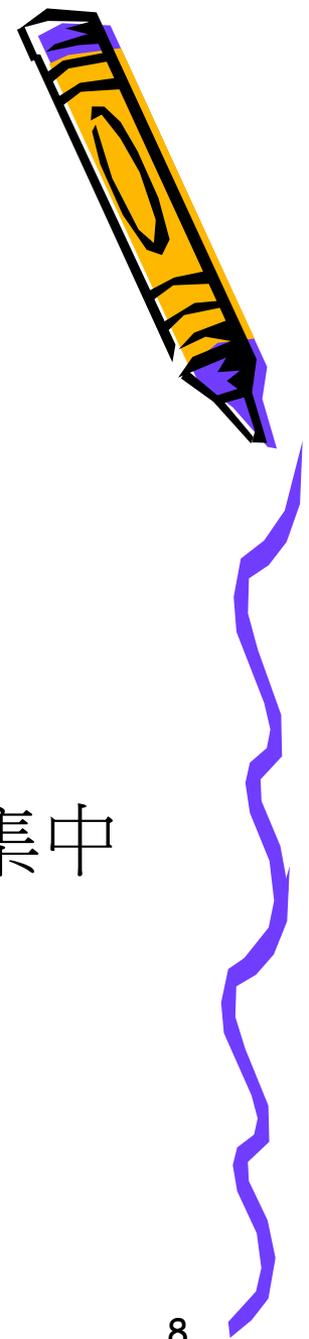
感覺功能障礙與行為問題

感覺負荷過量 (sensory avoiding)

- 因感覺系統抑制過低和提升能力過高
- 不能調節正常的感覺刺激
- 產生負面情緒和警覺性過高
- 出現逃避、害怕、驚慌、哭叫的行為
- 甚至停止感覺輸入 (**shutdown**) 來防衛感覺系統

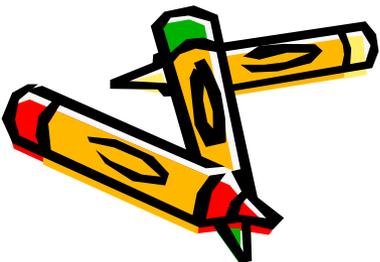


感覺功能障礙與行為問題

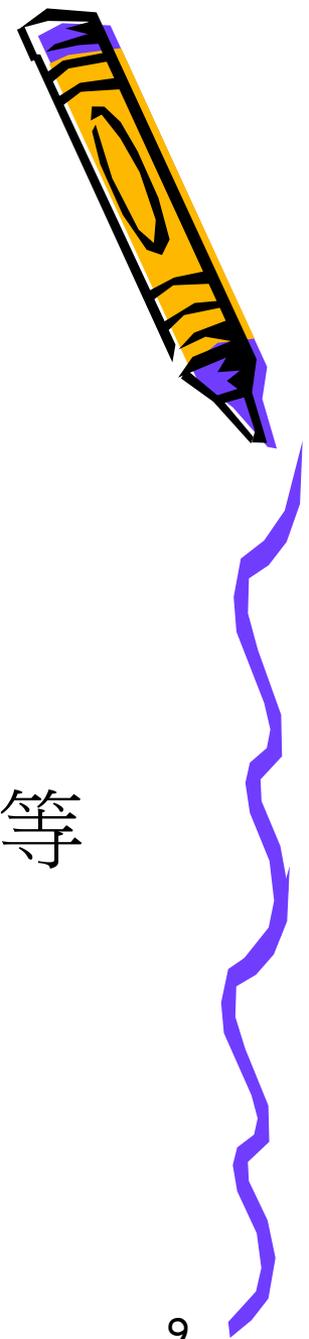


感覺過敏 (sensitivity)

- 因感覺系統抑制過低和提升能力過高
- 不能調節過多的感覺刺激
- 出現過度興奮，大笑大叫或注意力不集中的行為

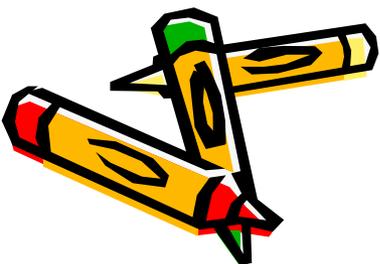


感覺功能障礙與行為問題



尋找刺激 (sensory seeking)

- 因感覺系統抑制過高和提升能力過低
- 以致感覺系統渴求感覺輸入
- 學童很想獲得刺激，如：咬手、搖身等

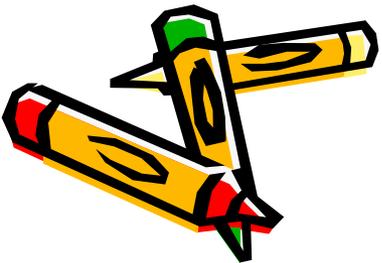


感覺功能障礙與行為問題



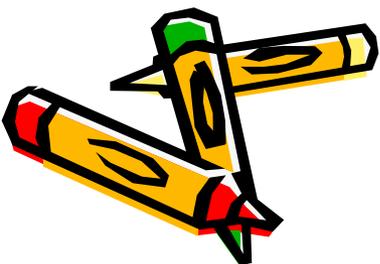
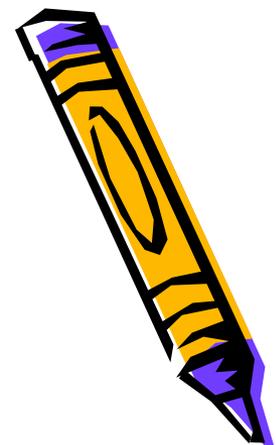
感覺註冊能力過弱 (low registration)

- 因感覺系統抑制過高和提升能力過低
- 感覺刺激沒有被腦部確認，因此學童對感覺刺激反應不大，而忽略注意周圍的環境

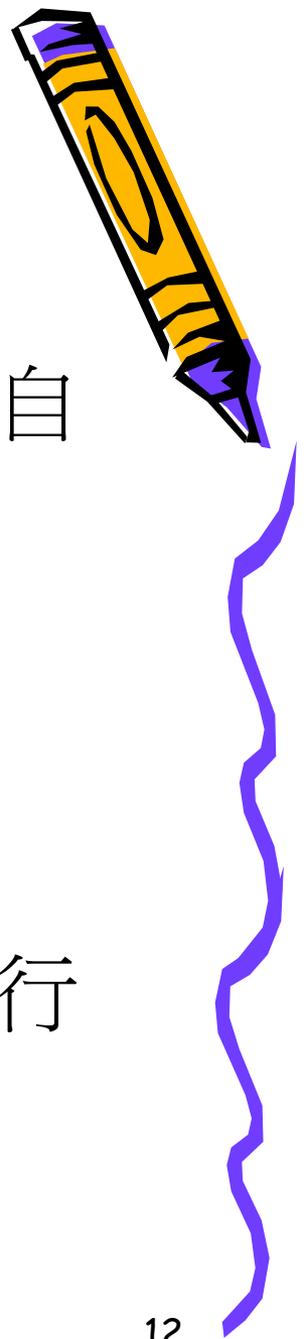


感覺功能障礙與行為問題

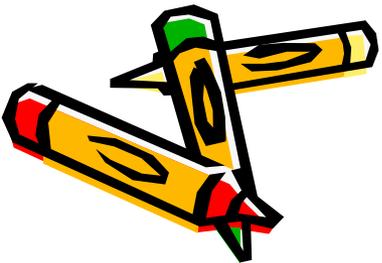
- 因感覺調節過程出現問題
- 接受和處理感覺的反應過高或過低
- 用自我刺激或自我平伏
- 容易出現自我傷害、重複性和攻擊性行為

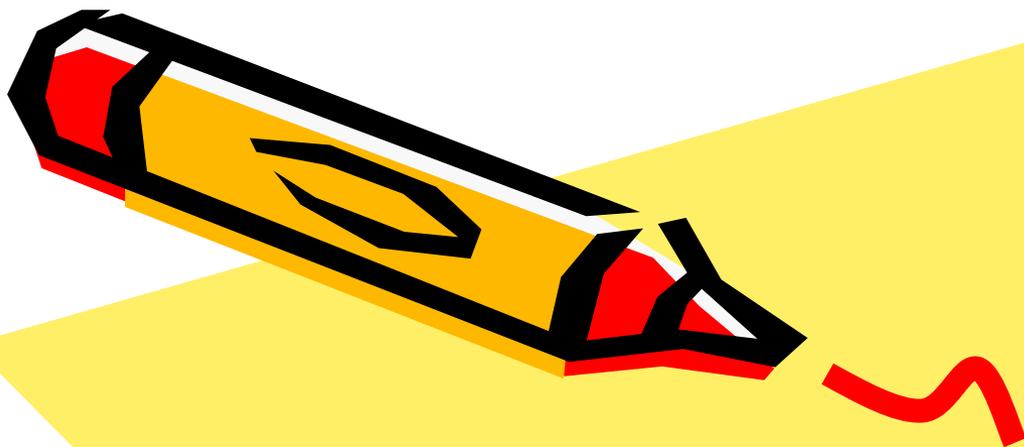


智障學童的感覺功能障礙與行為問題

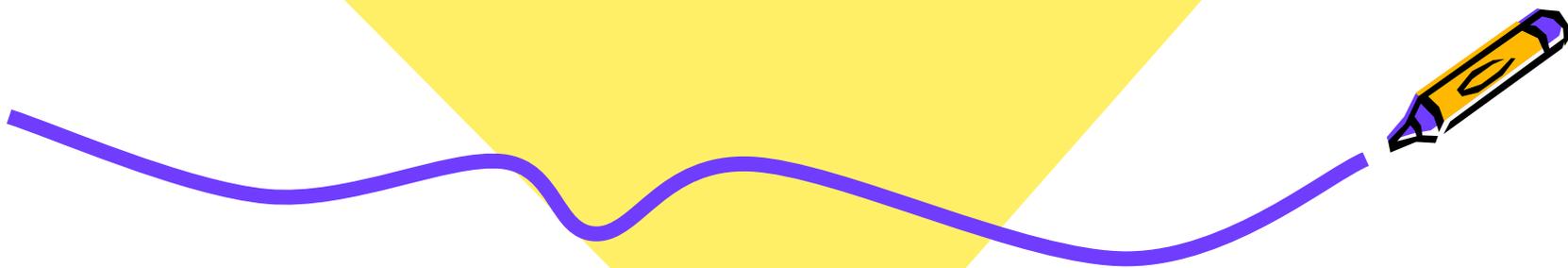


- **55%**成人嚴重弱智人士的行為問題源自感覺 (陳偉雄, 1999)
- 因感覺調節過程出現問題
- 接受和處理感覺的反應過高或過低
- 用自我刺激或自我平伏
- 容易出現自我傷害、重複性和攻擊性行為

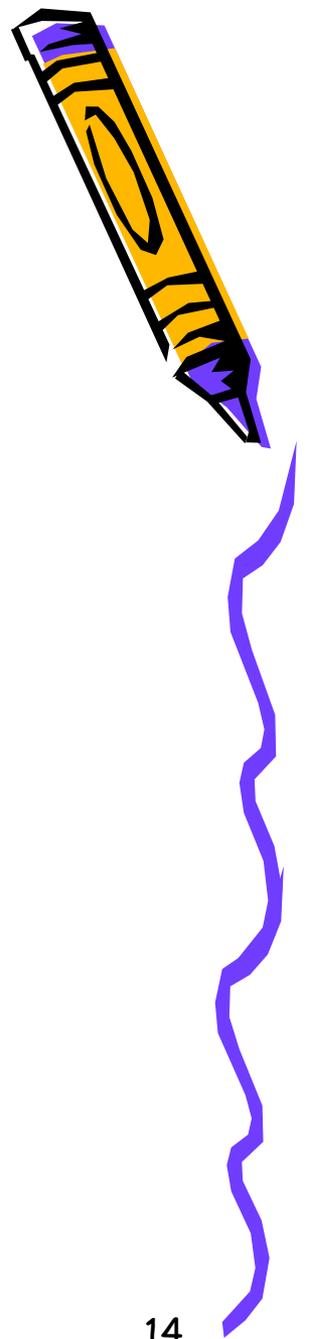




促進感覺調節的方法

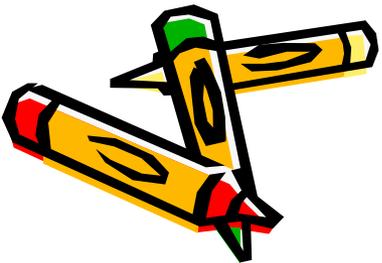


感覺統合治療



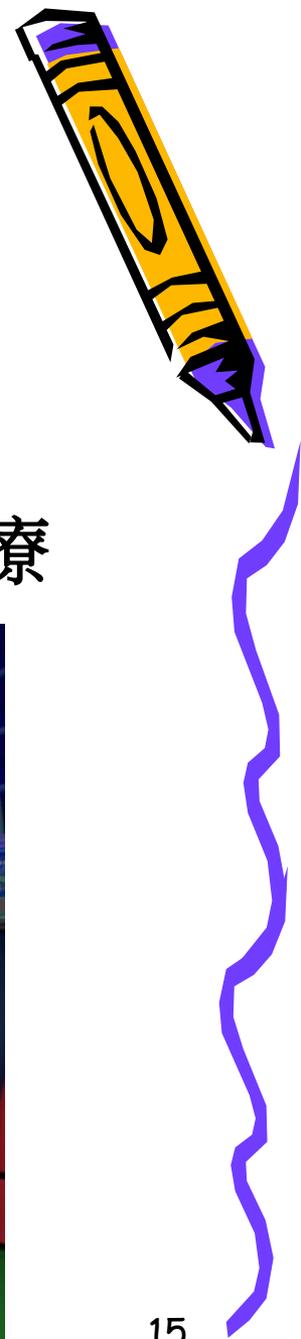
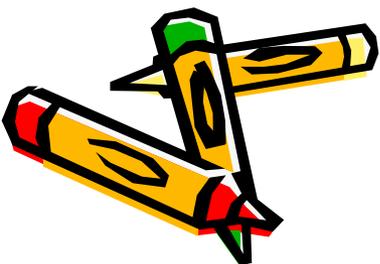
目的：

- 透過有系統及小心控制的感覺刺激活動，促進腦神經成熟，讓腦部能有效地處理外界及自身的感覺訊息，繼而能作出適當和適合環境需要的反應。



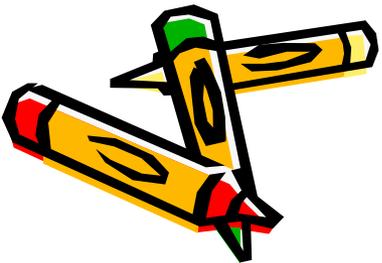
促進感覺調節的方法

- 反應過低 → 提供感覺刺激
- 反應過高 → 提供平伏活動
- 主要利用觸覺、本體感、平衡感覺進行治療



訓練建議

- 觸覺活動
- 前庭活動
- 本體活動
- 觸覺/前庭/本體活動



多感官訓練法

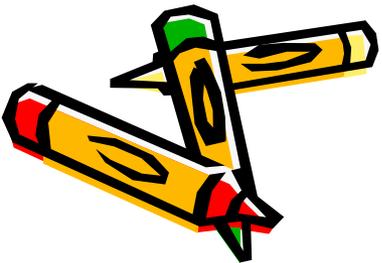


- 觸覺：
- 層次變化多
 - 多接觸不同質地
 - 沙、水、剃鬚膏、泥膠、麵粉、手指畫顏料、刷等。



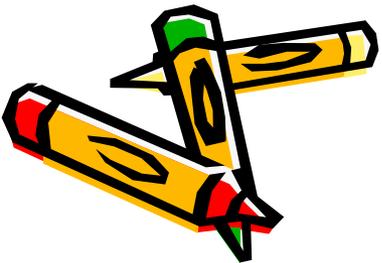
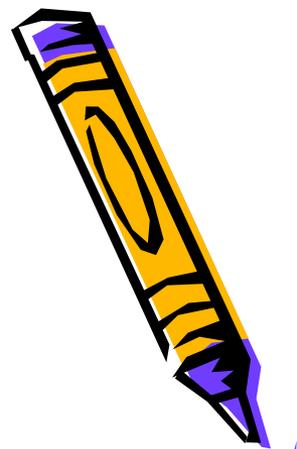
多感官訓練法

- 本體感：
 - 攀爬活動
 - 碰撞活動
 - 推、拉重物
 - 跳彈床
 - 玩泥膠
 - 壓沙包
 - 關節按壓



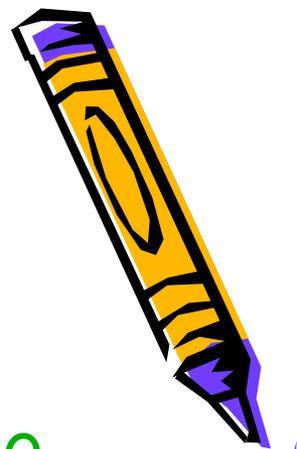
多感官訓練法

- 平衡感覺：
 - 單向 / 多方單向(linear)
 - 360度旋轉 (rotational/angular)
 - 速度改變 (acceleration / deceleration)



SENSORY DIET.WMV

<https://www.youtube.com/watch?v=AXJFGnJLUo0>



感覺統合治療

- 功能性技能 (Functional skills)
- 想象遊戲 (Imaginative play)
- 有趣 (Fun)
- 遵循兒童的興趣 (Follow the child's interest)

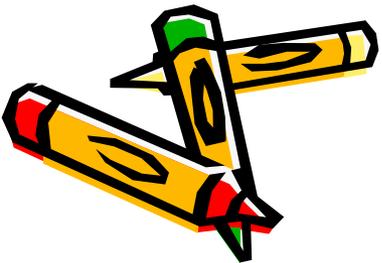
<https://www.youtube.com/watch?v=0QQDGZONA0I>



促進感覺調節的方法

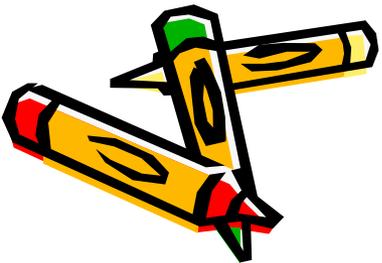
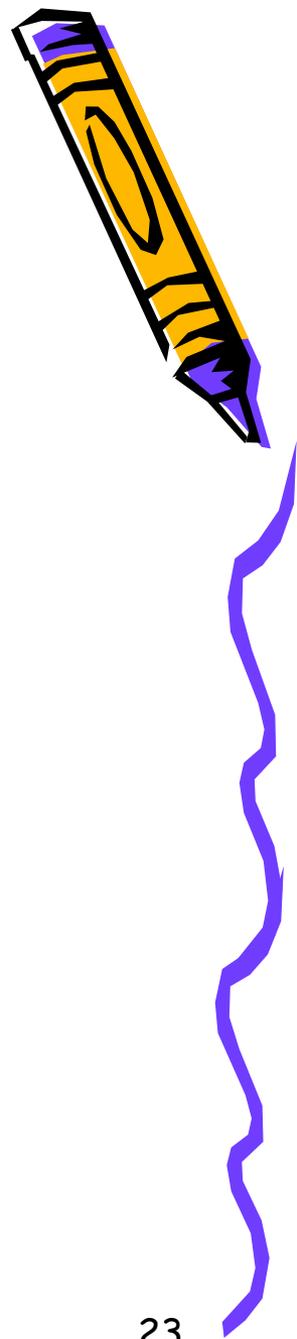


- 治療的重點是規範感覺處理
- 在一個安全的環境中控制感官的輸入
- 適當的挑戰
- 提升覺醒力(arousal levels)、 注意力(attention)
、 動機 (motivation)
- 產生適應性反應 (adaptive response)



治療過程中 可見的適應性反應進展

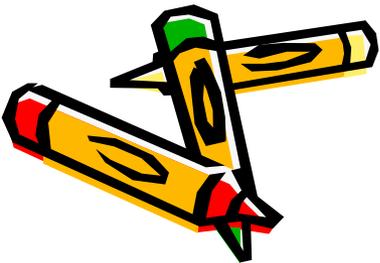
1. 被動性刺激
2. 維持固定模式
3. 簡單變化
4. 主動帶出、協助完成
5. 在熟悉情況下自我調節
6. 在不熟悉情況下自我調節
7. 有效地面對挑戰

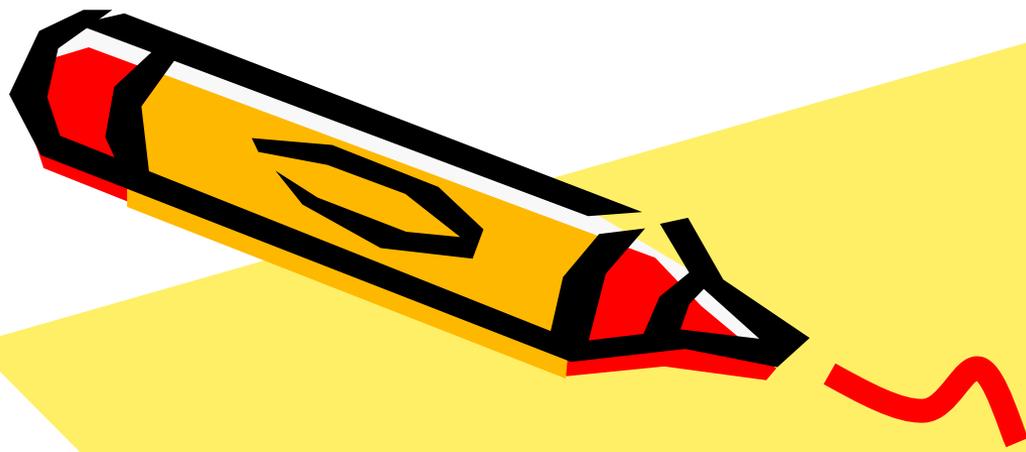


An Example...

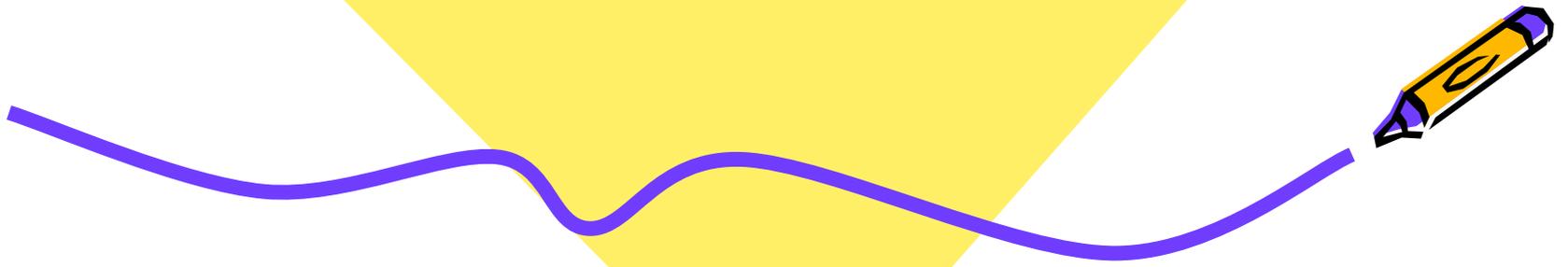


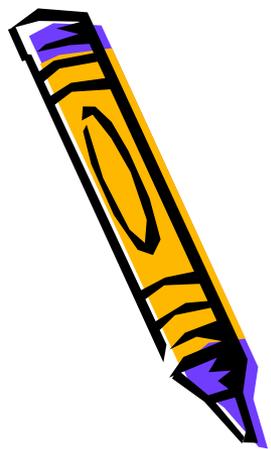
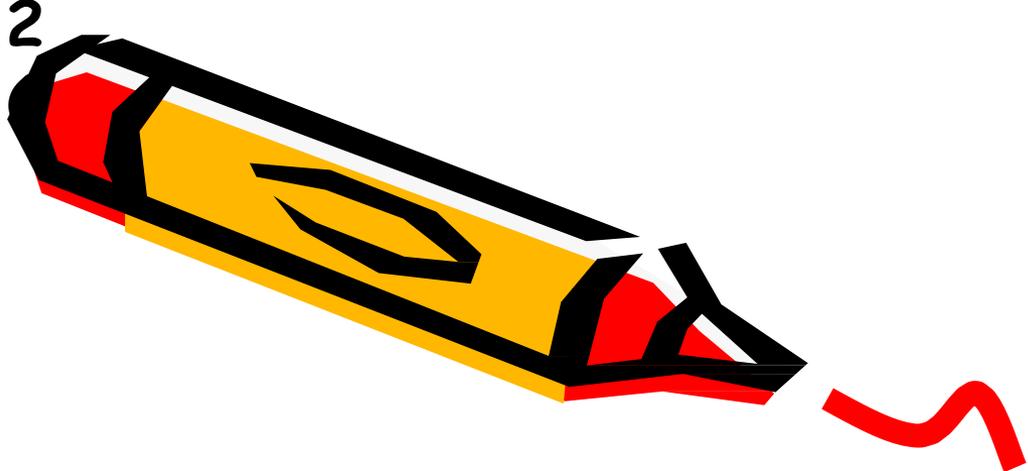
- Sensory Processing Disorder:
Occupational Therapy Demonstration
- <https://www.youtube.com/watch?v=YUdsgQGHSR8>



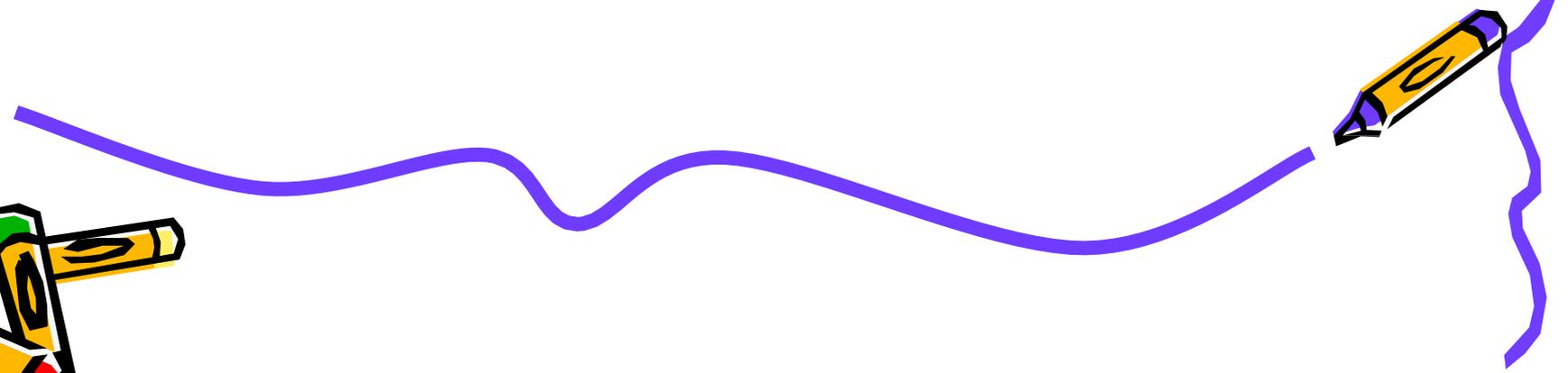


從感覺統合理論出發： 相應教學法





學寫字(例子)



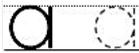
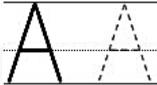
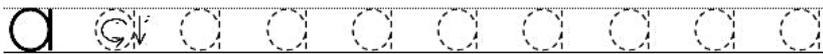
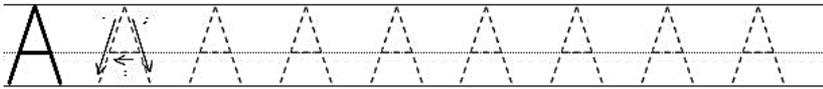
學寫字 (例子)

寫字練習 (Handwriting without tears)

<https://www.youtube.com/watch?v=HGcruM67BGE>

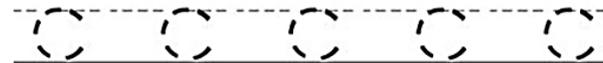
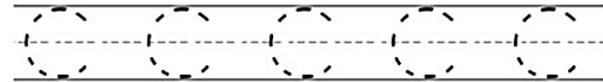


Name: _____ Grade/Class: _____ Date: _____



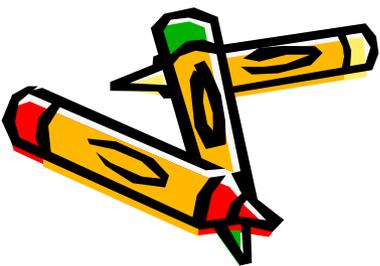
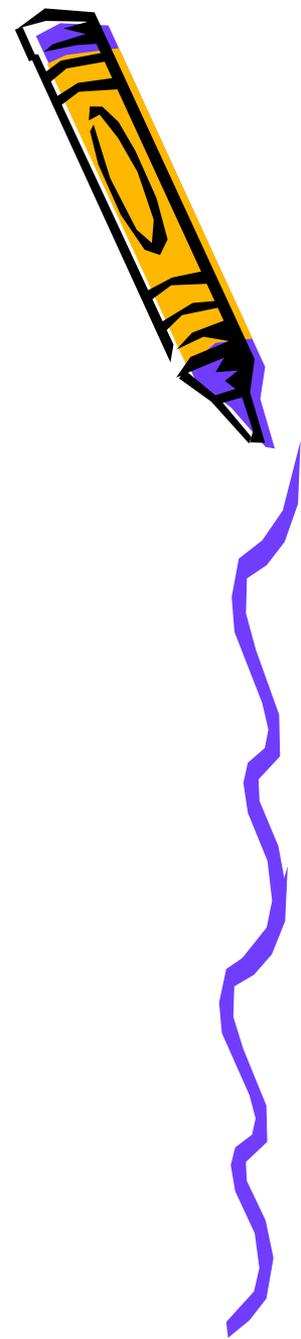
©www.toddler-net.com

Practice writing the letter C.



學寫字 - 基礎條件

1. 大小肌肉發展成熟
2. 眼球控制 / 手眼協調能力
3. 專注力 / 模仿能力
4. 正常的視覺感知 / 視覺記憶
5. 基本學前概念



學寫字 - 困難

1. 學習能力方面

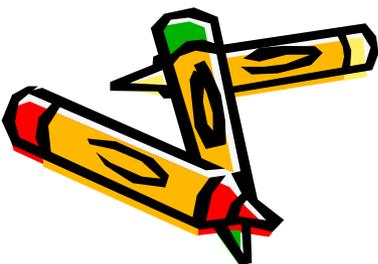
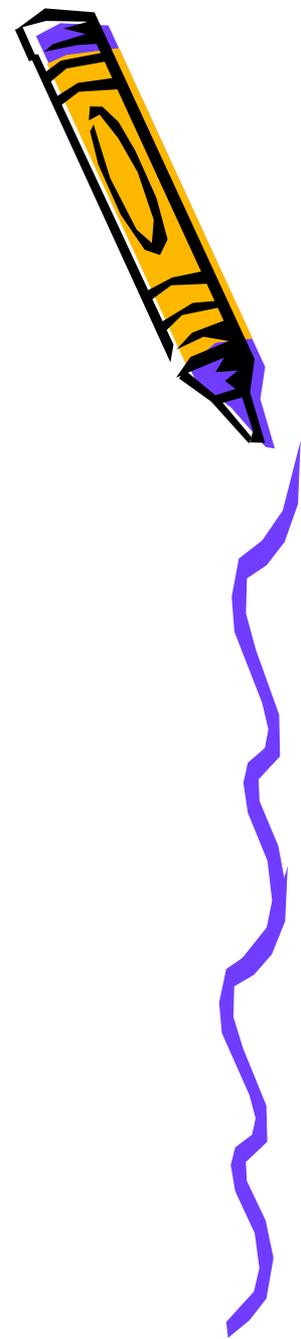
專注力弱、學前概念

2. 感覺肌能方面

坐姿、握筆姿勢 / 力度

3. 視覺感知方面

遺漏或多加筆畫、線條方位混亂



學寫字 - 訓練策略

1. 正確坐姿

2. 增強感覺肌能

觸覺、本體感覺、動作計劃練習

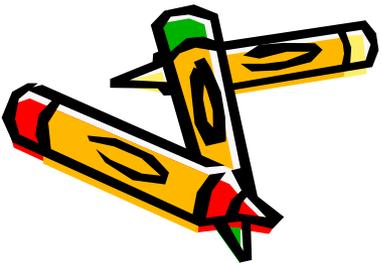
3. 增強肩膊及上肢控制能力

4. 增強雙手協調及手指的靈活運用

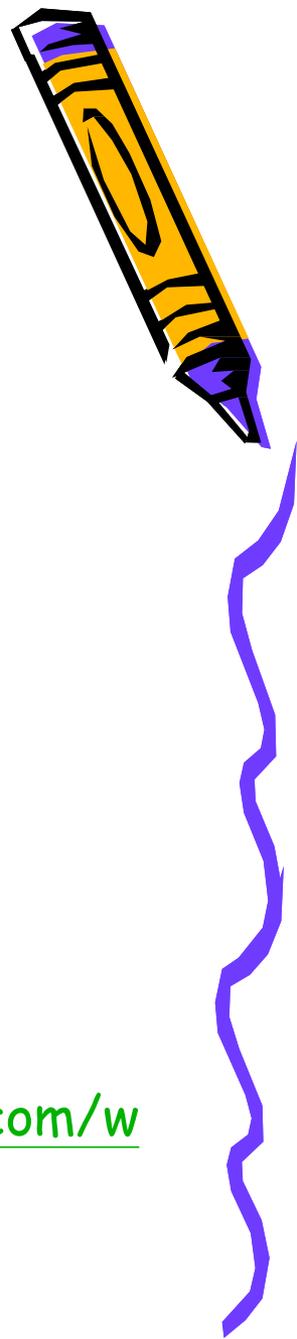
泥膠、穿珠等

5. 增強手眼協調能力

線條練習、摺紙、砌積木、填色等

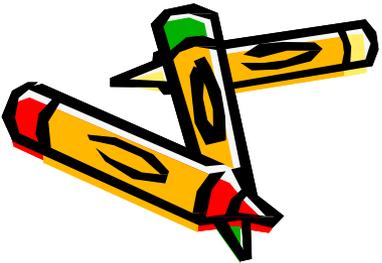


寫前練習



<https://www.youtube.com/watch?v=eslnHX87B3w>

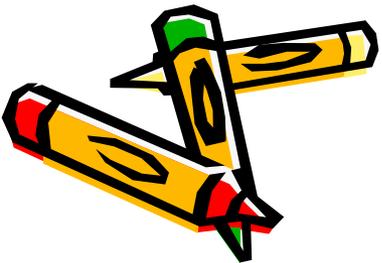
<https://www.youtube.com/watch?v=oyY5Z2PeMsY>



Accommodation Checklist

調式覽表

1. Sensory Processing(感覺調節)
2. Postural Control and Motor Performance (身體姿勢及肌能)
3. Motor Planning and Organization Strategies(動作計劃及組織策略)
4. Fine Motor/Visual Motor Skills (小肌/眼手協調)



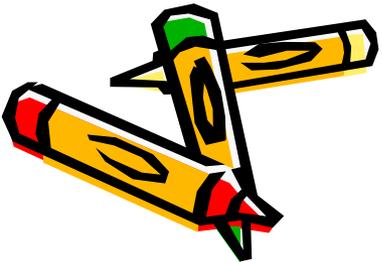
Accommodation Checklist

調式覽表



1. Sensory Processing (感覺調節):

- At each moment a person takes in information from the environment and his body and must screen what is important to organize himself to act on the environment.
- (eg) Keep visual and auditory distractions to a minimum to help facilitate the child's attention to homework (環境控制，減少感官刺激). Have a "quiet corner" with a beanbag chair or cubicle.



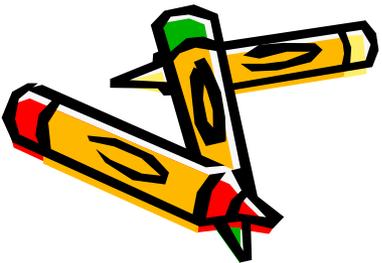
Accommodation Checklist

調式覽表



2. Postural Control & Motor Performance (身體姿勢及肌能):

- Postural stability, or the ability to maintain a stable trunk position, provides background support necessary to develop fine motor skills.
- (eg) Provide correct seating. Give frequent breaks from table top work due to weakness in postural muscle control (提供正確的座椅，休息).



Accommodation Checklist

調式覽表



3. Motor Planning & Organizational Strategies (動作計劃及組織策略):

- Motor planning is the ability to organize and sequence novel activities, and affects the child's independence in self-help skills and motor development.
- (eg) Develop consistent home routines (定立常規). Give simple step-by-step directions (讓工作步驟化). Model the thinking process by verbalizing steps aloud to help the child incorporate this process into his routine (口訣提示可協助孩子自我提醒).



Accommodation Checklist

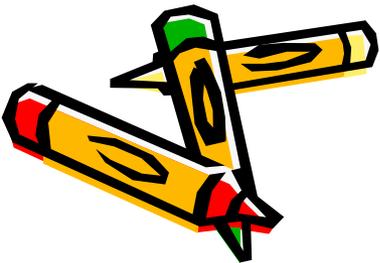
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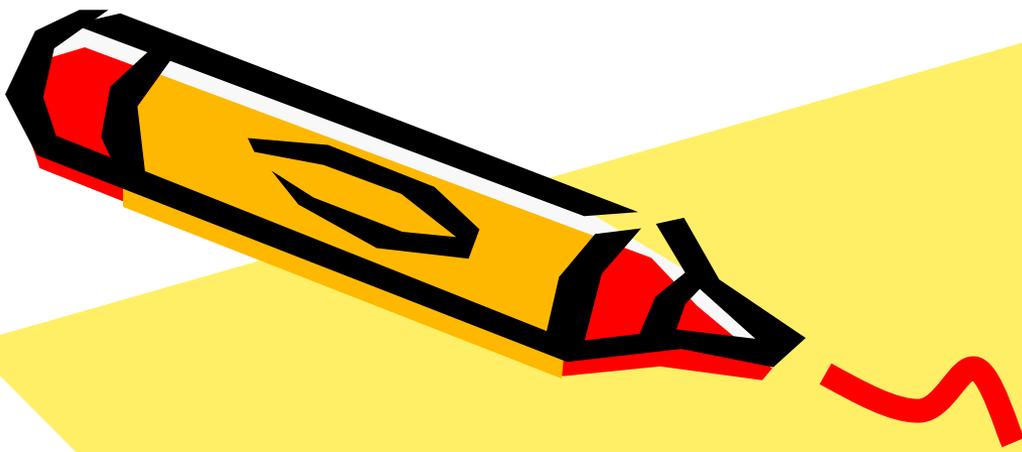


4. Fine Motor / Visual Motor Skills

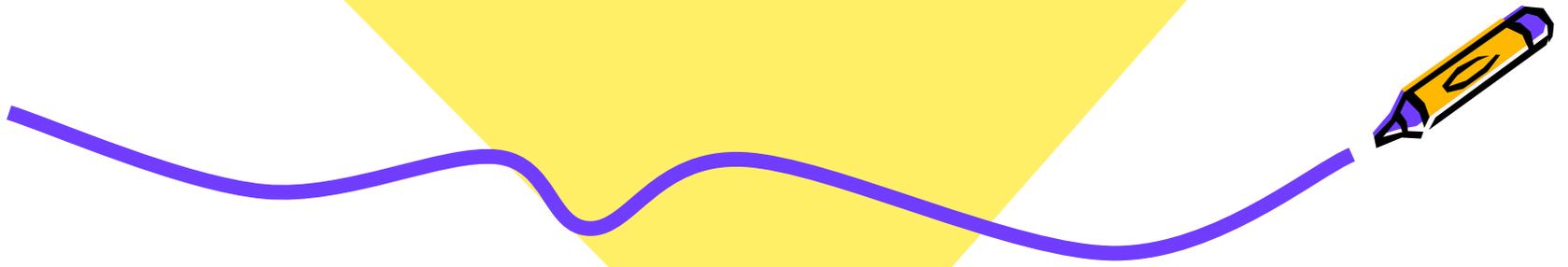
(小肌/眼手協調)：

- Fine motor control is the ability to utilize one's hand and fingers smoothly to accomplish an activity. Development of fine and visual motor skills facilitates skills such as writing, keyboarding, and scissors skills.
- (eg) Writing and drawing on a vertical surface, such as an easel or chalkboard, promotes wrist extension (利用書寫工具增強肩膊及上肢控制能力).





感覺統合與自我組織能力



感覺統合與自我組織能力

- 感覺發展



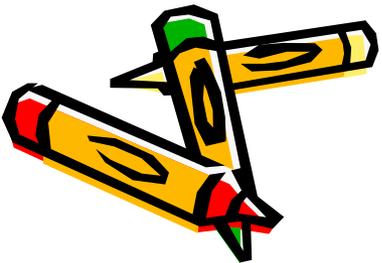
- 初級的感覺統合:

身體雙側的協調、眼手協調、情緒穩定、從事有目的性的活動



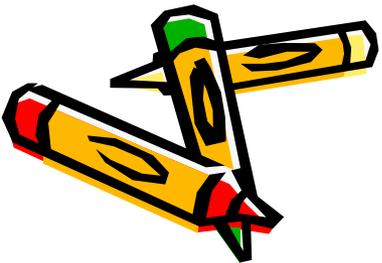
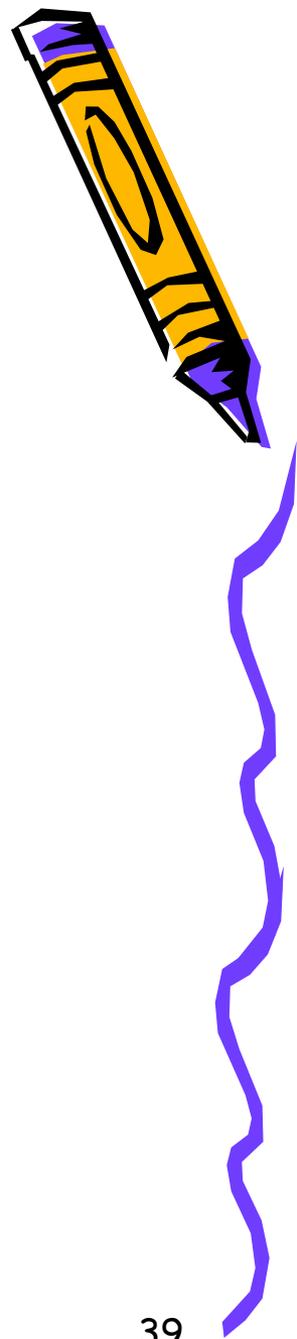
- 高級的感覺統合:

注意力集中、組織能力加強、自我控制、學習能力、概括和推理能力等不斷發展



前額葉系統 (總裁腦/思考的腦)

- 做決定、解決問題、設定目標、計劃、控制衝動、創意思維
 - 了解
 - 決定
 - 喚回記憶
 - 記住
 - 壓抑



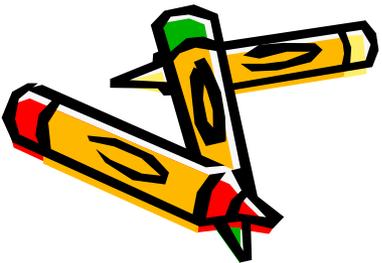
前額葉系統 (總裁腦/思考的腦)



煩惱要送同學
什麼生日禮物？

香水：她不喜歡
包包：已經有很多了
音樂盒：愛音樂的她
應該會喜歡

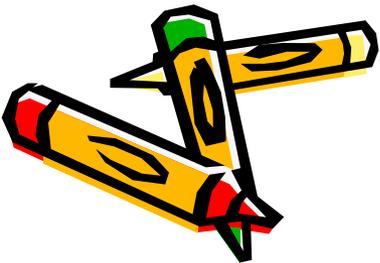
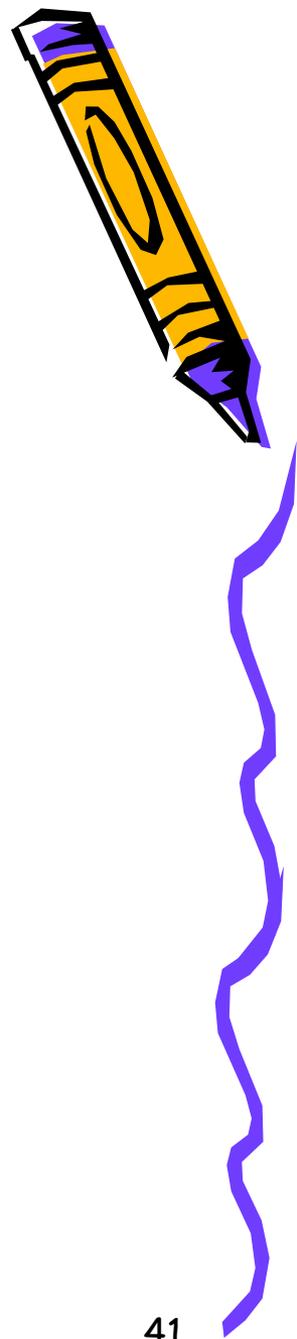
買音樂盒
送給同學



前額葉系統 (總裁腦/思考的腦)

執行功能：

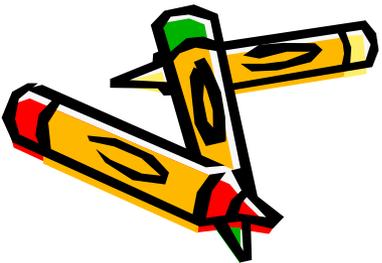
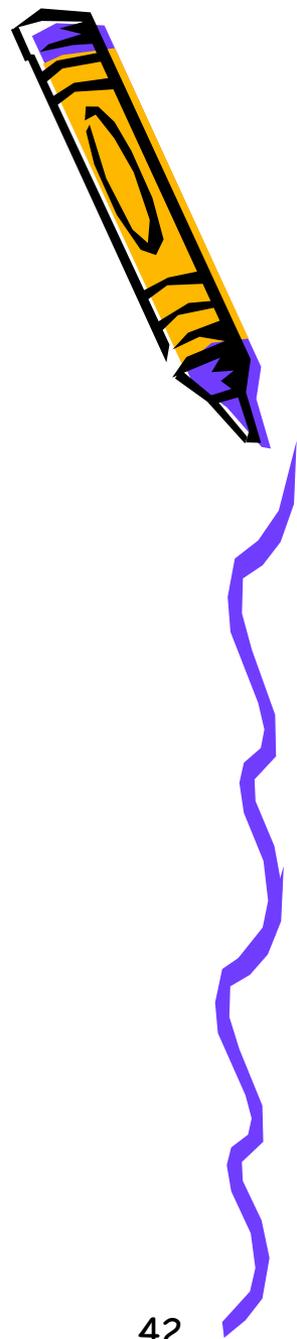
- 計劃
- 啟動行為
- 組織時間與物質
- 自我監控
- 調節行為以符合情境需求
- 保留和操作工作記憶中的訊息



執行功能出現問題時...

自我組織能力弱，因而影響：

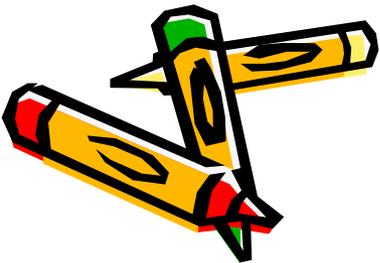
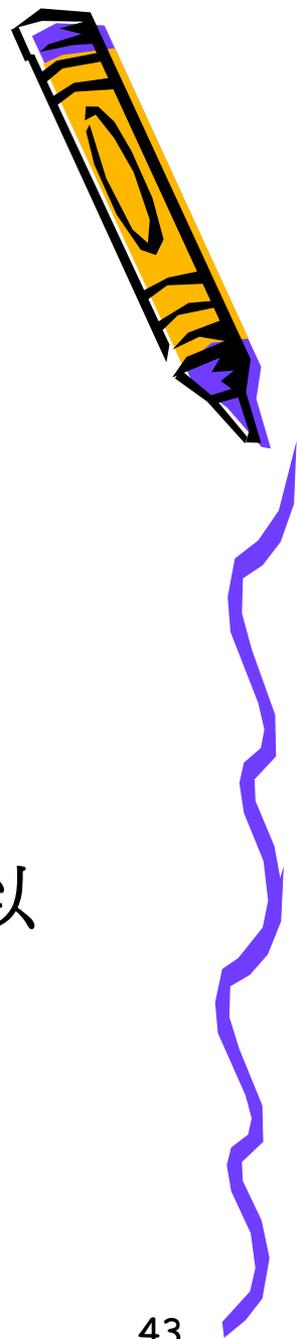
- 計畫能力
- 做決定的能力
- 調節行為以符合情境需求
- 自我監控

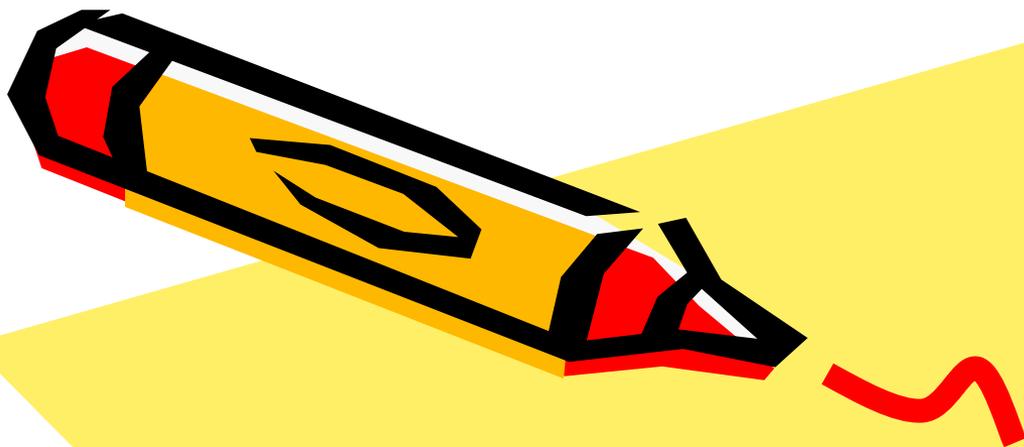


執行功能出現問題時...

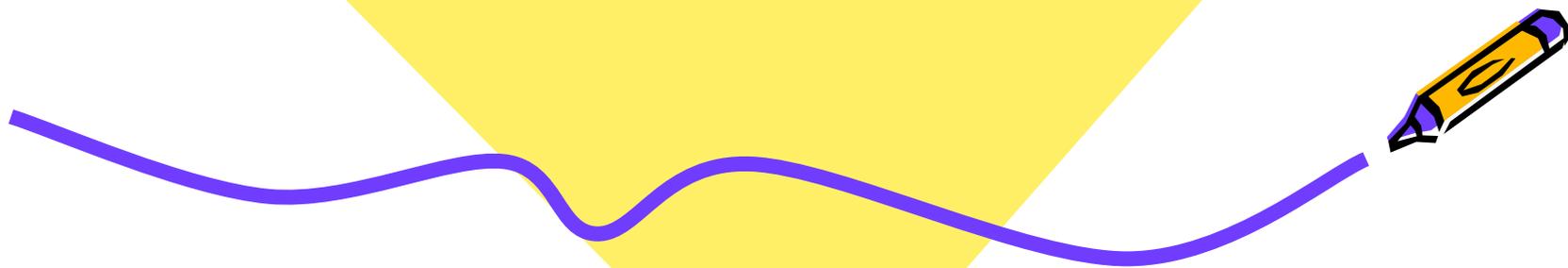
孩子亦會變得：

- 計畫困難、固執、衝動
- 對新的學習難以集中注意力
- 難以判斷事情的優先順序
- 連結及類化習得技巧和經驗有困難：難以舉一反三



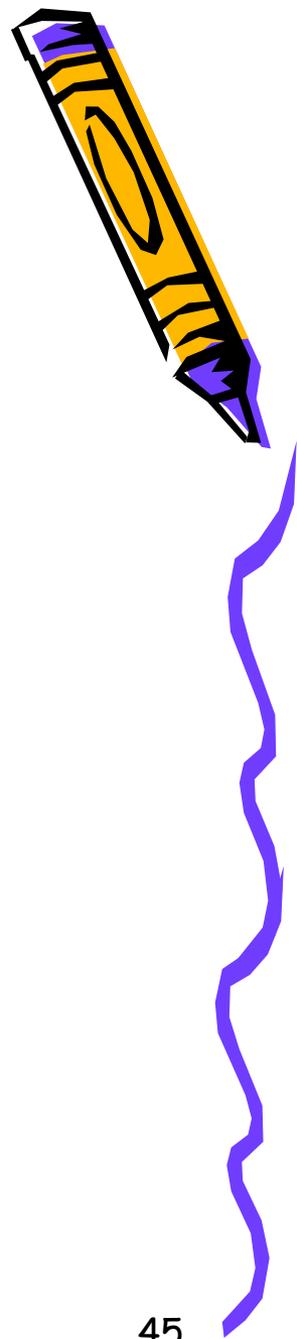
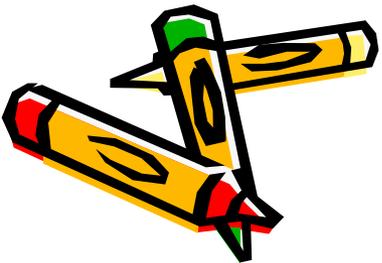


提升自我組織能力 (self organization)



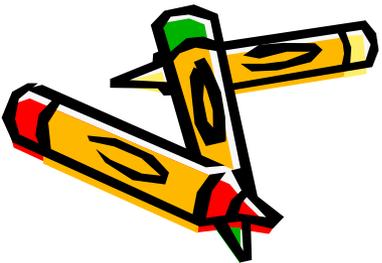
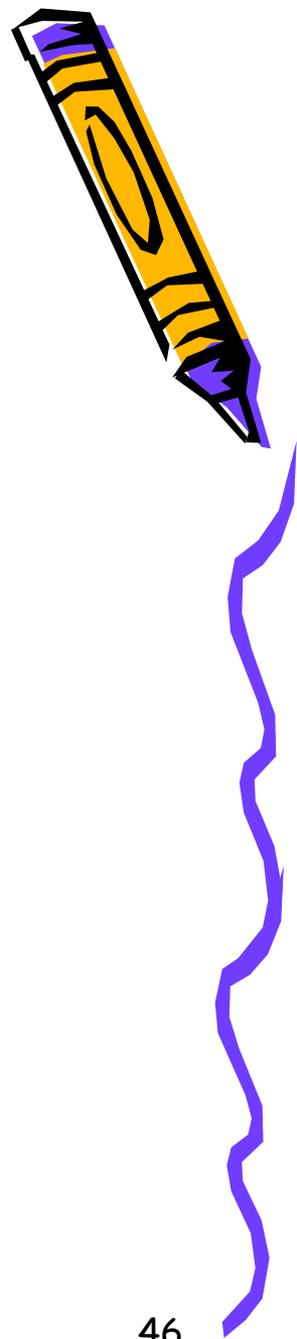
提升自我組織能力

- 環境控制
- 減少感官刺激 (**overload**)
 - 提供正確的座椅
- 課堂管理
 - 常規
 - 過渡時間/休息

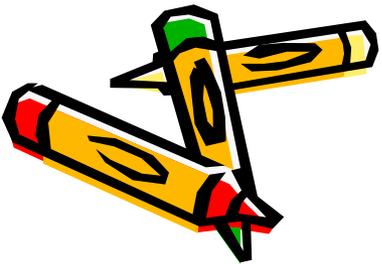
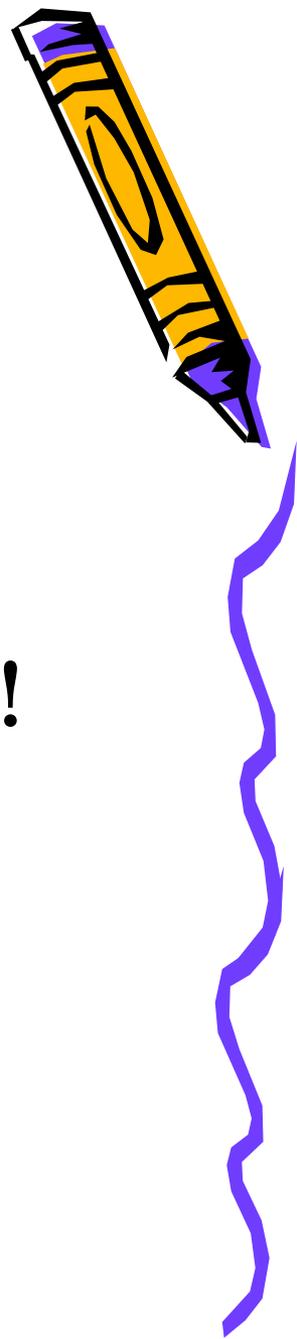


提升自我組織能力

- 積極學習-利用其它感官（閱讀和聽力往往不是學習的最佳管道）
- 給予足夠時間
- 簡化說明
- 減低你的聲線
- 尊重學生需要 -給予替代品
例子：書寫工具的選擇

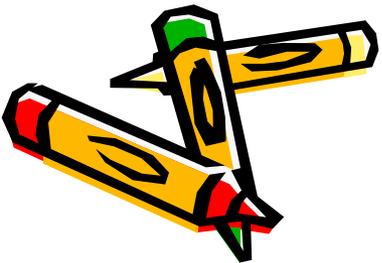


不要假設孩子可以不經教導就能懂！



課堂適應

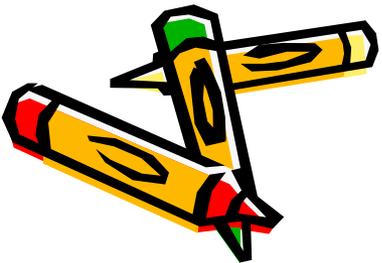
1. 轉換困難會引發焦慮
2. 視覺性（圖 / 文）及聽覺性（口訣）提示可協助孩子自我提醒
3. 可預期的結構可提升孩子的學習能力
4. 指令要精確、簡化說明
5. 讓工作步驟化
6. 合理調整書寫及作業進度
7. 教師本身的心理調適



學習打掃房間

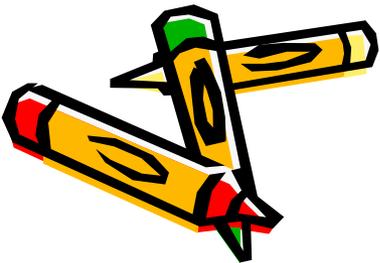
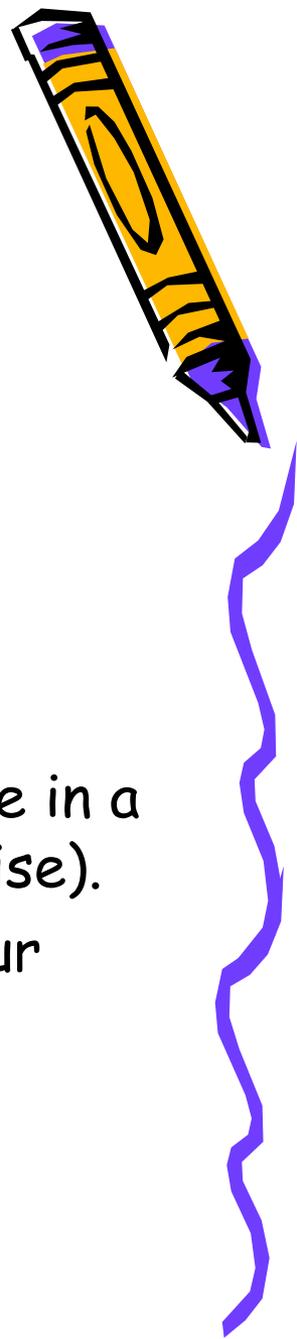


- Step 1 - 師長扮演前額葉角色，讓工作步驟化：
 - Develop a plan (計畫), an organizational scheme (組織), and a specific set of directions (提示).
 - Develop a way to monitor (監控) performance.
 - Provide encouragement/motivation and feedback (回饋) about the success of the approach
 - Problem solve (解決問題) when something doesn't work.
 - Determine when the task is completed (完成)



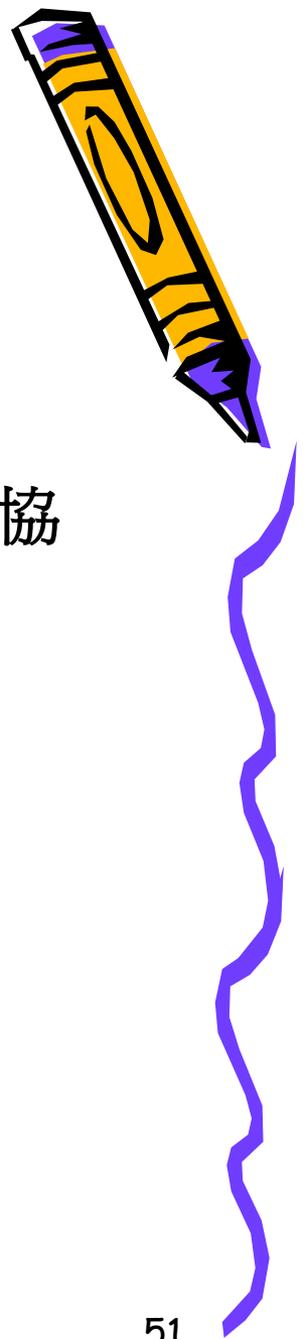
Step 1: Sample Statements

- Let's start.
- Put your dirty clothes in the hamper (praise).
- Hang your clean clothes in the closet (praise).
- Hang your hats/jewelry on the hooks (praise).
- Put your books on the shelf (praise).
- You have school papers under the bed. Put those in a pile and we will go through them at the end (praise).
- When you are finished you can hang out with your friends.
- You've done a great job staying on task.



學習打掃房間

1. 師長扮演前額葉角色：
2. 轉換困難會引發焦慮
3. 視覺性（圖 / 文）及聽覺性（口訣）提示可協助孩子自我提醒
4. 可預期的結構可提升孩子的學習能力
5. 指令要精確、簡化說明
6. 讓工作步驟化
7. 合理調整書寫及作業進度
8. 教師本身的心理調適



- Step 2 - 提供視覺 / 語言提示。利用結構來提升孩子的學習能力

- Provide the same information without being the direct agent: create a list, picture cues, audio tape, etc. to cue the child.

Says to child: Look at your list.

- Step 3 - 加強孩子的主動性

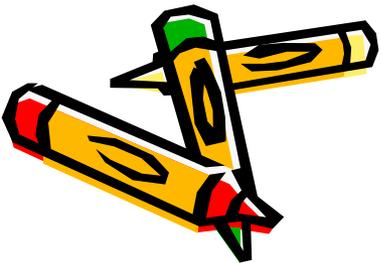
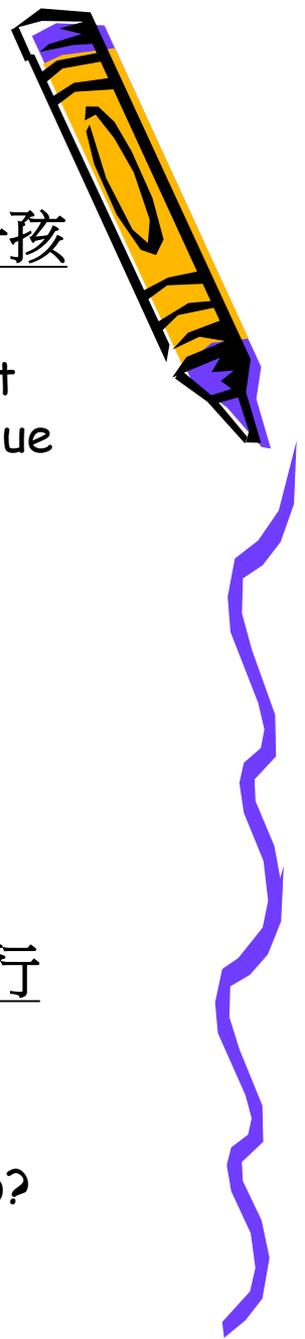
- Begins to transfer responsibility to child:

Says to child: What do you need to do?

- Step 4 - 孩子能連結及類化習得技巧和經驗，自行完成工作

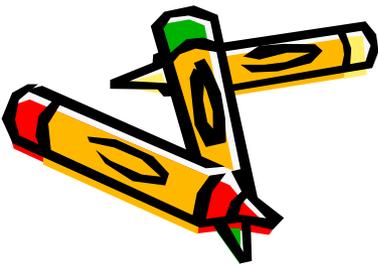
- Transfer complete.

Child now asks himself/herself. What do I need to do?



7 Steps to Teaching Executive Skills

1. Identify specific problem behaviors (問題行為)
2. Set a goal (定立目標)
3. Outline the steps that need to be followed in order for the child to achieve the goal (問題行為)
4. Whenever possible, turn the steps into a list, checklist, or short list of rules to be followed (讓工作步驟化)

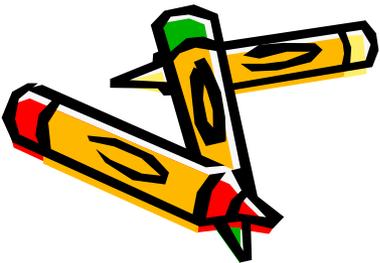


7 Steps to Teaching Executive Skills



5. Supervise the youngster following the steps.

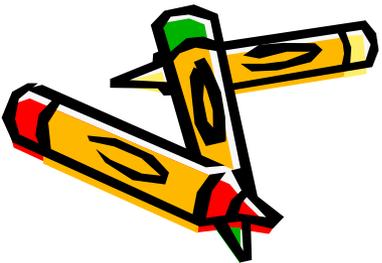
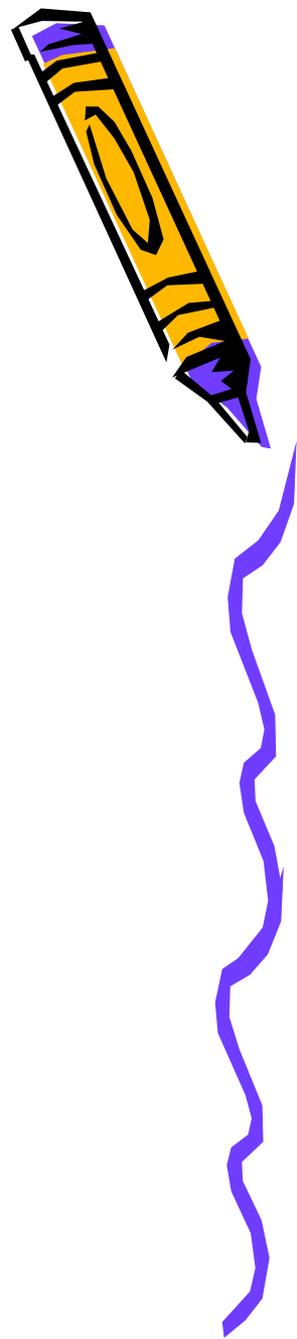
- Prompt the child to perform each step in the procedure (提示).
- Observe the child while s/he performs each step, providing feedback to help improve performance (提供回饋).
- Praise the child when s/he successfully completes each step and when the procedure is completed as a whole (予以鼓勵).

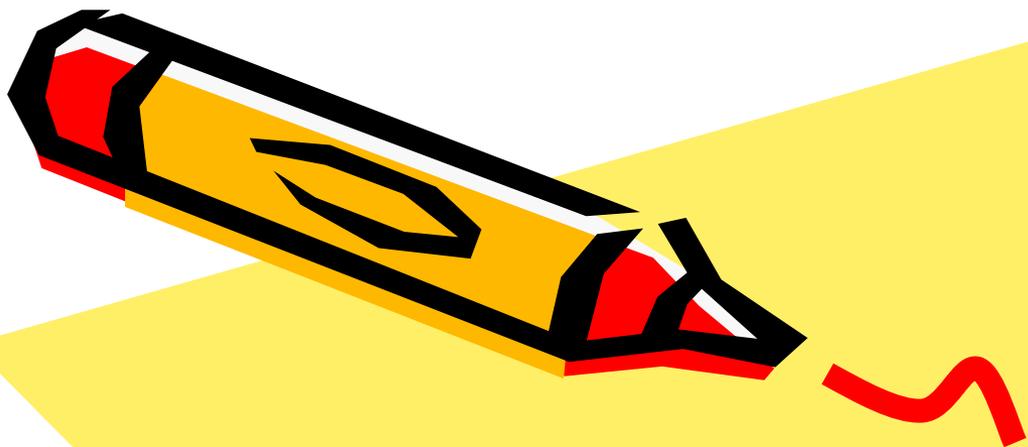


7 Steps to Teaching Executive Skills

6. Evaluate the program's success and revise if necessary (評估成效)

7. Fade the supervision (淡化監督)





答問時間
Thank You!

