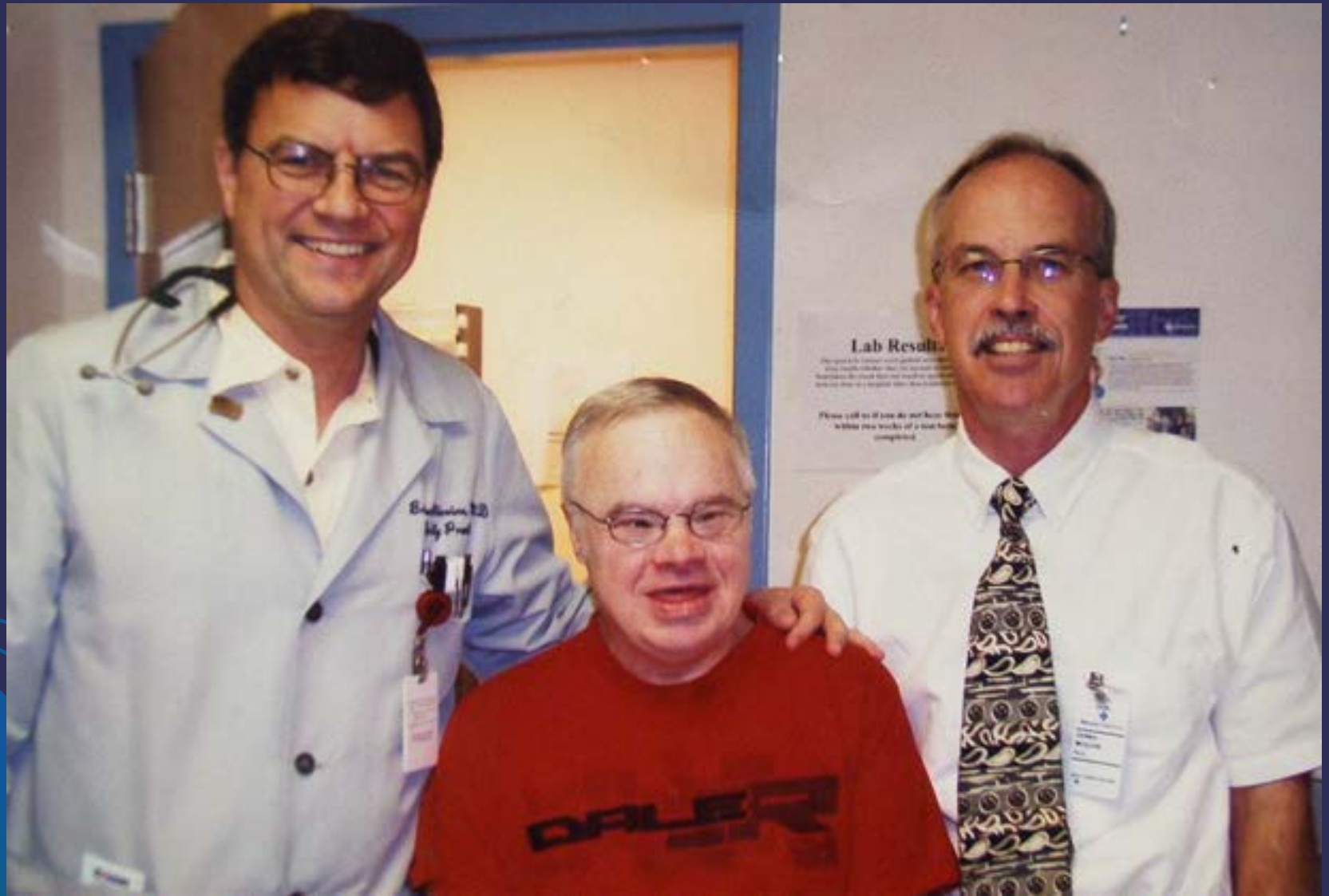


Visual Memory: A gift and a challenge to manage adaptively

Dennis McGuire, Ph.D.







Over the 27 years

- At the Adult Down Syndrome Center
- Chicago (23 years) & Denver (4 years)

I saw over 6000 people with Down syndrome with my physician colleagues.

We maintained a close partnership with Parents

- We have learned so much
- From People with Down syndrome
- Their Parents and caregivers
- The real experts



What we have learned

Behavioral Characteristics

Incredibly consistent
Strength or
Weakness

Alternative to Mental
health Labeling

Explanation,
A way to solve a
problem &, not
just a label



Six Behavioral Characteristics: Key to Everythings

1. **Rely on Concrete versus abstract forms of thought**
2. **Expressive & Receptive language**
3. **Social-emotional skills**
4. **Self Talk**
5. **“Grooves”**
6. **Visual Cues/Visual memory**



Six Behavioral Characteristics: Key to Everythings

1. **Visual Cues/Visual memory**
2. **Expressive & Receptive language**
3. **Self Talk**
4. **“Grooves**
5. **Rely on Concrete versus abstract forms of thought**
6. **Social-emotional skills**



Visual “photographic-like” memory



People with DS have exceptional visual memories

- People often remember past people, places and events in great detail
- And in living color



Visual-spatial memory is superb

- Orientation to space is excellent
- Memory for directions is also excellent



Movies & Television

- Visual images from movies and TV may be taken in “whole”
- And replayed over and over



Memory Skills: Escaping & entertainment

- People may escape rich visual/fantasy world
- Particularly when in a stressful or boring environment



Visual memory has a major glitch: time

- People replay events as if happening NOW !
- With same feelings and emotions of the original event
- This may be good or bad depending on the memory



Memory: Helps to explain phobias



“In the moment” memory response may be a problem



- People may replay a traumatic memory over and over
- Such as when there is a major loss,
- More susceptible to PTSD
- Examples: ‘Parking lot’



Using unique memory skills to solve problems

- Memories of positive experiences with family & friends
- In the form of pictures, home movies etc
- May be substituted for negative memories



“In the moment” memory response



May also be a solution {if understood}

□ People may **replay** a **positive memory** over and over

Or if a visual cue is managed

Daughter & Father (room and pipe)

- Can be humorous or catastrophe

- Social skills group



A Behavioral Characteristic :

Help to explain Visual memory

- Not emphasized as in past:
“Concrete thinking and behaving”
- Examples *Not working...*
- Safety training in groups not effective



Concrete and not abstract in their thinking



Other Examples

- In a work setting: Boss says “Come see me anytime” {people do}
- Or... “call me anytime” {call at 3 am}
- Time too abstract “5 or 10 minutes”
- Other time concepts are too vague: “Soon”... “tomorrow”..or even ‘Wednesday’



Why concrete thinking creates challenges?

Abstract thought: allows one to see the relationship between things

- Not just the individual (concrete) case.
- Allows one to see other ways to deal with a problem or situation.
- Example: A bus people ride has an unexpected detour (construction) & the person with DS panic's and gets off

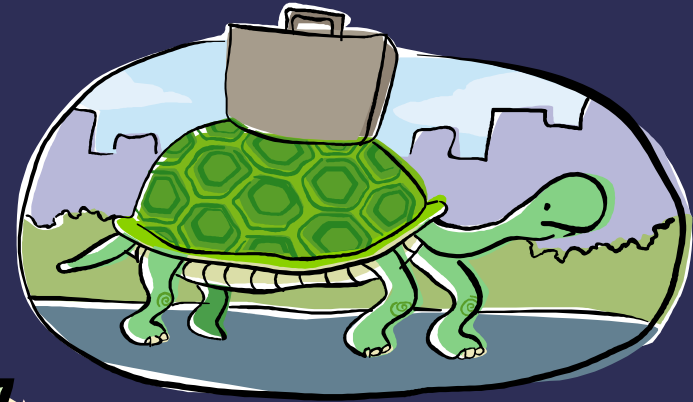


“The Pace”

- People with Down syndrome have a reputation for having two speeds:

SLOW

and **SLOWER**



First: the benefits of concrete thinking and behaving

- People with DS are “concrete”, but that also means practical..
- Down to earth, grounded...
- Live in the here and now
- Huge benefits (health and well being) from this...
- A key part and focus of all manner of spiritual practices (meditation, yoga, prayer)



Healthy Ways of Living and Looking at Life

They have the ability to teach us lessons

- on slowing down
- and experiencing the joys and pleasures of the here and now

Martha Beck: People with DS literally and figuratively “**stop to smell the roses**”



We can learn so from how they live

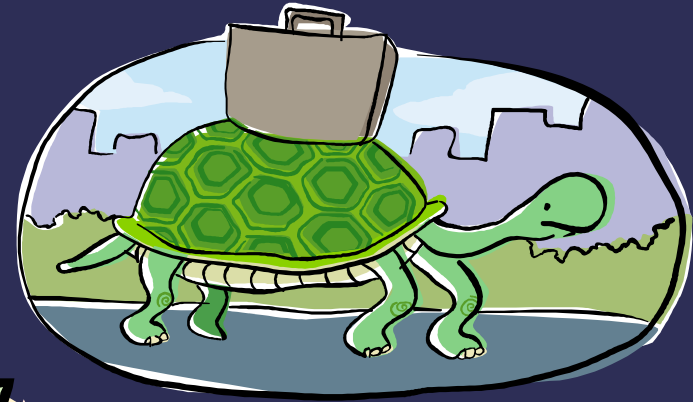


“The Pace”

- People with Down syndrome have a reputation for having two speeds:

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Most important benefit of concrete thinking

- It helps us to avoid pursuit of an abstract idea that may limit and or even hurt us
- For example: Over focusing on succeeding or “keeping up with the Jones”
- Results in a sacrifice of time with family and friends-
- Keeping us from “what really matters” (death bed admission)



Ironically Concrete Thinking & Behaving

- **Help explain visual memory**
- **May actually give us a means to solve the problem of**
- **“Poor or limited Verbal communication in people with DS”**



Expressive Language

Weakness ↓

Expressive language

- Verbal language not a strength
- “Not good on their feet” with spoken word
- Far better mediums ...



“Taking the Fifth”

- **When asked “How was your day”?**
- **Or questioned about something they did**
- **Many will answer “I don’t know” or try to avoid an answer**
- **Just not comfortable or on an equal footing with verbal exchanges**



Host of problems: If people cannot easily verbalize the cause or source of a problem

- It is more difficult to Identify and solve problems & issues
- Makes people at greater risk for shutting down & depression
- Losing a good job etc



In order to help them explain their world and experiences

Remember their world is

1. Concrete (& not abstract)

2. And Visual (strength)

- Encourage them to use words that are concrete & visual

- Something: See & touch in their immediate world

- To explain their world



Encourage other means to communicate their world

Pair a picture with the spoken word to communicate

This may include:

- Pictures that show you
- Imagine a different scene from a typical “Taking the Fifth” response
- When asked what they did?
- They show you pictures (coupled with a few choice words) play, dance, work, restaurant, food, etc.



Encourage other mediums:

- Remember too the **written word is still still visual**
- - Notes
- - Journaling
- Example: of an outgoing and creative man who used a **tiny voice with his MOM**



Enhancing verbal Language {by Adding concrete & visual words}

1. **Patrick's experience:**
2. "I want to quit" (a job he loved at Whole Foods)
3. "I hate that place"...
4. Why? ..He is upset and can't say..
5. **We need to find a concrete and visual way to tell us.... What happened..**



Patrick's experience: traumatized



- My guess: Something scared him
 - That he cannot verbalize
 - His mother & his job coach accompany him around the store (took a lot)
 - He is able to point to the back room and show a bruise on his head
1. He is hurt/scared using a big trash compacter
 2. Traumatized (replays negative events when he has a reminder)

Patrick's experience: traumatized

- My guess: Something scared him that he cannot verbalize
- His mother & his job coach accompany him around the store
- He is able to point to the back room and show a bruise on his head
 1. He is hurt/scared using a big trash compacter
 2. He replays negative event over & over
Esp When he has a reminder {the store}



Enhancing problem solving

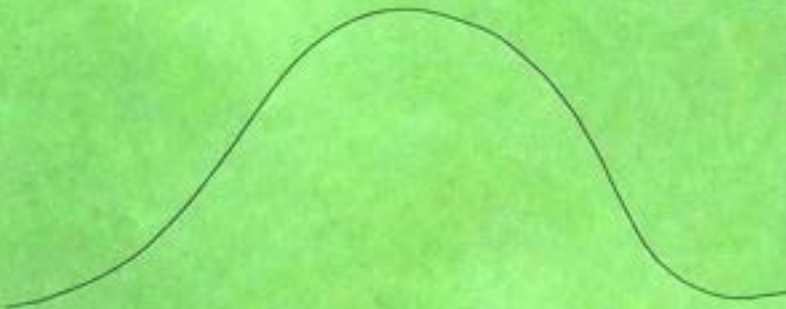
Concrete & visual solutions



1. His job coach creates a detailed concrete schedule (for his work day)
2. That keeps him out of the back room (agreed on by his boss)

I am Mad Strategies

1. I am so Mad.
2. I am SUPER Mad.
3. I am UPset With The 303
4. I am Frustrated
5. I am ANGRY With the DRIVER
6. I am Pissed ~~off~~ OFF
7. I am UNHAPPY
8. I am UNCOMFORTABLE
9. I am Nervous
10. I need a minute to ~~calm~~ Calm down

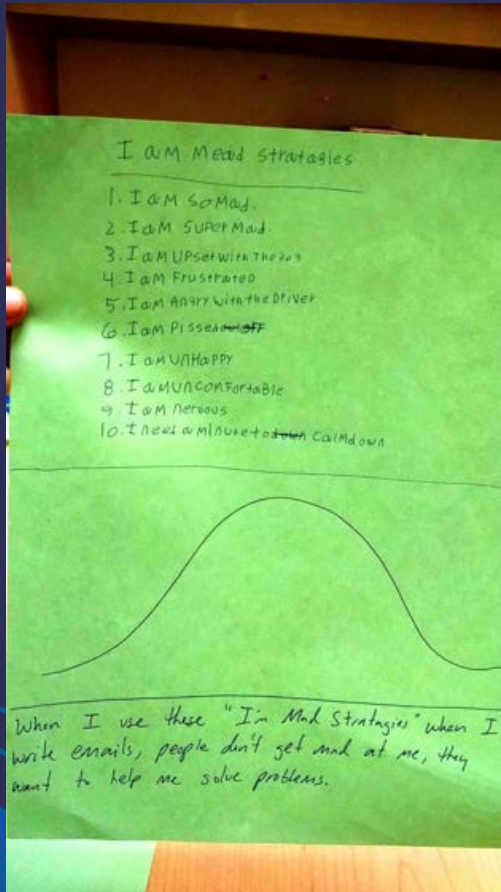


When I use these "I'm Mad Strategies" when I write emails, people don't get mad at me, they want to help me solve problems.

I am mad strategies

1. I am so mad
2. I am super mad
3. I am Upset with the 303
4. I am Frustrated
5. I am angry with the driver
6. I am Pissed OFF
7. I am Unhappy
8. I am Uncomfortable
9. I am nervous
10. I need a minute to calm down

What I like



Music

1. Beatles
2. Beach boys
3. Pink Floyd

Dancing

- To Motown

Baseball – the Cubbies

Hockey – the Blackhawks

FOOD

Pizza; BBQ, Watermellow

Problem Solving strategies



When I write emails

& I use these “I AM MAD STRATEGIES”

People don't get mad at me

They want to help me solve problems

Patrick uses similar checklists with a host of other situations (to better communicate)

& not just when angry

Example: He has a new assistant

Despite expressive limitations, receptive skills are excellent

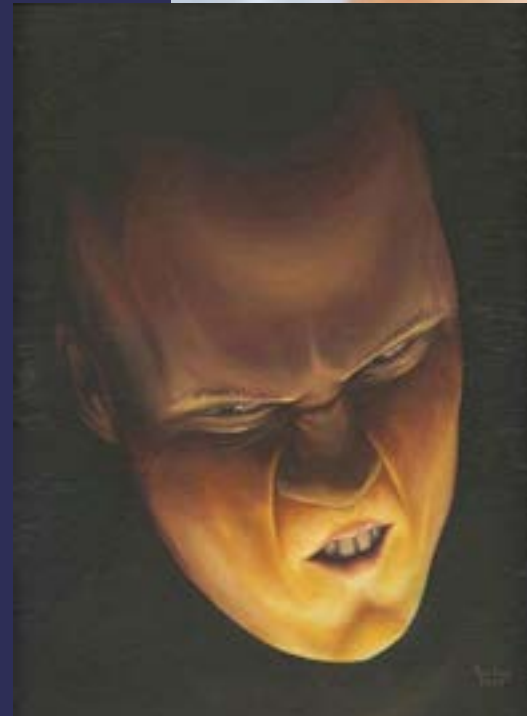
- Many people are very perceptive
- They have excellent intuition
- And an uncanny sensitivity to others (especially loved ones)
- Builds good will





Sensitivity to others

- People may be **too** sensitive
- **Absorb conflicts, and stress from others**
- Especially **ANGER**



People are too Sensitive and Empathic



- Often not able to block negative feelings and emotions encountered
- Even when not directed at them
- They will take the feelings onto themselves
- Suggestion

Despite 35 Years of Papers, Books and Presentations on the Positive Nature of Self Talk

- Concern and controversy persists (parents/professionals)
- 2 major reasons
 1. For teens & adults: Self talk is not acceptable in public
 2. It can also be alarming - dramatic *even in a private space*
- Includes **fantasy play and imagined others**



Incredibly, Self Talk is Revered in the Field Human Development

Because it plays a key role in both:

1. **The acquisition of new developmental skills**
(Occurs over & over throughout development)
2. In the development of our mental thought processes.



Acquisition of new skills: How this works

- The child is shown the next task in their development (just out or reach)
- They are talked through the task by parents
- The Child then talks themselves **out loud** through the task
 - In a strategy called “**Directed action**”
 - This happens over and over through each task at each stage of development



Self Talk Gives ALL children a needed boost when learning a new task;

- Self talk is gradually Internalized (into our inner speech)
- By about the age of 7 in children
- BUT Much later, (up to 12) in typical children with challenges (learning problems, ADHD, Hearing or visual issues.
- “Because they need the **boost** that the **SELF** Talk gives them”



Researchers Tell Us Self Talk CONTINUES in All of Us !!!

- Resurfaces (become more overt) whenever we have a challenge
- Numerous studies showing most people use inaudible muttering (muttering that is low but still heard)
- It appears then that WE ALL DO IT
- It's just that People with Down syndrome
- May not be as sensitive or aware of the need to cover up



Self talk continues In people with Down Syndrome for 3 compelling reasons

1. They need the extra boost that Self talk gives even more than typical children who are challenged
2. BUT (unlike us) They are may not be as sensitive or aware of the need to cover up...

Families tell us this with some amazement:

- When chastised (told what to do etc)

3. They may view this as a private space



Self Talk: Viewed as a Social Skill Issue

- Like “Hugging, even “masturbation”
- Nothing inherently wrong
- Just when, & where expressed
- Try to confine to private space



Self talk can be a spectacularly dramatic scene

- “May include the full range of facial expressions, hand gestures and body movements”
- Appears as if the person is on a stage and fully enacting a scene
- With at least one **imaginary other**



Concrete and Visual helps people make sense the world **through self talk**

Again their world is Concrete & Visual

- Self talk scenes allows them to capture (superb visual memory)
- And then bring the raw (concrete) material from their lives
- Into their personal “self talk” lab
- To see, process and to try to make sense of it in their personal lab
- Especially if they don't understand it



Self Talk as a private theatre/lab



- Offers a window on people's world
- A Change in tone, more anger or self criticism
- Gives us a way to identify a stressor or a scene from their lives
- That they cannot easily verbalize
- But can act out in their private theatre

People with DS have a reputation for being

- **Stubborn**
- **“Grooves”**
- **Set patterns and routines**
- **That can drive others a little crazy**



There are many benefits to “grooves”

- It gives structure and order to peoples daily lives



Increases independence at home and work

- Once the task is part of a daily routine
- It will be repeated reliably



Benefits

- Careful with their appearance and grooming
- “Meticulous”
- Social benefits, **Public Relations** (PR)



Grooves & Free Time Activity

A way to relax by repeating a favorite activity in a quiet space

- Like 'Yoga'
- Only cheaper



Grooves and Stress

- Under stress a ‘groove’ can become
- Less productive ...
- (AKA an “obsession or compulsion”)
- Groove may be a conduit for stress
(Like headache, stomach issues for others)



For stuck grooves reduce any stressors:

- Do not force a change
- Gently establish new more productive grooves



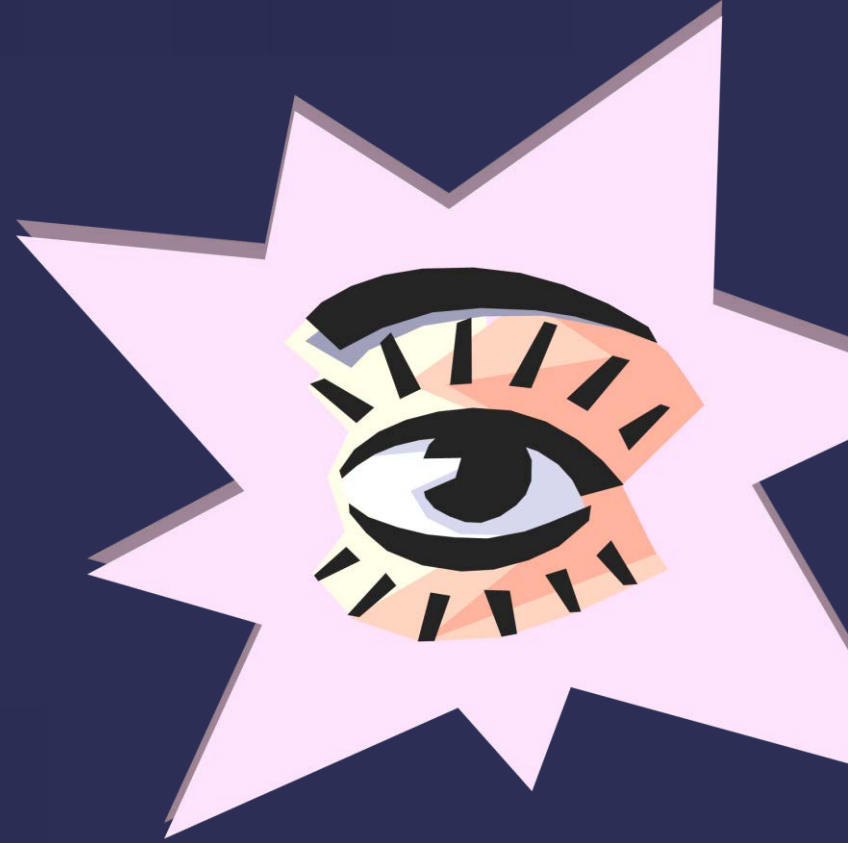
Another very effective way: 'Reset' stuck grooves



- Use visual cues
- Then help people establish a new more positive routine/groove

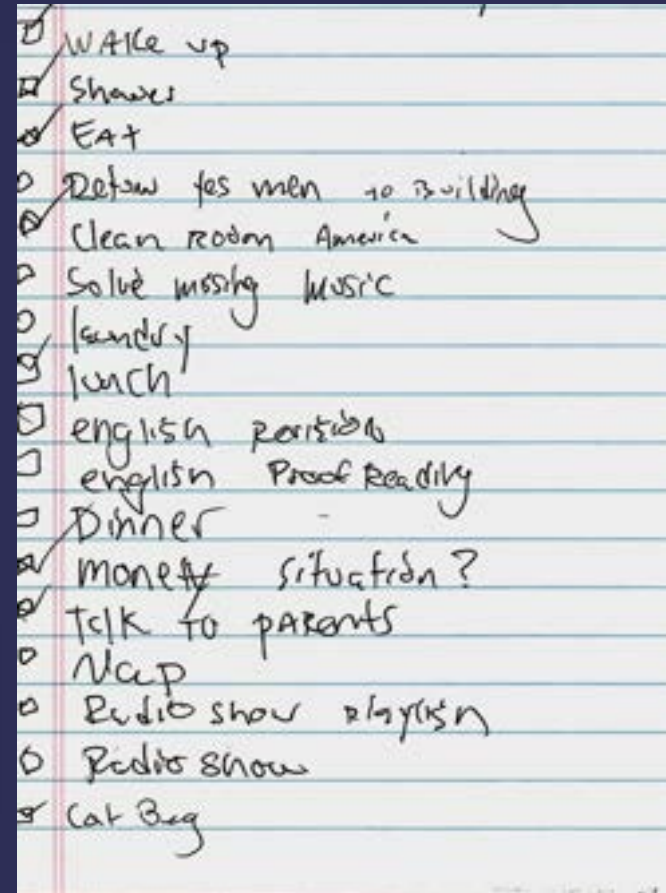
For people with DS: Grooves are 'onboard', but visual is king

- They are visual learners
- They love movies and pictures
- They remember everything they see



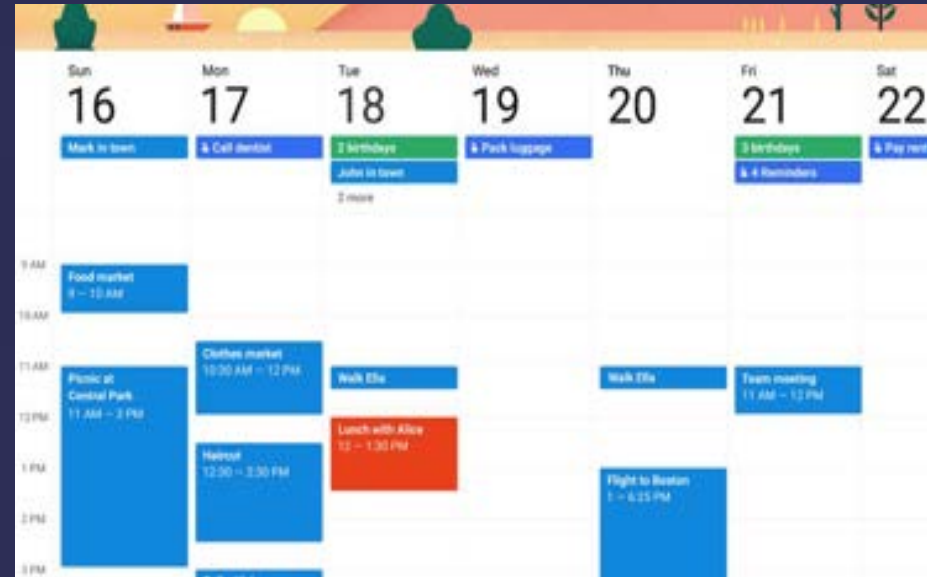
Enormous benefit of visual supports: such as to reset stuck grooves

- Use of pictures or visual schedules or checklists
- Use of calendars
- Visual images for learning tasks
- All to help solve problems



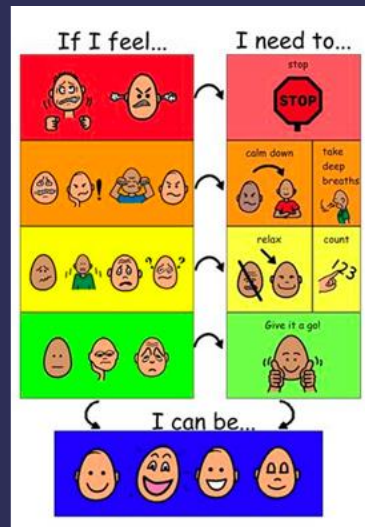
Why calendars are so popular for people with Down syndrome ?

- Time too abstract
- 5 minutes or 5 years means Nothing
- But people easily memorize a calendar
- Allows them to plan and predict



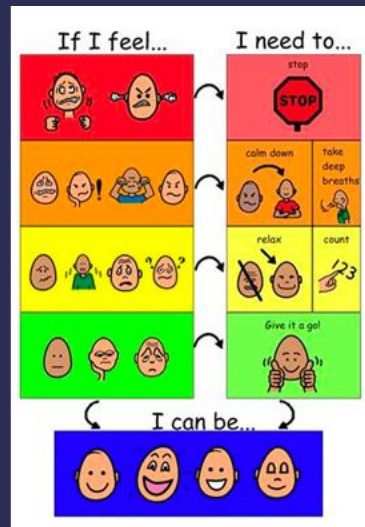
Use of visual supports are limited only by your creativity; Preference of Son/daughter

- Social skills
- Naming & managing emotions/behavior
- Choice board
- Schedules



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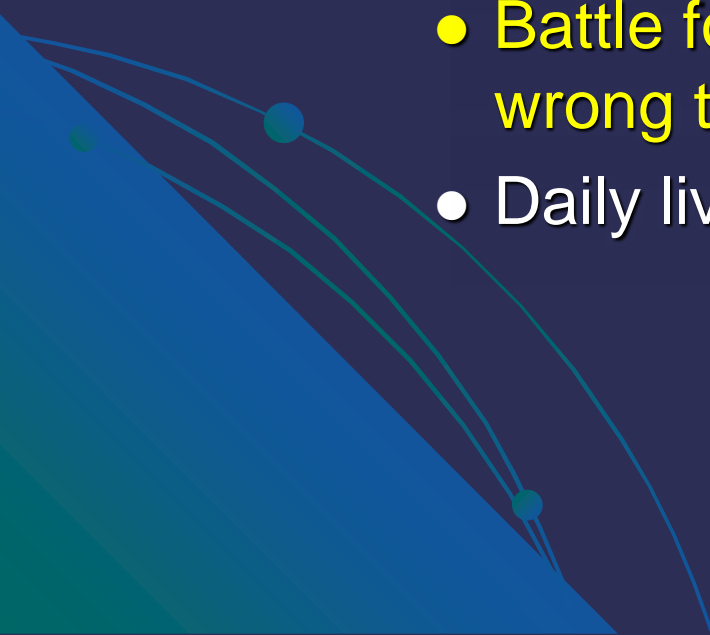


Interest, age, skill



Visual Images Can Be Designed to Fit Problem: “Oppositional”

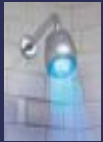
For example: Susan 16- year old having a problem (any age)

- Two parents at odds over parenting
 - **Battle for independence over the wrong things**
 - Daily living tasks
- 

Susan's Schedule



- _____ Get up on time



- _____ Take a shower



- _____ Get dressed



- _____ Breakfast



- _____ Brush teeth



- _____ Get on van



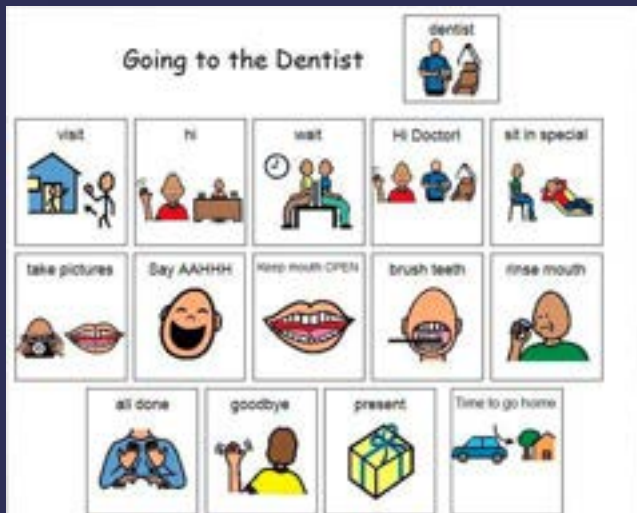
- _____ Do all for

Classic example : Visual lists can be especially helpful to encourage independence

- “The list” tells ‘me’ what to do
- And not mom and dad



Visual maps take you anywhere



Problems: Bad eating habits

- May be particularly difficult habit to change



We can take advantage 'grooves' and visual skills

- People may get into “bad habits” ...
- Or “good habits” around good food
- Once these habits are set; they will continue



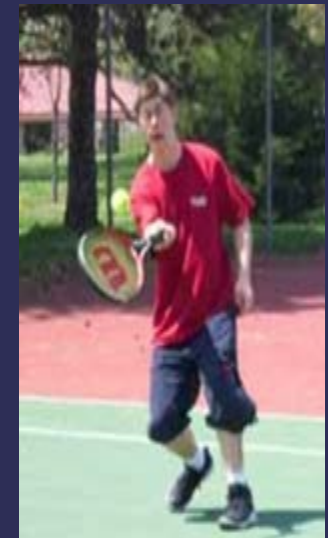
Lists & pictures are very powerful and you can use any format

Breakfast

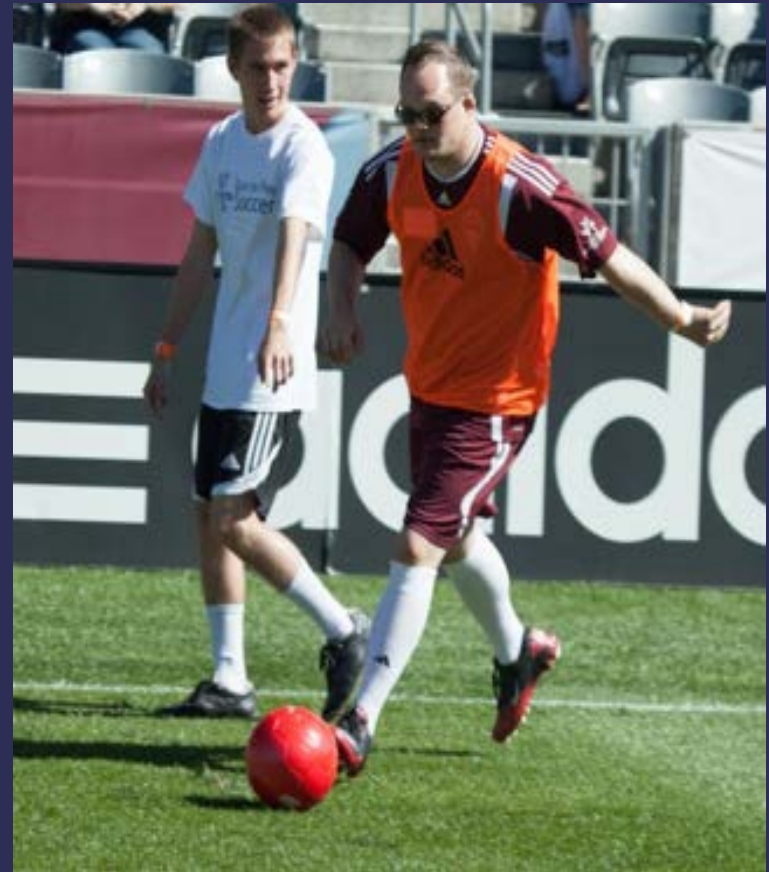
- one egg
- one toast
- Cereal
- Juice



How Do I Get My Son or Daughter To...?



Put Activities on a Calendar, and Go!





WWW.HOOVERWEBDESIGN.COM

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						

NOTES:

Similarly: Problem learning or transferring subtle social skills to a new work or community setting:

Examples:

- Safety skill in a community setting
- Not using key social skills in new job
- **Being overly friendly or affectionate (hugging) in a work setting**
 - This is why people lose jobs, not due to job skill

Problems learning or transferring skills to a new setting

Esp subtle social skills in work or community

ROLE PLAY: incredibly
effective way to learn

- Ironically: The use of the superb visual skills they use to take in the world
- (Which many see acted as “self talk scenes” in private bedrooms)
- Again : Private lab for learning the world



What you can do: Rely on strengths Grooves (concrete) and Visual

Multi-step process

- Role play to build a repertoire (class) of appropriate behavior
- But this will not be enough
- Skills don't readily generalize to new setting
- Need to be taught new skills in the new place
- “Teachable moments” intervening on the spot whenever and wherever the need occurs
- You can also add checklists (power full visual cues)



Use of strengths: to Change a rigid groove



- Analogy: Jet pilots who learn to over-ride panic & unproductive behavior when their plane is in trouble
- **By training over and over to do the right thing...**
- **Role play (the right thing) &**
- **Then enacted/learned in new setting**

Time may be too abstract for people with DS

Example: “Are you working”?)

- People get real time: (never miss shows, dinner etc)
- If you put something on a calendar They NEVER Forget
- What to do (use ‘real time’ – concrete visual)
- For example: Use clock hands for a break time not “fifteen minutes” etc
- Use calendar to change a time or put something on a calendar



Why calendars are so popular for people with Down syndrome ?

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