

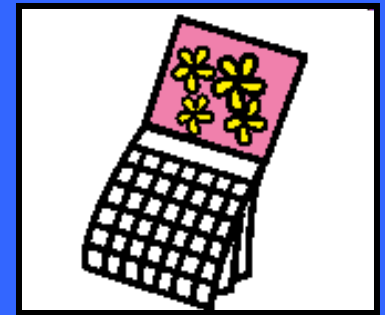
# Using Visual Cues to Improve Classroom Instruction for Young Children with Developmental Delays

Leslie Hawkins and Cathy Clayton  
Assistive Technology Dept.  
Fulton County Schools  
Atlanta, GA





# How many of you:



- Use a calendar or day planner?
- Point to a picture in an ad or menu to show someone what you want?
- Follow recipes?
- Have looked at a sign to tell where you should stand in line or where to enter/exit?
- Have followed “some assembly required” instructions?

# What is Visually Cued Instruction?

- Body Language
- Location
- Arrangement of Environment
- Printed Materials and/or Multimedia
  - Text
  - Pictures
  - Objects or Parts of Objects
  - PowerPoint

# Visually Cued Instruction...

- Involves the use of pictures, symbols, photographs and written language as instructional supports in both structured and natural environments
- Enhances children's
  - Organizational skills
  - General skill development
  - Academic learning
  - Communication
  - Socialization
  - Self-Control

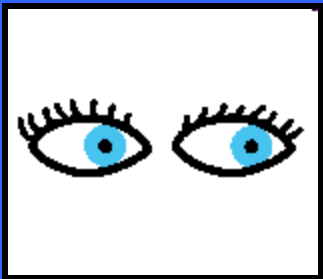


# Why use Visually Cued Instruction (VCI)?

- Teaches students to become independent rather than prompt-dependent
- Increases communication skills, reducing negative behaviors
- Allows students access to their environment
- Develops school and life skill sets

Verbal directions are  
**TEMPORARY.**

We present them and they are  
gone.



**VISUALS**  
can be there as long  
as we need them.



**Who needs VCI?**

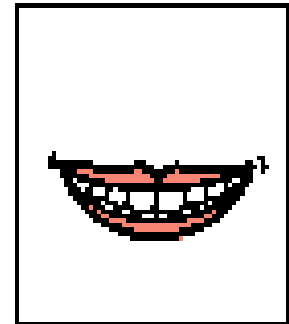
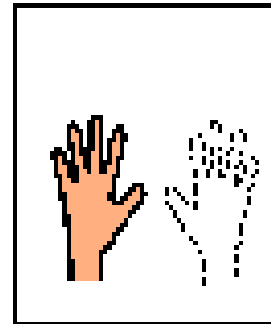
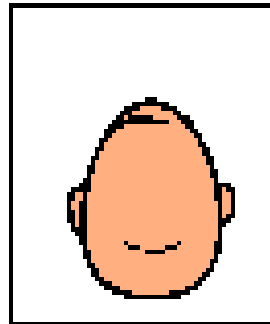
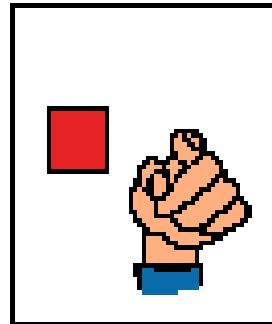
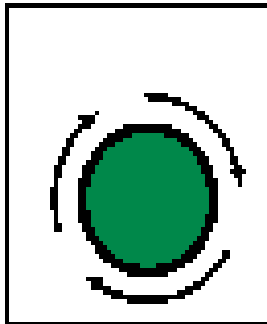
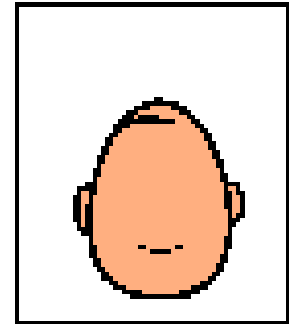
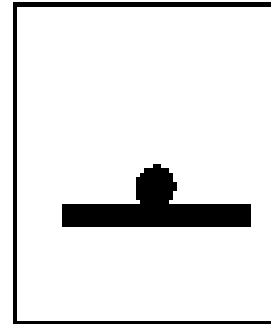
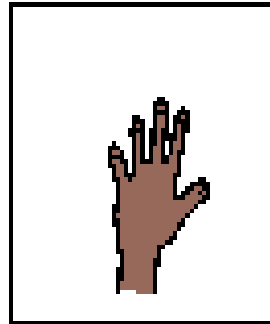
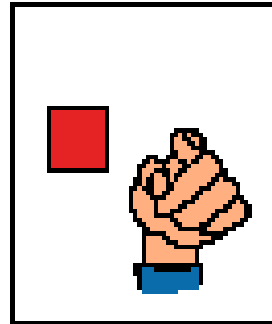
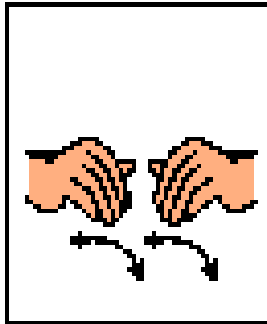
**EVERYONE**

# Teaching Students to Read Symbols

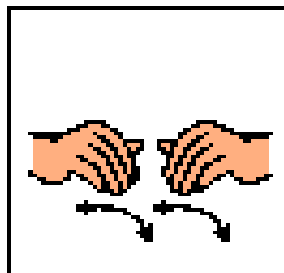


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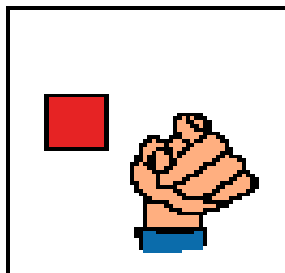
Read the symbols below and follow the directions:



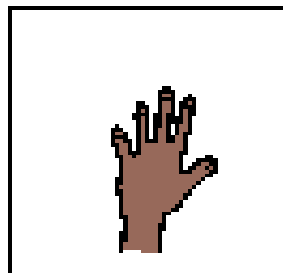
# Is this what you did?



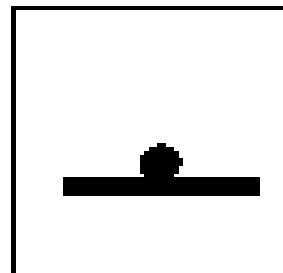
Put



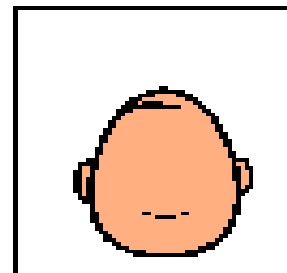
your



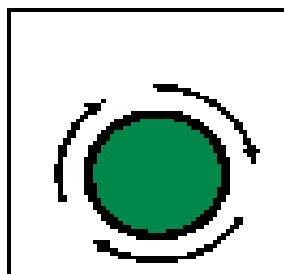
hand



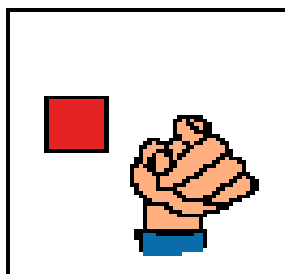
on



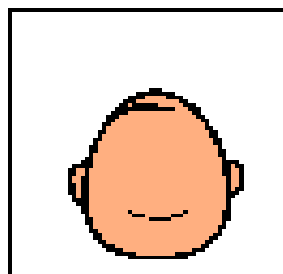
head.



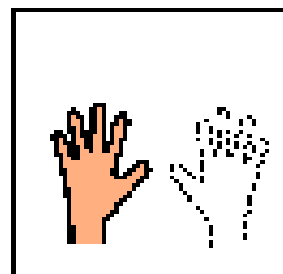
Turn



your



head

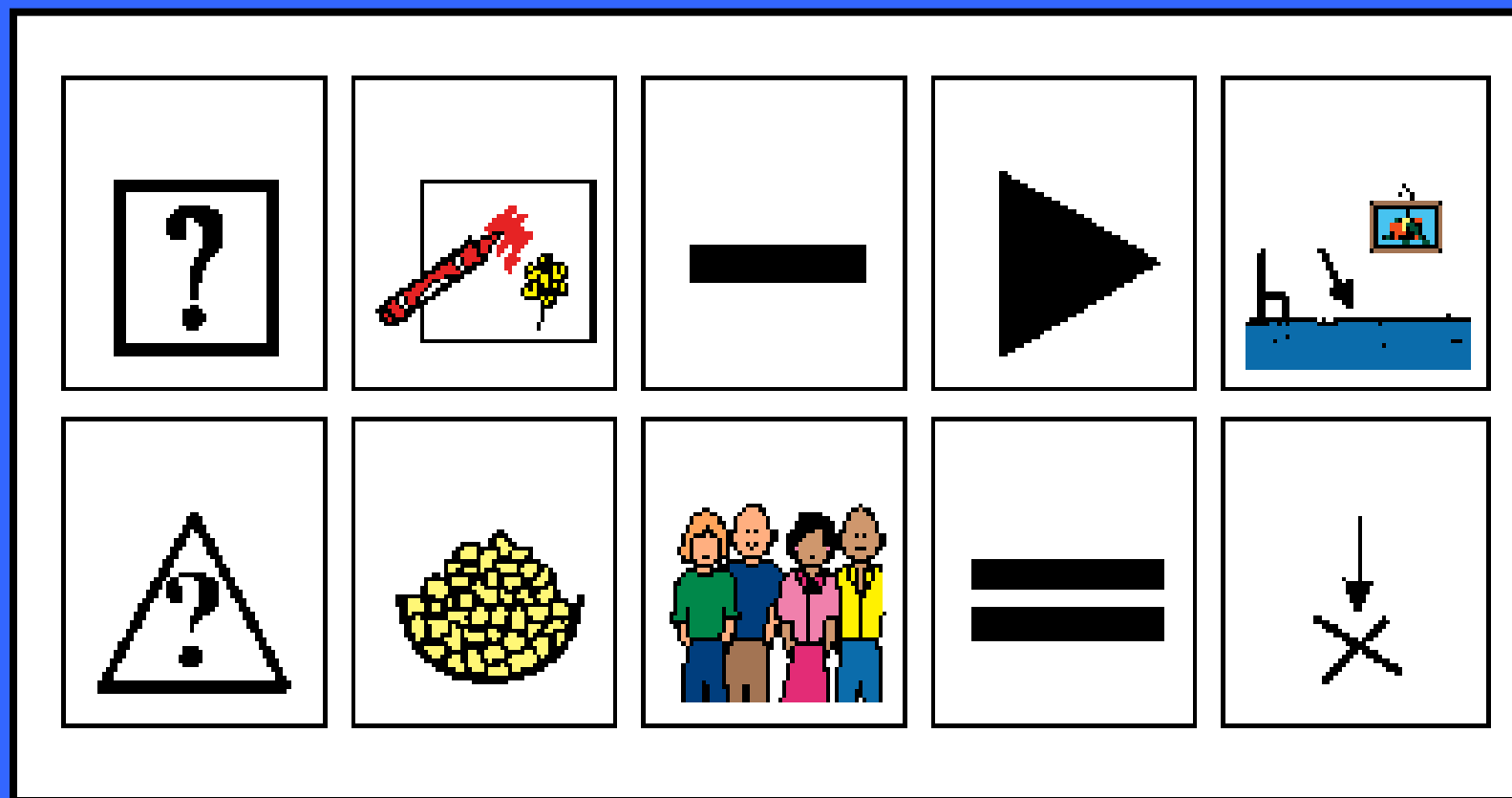


left

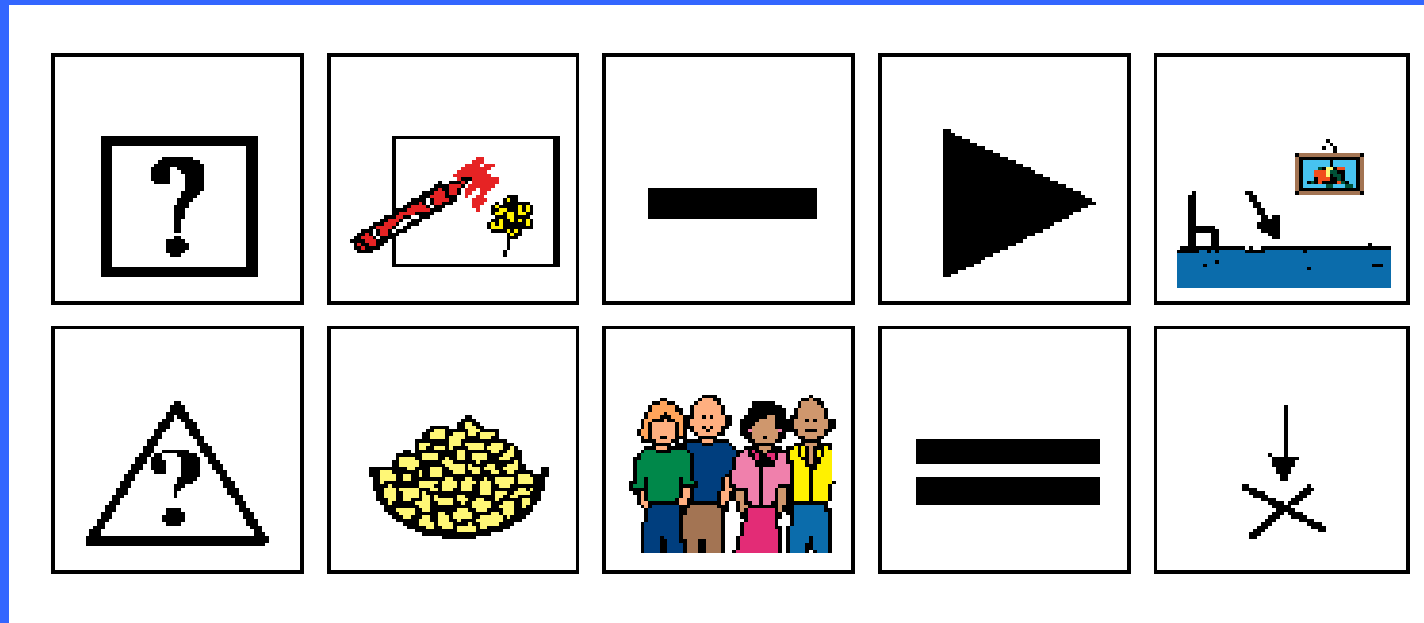


smile.

Try this one:



# Is this what you read?



1. What color is the carpet?

2. How many people are here?

# How do you Teach what Symbols Mean?

- Simon Says
- Consistency
- Matching Objects with Symbols



# What to Consider with Visuals

- Can students can reach materials, see labels, manipulate visuals, etc.?
- What type of visual will allow a student the most independence (photo, line drawing, color, black & white)?
- What level or amount of support does the student need (what level of facilitation to allow for errorless learning, independence and generalization)?
- Are appropriate visuals present in all environments a student will access throughout a day?



# Areas of VCI to discuss today:

- Environment
- Organizational Tools
- Behavior
- Communication/Language/Academics

# Setting Up the Classroom Environment

- **Label the classroom**
  - Areas: bathroom, sink, cleaning supplies, toys
  - Home living supplies: cups, toothbrush, etc.
  - Post a schedule in room/in student notebook/in folders
- **Setting up areas**
  - Center Areas: kitchen, art, blocks, reading, etc.
- **Accessible areas**
  - Ensure students can reach materials, see labels, etc.

# Environmental Visual Cues

- Help students gain a better understanding of the environment
- Encourage independence
  - Labeling where supplies and items belong
  - Putting instructions in pictures (example, task analyses)
  - Breaking tasks into pictures labeled in area (example, clean-up routine is in pictures for each area)
  - PowerPoint “books” can be made to visually provide a task analysis

## Activity Cards 2



pattern frame blocks



blocks



chalkboard



puzzle



music center



duplo



# Task Analysis for Sink

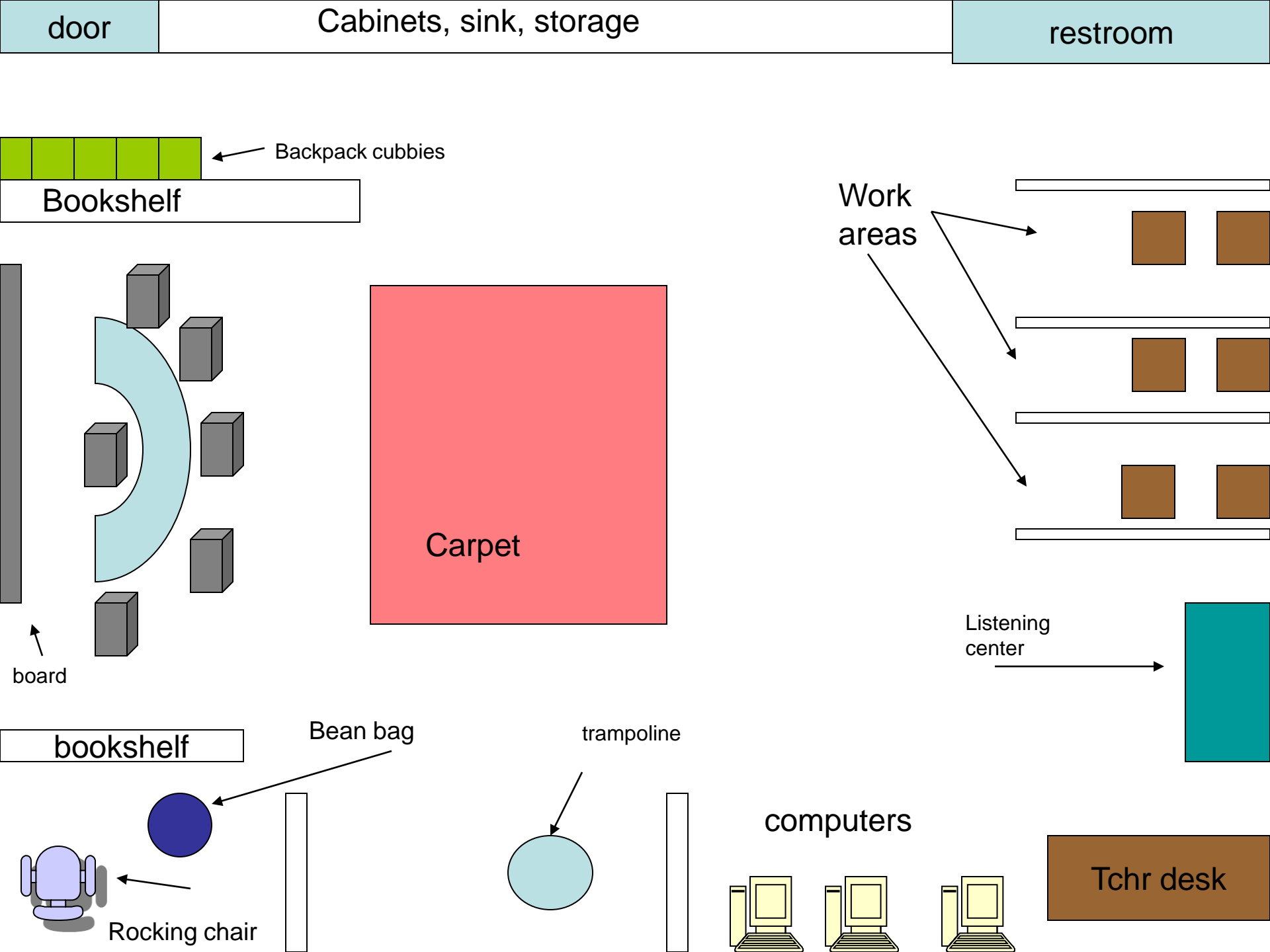
 **Washing Hands**

1	 water on	<input type="checkbox"/>	6	 water off	<input type="checkbox"/>
2	 wet hands	<input type="checkbox"/>	7	 get 1 paper towel	<input type="checkbox"/>
3	 get soap	<input type="checkbox"/>	8	 dry hands	<input type="checkbox"/>
4	 rub hands	<input type="checkbox"/>		 put in trash	<input type="checkbox"/>
5	 rinse hands	<input type="checkbox"/>	10	 finished	<input type="checkbox"/>

# Classroom Arrangement

The layout of your room should

- Be clearly labeled
- Facilitate communication
- Promote independence
- Align individual students' IEP goals with the curriculum





# Areas Should Include:

- Book bag/cubby area
- Circle Area
- Centers
- Bathroom
- Snack and work areas
- Computer area
- Listening Center

# Individual Work Areas

- Individual work areas - Individual workstations should be set up for students when needed and should be clearly defined (with visuals) allowing students to start work. Using visual prompts (icons, colors and/or words) can allow students independence while working.
- A group can be with chairs at a table or desk, in a circle on floor or in chairs around an area rug. Each student should have a clearly marked box or place with their name/picture.
- In a work area supplies should be clearly labeled so that students can access them independently

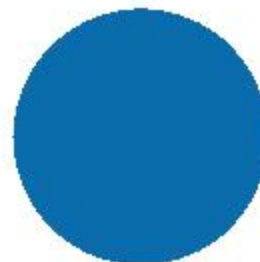


# Visual for Circle – Where to Sit



Leah

blue





# Small Group Work Areas

- Work Areas (embed IEP goals into curriculum)
- Examples of subject areas to be covered:
  - Math: Snack/Cooking
    - Correlating goals
      - » measurement ,counting, shapes, size, matching, more/less, safety words/symbols, etc.
  - Community, Leisure, Fine Motor
    - Correlating goals
      - » Community helpers, cutting, drawing a person, identify people, making choices, social communication exchange
  - Literacy (Reading, Writing)
    - Correlating goals
      - » Match pictures/ symbols, identify letters, sequencing, write/ type letters, cutting, gluing, retell a story, identify picture/object, phonemic awareness.

# Bulletin Boards/Display for Student

Utilize bulletin boards to:

- highlight student work
- display student expectations or class rules
- display stories/writing/art related to class themes and the curriculum
- post calendar and schedules (if students can access the boards)

# Class Rules





# Examples of Bulletin Boards:





# Teacher Schedule

## Tuesday

7:20 - 8:00	Arrival
8:00 - 8:30	Breakfast / Morning Work Dane O/T Angelo Speech
8:30 - 9:00	Goal Work
9:00 - 9:45	Circle 9:30 Abraham Speech
9:45 - 10:15	Vocational
10:00 - 10:30	Angelo O/T
10:15 - 10:45	Bathroom / Snack
10:45 - 11:00	Freetime
11:00 - 11:30	Goal Work <del>Time</del> No OT
11:30 - 12:00	Quiet Time
12:00 - 12:20	Recess
12:20 - 1:10	Bathroom / Lunch
1:10 - 1:40	Music
1:40 - 2:00	Behavior Charts Dismissal

## Friday

7:20 - 8:00	Arrival
8:00 - 8:30	Breakfast / Morning Work Angelo Speech Abraham Speech
8:30 - 9:00	Goal Work Mohammed Speech Jose Speech
9:00 - 9:45	Circle
9:40 - 10:25	Jose, Abraham, Angelo Music
9:45 - 10:15	Bathroom, Goalwork
10:15 - 11:00	Snack/Walk
11:00 - 11:30	Goal Work
11:30 - 12:00	Quiet Time
12:00 - 12:20	Recess
12:20 - 1:10	Bathroom / Lunch
1:10 - 1:20	Jose P.E./Abraham ART
1:10 - 1:40	Class activity
1:40 - 2:00	Behavior Charts Dismissal

# Organizational Tools:

## Establish Temporal Structure with VCI

- Activity Length
- Variation of Activities
- Teaching Starting and Stopping
- Transitions



# Activity Length

- Type of activity, age, and abilities dictate how long an activity should last
- Some students don't care if they've finished an activity when time ends; others will insist on finishing one
- Activities should end on a positive note

Heflin & Alaimo, 2007



# Visuals for Activity Length

## Time Timer

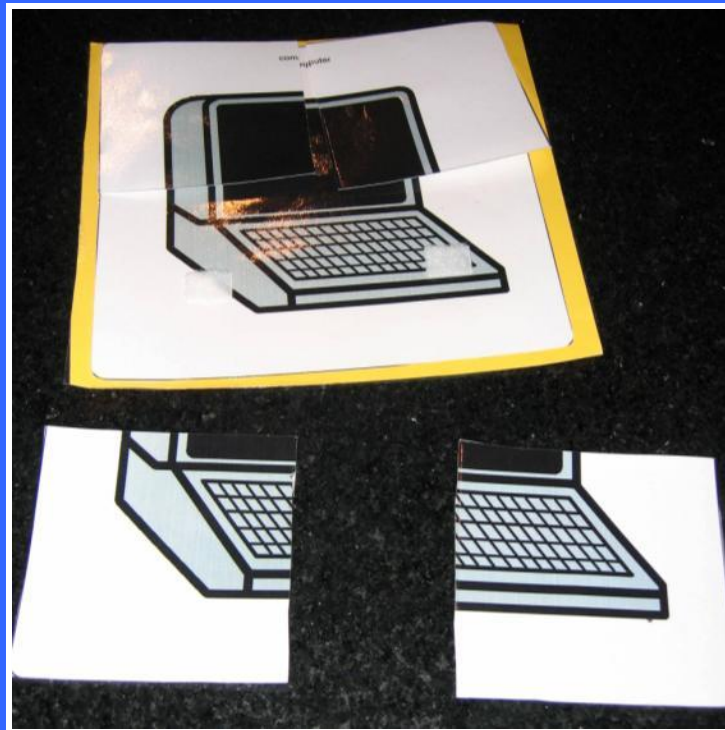
- Big and small, can be purchased with auditory cues as well



## Visual Puzzles

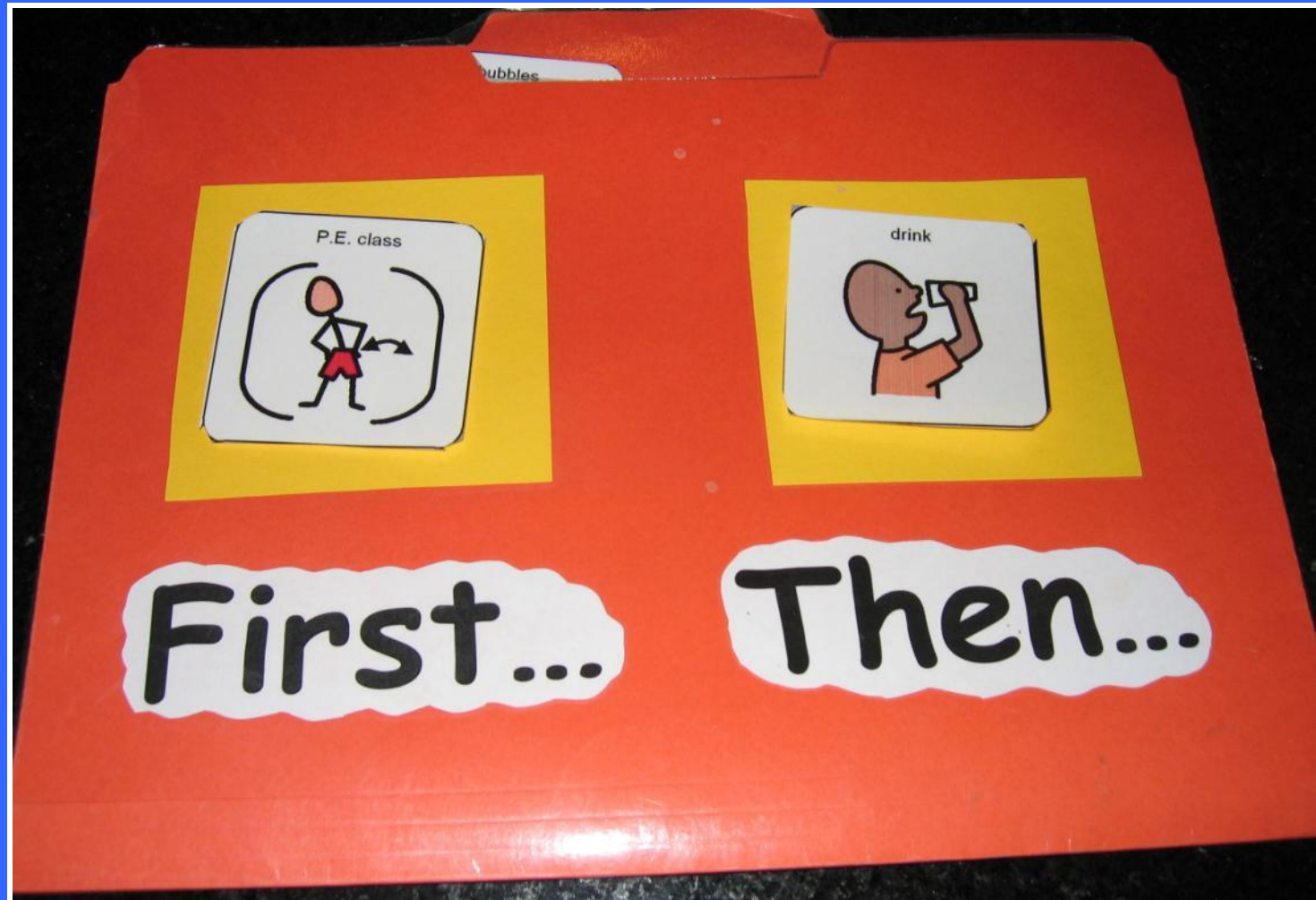
Earn pieces as  
time progresses  
until puzzle is  
complete



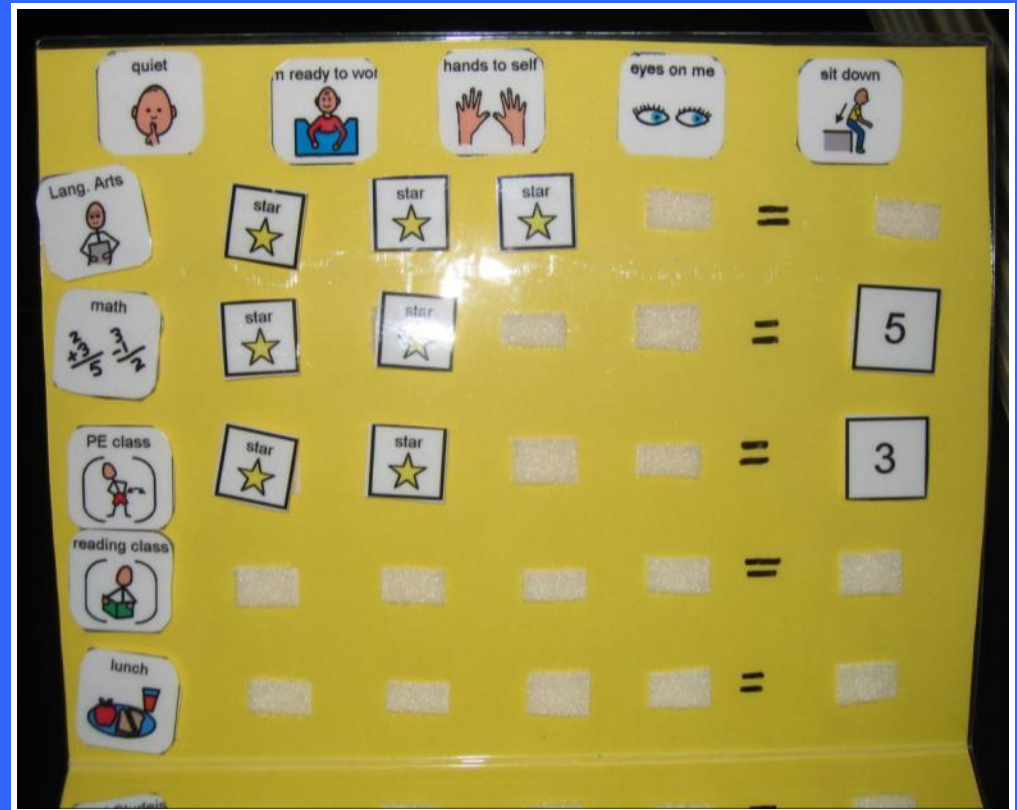
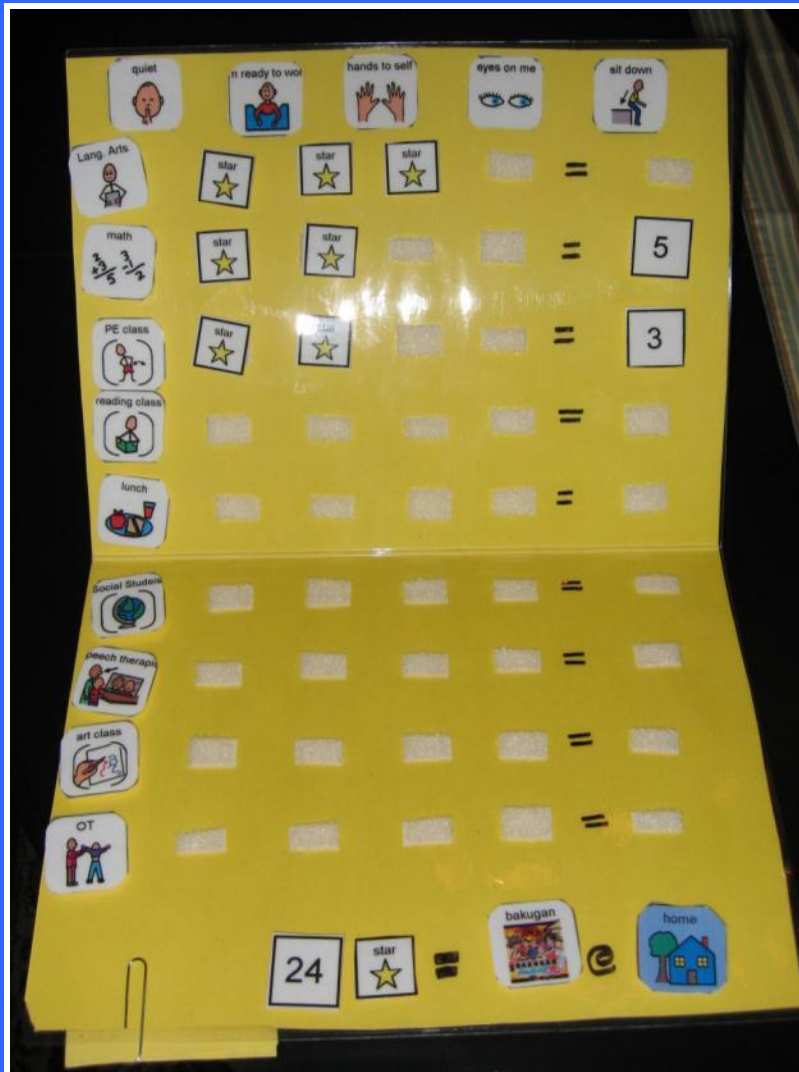




# First....Then....



# Reward System



# Variation of Activities

- Premack Principle – “Eat your vegetables before you get dessert!”
- Motivation for low-preference task – pair it with a highly rewarding task to follow
- Schedule can be modified over time so that more work must be finished before the reward arrives

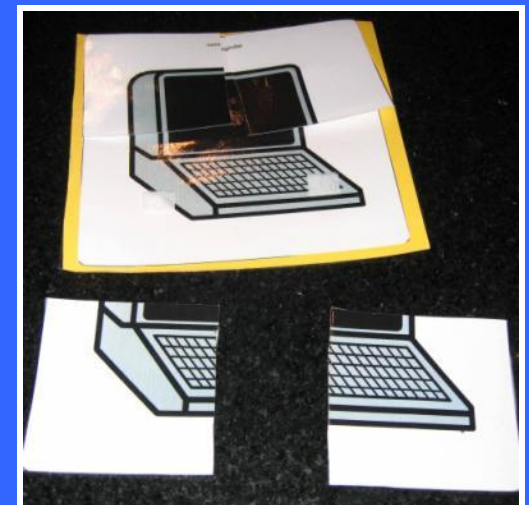
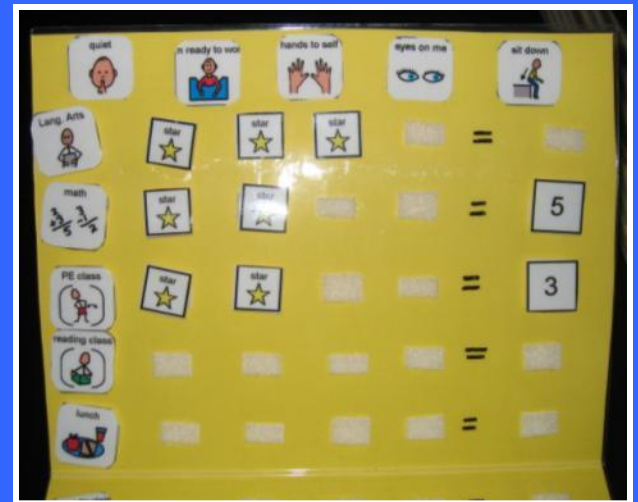
Heflin & Alaimo, 2007

# Variation of Activities continued

- Tasks that require high levels of energy and effort should be followed by tasks that require less energy and effort
- Behavioral Momentum – “the student completes several quick and easy tasks prior to the introduction of more difficult or less preferred tasks” (Heflin & Alaimo, 2007, p. 124)

# Variation of Activities Visuals

- First then
- Time Timer
- Schedule alternating easier/harder tasks
- Stars (rewards)
- Giving 2 choices (peas vs. carrots) instead of yes/no to “Do you want vegetables?”





# Teaching Starting and Stopping

- As much as possible, add a visual to verbal comments such as “Its time for math”
- Repetition of routines helps
- Using songs (example: Clean Up Song)

Heflin & Alaimo, 2007

# Visuals for Starting and Stopping

- Visual Timer
- “Finished” or “All Done” – sign language, large sign on stick, behavior lanyard
- Calendar or schedule





# Transitions

- Transitions can be especially problematic for some students, especially students with Autism Spectrum Disorder (ASD)
- Warn students verbally AND visually
- Research shows students with ASD are “not bothered as much by changes in routine as they are by the lack of prior notice that a transition is about to occur” (Flannery & Horner [2004] referenced in Heflin & Alaimo, 2007, p. 125).

# Transitions

- Visual schedules can teach change and flexibility in routines (even highly verbal students benefit greatly from a visual schedule)
- Try to allow students as much choice as possible in visual schedule (order of activities)
- Time Timer
- Visual picture symbol or card (example, “5” for 5 minutes left)

# Schedules

- Help us predict what is going to happen in the future
- Help us understand when there is a change in the routine so we can adapt
- Promote independence
- Encourage generalization of skills

# Visual Schedules

Schedules should be presented at eye level.

Student should know:

- What I'm supposed to do?
- How much I'm supposed to do?
- When am I finished?
- What activity/choice can I make next?

# Visual Schedules

- Schedules need to be portable and easy to access and use. They should **not** be faded out as the student “learns” their schedule.
  - Posted in room/in student notebook/in folders
- First model the manipulation of the schedule. This allows your child to learn how to use the schedule by first watching you.
  - As soon as possible your child needs to actively participate in the process.
    - first you may need to put the schedule together yourself but soon your child might take part by placing each picture on the board as you hand it to them or ask them what comes after.....

# Types of Schedules

- Daily
  - Individual
  - Class
- Mini Schedules
- First/Then

# Class Schedule



- **Class Daily Schedule:**

- It is important for the flow of the class for all members to know what to expect. The class schedule should be put up and gone over together, not just displayed as an art project.

- **Individual Student Schedules:**

- Schedules are not just for children or students with negative behaviors. They allow students to grow into more independent individuals and eventually adults. If a child learns to read a schedule they may be more employable and have better independent living skills as they transition into adulthood.



# Desk Schedule

Jason



VELCRO

VELCRO

VELCRO

VELCRO

VELCRO

Paste Envelope Here

**first** Then Gameboy  
**finish**



Get breakfast



Hang backpack



eat



reading

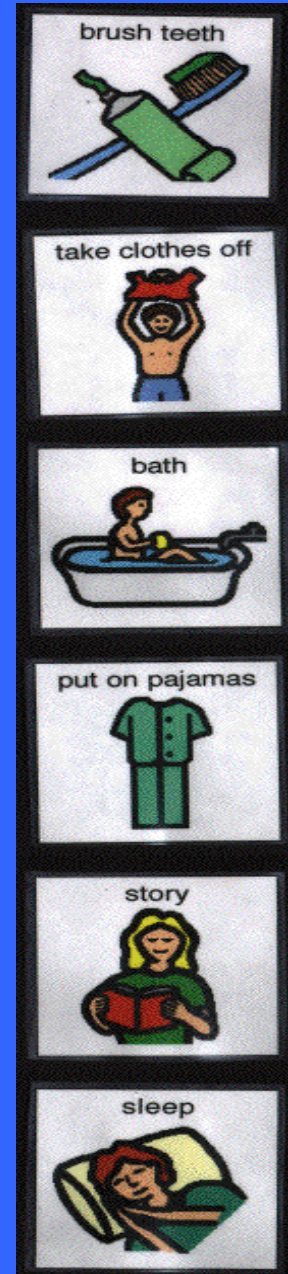


computer



## Mini Schedule:

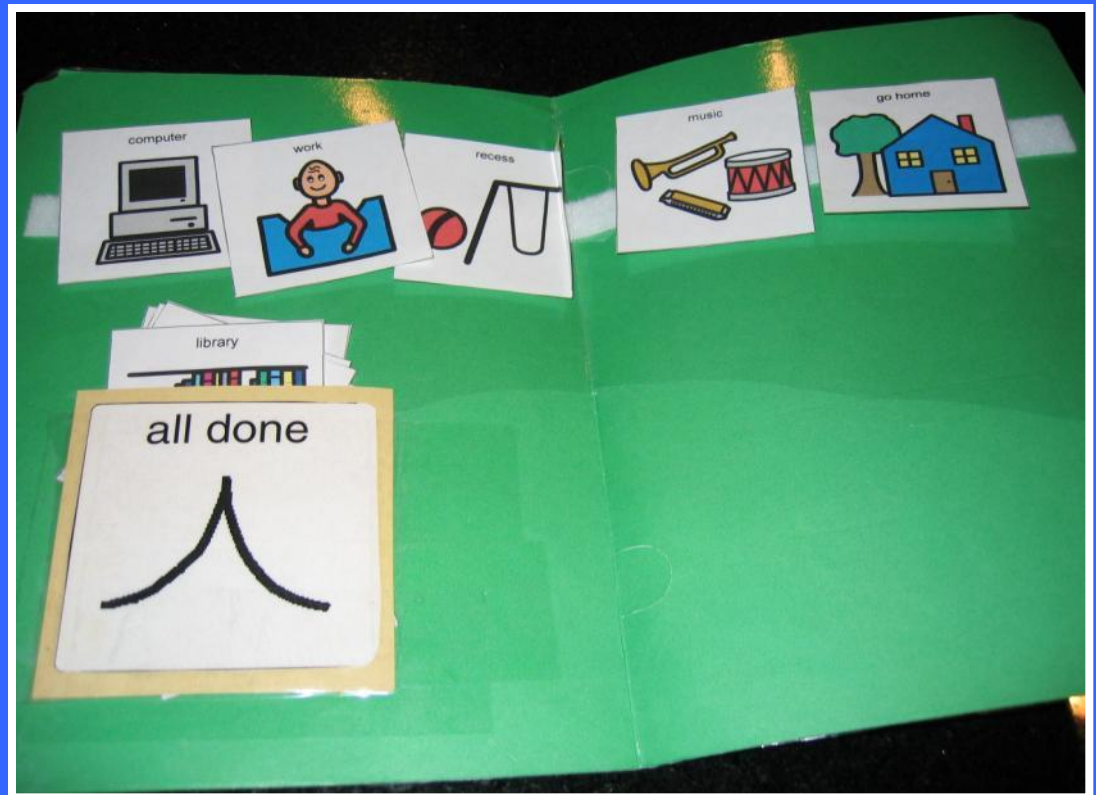
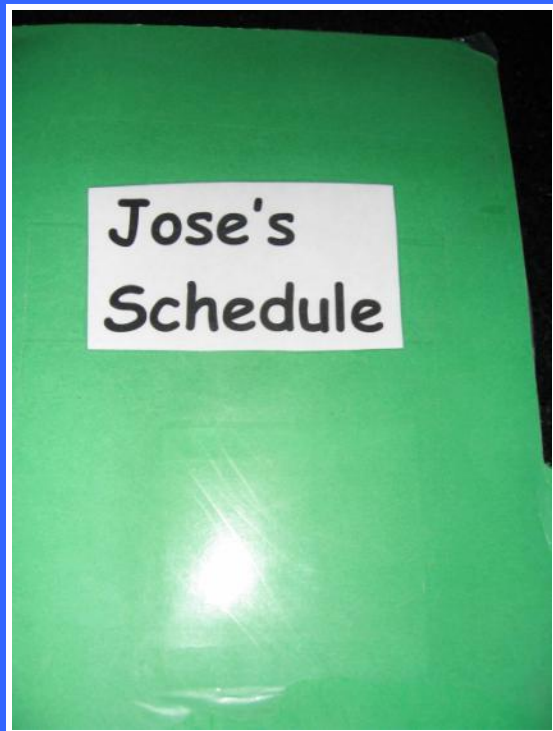
Breaks a larger task down into smaller steps which are easier for a child to handle.



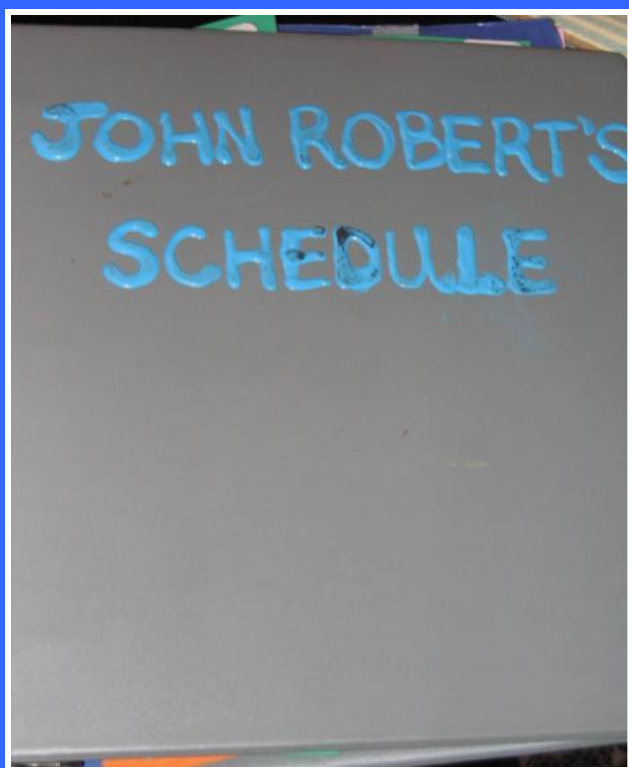
# Individual Schedule with Objects



# Individual Student Schedule – File Folder

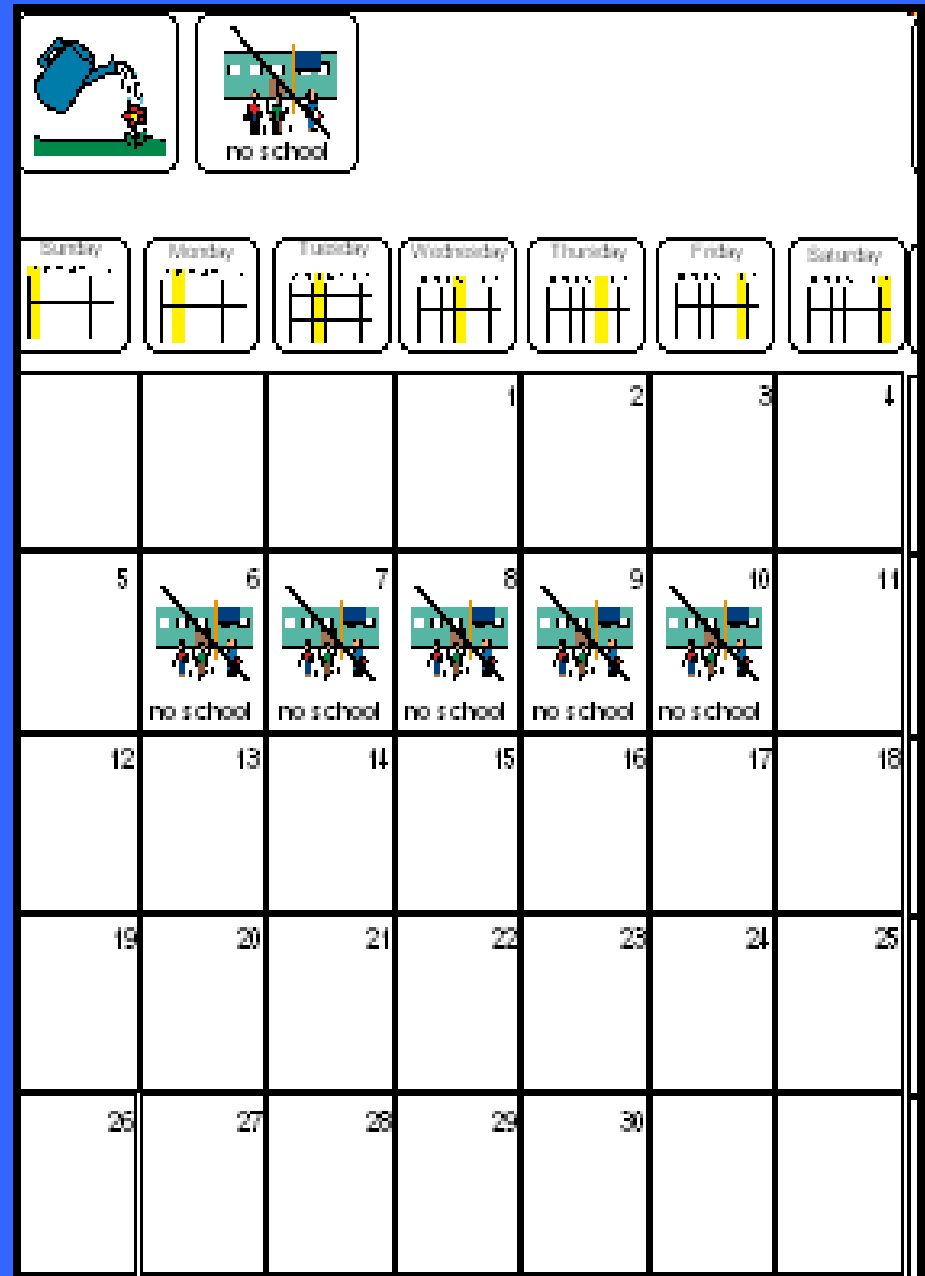


# Individual Schedule - Tactile



# Calendar

- A natural progression from simple daily schedules.
- Teaches your student to understand what is happening on a larger scale



# Behavior Management

## Social Stories:

- can be used to help students achieve desired behaviors and understand body language
  - Social conversation
  - Behaviors appropriate for environment(s)
- can be presented in a PowerPoint and printed to make a book for the reading center
- can be sent home to assist with carry over and acquisition of social skills or appropriate behaviors

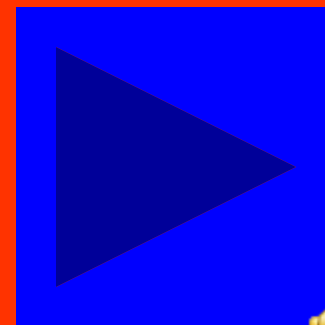
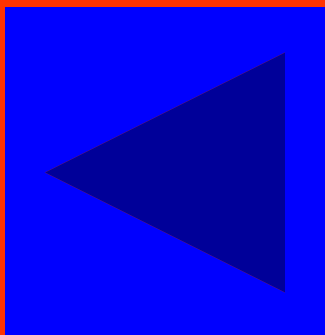


# When I Feel Angry



Written by the Flemington-Raritan Autism Program, NJ

[http://www.frsd.k12.nj.us/autistic/Social%20Stories/social\\_stories.htm](http://www.frsd.k12.nj.us/autistic/Social%20Stories/social_stories.htm)





# Behavior Management: Using Visuals

- Provide visual supports to encourage appropriate behaviors (Time Timer, reward puzzles, etc.)
- Body Language: (teach students to read social cues)
  - Eye gaze/avert eyes
  - Smile/flat affect
  - Thumbs up/shrug shoulders

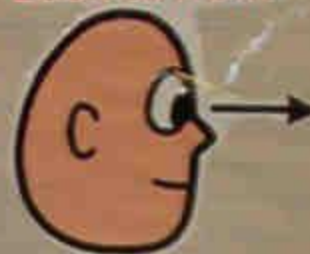
How to walk in line.



Mouth Closed



Look to front



Hands & feet to self!



NOT too close!



STOP at doors!



# Quiet Behavior Management = A Happy Classroom

Stop yelling/get quiet and watch appropriate behaviors increase

- Behavior Lanyard speaks louder than words
- Use visuals in a game of Simon Says
- Use visuals with the other adults in the room
- Use praise with each other and students
  - Students want your attention (negative or positive)
  - Make positive=a party and negative=nothing
- Label the appropriate behavior
- Avoid giving attention to a negative behavior
  - It only reinforces the inappropriate behavior

# Positive Behavior Visual

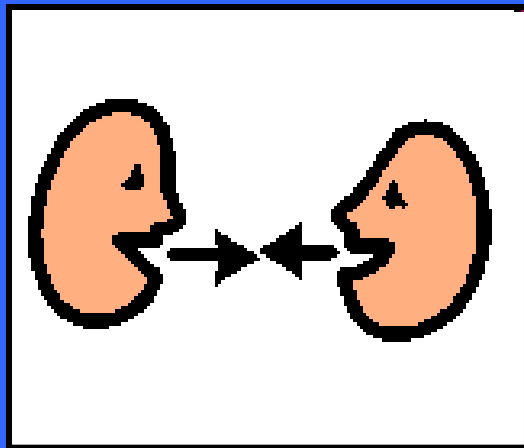


- This student was a compulsive toilet flusher.
- To decrease flushing behaviors we allowed him a certain number of flushes.
- We decreased the number as he achieved his goal.

# Temporal Organization - Schedules

- Remember that negative behaviors will decrease when students know what to expect
- Prepare for transitions
- Teach the concepts of starting and stopping

# Teaching Communication: An Integral Part of All Classroom Activities



# Mode(s) of Communication

- Multi-modal approach for students who are non-verbal or have limited verbal output
- Remember, if a student displays echolalia, they may be verbal, but if they can't make requests, comments, etc. independently, then they need AAC!

# Mode(s) of Communication

AAC includes low-tech stuff like picture symbols – not just fancy devices

- High-tech device = dynamic display AAC device
- Determine what other methods of communication are acceptable
  - Verbal communication
  - Universally known gestures or signs
  - Low-tech communications system
    - back-up system like a communication book
    - other AAC equipment and tools in classroom



## AAC Reminder:

- Have a backup plan: Devices will go in for repair and students **MUST** have a means to communicate (low tech)
- A student does not stop working towards goals because their device is in the shop.

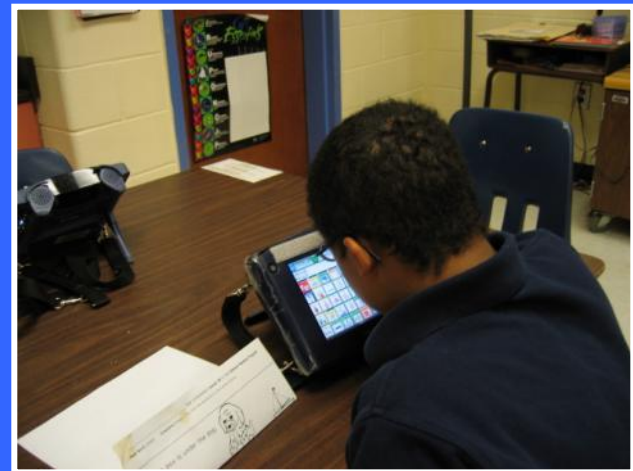


# Things to remember to encourage communication:

- Assess student needs:
  - How will the access communication (verbally, word cues, picture exchange, sign, etc.)?
- Motivate:
  - What's fun to talk about?
  - Pick up props from the community to pull out during the afternoon wrap up to prompt comments/ communication, etc.
- Provide appropriate visual supports:
  - Do the students' visual supports correspond to things they need/want to communicate? Do they have enough or too many visual supports?

# Assess what a Student Needs to Communicate

- Picture cues
- communication sheet(s)
- Pictures
- Objects
- communication device, etc.





## What is your favorite cartoon?

I like

Flintstones

Yogi Bear

Spongebob Squarepants

Dragon Ball Z

Bugs Bunny

Dexter's Laboratory

The Simpsons

Scooby-Doo

Pokemon

Powerpuff girls

My favorite isn't here.

# Activities Need to be Motivating

- Begin teaching in natural settings with natural events and activities
- Choose activities that are highly motivating such as snack or leisure time
- What is motivating to your student may not seem interesting to you. You may need to spend some time figuring out what is motivating

# Encourage communication

- What is motivating?
  - Motivating
    - I went to the pool yesterday!
    - I gave my dog a bath.
    - What did you watch on TV last night?
    - My mom bought me a new Spider Man toy!
  - Not so Motivating:
    - The block is red.
    - I have 2 eyes.
    - What number is this?

# Students Need to be Taught how to use Communication Systems

- Typically a student is handed a communication device or book and they are expected to start using it
- Users need time to learn their new device/communication book:
  - Where vocabulary is
  - How to access and work the device
  - How to speak to others with it
- When students are not successful with their system it is often because they have had little to no instruction or modeling learning to communicate.

# Setting up communication models

- Use your support staff, students and yourself as communication models
- Set up situations for modeling
  - At snack have your paraprofessional ask for what she/he would like. He/She can model a response with a student's device
  - During a lesson, model the use of the device to describe things that you are studying (e.g., descriptors for animals – soft, furry, small, etc.)

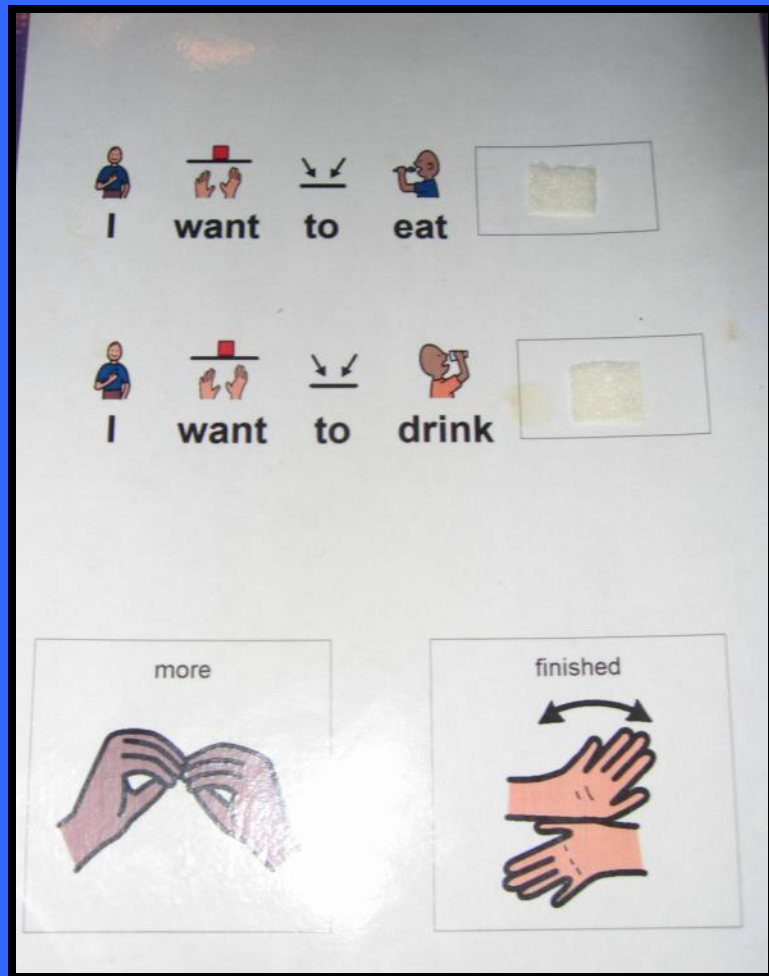


# Ideas for Teaching New Concepts when working with Students who are Non-Verbal

- Real objects
- Photographs or digital images
- Picture Symbols (Boardmaker, line drawings, etc.)
- PowerPoint
- Pointing to pictures in a book
- Sticky notes/index cards with answers
- Homework (e.g., story to be read in class)
  - Have student (with parent) read assignment or preview activity and come up with a question. He/she can practice finding the answer and the parent can send the question and answer to you. Then, when you call on the student in class they are **prepared** to find the answer on their device.
- Eye gaze, alphabet board, etc.

# Morning Snack

- Use snack folders to:
  - Encourage sentence structure
  - Facilitate AAC use
  - Make choices
- Student using PECS:
  - Use PECS book/board and symbol(s), at the corresponding level, to request preference throughout snack activity
    - At level 4 and up can give descriptors such as orange cracker, square cracker, etc.



<http://3.bp.blogspot.com>



# Communication Sheets

Today at school:

Name: \_\_\_\_\_

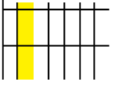
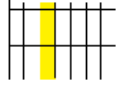
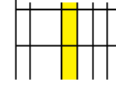


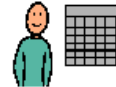
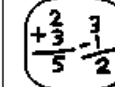



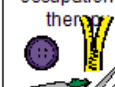







The day is:

Today I participated in:

Today I had a \_\_\_\_\_ day.

Do I have homework?

For lunch I had \_\_\_\_\_.

Monday	Tuesday	Wednesday	Thursday	Friday
				
				
				
				
				

# School to Home Communication

Today at School....

Today I went to art class music class

The therapist I saw = physical therap

For lunch I had pizza salad juice

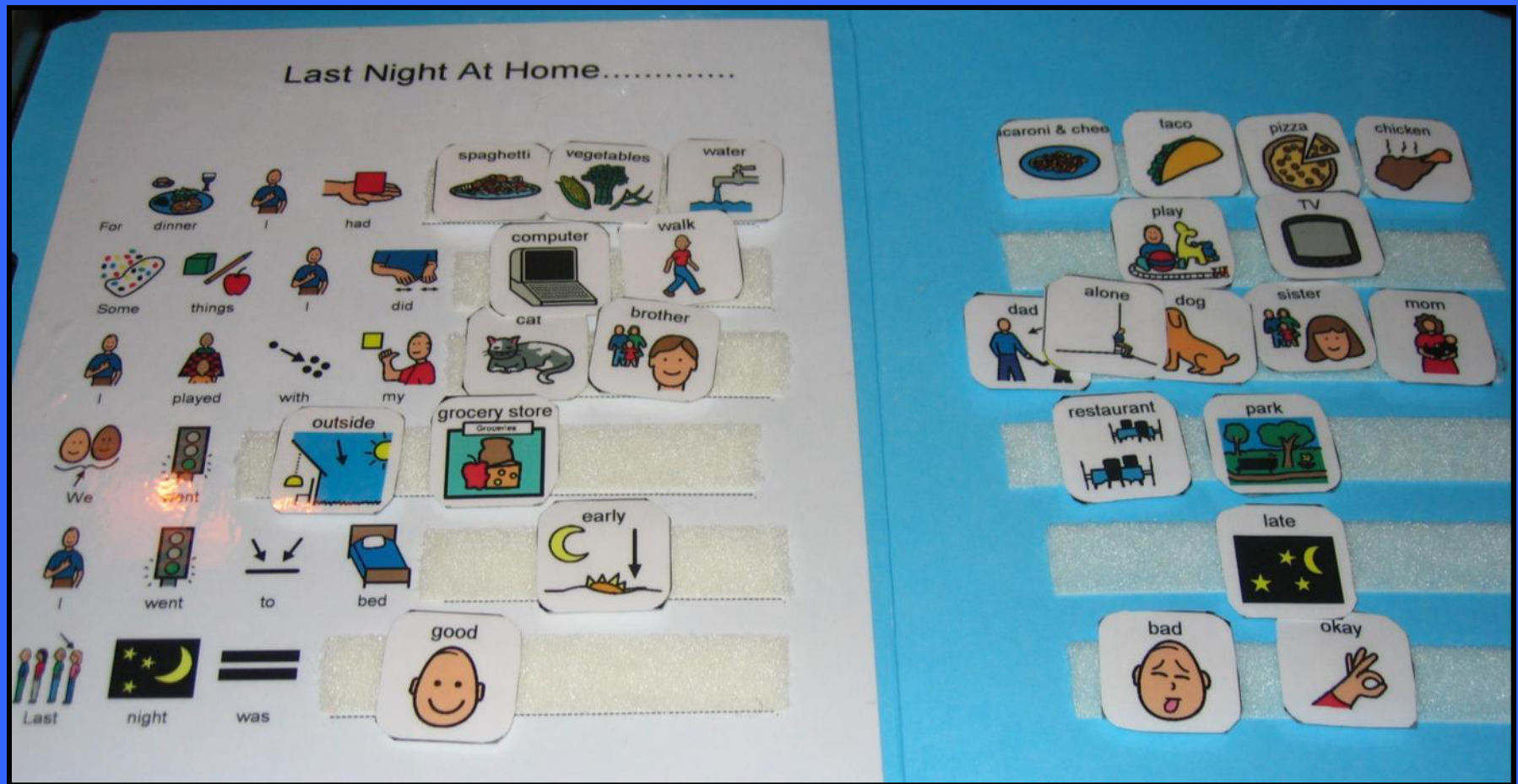
Today was a good day.

My favorite thing was recess friends

I am out of snack foods



# Home to School Communication



# Language and Academic Activities



$$\begin{array}{r} 2\frac{2}{3} \\ \times \frac{3}{5} \\ \hline \end{array} \quad \begin{array}{r} 3\frac{1}{2} \\ \times \frac{1}{2} \\ \hline \end{array}$$





# Center Boxes/Folders

- For each area of your classroom, language opportunities should be planned
- Create a box with the activity inside. The vocabulary can be velcroed on the inside of the lid or in a folder in the box
- The outside of the box can hold the visual symbols for the corresponding vocabulary (nouns, verbs, descriptors, etc.)

# Game Box: Jacks and Bubbles



# Writing Box

- Inside lid: all possible choices and communication symbols for teacher.
- Outer lid: all choices student needs for that day/activity.
- Inside box: all writing needs, such as pencils, markers, chalk, chalk board, white boards, rubber stamps, crayons, paper, etc.

# Example Writing Activity:

Write the word "Me"

- for student who is unable to write, they might glue a picture of self next to word me or use rubber stamps
- sequence the letters in me or call names out for students to say, "that's me"
- symbol choices: pen, pencil, marker, paper, eraser, colors, help, look, watch me, glue, I need, scissors

# Visual Task Analysis: Moving Towards Independence

- Visual Task Analysis
  - Allows a child to see all the steps to complete a task and learn to follow along independently
  - Reduces dependence
  - Promotes generalization
- Types
  - Picture recipes
  - Work task/ Instructions
  - Personal Care task/Hygiene

# Recipe

## What You Need to Make Dirt Pudding



1 packet chocolate pudding



1 pack of oreos



thawed cool whip



Gummy Worms



milk & measuring cup



baggy & rolling pin



whisk



mixing bowl & spoon



plastic cups & spoons



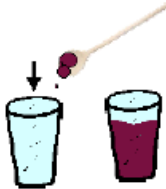
## Dirt Pudding p. 2



7. Pour 1/2 crushed cookies in bowl.



8. Stir.



9. Spoon mixture into cups.



10. Put crushed cookies on top.



11. Refrigerate 1 hour.



12. Decorate with Gummy worms.

## Dirt Pudding



1. Wash hands.



2. Pour pudding in bowl.



3. Pour 2 cups milk in bowl.



4. Whisk and let stand for 5 minutes.



5. Stir in Cool Whip.



6. Crush cookies in bag.

# Task Analysis



# Supported Reading

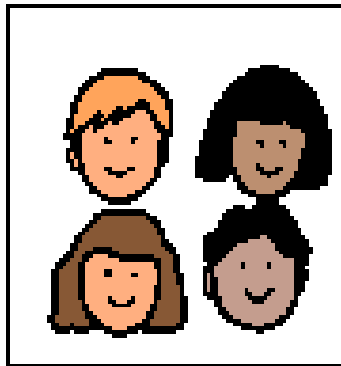
- Students learn to use pictures to derive meaning from books, magazines, menus, and the world around them.
- Students who may not have otherwise become readers may begin to recognize words because they have been paired with picture cues.



Read the Following Passage:

**Los niños juegan  
afuera en tierra del  
juego. Juegan la  
bola y saltan la  
cuerda.**

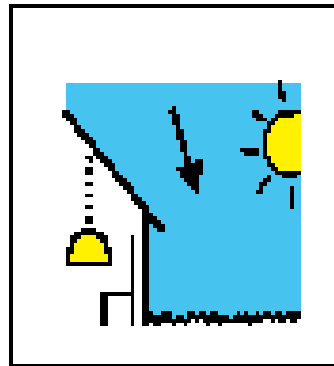
# Now Try to Read This:



De los niños



jugan



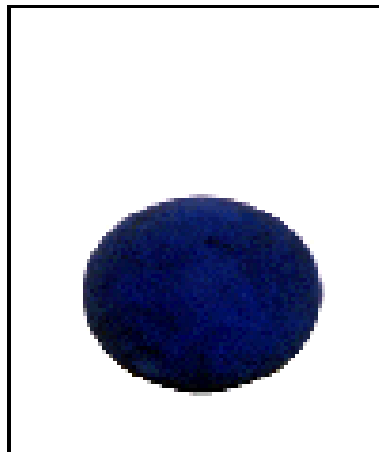
afuera



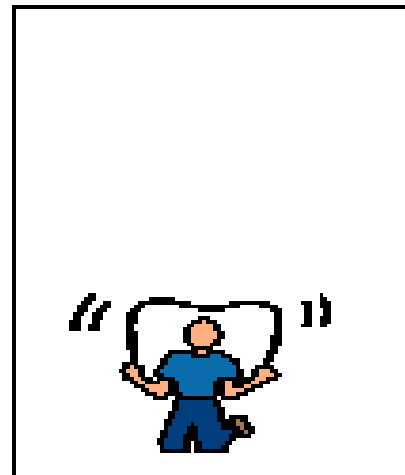
tierra del  
juego



Juegan



la bola



y

saltan la cuerda

# It Says

The children play outside on the  
playground.

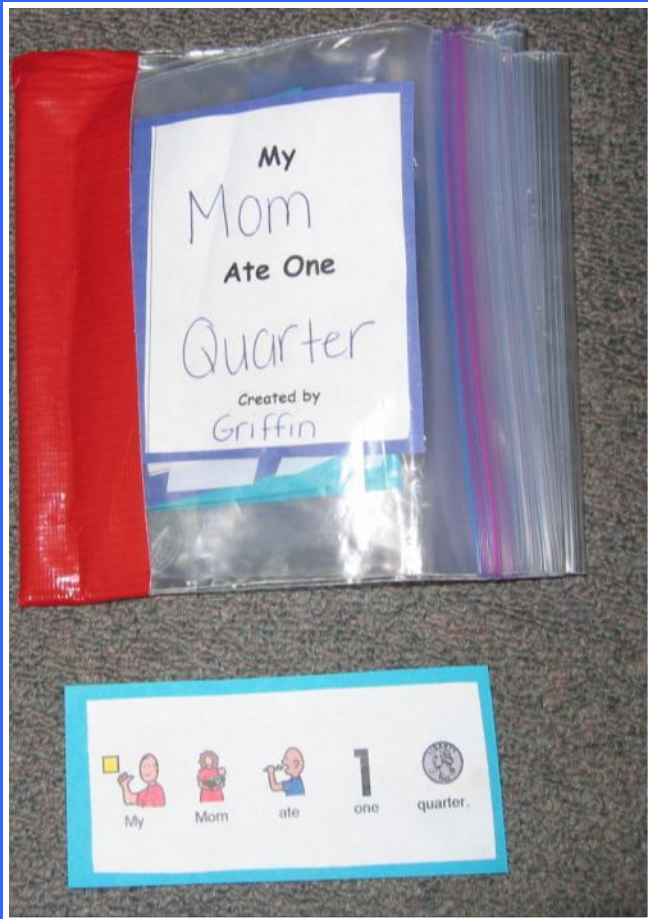
They play ball and jump rope.

Were the pictures helpful? Did you need to  
know all the pictures to get the point?

# Adapted Symbols Added to Book



# Objects Added to Book



# Matching Words to Pictures

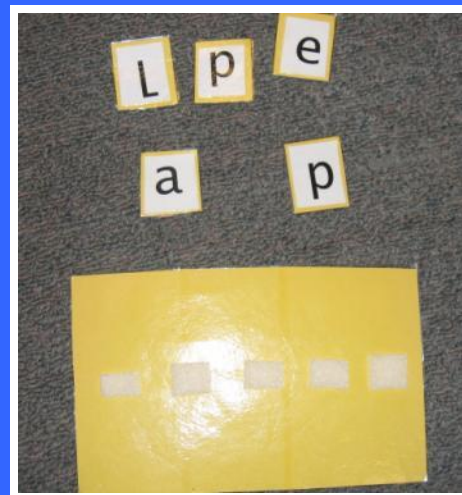
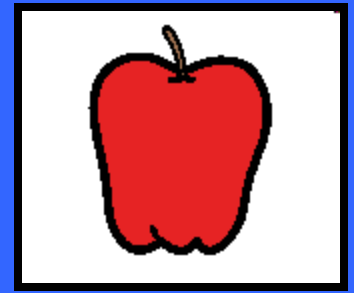




# Matching Words to Pictures



# Matching Letters/Spelling

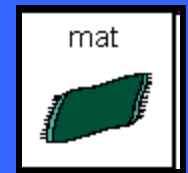
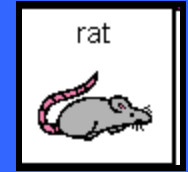
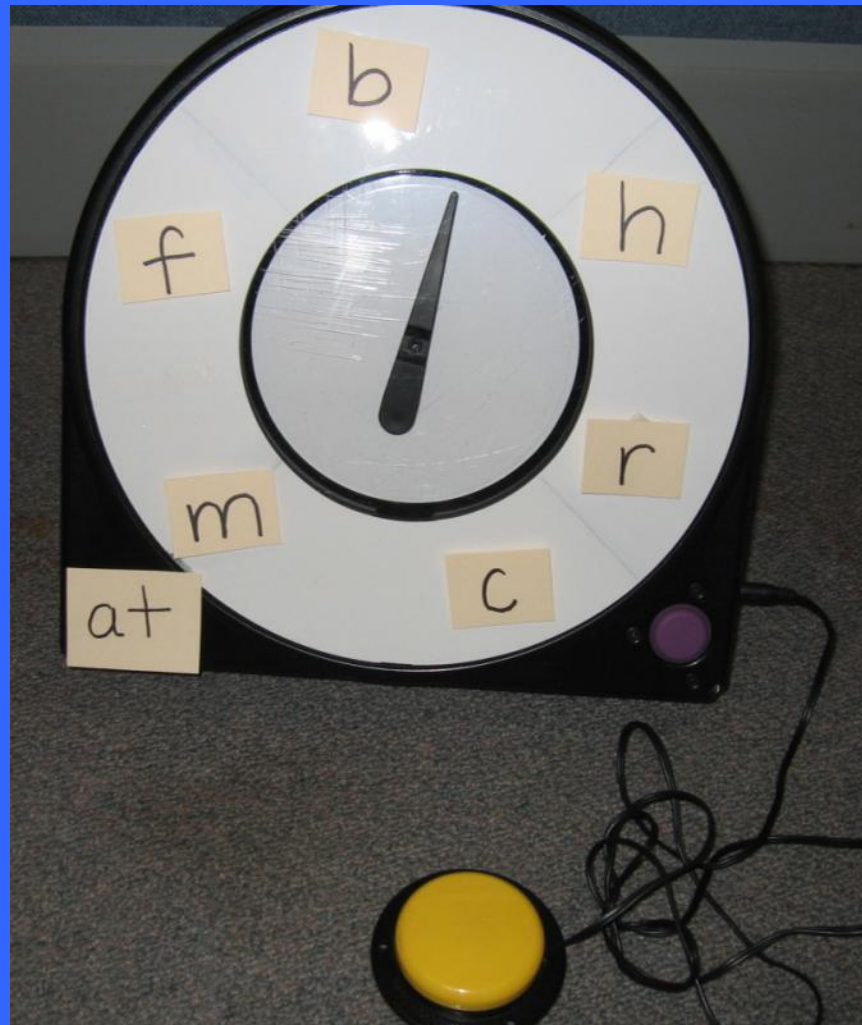




# Categorizing by First Letter



# Phonemic Awareness/Rhyming

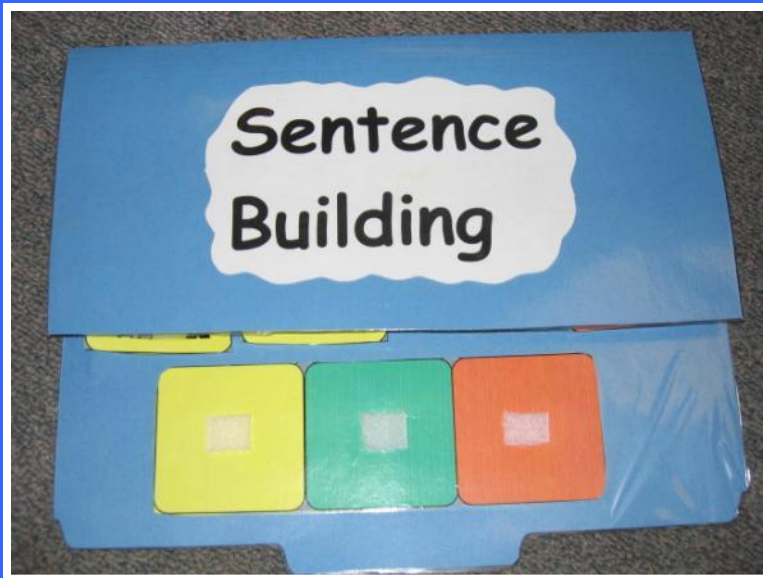


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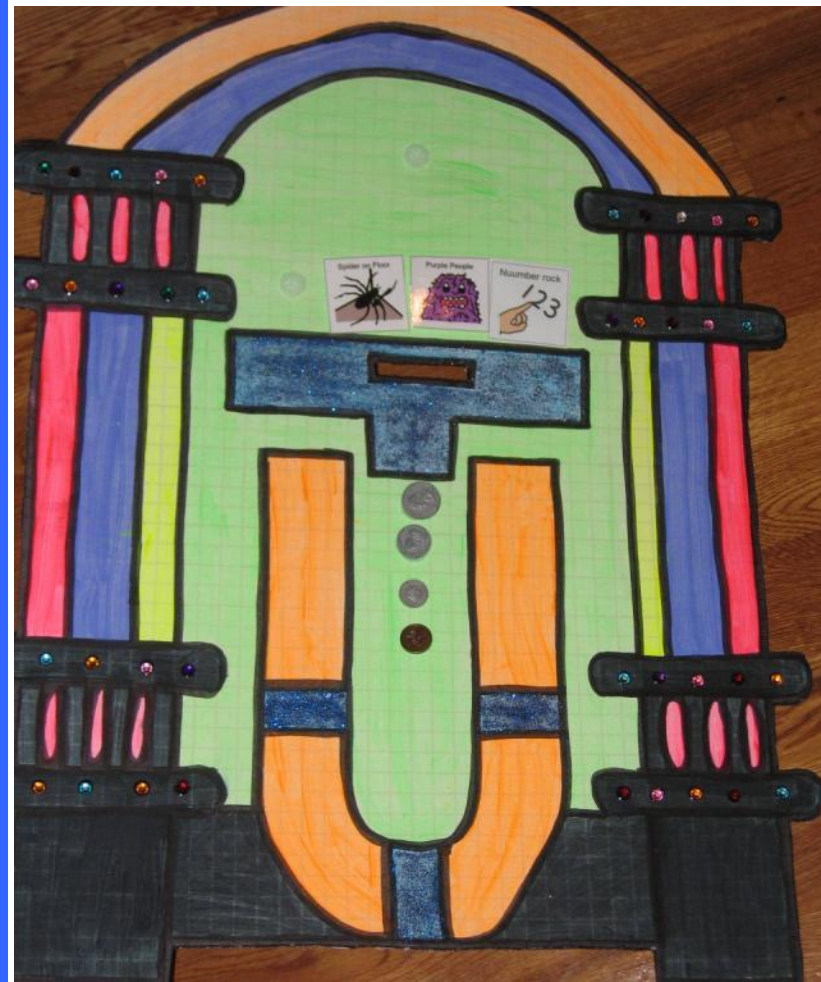


# Sentence Building



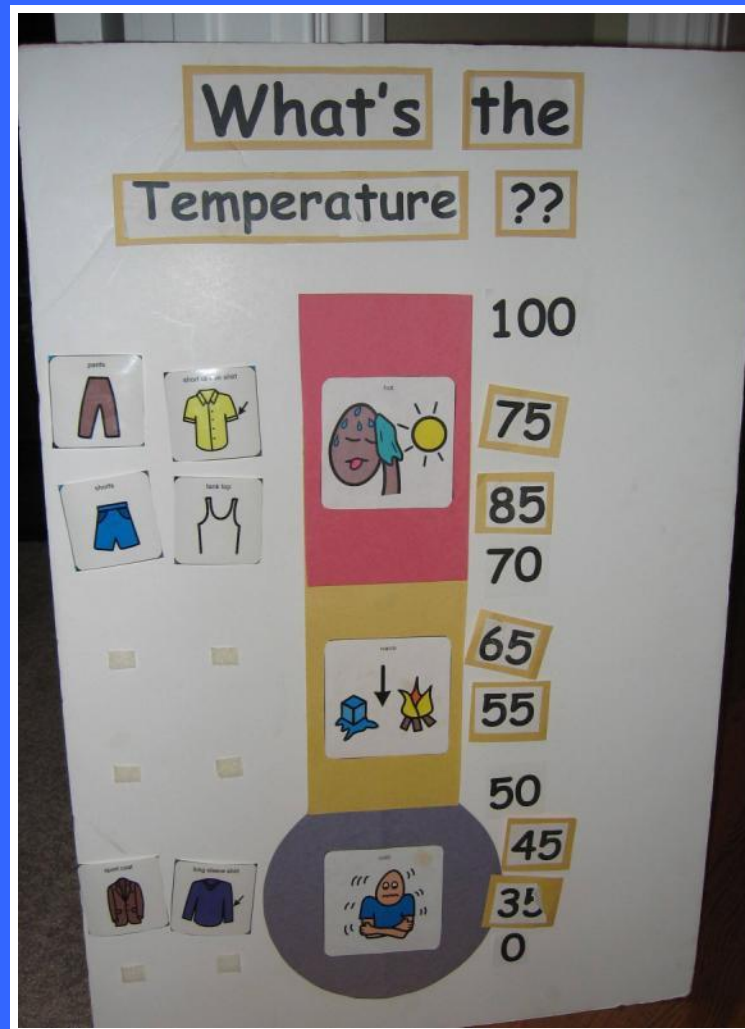


# Jukebox: Money, Math, and Music

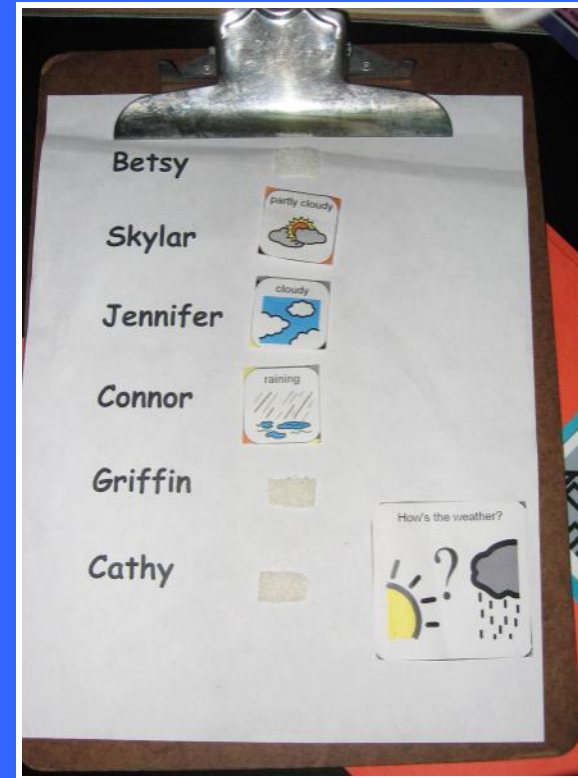
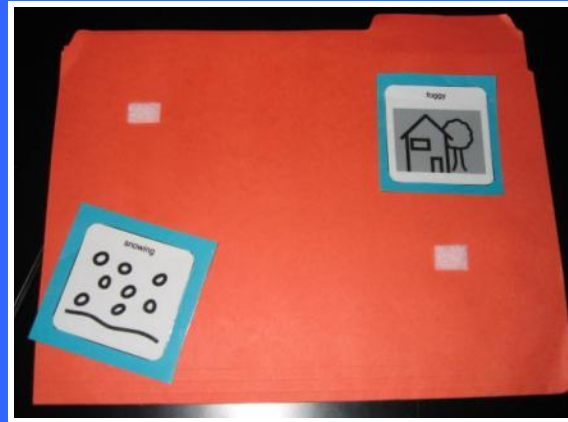




# Weather: Math, Science, and Vocabulary



# Take a survey, count, graph...





# Weather Graph

6

5

4

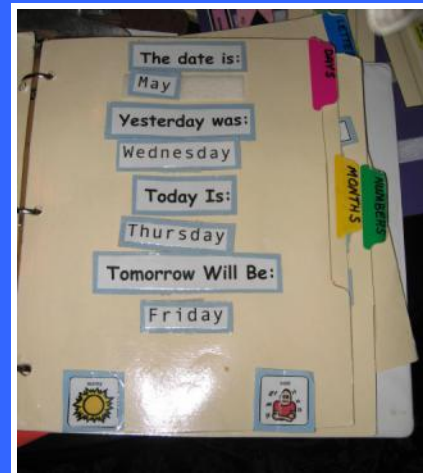
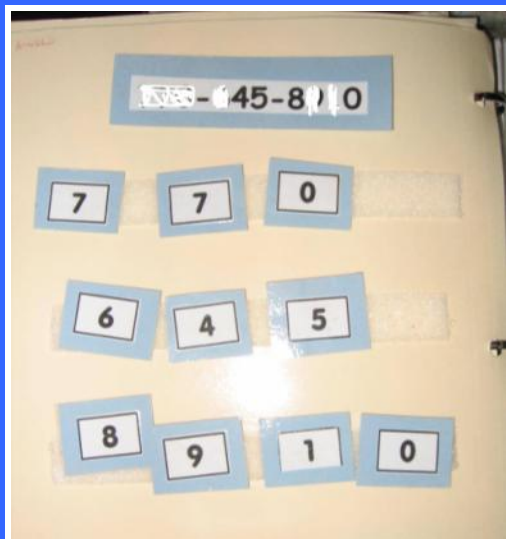
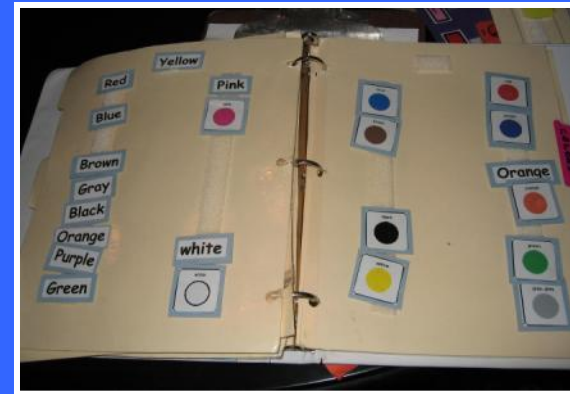
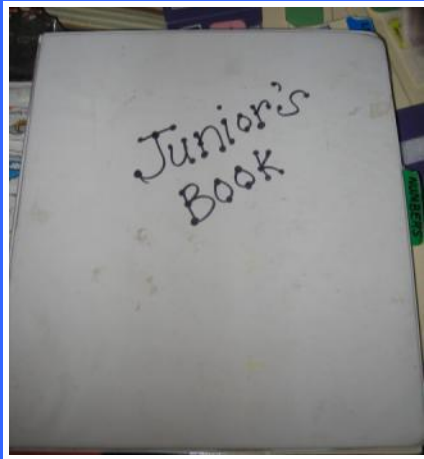
3

2

1



# Individual Work Book



# Preplanning Thoughts

- Preplanning is **NOT** Pre-Decorating!!
- Pretty is nice, but a successful student is beautiful
- Make a plan for planning

*We are what we  
repeatedly do.  
Excellence then is not  
an action but a habit.*

*~Aristotle*

# Websites: Picture Symbols using Boardmaker Software

- <http://www.adaptedlearning.com> – Mayer Johnson website that allows users to upload and download free Boardmaker materials (activity exchange). Must have Boardmaker software
- <http://groups.yahoo.com/group/boardmaker/?v=1&t=search&ch=web&pub=groups&sec=group&slk=1> - free Boardmaker activity exchange (must have Boardmaker software)
- [http://www.baltimorecityschools.org/Boardmaker/adapted\\_library.asp](http://www.baltimorecityschools.org/Boardmaker/adapted_library.asp) - free adapted Boardmaker books (must have Boardmaker software)
- <https://www.ocps.net/cs/es/s/support/at/Pages/VisualSupports-ThematicVisualSupports.aspx> - provides free pre-made Boardmaker files (must have Boardmaker software)
- <http://fdlrsregion3thematicvisuals.wikispaces.com/> - thematic Boardmaker visuals and links to other Boardmaker visuals (must have Boardmaker software)
- <http://prekese.dadeschools.net/BMD/interactivestorybooks.html> - Interactive Boardmaker storyboards for pre-k (must have Boardmaker software)

# Websites: Picture Symbols requiring no Software

- <http://www.pics4learning.com/index.php> - free pictures
- <http://www.askability.org.uk/Default.aspx> - free British website that posts symbolized text jokes, stories, current events, etc. (similar to Writing With Symbols but no software is required)
- <http://www.slattersoftware.com/document.html> - free visuals provided by Slater Software. Items for purchase are also available on the website. Adobe Acrobat reader is required to open visual files.

# Websites: General Resources

- <http://www.polyxo.com/visualsupport/> - website about teaching students with autism, including information about visual cues, social stories, etc.
- <http://card.ufl.edu/visual.htm> - University of Florida Center for Autism and Related Disabilities pages that provide ideas and information on using Visual Supports
- <http://www.tinsnips.org/> - special education website that provides lots of information and examples of visual supports
- [http://www.frsd.k12.nj.us/autistic/Social%20Stories/social\\_stories.htm](http://www.frsd.k12.nj.us/autistic/Social%20Stories/social_stories.htm) - social stories





# Reference

Heflin, L. J., & Alaimo D. F. (2007). Students with Autism Spectrum Disorders: Effective Instructional Practices. Saddle River, NJ: Pearson.