

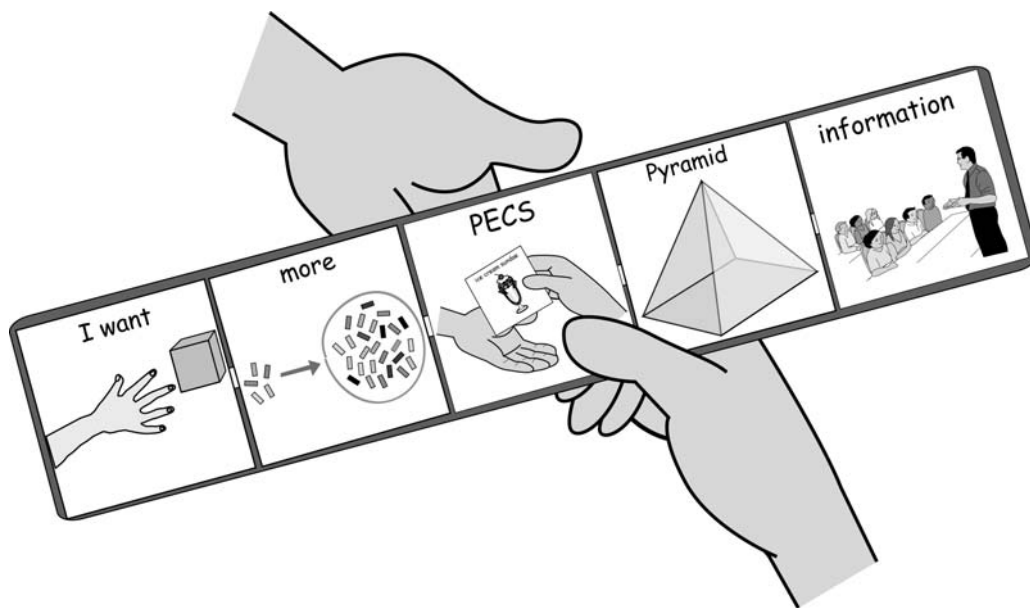


PECS LEVEL 2:

ADVANCED WORKSHOP

Developed by
Lori Frost, MS, CCC-SLP
Andy Bondy, PhD

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A special thanks to our **Pyramid Revision Team** for making this workshop up-to-date and fun!

Pyramid Revision Team:

Lori Frost, MS, CCC-SLP – Co-Founder of Pyramid Educational Consultants and co-creator of PECS

Gary Dadd, MA, B Ed Hons (CANTAB) – Pyramid UK Consultant

Sophie Kerr, B App Sci (Dis Stud) (Hon) B Ed – Pyramid AUS Consultant and General Director

Anne Overcash, M Ed – Pyramid US Consultant

Nancy Trincia, MBA – Pyramid Group Management Services Corporation, Marketing Manager

Illustrations by:

Brad Almond – Pyramid Group Management Service Corporation, Creative Director

Nancy Trincia, MBA

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WORKSHOP OUTLINE

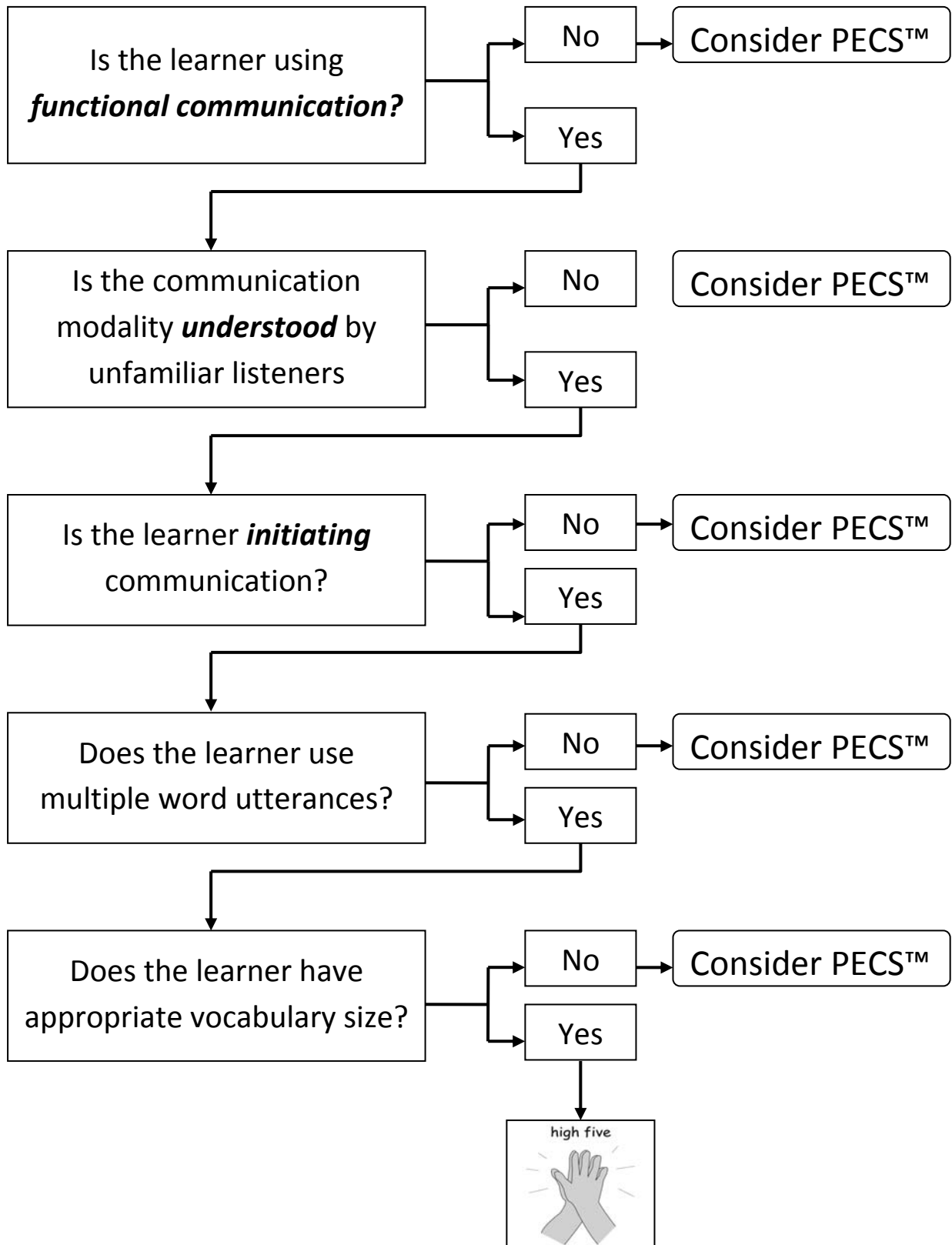
TOPIC	MANUAL PAGES	SLIDE #s
Introduction		1-3
About PECS		4-7
Learning and the Pyramid Approach to Education	4-19	8-10
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Bringing it All Together		274-284

FORMS IN PECS MANUAL	MANUAL PAGES	PECS Data Forms CD
IEP Objectives	335 and website	
PECS™ Implementer Skills Assessment	355	
Learner Skills Assessment		✓
Data Forms	369	✓
Error Correction Cheat Sheets	385	✓
Communication Planning Worksheets	391	✓

Learner Objectives

1. Name and describe the components of the Pyramid Approach to Education
2. Review and troubleshoot implementation of the PECS protocol
3. Discuss and plan incorporating communication within functional activities and routines
4. Develop advanced PECS lessons
5. Analyse teaching PECS across the day

Is this person a candidate for PECS?



Communication Bill of Rights

All persons, regardless of the extent or severity of their disabilities, have a basic right to affect, through communication, the conditions of their own existence. Beyond this general right, a number of specific communication rights should be ensured in all daily interactions and interventions involving persons who have severe disabilities. These basic communication rights are as follows:

1. The right to request desired objects, actions, events, and persons, and to express personal preferences, or feelings.
2. The right to be offered choices and alternatives.
3. The right to reject or refuse undesired objects, events, or actions, including the right to decline or reject all offered choices.
4. The right to request, and be given, attention from and interaction with another person.
5. The right to request feedback or information about a state, an object, a person, or an event of interest.
6. The right to active treatment and intervention efforts to enable people with severe disabilities to communicate messages in whatever modes and as effectively and efficiently as their specific abilities will allow.
7. The right to have communicative acts acknowledged and responded to, even when the intent of these acts cannot be fulfilled by the responder.
8. The right to have access at all times to any needed augmentative and alternative communication devices and other assistive devices, to have those devices in good working order.
9. The right to environmental contexts, interactions, and opportunities that expect and encourage persons with disabilities to participate as full communicative partners with other people, including peers.
10. The right to be informed about the people, things, and events in one's immediate environment.
11. The right to be communicated with in a manner that recognizes and acknowledges the inherent dignity of the person being addressed, including the right to be part of communication exchanges about individuals that are conducted in his or her presence.
12. The right to be communicated with in ways that are meaningful, understandable, and culturally and linguistically appropriate.

National Joint Committee for the Communicative Needs of Persons with Severe Disabilities (1992)

A Case for Teaching Functional Skills

Extract from *TASH Newsletter* (Dec. 1987) re. Older brother, Daryl, who was 18 years old and had attended special education all his life, including some years of 'individual instruction'.

Daryl can do a lot of things he couldn't do before!

He can put 100 pegs in a pegboard in less than 10 minutes with 95% accuracy.
But he can't put coins in a vending machine.

Upon command he can "touch" nose, shoulder, leg, foot, hair & ear.
He's still working on wrist, ankle, hips.
But he can't blow his nose when needed.

He can do a 12 piece Big Bird puzzle with 100% accuracy
and colour an Easter Bunny and stay in the lines!
But, he prefers music, but was never taught how to use a radio or record player.

He can now fold paper in halves and even quarters.
But he can't fold his clothes.

He can put the cube in the box, under the box, beside the box and behind the box.
But he can't find the rubbish bin in McDonalds and empty his rubbish into it.

He can sort blocks by colour, up to 10 different colours.
But he can't sort his clothes, whites from colours for washing.

He can sing his ABC's and tell me names of all the letters of the alphabet
when presented on a card in upper case with 80% accuracy.
But he can't tell the men's room from the ladies' room when we go to McDonalds.

He can string beads in alternating colours and match it to a pattern on a DLM card!
But he can't lace his shoes.

I guess he's just not ready yet.

PECS Role-Play Reminders


<p style="text-align: center;">Phase I</p> <p>Communicative Partner</p> <ul style="list-style-type: none"> <input type="checkbox"/> Non-verbal enticement <input type="checkbox"/> 1 picture at a time <input type="checkbox"/> Provides open hand AFTER reach <input type="checkbox"/> Gives item within ½ second <input type="checkbox"/> Labels the item <input type="checkbox"/> Fades the open hand <p>Physical Prompter</p> <ul style="list-style-type: none"> <input type="checkbox"/> WAITS for the REACH/initiation <input type="checkbox"/> Physically prompts for pick-up, reach, release <input type="checkbox"/> Fades with Backward Chaining <input type="checkbox"/> Interrupts interfering behaviour <input type="checkbox"/> No verbal prompting <input type="checkbox"/> No R+ to the learner 	<p style="text-align: center;">Phase IIIB</p> <ul style="list-style-type: none"> <input type="checkbox"/> Arranges for 2 preferred items <input type="checkbox"/> Uses a plate or tray to hold items <input type="checkbox"/> Does NOT label the icon at the exchange <input type="checkbox"/> Offers the choices on the tray saying “take it” or indicating a choice <input type="checkbox"/> Labels the item if it corresponds to the icon that was exchanged <input type="checkbox"/> Conducts the 4-Step Error Correction if the item the learner attempted to take non-corresponding picture <ul style="list-style-type: none"> <input type="checkbox"/> Teaches to the “reach” <input type="checkbox"/> Model the icon <input type="checkbox"/> Prompt the correct icon <input type="checkbox"/> Switch the focus <input type="checkbox"/> Repeat by offering both items
<p style="text-align: center;">Phase II</p> <p>Communicative Partner</p> <ul style="list-style-type: none"> <input type="checkbox"/> One picture at a time <input type="checkbox"/> Non-verbal enticement <input type="checkbox"/> Gradually increases distance from learner <input type="checkbox"/> Eliminates “body language” prompts <input type="checkbox"/> R+ within ½ second <input type="checkbox"/> Praises and labels the item <p>Physical Prompter</p> <ul style="list-style-type: none"> <input type="checkbox"/> WAITS for initiation <input type="checkbox"/> Physical assistance to go to the CP if needed <input type="checkbox"/> Physical assistance to get PECS Book <input type="checkbox"/> Avoids verbal prompting and R+ 	<p style="text-align: center;">Phase IV</p> <ul style="list-style-type: none"> <input type="checkbox"/> Stationary “I want” <input type="checkbox"/> Waits for initiation <input type="checkbox"/> Uses physical prompting only <input type="checkbox"/> Uses Backward Chaining to fade prompts <input type="checkbox"/> Immediate verbal feedback for independence <input type="checkbox"/> the Sentence Starter up <input type="checkbox"/> Waits for initiation toward icon of preferred item <input type="checkbox"/> Uses physical prompting only toward the Sentence Starter <input type="checkbox"/> Uses immediate verbal feedback for independence toward the Sentence Starter
<p style="text-align: center;">Phase IIIA</p> <ul style="list-style-type: none"> <input type="checkbox"/> Arranges for preferred and non-preferred <input type="checkbox"/> Has both items in sight <input type="checkbox"/> Uses 1/2" rule at the point of the choice <input type="checkbox"/> Uses 4-step Error Correction <ul style="list-style-type: none"> <input type="checkbox"/> Model the correct icon <input type="checkbox"/> Prompt the correct icon <input type="checkbox"/> Switch <input type="checkbox"/> Repeat <input type="checkbox"/> Maximum 2—3 error correction cycles 	<p style="text-align: center;">Phase V</p> <ul style="list-style-type: none"> <input type="checkbox"/> Simultaneous presentation of the prompt & question <input type="checkbox"/> 1-second delay <input type="checkbox"/> Gradual increase in the delay <input type="checkbox"/> Differential R+ for independent response
	<p style="text-align: center;">Phase VI</p> <ul style="list-style-type: none"> <input type="checkbox"/> Simultaneous then 1, 2, 3, 4, second delay <input type="checkbox"/> Social praise ONLY <input type="checkbox"/> Mix commenting and requesting questions

Aim


To teach learners to communicate using a broad range of language skills with many people in all environments and situations by

- Refining current PECS skills
- Expanding PECS skills

THE PICTURE EXCHANGE COMMUNICATION SYSTEM




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About PECS

- Does not disregard nor inhibit speech development
- Avoids “prompt dependency”
- Begins by teaching social approach and “how to communicate”
- Parallels early typical communication development
- Does not require teaching ‘pre-requisites’

A REVIEW




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About PECS

- Teaches:
 - Spontaneous requesting
 - Vocabulary
 - Sentence construction
 - Responsive requesting
 - Responsive and spontaneous commenting
- Should be taught and expected across all activities
- Target 40–50 opportunities per day

A REVIEW



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Who is PECS for?

PECS can be used to teach:

- Functional communication
- Initiation of communication
- Understandable communication

PECS can be used to improve:

- Sentence length
- Vocabulary size



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IS THE LEARNER A PECS CANDIDATE?

"Learning"

- Learning leads to a change in behaviour
 - After a successful lesson, the learner can do something he could not do before the lesson
 - Exchange a picture
 - Write name
 - The learner engages in the new behaviour without a teacher's help

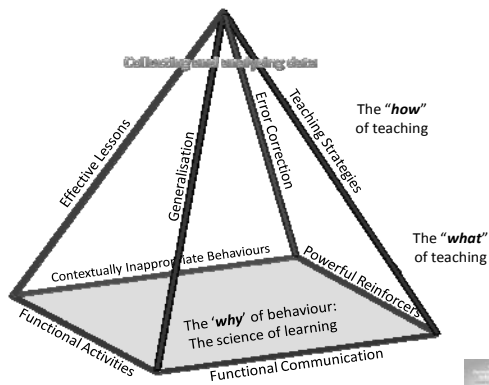
You must show what you know!



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"LEARNING" - WHAT DOES IT MEAN?



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THE PYRAMID APPROACH TO EDUCATION

The Pyramid and PECS

Functional Activities	Learners engaged in functional activities have something to communicate about!
Reinforcement	The first lesson in PECS is requesting a reinforcer, so we must identify a powerful reinforcer before beginning.
Functional Communication	PECS begins by teaching requesting - the communication skill associated with access to a powerful reinforcer.
Contextually Inappropriate Behaviours	Communication skills could be potential Functionally Equivalent Alternative Behaviours (FEABs).

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THE BASE OF THE PYRAMID AND PECS

Functional Communication

“Functional communication involves behaviour (defined in form by the community) directed to another person who in turn provides related direct or social rewards.”

(Bondy & Frost, 2002)

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FUNCTIONAL COMMUNICATION

Implementing Communication Intervention

- What function to teach first
 - Requests: direct reinforcement
 - Comments: social reinforcement

- Approach to spontaneity
 - From the beginning
 - Teach responding then spontaneity

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DECISIONS IN COMMUNICATION INTERVENTION

Assessing Current PECS Skills

- Each learner has a PECS book with relevant pictures
- Environment promotes frequent communication

Learner spontaneously gets book or carries his book with him
Learner finds Communicative Partner to exchange picture or Sentence Strip
Learner discriminates between all pictures in his PECS book as demonstrated via periodic Correspondence Checks
Learner constructs 2-picture Sentence Strip with "I want"
Learner uses attributes
Learner comments



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ASSESSING CURRENT PECS SKILLS

Communication Bill of Rights

The US Joint Committee for the Communication Needs of Persons with Severe Disabilities (1992) states they have the right to

- Request desired objects, actions, events, including the right to decline or reject offered choices
- Interact with another person
- Request feedback or information
- Have access at all times to any needed AAC system or device in good working order



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THE "RIGHT" TO COMMUNICATE

Communication Across the Day

Typical language development:
number of utterances per hour

Age	Verbalisations	Initiation	Response	Floorholding
1	140	56	101	4
2	448	58	222	174
3	497	55	214	241

Hart, B. and Risley, T.R., 1999. *The Social World of Children Learning to Talk*. Paul H. Brookes Publishing Co.



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HOW MUCH PRACTICE?

Functional Activities

- Tasks necessary for independent living:
 - “If the child doesn’t finish the task independently, who will?”
- Functional materials
 - Real materials in real situations can be used to teach all concepts
- ‘My Brother Daryl’



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FUNCTIONAL ACTIVITIES

Is it Functional?

	Complete a jigsaw puzzle	Put red blocks in container	Set 3 dinner places	Point to green	Tie shoes
Yes	If it is a preferred activity	When cleaning up toys	For a group meal	When asked, “Which apple?”	Real shoes on learner’s feet
No	To develop fine motor skills	When told “Sort”	For eating alone	When shown 3 pieces of coloured paper	“Training” shoes on a table



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UNDER WHAT CONDITIONS?


Schedule Picture	Time	Staff	Activity	PECS Request
	8:30	Mrs. Y	Arrival. Learners enter room, empty and hang book bags, put home-school log in basket on teacher’s desk. Mrs. Y has a jar of snacks and small toys on her desk containing items the learners like. Amy has trouble unzipping her book bag.	1) <u>I want help</u> 2) <u>I want long tangled toy</u>
	8:35		Transition to schedule (empty bag)	
	8:36	Mr. J	Bathroom. Amy uses the toilet, washes hands—she is independent at both tasks, so today the soap is out of reach.	3) <u>I want help soap</u>
	8:41		Transition to schedule (Amy finishes task sequence)	



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PECS ACROSS THE DAY: AMY

	8:42	Ms. S	Free time. Most toys/games, etc. are on high shelves out of reach of learner or in containers that they can see into but cannot open. Amy likes a set that includes a dollhouse-like castle with characters and furniture.	4) <u>I want castle</u> 5) <u>I want princess</u> 6) <u>I want white horse</u> 7) <u>I want prince</u> 8) <u>I want knight</u> 9) <u>I want shield</u>
	8:53		Transition to schedule (bell/timer rings)	
	8:55	All	Breakfast. Learners go to breakfast table where bread, butter, 3 types of cereal, 2 types of jam, and 3 types of juice are available. Amy asks for cereal and milk but has not mastered pouring either.	10) <u>I want circle cereal</u> 11) <u>I want white milk</u> 12) <u>I want help pour milk</u> 13) <u>I want purple juice</u> 14) <u>I want tall cup</u> 15) <u>I want help pour juice</u> 16) <u>I want toast</u> 17) <u>I want orange jelly</u>

PECS ACROSS THE DAY (CONT)



Time	Activity	PECS Requests

PECS ACROSS THE DAY



Teaching Communication within Routines

Survey the day for functional, predictable and regularly occurring routines and activities

- Home
 - dressing, cooking, eating, bathing, self-care tasks
- School
 - morning and ending of the day, play, work activities (group and independent)
- Community
 - shopping, swimming, bowling, going to the park



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COMMUNICATION WITHIN ROUTINES

Teaching Communication Through Sabotage

Prerequisites for using sabotage:

- Learner has mastered the routine
- Learner finds the routine (or its completion) reinforcing

Use sabotage to create requesting opportunities by:

- Delay giving items and wait for the request
- Hide items and wait for the request



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SABOTAGING ROUTINES

Routine	Reinforcement	Materials
	<input type="checkbox"/> Participation <input type="checkbox"/> Finishing	
	<input type="checkbox"/> Participation <input type="checkbox"/> Finishing	
	<input type="checkbox"/> Participation <input type="checkbox"/> Finishing	
	<input type="checkbox"/> Participation <input type="checkbox"/> Finishing	



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COMMUNICATION ACROSS THE DAY

Planning and Teaching Sabotage

- Write a task analysis
- Ensure the task itself is reinforcing or that its completion is reinforcing
- Teach the learner to complete the task
- Identify opportunities for sabotage
- Sabotage the routine in different ways
- Ensure the routine is kept intact sometimes

PLANNING AND TEACHING SABOTAGE



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Routine	Steps	Requesting vocabulary
Washing hands	1 <i>Enter bathroom</i>	1
	2 <i>Turn on water</i>	2 <i>water or help</i>
	3 <i>Get hands wet</i>	3
Sabotage strategy: <i>Prior to learner arriving in bathroom, vary:</i> 1. <i>Turn water off tightly</i> 2. <i>Hide soap</i> 3. <i>Hide towel</i>	4 <i>Put soap on hands</i>	4 <i>soap</i>
	5 <i>Rub hands</i>	5
	6 <i>Rinse hands</i>	6
	7 <i>Turn off water</i>	7
	8 <i>Dry hands</i>	8 <i>towel</i>
	Reinforcement	
	<input type="checkbox"/> Participation:	
	<input checked="" type="checkbox"/> Finishing: <i>moving on to next task (meal)</i>	

The routine was intact—no requesting was necessary.

Learner requested when no request was needed.

Date	2 Nov	3 Nov	4 Nov	5 Nov	6 Nov	7 Nov	8 Nov	9 Nov	10 Nov	11 Nov
Item	Soap	Soap	Towel	None	none	Help	None	Towel	Water	none
Response	+	+	+	-	+	+	+	+	↓	+
Staff	GD	AO	SK	GD	SK	LF	AO	GD	SK	AO

COMMUNICATION ACROSS THE DAY



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Routine	Steps	Requesting vocabulary
	1	1
	2	2
	3	3
Sabotage strategy:	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
Reinforcement: <input type="checkbox"/> Participation: <input type="checkbox"/> Finishing:		



What is the first lesson in PECS?

- Requesting a reinforcer

What categories of reinforcers are available to everyone?

- Tangible/direct
- Social



Name: _____ Updated: _____

Likes	Dislikes
<i>Music Movies Hugs Cookies</i>	<i>Yogurt Lettuce Apple Sand</i>

Behavioural Targets

Behaviour	Function	FEAB
<i>Biting</i>	<i>Escape</i>	<i>Break</i>

Communication

PECS Phase in Progress: *IV*


Help: <i>Give Item to CP</i>	Break:
Yes: <i>Head Nod</i>	No: <i>Push Away</i>

Picture *Work table, Play area,*
 Directions: *Lunch, Outside*

Vocal *Stop, Sit down, Give it*
 Directions: *to me, Come here*

Schedule: *Not Started*

LMAD: ● ● ○ ○ ○

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PUBLIC POSTING

Name: _____ Updated: _____

Likes	Dislikes

Behavioural Targets

Behaviour	Function	FEAB

Communication

PECS Phase in Progress:



Help:	Break:
Yes:	No:

Picture
 Directions:

Vocal
 Directions:

Schedule:

LMAD: ○ ○ ○ ○ ○

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PUBLIC POSTING

How to Communicate

Goal: Initiation with picture

- If we show a reinforcer, learner will “go first” typically by reaching for it
- Once learner initiates — teach the motor response
 1. pick up
 2. reach
 3. release



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PHASE | REVIEW

Is picture discrimination required?

- No

How do we ensure spontaneity?

- 2-Person Prompt Procedure



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PHASE | REVIEW

What does the Communicative Partner do?

- Entice
- Reinforce
- Manage environment

What does the Physical Prompter do?

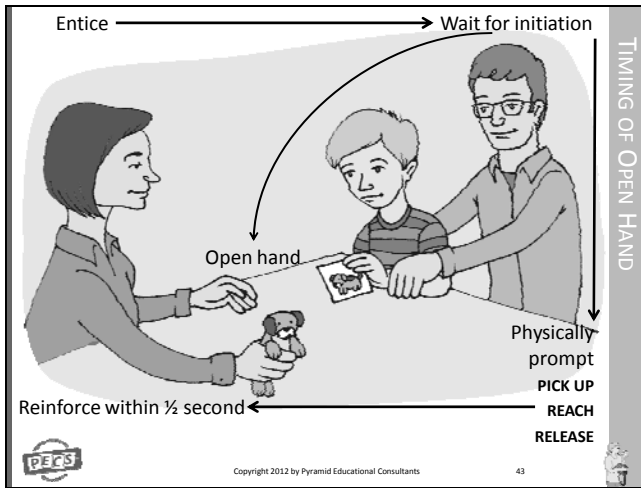
- Wait for initiation
- Physically prompt
- Eliminate prompts



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PHASE | REVIEW




Generalisation	Stimulus:	CPs, activities, R+s, locations
	Response:	Fluent exchange
Effective Lesson	<input type="checkbox"/> Discrete	<input type="checkbox"/> Sequential
Teaching Strategy	<input type="checkbox"/> 2-Person	<input type="checkbox"/> Backward Chain <input type="checkbox"/> Forward Chain
	<input type="checkbox"/> Shaping	<input type="checkbox"/> Delayed Prompting
	<input type="checkbox"/> Simple Discrimination <input type="checkbox"/> Conditional Discrimination	
Error Correction	<input type="checkbox"/> Errorless	<input type="checkbox"/> Anticipatory Prompt
	<input type="checkbox"/> 4-Step	<input type="checkbox"/> Backstep

PHASE I

PECS

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Trial	Pick-Up	Reach	Release	Open Hand
1	FP PP +	FP PP +	FP PP +	Yes No
2	FP PP +	FP PP +	FP PP +	Yes No
3	FP PP +	FP PP +	FP PP +	Yes No
4	FP PP +	FP PP +	FP PP +	Yes No
5	FP PP +	FP PP +	FP PP +	Yes No
6	FP PP +	FP PP +	FP PP +	Yes No
7	FP PP +	FP PP +	FP PP +	Yes No
8	FP PP +	FP PP +	FP PP +	Yes No
9	FP PP +	FP PP +	FP PP +	Yes No
10	FP PP +	FP PP +	FP PP +	Yes No



Fidelity Check: Phase I Communicative Partner

- Arranges training environment effectively – single picture in sight of learner between Communicative Partner and learner
- No verbal prompting
- Entices appropriately and silently
- Times open hand appropriately
- Reinforces within ½ second and labels item
- No insistence on speech
- Returns picture while learner consumes/plays with R+

PHASE I FIDELITY CHECK



Fidelity Check: Phase I Physical Prompter

Waits for initiation	<input checked="" type="checkbox"/>
Physically guides learner to pick up, reach, release picture	<input checked="" type="checkbox"/>
Uses backward chaining to eliminate prompts from trial to trial	<input checked="" type="checkbox"/>
Interrupts/prevents learner's interfering behaviour	<input checked="" type="checkbox"/>
No social interaction with learner	<input checked="" type="checkbox"/>

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PHASE I FIDELITY CHECK

Phase I Analysis

Communicative Partner	Physical Prompter
Silent enticement	Wait for initiation
No prompting	Physically prompts 3 steps
½ second rule; names item; praise	Fades prompts
Appropriate open hand	Prevents interfering behaviour
Returns picture	No interaction

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PHASE I ANALYSIS

PHASE I PROBLEM SOLVING

Difficulty finding 2 trainers?	<ul style="list-style-type: none"> • Family members/siblings • Peers • Other school staff
Reinforcers change from trial to trial?	<ul style="list-style-type: none"> • Have many reinforcers available • Teach learner to request "choice" or a box of reinforcers
Learner uses "exchange rituals"?	<ul style="list-style-type: none"> • Physical prompter blocks behaviours with anticipatory prompt • Modify symbol to be less fun

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PHASE I PROBLEM SOLVING

Mastery Criteria to Move to Phase II

Independently completes request sequence...

9 of 10 opportunities

3 Communicative Partners

3 Activities

5 Reinforcers

PHASE I MASTERY CRITERIA



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Distance and Persistence

Goal: Travel to/with book to Communicative Partner, communicate in multiple places with multiple people

- Continuing to teach “how” to communicate by adding obstacles
- Phase II lasts forever – maintain distance and persistence throughout remainder of protocol

PHASE II



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How many trainers?

- 1 if using shaping
- 2 if available

Is picture discrimination required?

- No

Where are the pictures?

- Each learner has a PECS book
- “Target” picture on front of book

PHASE II REVIEW



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Generalisation	Stimulus:	CPs, activities, R+s,	
	Response:	Increased distance, room to room, open doors	
Effective Lesson	<input type="checkbox"/> Discrete	<input type="checkbox"/> Sequential	
	<input type="checkbox"/> 2-Person	<input type="checkbox"/> Backward Chain <input type="checkbox"/> Forward Chain	
Teaching Strategy	<input type="checkbox"/> Shaping	<input type="checkbox"/> Delayed Prompting	
	<input type="checkbox"/> Simple Discrimination <input type="checkbox"/> Conditional Discrimination		
	<input type="checkbox"/> Errorless	<input type="checkbox"/> Anticipatory Prompt	
Error Correction	<input type="checkbox"/> 4-Step	<input type="checkbox"/> Backstep	



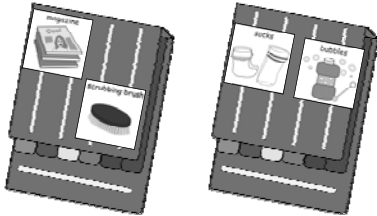
Staff	Item	Distance to Listener	# trials at target distance:	# independent trials at target distance:
SB	Swing	Start of Activity: 0 1 2 3 4 5 6 7 8 9 10		
		End of Activity: 0 1 2 3 4 5 6 7 8 9 10		
		Distance to book	# trials at target distance:	# independent trials at target distance:
		Start of Activity: 0 1 2 3 4 5 6 7 8 9 10		
		End of Activity: 0 1 2 3 4 5 6 7 8 9 10		



Simple Discrimination

Goal: Discrimination between pictures of preferred and non-preferred items/activities

- New Behaviour: choosing correct picture



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PHASE IIIA

Which two pictures?

- Preferred
- Non-Preferred

What is the new behaviour?

- **Choosing** the correct picture

How many trainers?

- One



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PHASE IIIA REVIEW

Generalisation

Stimulus: New activities, CPs, locations, variety of distracters
Response: Scanning all directions

Effective Lesson

- Discrete Sequential

Teaching Strategy

- 2-Person Backward Chain
 Forward Chain
 Shaping Delayed Prompting
 Simple Discrimination
 Conditional Discrimination

Error Correction





- Errorless Anticipatory Prompt
 4-Step Backstep



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PHASE IIIA

<p>1. Model/Show</p> 	<p>2. Practice</p> 	4-STEP ERROR CORRECTION PROCEDURE
<p>3. Switch</p> 	<p>4. Repeat</p> 	

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<p>Learner gives a distracter picture?</p>	<ul style="list-style-type: none"> • Give distracter • Wait for rejection • 4-Step Error Correction 	PHASE IIIA PROBLEM SOLVING
<p>Learner does not reject the distracter item?</p>	<ul style="list-style-type: none"> • Find a new distracter • Reassess preferred item 	

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<p>Is one distracter picture sufficient?</p>	<ul style="list-style-type: none"> • No 	PHASE IIIA PROBLEM SOLVING
<p>What about the switches?</p>	<ul style="list-style-type: none"> • Mastered actions • Variety of switches 	

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Staff	Preferred Item	Non-Preferred Item	Performance
N	Play Clay	Sock	+ -
N	Play Clay	Sock	+ -
			+ -
			+ -



Fidelity Check: Phase IIIA

- Entices silently with both items
- Socially reinforces as soon as learner touches correct picture
- Appropriately reinforces with requested item
- Uses many preferred versus non-preferred pairings
- Conducts 4-Step for errors

PHASE IIIA FIDELITY CHECK



Phase IIIA Analysis

Communicative Partner

	Shows both items
	½ second rule at moment of choice
	4-Step
	Moves pictures around
	No subtle prompts



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PHASE IIIA ANALYSIS

Cannot find a non-preferred item?

- Assess sensory preferences
- Use a contextually irrelevant item

Learner gives both pictures?

- With 2 hands: 4-Step. Next trial, move pictures further apart
- Two pictures in one hand: Accept only first picture



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PHASE IIIA PROBLEM SOLVING

Learner is not making progress?

- Check trainer fidelity
 - ½ second rule
 - 4-Step
 - Vary non-preferred
 - At least 40–50 opportunities/day

Learner is not looking at the picture?

- Teach orienting response via target practice

Learner makes an error on step 4 of the 4-Step?

- Cycle through 4-Step 2 or 3 times and then return to level of mastery



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PHASE IIIA PROBLEM SOLVING

Mastery Criteria to move to Phase IIIB

Independently and accurately selects picture to complete request sequence...

9 of 10 opportunities

From many pairings of preferred and non-preferred pictures

Multiple Communicative Partners

Gets book; travels to Communicative Partner



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PHASE IIIA MASTERY CRITERIA

Blank distracter

point

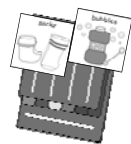


Large versus small

toy car



Bigger pictures



Big pictures far apart



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ALTERNATIVE STRATEGIES

Pictures on Containers

condy



clothes pin



Linear Arrangement



paper clips



apple



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ALTERNATIVE STRATEGIES

Add picture on consecutive pages of book

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ALTERNATIVE STRATEGIES

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ALTERNATIVE STRATEGIES

Photos, Product Logos, Internet Images

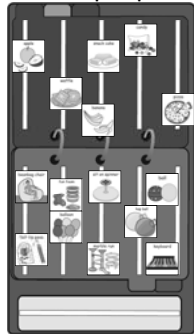
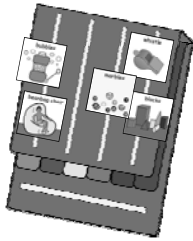
Photos	Product Logos	Internet Images

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ALTERNATIVE STRATEGIES

Conditional Discrimination

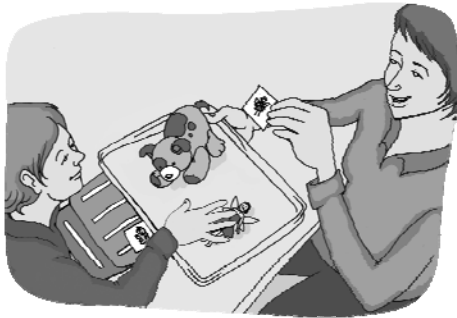
Goal: Discriminate between multiple pictures throughout PECS book



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PHASE IIIIB



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CORRESPONDENCE CHECK

4-Step Error Correction Procedure with Correspondence Checks



Model



Practice



Switch



Repeat



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4-STEP WITH CORRESPONDENCE CHECKS



PHASE IIIB REVIEW

What to say with Correspondence Check:

- Name/label the item **after** the learner has taken it
 - if it corresponds with the exchanged picture

Correspondence Checks Reminders:


- Vary statements: “Go ahead,” “Take it,” “Here you go,” or offer items silently
- Initially conduct more frequent Correspondence Checks

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PHASE IIIB REVIEW

Phase IIIB Review



- After mastery of 2 pictures, move to
 - 3 pictures
 - 4 pictures
 - 5 pictures
- Teach learner to look in book and move through pages of book, then...
 - Don’t arrange front of book to represent current lesson
 - Reintroduce Phase II elements!

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PHASE IIIB FIDELITY CHECK

Fidelity Check: Phase IIIB

Silently entices with all items	<input checked="" type="checkbox"/>
Conducts periodic Correspondence Checks	<input checked="" type="checkbox"/>
Conducts 4-Step for errors	<input checked="" type="checkbox"/>
Rearranges pictures between trials	<input checked="" type="checkbox"/>
Teaches 3, 4, 5 picture discrimination	<input checked="" type="checkbox"/>
Uses a variety of pictures in the target size array	<input checked="" type="checkbox"/>
Teaches looking inside book	<input checked="" type="checkbox"/>

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Phase IIIB Analysis

Communicative Partner	
	Controls both items
	Correspondence Checks
	4-Step – teach to the reach
	Moves pictures around
	No subtle prompts



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PHASE IIIB ANALYSIS

Learner does not make progress?

- Check trainer fidelity
- Correspondence Checks
- 4-Step

Learner is still not making progress?

- Go back to Phase IIIA with multiple pairings of preferred and non-preferred pictures



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PHASE IIIB PROBLEM SOLVING

Learner is still not making progress?

- Try intermediate steps:
 - Non-preferred + blank + preferred
 - 2 different non-preferred + preferred
 - Preferred items from different categories



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PHASE IIIB PROBLEM SOLVING

Picture Exchange Communication System
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PHASE IIIB PROBLEM SOLVING

Learner makes multiple errors in the 4-Step?

- Cycle through 4-Step 2—3 times
- For consistent error, drop back to Phase IIIA or only 1 picture
- For inconsistent error, STOP the lesson

Learner makes an error on the "repeat" of 4-Step?

- This is acceptable as long as the learner takes what he/she asked for




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PHASE IIIB MASTERY CRITERIA

Mastery Criteria to move to Phase IV

Independently and accurately selects picture to complete request sequence...

- 9 of 10 opportunities
- 90% accuracy on Correspondence Checks
- Looks in book
- Gets book; travels to Communicative Partner

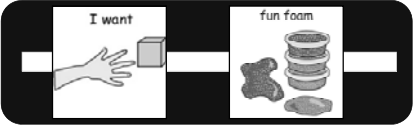



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PHASE IV REVIEW

Sentence Structure

Goal: Construct, exchange, and 'read' Sentence Strip for requesting

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Learner Behaviour Task Analysis

- 1 Remove "I want" icon
- 2 Place on Sentence Strip
- 3 Remove R+ picture
- 4 Put on Sentence Strip
- 5 Remove and give Sentence Strip
- 6 Tap the symbols



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PHASE IV REVIEW

Generalisation	Stimulus:	Variety of requests, CPs and locations
	Response:	Speed of Sentence Strip construction
Effective Lesson	<input type="checkbox"/> Discrete	<input type="checkbox"/> Sequential
	<input type="checkbox"/> 2-Person	<input type="checkbox"/> Backward Chain <input type="checkbox"/> Forward Chain
Teaching Strategy	<input type="checkbox"/> Shaping	<input type="checkbox"/> Delayed Prompting
	<input type="checkbox"/> Simple Discrimination <input type="checkbox"/> Conditional Discrimination	
	<input type="checkbox"/> Errorless	<input type="checkbox"/> Anticipatory Prompt
Error Correction	<input type="checkbox"/> 4-Step	<input type="checkbox"/> Backstep



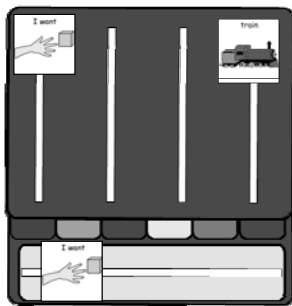
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PHASE IV

New Behaviour

- Step 1 move R+ picture to Sentence Strip
- Step 2 move "I want" picture to Sentence Strip



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PHASE IV REVIEW


PHASE IV STEP 1 REVIEW

How do we teach the new behaviour?

- Wait for initiation (pulling R+ picture off book)
- Physically prompt
- Eliminate prompts over trials
- ½ second rule

What do we do when learner gives the Sentence Strip?

- Give item and quickly read Sentence Strip



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PHASE IV STEP 2 REVIEW

What does initiation look like?


- Learner will reach for R+ picture

What is the new behaviour?

- Reaching for and moving "I want" Sentence Starter



What do we do when learner gives the Sentence Strip?


- Give item and quickly read Sentence Strip



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PHASE IV REVIEW

New Behaviour	
Step 3	<p>Point to or tap each picture as Communicative Partner reads the Sentence Strip</p> 
Step 4	<p>Vocalizing or saying the word (differential reinforcement)</p> 



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How do we get learner to tap pictures while Communicative Partner reads Sentence Strip?

- Prompt the hand the learner uses to exchange the Strip
- Eliminate prompts via backward chaining

What do we do to encourage speech in Step 4?

- Use Constant Time Delay (3-5 seconds)
- Provide access to R+ even if learner does not talk

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PHASE IV STEPS 3 & 4 REVIEW

Fidelity Check: Phase IV Step 1

Arranges book with "I want" on Sentence Strip	<input checked="" type="checkbox"/>
Appropriately entices and waits for initiation	<input checked="" type="checkbox"/>
Physically prompts learner to add R+ picture to and exchange Sentence Strip	<input checked="" type="checkbox"/>
Quickly gives R+ while reading Sentence Strip	<input checked="" type="checkbox"/>
Eliminates prompts over successive trials	<input checked="" type="checkbox"/>
Uses ½ second rule	<input checked="" type="checkbox"/>

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PHASE IV STEP 1 FIDELITY CHECK

Fidelity Check: Phase IV Step 2

Arranges "I want" and R+ picture on book	<input checked="" type="checkbox"/>
Appropriately entices and waits for initiation	<input checked="" type="checkbox"/>
Physically prompts learner to add "I want" to Sentence Strip	<input checked="" type="checkbox"/>
Eliminates physical prompts over successive trials	<input checked="" type="checkbox"/>
Uses ½ second rule for new behaviour	<input checked="" type="checkbox"/>
Quickly gives R+ while reading Sentence Strip	<input checked="" type="checkbox"/>

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PHASE IV STEP 2 FIDELITY CHECK

Fidelity Check: Phase IV Steps 3 & 4

3 Physically prompts learner to touch each picture while Communicative Partner reads Sentence Strip

Eliminates physical prompts over successive trials

Uses ½ second rule for new behaviour

4 Adds Constant Time Delay (3-5 seconds) when reading Sentence Strip

Gives learner R+ after reading Sentence Strip

Uses differential reinforcement if learner speaks

PHASE IV STEPS 3 & 4 FIDELITY CHECK

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Phase IV Analysis

Communicative Partner	
	Waits for initiation, then uses Physical Prompting with backward chaining... STATIONARY "I WANT" step
	Waits for initiation, then uses Physical Prompting with backward chaining... COMPLETE SENTENCE STRIP CONSTRUCTION step
	½ second rule
	Teaches TAP AND READ SENTENCE STRIP steps
	Constant Time Delay for encouraging speech

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PHASE IV ANALYSIS

Learner does not make progress?

- Increase value of R+
- Be consistent in expectations across environments

Learner exchanges pictures in the wrong order?

- Consider age of learner
- Backstep

Learner leaves the interaction before receiving the R+?

- Increase value of R+
- Do not follow to give R+

PHASE IV PROBLEM SOLVING

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Page | 40

Mastery Criteria to move to Attributes and Phase V

Independently constructs and exchanges Sentence Strip ...

9 of 10 opportunities

Taps pictures while Communicative Partner reads Sentence Strip

Gets book; travels to Communicative Partner

PHASE IV MASTERY CRITERIA



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PECS & Speech

- **Never demand speech!**
- Early in PECS, begin functional imitation (including speech) activities in natural contexts
- Use Constant Time Delay to “encourage” speech and then differentially reinforce
- Never withhold a requested item if learner does not speak

PECS & SPEECH



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PECS & Peers

- Arrange for peer to have the “goods”
 - snack captain
 - play leader
- Teach peer to “share”
- Physically prompt PECS learner to request from peer
- Use Backstep if learner initially goes to adult

PECS & PEERS



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Modality Transitioning

The new modality must...

1. Allow for independent access to the entire PECS vocabulary and for vocabulary growth
2. Allow for an equal rate of initiation
3. Accommodate the student's current message length and allow for expansion
4. Be intelligible across environments
5. Be as efficient or better than PECS in speed of encoding and delivering message



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PECS TO SPEECH, SGD...

Pre-transition Assessment

Collect PECS language sample across several days to assess:

1. Total number of different pictures used
2. Average number of pictures per Sentence Strip exchange
3. Longest sentence
4. Frequency of PECS use across the day
5. Ratio of spontaneous use to prompted use



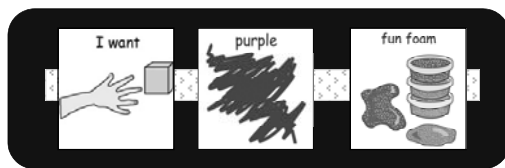
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ASSESS LEARNER'S CURRENT PECS SKILLS

Using Attributes within Sentence Structure

Goal: To request *specific* reinforcers using descriptive vocabulary



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ATTRIBUTES


ATTRIBUTES REVIEW

Why teach attributes?

- To teach concepts in a motivating context
- So learner can describe desired item when picture has not been added to book

Is receptive mastery a prerequisite?

- No



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ATTRIBUTES REVIEW

When do we start attributes?

- Immediately after mastery of Phase IV

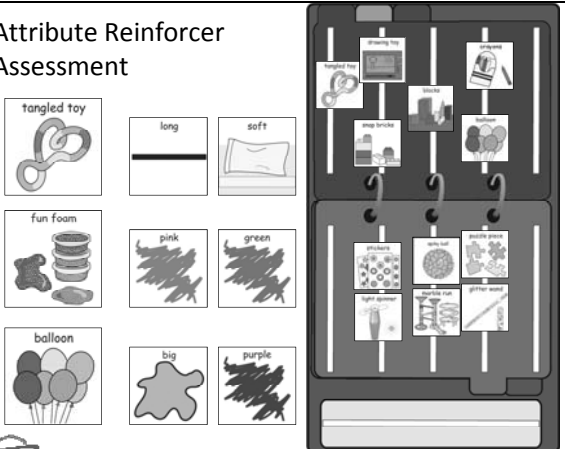

Which attribute should be taught first?

- Determine via reinforcer assessment



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Attribute Reinforcer Assessment

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ATTRIBUTE REINFORCER ASSESSMENT

Concept	Current Reinforcers				
	Tangled Toy	Fun Foam			
Colour		pink green			
Size	long				
Texture	soft				




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Picture Exchange Communication System
SECOND EDITION
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ATTRIBUTES STEP 1 REVIEW

New Behaviour

Step 1 Move attribute picture to Sentence Strip

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Generalisation	Stimulus:	Different colours, different items
	Response:	More complex sentence structure, speed of Sentence Strip construction
Effective Lesson	<input type="checkbox"/> Discrete	<input type="checkbox"/> Sequential
	<input type="checkbox"/> 2-Person	<input type="checkbox"/> Backward Chain <input type="checkbox"/> Forward Chain
Teaching Strategy	<input type="checkbox"/> Shaping	<input type="checkbox"/> Delayed Prompting
	<input type="checkbox"/> Simple Discrimination <input type="checkbox"/> Conditional Discrimination	
	<input type="checkbox"/> Errorless	<input type="checkbox"/> Anticipatory Prompt
Error Correction	<input type="checkbox"/> 4-Step	<input type="checkbox"/> Backstep

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SENTENCE STRIP CONSTRUCTION WITH ATTRIBUTES

Step 2

New Behaviour

Discriminate between pictures of preferred and non-preferred attributes

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ATTRIBUTES STEP 2 REVIEW

Generalisation	Stimulus:	Many different attributes, items
	Response:	Quickly find correct attribute picture
Effective Lesson	<input type="checkbox"/> Discrete	<input type="checkbox"/> Sequential
	<input type="checkbox"/> 2-Person	<input type="checkbox"/> Backward Chain <input type="checkbox"/> Forward Chain
Teaching Strategy	<input type="checkbox"/> Shaping	<input type="checkbox"/> Delayed Prompting
	<input type="checkbox"/> Simple Discrimination <input type="checkbox"/> Conditional Discrimination	
	<input type="checkbox"/> Errorless	<input type="checkbox"/> Anticipatory Prompt
Error Correction	<input type="checkbox"/> 4-Step	<input type="checkbox"/> Backstep

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ATTRIBUTES SYMBOL DISCRIMINATION

If learner likes multiple examples, how do we 'know' he is using the correct icon?

- Correspondence Check

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ATTRIBUTES CORRESPONDENCE CHECKS

New Behaviour

Step 3 Discriminate between pictures of multiple preferred attributes

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ATTRIBUTES STEP 3 REVIEW

What kind of lesson? • Sequential

Error correction? • Backstep

What kind of lesson? • Discrete

Error correction? • 4-Step

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ATTRIBUTES REVIEW

...if learner uses distracter picture

Do not de-construct entire Sentence Strip

1 Model	Show/model/tap the correct picture
2 Practice	Prompt learner to add correct icon and exchange Sentence Strip
3 Switch	Switch to another task while putting target picture back on book
4 Repeat	Show both items and wait for learner to repeat the exchange

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Picture Exchange Communication System 387

ATTRIBUTES REVIEW

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ATTRIBUTES REVIEW

...learner reaches for wrong item, teacher blocks access...

1 Model	Show/model/tap the correct picture
2 Practice	Prompt learner to add correct icon and exchange Sentence Strip
3 Switch	Switch to another task while putting target picture back on book
4 Repeat	Show both items and wait for learner to repeat the exchange

Repeat Correspondence Check

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Picture Exchange Communication System 388

ATTRIBUTES REVIEW

Attribute Materials: Colour

candy cars Play-Doh®
 juice paint markers
 clothing Lego® apples

I want green pepper
 I want yellow snap bricks

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ATTRIBUTE MATERIALS: COLOUR

Attribute Materials: Size

Big/little any food keychain toys marbles
Long/short bubble wands pencils licorice

I want long short pencil

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ATTRIBUTE MATERIALS: SIZE

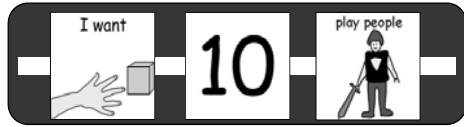
I want little fish crackers
 I want big fish crackers

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ATTRIBUTE MATERIALS: SIZE

Attribute Materials: Numerals & Quantity

- First teach the names of the numerals
- Then teach to request quantities
- Start with large differences – 10 is better than 1

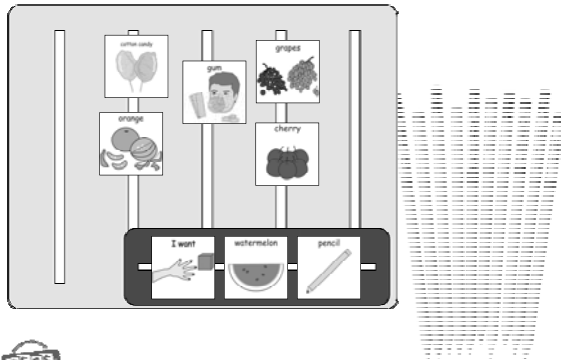


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ATTRIBUTE MATERIALS: NUMERALS & QUANTITY

Attribute Materials: Aromas/Scents



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ATTRIBUTE MATERIALS: AROMAS/SCENTS

Learner does not make progress with attribute symbol discrimination?

- Use 1/2 second rule
- Conduct Correspondence Checks
- 4-Step Error Correction procedure

Learner used only one attribute?

- Teach multiple exemplars
- Red juice, red marker, red ball
- Red, yellow, orange, purple juice
- Teach opposites in pairs

Some attributes are not reinforcing?

- Try 'container therapy'




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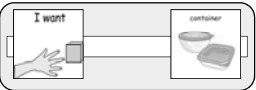
ATTRIBUTE MATERIALS: PROBLEM SOLVING

Container Lessons


Put R+ in container and allow learner to open the container and access the R+ (Use a variety of containers)



Teach learner to request "container" (box, egg, jar, etc.)



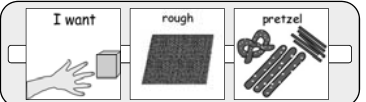
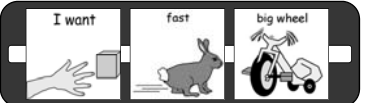
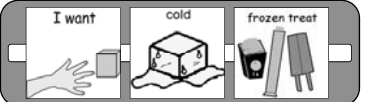
Begin pairing containers so that one is highly reinforcing (contains R+) and one is non-preferred (empty)



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CONTAINER LESSONS

Attribute Materials: Additional


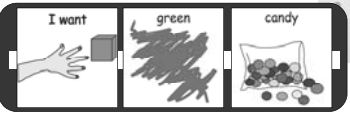
Texture	
Speed	
Temperature	

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ATTRIBUTE MATERIALS: ADDITIONAL

Over-Generalisation

Learner uses attribute when it is not necessary

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ATTRIBUTE MATERIALS: PROBLEM SOLVING

Learner uses attribute but no reinforcer picture

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ATTRIBUTE MATERIALS: PROBLEM SOLVING

HOW MANY PICTURES ARE NECESSARY?

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HOW MANY PICTURES ARE NECESSARY?

Attributes: Body Parts

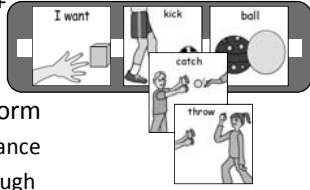
Mr. Potato Head Bandages
Ink Stamp Massager

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ATTRIBUTES: BODY PARTS

Additional Vocabulary

- What to do with R+
 - I want kick ball
 - I want read book
- Make teacher perform
 - I want Miss Meg dance
 - I want Miss Meg laugh
- Request specific person to perform action
 - I want Jill sit
 - I want Catherine push



ADDITIONAL VOCABULARY: ACTIONS



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Thematic Unit Vocabulary

- Alphabet
- Numerals
- Body Parts
- Animals
- Vehicles
- Actions
- Holidays

ADDITIONAL VOCABULARY: THEMATIC



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Fidelity Check: Attributes Step 1

- | | |
|--|-------------------------------------|
| Arranges book with "I want," attribute and R+ picture | <input checked="" type="checkbox"/> |
| Silently entices | <input checked="" type="checkbox"/> |
| Waits for initiation and uses forward chaining with physical prompting to teach adding attribute picture to Sentence Strip | <input checked="" type="checkbox"/> |
| Uses ½ second rule for new behaviour | <input checked="" type="checkbox"/> |
| Eliminates physical prompts over successive trials | <input checked="" type="checkbox"/> |

ATTRIBUTES: STEP 1 FIDELITY CHECK



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Picture Exchange Communication System
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Fidelity Check: Attributes Step 2

- Arranges book with "I want," preferred attribute icon, non-preferred attribute icon, and R+ icon
- Waits for learner to build and exchange Sentence Strip
- Uses ½ second rule for new behaviour
- Uses 4-Step Error Correction procedure

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ATTRIBUTES: STEP 2 FIDELITY CHECK

Fidelity Check: Attributes Step 3

- Arranges book with "I want" + multiple preferred attribute icons and R+ icons
- Waits for learner to construct and exchange Sentence Strip
- Conducts periodic Correspondence Checks (does not name attribute)
- Allows access to item for correct Correspondence Check
- Blocks access to item for incorrect Correspondence Check
- Uses 4-Step Error Correction procedure for the item the learner reached for

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ATTRIBUTES: STEP 3 FIDELITY CHECK

Fantastic!		Needs Improvement	
1		1	
2		2	
3		3	
4		4	

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ATTRIBUTES: CRITIQUE

Attributes Mastery Criteria

Independently constructs
and exchanges 3-picture
Sentence Strip...

9 of 10 opportunities

3 different attributes
2-5 exemplars of each

Gets book; travels to
Communicative
Partner



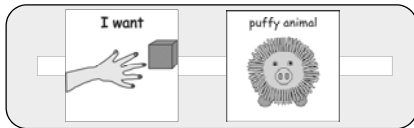
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ATTRIBUTES MASTERY CRITERIA

Responding to "What do you want?"

Goal: Respond to requesting questions and
maintain spontaneous requests



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PHASE V REVIEW

What teaching
strategy do we
use?

- Progressive Time Delay with Differential Reinforcement

What is the
'new' behaviour?

- Answering the question (Reaching for the "I want") before the prompt

What 2 skills
should we
incorporate into
activities?

- Spontaneous Requesting
- Responsive Requesting



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PHASE V REVIEW

Generalisation	Stimulus:	Different questions
	Response:	Faster response; respond in group
Effective Lesson	<input type="checkbox"/> Discrete	<input type="checkbox"/> Sequential
	<input type="checkbox"/> 2-Person	<input type="checkbox"/> Backward Chain <input type="checkbox"/> Forward Chain
Teaching Strategy	<input type="checkbox"/> Shaping	<input type="checkbox"/> Delayed Prompting
	<input type="checkbox"/> Simple Discrimination <input type="checkbox"/> Conditional Discrimination	
	<input type="checkbox"/> Errorless	<input type="checkbox"/> Anticipatory Prompt
	<input type="checkbox"/> 4-Step	<input type="checkbox"/> Backstep

PECS Copyright 2012 by Pyramid Educational Consultants 212 PHASE V REVIEW

PHASE V PROBLEM SOLVING

- Learner loses spontaneous requesting?
 - Mix opportunities for spontaneous and responsive requesting in a single activity
- Learner does not respond to question?
 - Change the prompt
 - Assess reinforcer
- Learner responds to one specific question only?
 - Use a variety of questions ("What do you want?" "What would you like?" "What else?")

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PHASE V FIDELITY CHECK

Fidelity Check: Phase V

- Uses progressive time delay to teach answering "What do you want?"
- Uses differential reinforcement if learner 'beats' the prompt
- Creates multiple opportunities for spontaneous and responsive requesting
- Uses a variety of requesting questions

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Mastery Criteria to move to Phase VI

Independently constructs and exchanges Sentence Strip...

- 9 of 10 opportunities to answer requesting question
- Spontaneously requests on 9 of 10 opportunities
- Gets book; travels to Communicative Partner

PHASE V MASTERY CRITERIA



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Commenting

Goal: Respond to a variety of commenting questions and spontaneously comment using correct Sentence Starters

I hear

fire truck



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PHASE VI REVIEW

How is commenting different than requesting?

- Antecedent: the **environment** versus a need
- Consequence: **social** versus tangible

Do we begin with spontaneous commenting?

- No! We anticipate social reinforcers are not highly motivating

What Sentence Starter do we begin with?

- Depends on the interests of the learner
- Consider sensory preferences



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PHASE VI REVIEW

PHASE VI REVIEW

How do we teach?	• Progressive Time Delay
How do we expand commenting?	• Teach discrimination between Sentence Starters
How do we teach spontaneous commenting?	• Fade question

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PHASE VI REVIEW

- Comments are evoked by exciting or dynamic environmental events
- Comments are learned and maintained by social reinforcement

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PHASE VI REVIEW

Generalisation	Stimulus:	New environmental events
	Response:	Novel comments
Effective Lesson	<input type="checkbox"/> Discrete	<input type="checkbox"/> Sequential
Teaching Strategy	<input type="checkbox"/> 2-Person	<input type="checkbox"/> Backward Chain <input type="checkbox"/> Forward Chain
	<input type="checkbox"/> Shaping	<input type="checkbox"/> Delayed Prompting
	<input type="checkbox"/> Simple Discrimination <input type="checkbox"/> Conditional Discrimination	
Error Correction	<input type="checkbox"/> Errorless	<input type="checkbox"/> Anticipatory Prompt
	<input type="checkbox"/> 4-Step	<input type="checkbox"/> Backstep

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Date	Staff	Activity	SS	+ / -	Picture	+ / -
		Language lesson	It is	+ / -	monkey	+ / -
			It is	+ / -	muffin	+ / -
			It is	+ / -	mittens	+ / -
			It is	+ / -	horse	+ / -



What do we do if learner is not motivated?

- Consider learner interests
- Use LMAD
- Try different sensory input

Learner chooses incorrect Sentence Starter?

- ½ second rule
- 4-Step Error Correction
- R+ appropriately



Mastery Criteria


Independently constructs and exchanges Sentence Strip...

Correct Sentence Starter and sentence sequence:
9 of 10 for Responsive Commenting

Correct Sentence Starter and sentence sequence:
8 of 10 for Spontaneous Commenting

Gets book; travels to Communicative Partner

PHASE VI MASTERY CRITERIA



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Is this PECS?

IS THIS PECS?

Modifying symbols


Using 1 trainer in Phase I

Removing pictures from book

Creating new discrimination strategies

Verbal prompting

Not teaching sentence structure



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Is this PECS?

IS THIS PECS?


Insisting on speech

Skipping Phase II

Using Physical Prompter after Phase III

Teaching learner to 'call' Communicative Partner

Taking PECS away without an equivalent replacement



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Teaching Further Skills

Use the top of the Pyramid to plan additional lessons:

- How are you going to generalise skills?
- What type is the lesson?
- What strategy are you going to use?
- How are you going to error correct?



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TEACHING FURTHER SKILLS

Generalisation	Stimulus:	
	Response:	
Effective Lesson	<input type="checkbox"/> Discrete	<input type="checkbox"/> Sequential
	<input type="checkbox"/> 2-Person	<input type="checkbox"/> Backward Chain <input type="checkbox"/> Forward Chain
Teaching Strategy	<input type="checkbox"/> Shaping	<input type="checkbox"/> Delayed Prompting
	<input type="checkbox"/> Simple Discrimination <input type="checkbox"/> Conditional Discrimination	
	<input type="checkbox"/> Errorless	<input type="checkbox"/> Anticipatory Prompt
Error Correction	<input type="checkbox"/> 4-Step	<input type="checkbox"/> Backstep



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USING THE TOP OF THE PYRAMID



Multiple Item Request

- It's okay for learner to ask for more than one item at a time!
- To "check" whether learner is using multiple reinforcer pictures appropriately, conduct Correspondence Check



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MULTIPLE ITEM REQUEST

REQUESTING MULTIPLE REINFORCERS

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Teaching Prepositions: Requesting

Begin with simple sentence and add complexity

- I want cookie container
- I want cookie in container
- I want the cookie in container

TEACHING PREPOSITIONS: REQUESTING

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Teaching Prepositions: Comments

- For some learners we can teach using a commenting format
 - Where's Spot?
 - Spot table
- Development
 - Spot on/under table
 - Spot is on/under (the) table

TEACHING PREPOSITIONS: COMMENTS

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Subject & Verb Combinations: Requesting

- Teach learners to ask for subject verb combinations
 - I want Grandpa clap hands



- Once mastered teach more subjects
 - Common nouns, proper nouns, etc.
- Teach adverbs



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SUBJECT & VERB COMBINATIONS: REQUESTING

Subject & Verb Combinations: Commenting

- Teach simple subject/verb sentences through commenting
 - Boy run
 - Alice jump




- Once mastered teach more subjects
 - I, he, she, they, common nouns, proper nouns etc.
- And teach more complicated verb use
 - Runs, jumping, is jumping, are jumping etc.



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SUBJECT & VERB COMBINATIONS: COMMENTING



am										
are										
is										
ing										

SUBJECT & VERB COMBINATIONS



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Verb Tenses: Past

- Past tense: Start teaching immediately after an event
 - ‘What did you eat?’
 - I ate baked beans.
- Once mastered extend to increasingly distant events



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VERB TENSES: PAST

Verb Tenses: Future

- Start immediately before an event
 - ‘Where are you going?’
 - I’m going home.
- Once mastered extend to increasingly distant future events



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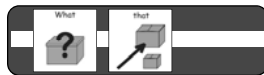
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VERB TENSES: FUTURE

Asking Questions

Use access to a reinforcer as motivation for asking the question

- Where?
 - To locate missing reinforcer
 - To locate missing person
- What?
 - To learn name of new reinforcer
 - To learn information



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ASKING QUESTIONS

ASKING QUESTIONS

- Who?
 - To learn name of new person
 - To learn who has a reinforcer
- When?
 - Will favourite activity occur

The image shows two rows of PECS cards. The first row has two cards: 'Who?' with a question mark and a person icon, and 'That' with a hand pointing to a box. The second row has two cards: 'Who?' with a question mark and a person icon, and 'urchin ball' with a sunburst icon. The third row has two cards: 'when' with a question mark and a clock icon, and 'feed ducks' with a person feeding ducks icon.

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ADDITIONAL SENTENCE STARTERS

As learner's vocabulary increases

- Add requesting Sentence Starters
- Add commenting Sentence Starters

The image shows two rows of PECS cards. The first row has five cards: 'Let's watch' (TV), 'Let's read' (books), 'Let's read' (person reading), 'Let's sing' (singing), and 'Can I have...?' (hand). The second row has five cards: 'I have' (hand holding object), 'I'm finished' (hand dropping object), 'It's all gone' (empty plate), 'I think' (person thinking), and 'I don't understand' (person confused).








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GIVING PERSONAL INFORMATION

- Teach the learner to respond to personal questions
 - What's your name?, Where do you live?, etc.

The image shows four PECS cards: 'My name is...' with a person and name 'Ashley', 'My address is...' with a house and '30 Westminster Road', 'My birthday is...' with a birthday cake and 'Happy Birthday', and 'My telephone number is...' with a telephone and '555-1234'.

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My name is: 	John	Snowing 	November 1	July 27	PECS	
The weather is: 	Sam	Sunny 	June 13	October 23		
My birthday is: 	Alexis	Stormy 	4 years old	6 years old		5 years old
I am: 	Rayna	[Blank box]				


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GIVING PERSONAL INFORMATION


Giving Opinions

Teach your learners to respond to questions like 'How is it?' by creating situations where you know how they feel


I like



I don't like



My favorite



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GIVING OPINIONS

Learning How to Express Emotion

Guided by the analysis of B.F. Skinner

1. We see something happen (he falls... he bleeds...she eats quickly...she repeats an action often)
2. We see other reactions (he cries...she laughs)
3. We tell the child what he/she is feeling
4. We guide the child to tell us about the feeling

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COMMUNICATING FEELINGS & EMOTIONS

What May be Different in Autism

Sometimes, children may not cry even when they are hurt, or laugh when they are happy

- Do they feel pain and joy? Yes!
 - Current research shows their nervous system/ brain functioning reacts just the same as others
- We may fail to tell them what they are currently feeling (Ouch! That hurts!... Wow—you love that ice cream)
- If we do not they will not learn how to express their emotions



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COMMUNICATING FEELINGS & EMOTIONS

How to Teach This Skill

- Take advantage of natural opportunities
- Create opportunities
- Teach age relevant words
 - Happy, sad for young learners
 - Excited, anxious for older learners, etc.
- All children who learn to talk about emotions comment on what is outside their bodies before they comment on what is inside



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COMMUNICATING FEELINGS & EMOTIONS

Learn More about Teaching Emotions

- Download Pyramid's webcast "I am the Master of My Emotions"
- Attend a workshop "The Language of Emotions" by Andy Bondy

Download Pyramid Webcast



Attend a Workshop



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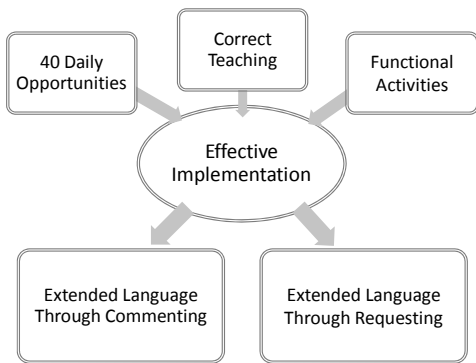
ADDITIONAL RESOURCES

Time	Activity	PECS Requests



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SUMMARY: ADVANCED PECS

Pyramid Workshops

- Teaching Communication Skills for Independence
- Guide to Managing Challenging Behaviours
- Teacher's Guide to Organising & Managing the Classroom
- The Language of Emotions



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Follow-Up Options

- PECS Message Board
- FAQs in Manual and on website
 - www.pecs.com
- Webcasts
- On-site consultation
- Consultation via phone or web
- Pyramid Workshops
 - see handouts for complete list



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Next steps to improving your learner's PECS skills

List opportunities you can use to get more communicative exchanges:

Give examples of where you can refine your PECS practice:

List functional activities you can use to elicit communication through sabotage:

Give examples of requesting sentences you can now get your learners to make:





Give examples of commenting sentences you can now get your learners to make:



PECS Requests Across the Day[®]


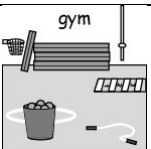
Learner:	Amy (6 years old)
Current PECS Phases Mastered:	Phase IV, some attributes
Current PECS Phases Targeted:	Attributes, expanded sentence length
Teacher:	Mrs. Y
Paraprofessionals:	Mr. Z and Ms. S
Speech/Language Pathologist:	Mrs. F





Each PECS picture is underlined (I want = single picture, little people = single picture)




(***Bold italics represent transition cues***)





Schedule Picture	Time	Staff	Activity	PECS Request
bookbag 	8:30	Mrs. Y	Arrival. Learners enter room, empty and hang book bags, put home-school log in basket on teacher's desk. Mrs. Y has a jar of snacks and small toys on her desk containing items the Learners like. Amy has trouble unzipping her book bag.	1. <u>I want help</u> 2. <u>I want long tangled toy</u>
bathroom 	8:35		Transition to schedule (<i>empty bag</i>)	
	8:36	Mr. J	Bathroom. Amy uses the toilet, washes hands—she is independent at both tasks, so today the soap is out of reach.	3. <u>I want help soap</u>
play area 	8:41		Transition to schedule (<i>Amy finishes task sequence</i>)	
	8:42	Ms. S	Free time. Most toys/games, etc. are on high shelves out of reach of Learner or in containers that they can see into but can't open. Amy likes a set that includes a dollhouse-like castle with characters and furniture.	4. <u>I want castle</u> 5. <u>I want princess</u> 6. <u>I want white horse</u> 7. <u>I want prince</u> 8. <u>I want knight</u> 9. <u>I want shield</u>
breakfast 	8:53		Transition to schedule (<i>bell/timer rings</i>)	
	8:55	All	Breakfast. Learners go to breakfast table where bread, butter, 3 types of cereal, 2 types	10. <u>I want circle cereal</u>


Schedule Picture	Time	Staff	Activity	PECS Request
			of jam, and 3 types of juice are available. Amy asks for cereal and milk but has not mastered pouring either.	11. <u>I want white milk</u> 12. <u>I want help pour milk</u> 13. <u>I want purple juice</u> 14. <u>I want tall cup</u> 15. <u>I want help pour juice</u> 16. <u>I want toast</u> 17. <u>I want orange jelly</u>
	9:14	Ms. S	Transition to schedule (bell/timer rings at end of breakfast)	
	9:15	Mrs. Y	Morning meeting. Learners sit in chairs with Mrs. Y in meeting area. Activities include greeting peers, selection of Learner jobs, singing with musical instruments, dressing the class mascot for the weather, choosing a “treat” at end of meeting. After each learner chooses a treat, Mrs. Y. waves “good-bye” and learners leave.	1. <u>Hello Mrs. Y</u> 2. <u>Hello Mr. Z</u> 3. <u>I want deliver message</u> 4. <u>I want 2 blue rhythm sticks</u> 5. <u>Let’s sing Hickory Dickory</u> 6. <u>I want coat</u> 7. <u>I want 3 star stickers</u>
	9:33		Transition to schedule (Mrs. Y waves and sings the ‘Goodbye’ song)	
	9:35	Mrs. Y	Work Rotation 1—Communication Group. Mrs. Y works on new PECS skills with Amy—colours. Amy loves jelly beans and is learning to ask for green, orange, and purple (her three favourites). She also likes to colour with scented markers and is learning to ask for her favourite colour. (bell/timer rings at end of rotation)	(20 requests made but only 5 counted toward daily total) 8. <u>I want green jelly bean</u> 9. <u>I want orange jelly bean</u> 10. <u>I want purple jelly bean</u> 11. <u>I want purple marker</u> 12. <u>I want green marker</u>
	9:55	Mr. J	Work Rotation 2—Functional Academics. Amy is learning to make frozen juice or Kool-Aid that the learners will drink at lunch and can choose which to make. Amy finishes making the juice before bell, so Mr. J offers small toys.	13. <u>I want purple juice</u> 14. <u>I want pitcher</u> 15. <u>I want help open</u> 16. <u>I want short stretchy string</u>

Schedule Picture	Time	Staff	Activity	PECS Request
			<i>(bell/timer rings at end of rotation)</i>	
	10:15	Ms. S	<p>Work Rotation 3—Structured peer play. Amy and 2 classmates choose to play with Mr. Potato Head® toys, Legos®, or puzzles. A classmate chooses Mr. Potato Head® and the learners ask each other for various parts. During the activity Ms. S brings a pitcher of water to the table and pours herself a glass of water.</p> <p><i>(bell/timer rings at end of rotation)</i></p>	17. <u>I want green glasses</u> 18. <u>I want 2 pink earrings</u> 19. <u>I want purple shoes</u> 20. <u>I want water cup</u> 21. <u>I want help pour water</u>
change clothes 	10:38		<p>Transition to Schedule. One of the work rotation groups is running late, so Amy’s and another group is presented with a box of small “fidget” toys to play with while the other group finishes.</p>	22. <u>I want pull toy</u> 23. <u>I want big Koosh</u>
	10:40	Ms. S Mr. J	<p>Change clothes for gym and bathroom. The learners keep a set of gym clothes (shorts, t-shirts, sneakers) in their cubbies. Amy can change clothes with help with buttons and put on shoes with help tying. Today she must remove a shirt with buttons. One of her shoes is missing from her cubby.</p>	24. <u>I want help buttons</u> 25. <u>I want shoe</u>
gym 	10:53	Ms. S	<p>Transition to schedule (Amy finishes dressing). Amy finishes dressing before other Learners and Ms. S offers “fidget toys” while Amy waits at door.</p>	26. <u>I want short tangled toy</u>
	10:55	Ms. S Mr. J.	<p>Walk to gym.</p>	
	11:00	Mr. W Ms. S	<p>Gym. The Learners rotate through two different activity centres in the gymnasium. At each centre, Mr. W makes several items available from which the learners can choose.</p> <p><i>(bell rings to signal end of gym).</i> Learners line up at door and Mr. W. offers ink stamps to reinforce gym participation.</p>	27. <u>I want scooter</u> 28. <u>I want basketball</u> 29. <u>I want Pooh sticker</u>
	11:30	Ms. S Mr. J	<p>Return to class. On the return to class, the learners pass a water fountain.</p>	30. <u>I want water</u>



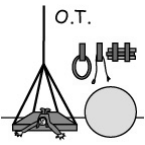
Schedule Picture	Time	Staff	Activity	PECS Request
change clothes 	11:38		Transition to schedule (arrive at room)	
	11:40	Ms. S Mr. J	Change clothes. Amy changes from gym clothes to her school clothes.	31. <u>I want help buttons</u>
jobs 	11:48		Transition to schedule (Amy finishes dressing)	
	11:50	Ms. S.	Daily Jobs. Amy chose to deliver messages to the office. She takes the papers out of a basket by the classroom door and walks to the office where the receptionist greets her. The receptionist keeps a jar of treats on her desk and Amy loves her Skittles. Amy passes the water fountain on her return to class.	32. <u>I want 5 yellow candy</u> 33. <u>I want water</u>
wash hands 	12:03		Transition to schedule. (Amy returns to class) On her way to her schedule, Amy passes by the teacher's desk	34. <u>I want princess stamp</u>
	12:05	Mr. J	Wash-up for lunch.	35. <u>I want towel</u>
lunch 	12:13	Mr. J	Transition to schedule (Amy finishes sequence)	
	12:15	Mrs. Y Mr. J	Lunch. Amy's father sends her lunch and today included ½ peanut butter sandwich, ½ ham and cheese sandwich, chips, cookies, and two chocolate kisses. The learners drink the juice Amy and two other learners prepared that morning. Amy requests peanut butter sandwich to eat first and Mr. J gives it and her chips to her. After finishing both, Mrs. Y gives her ½ of her cookies and shows her the chocolate kiss. Amy spontaneously requests bathroom during the meal.	36. <u>I want peanut butter sandwich</u> 37. <u>I want juice</u> 38. <u>I want help pour juice</u> 39. <u>I want chocolate kiss</u> 40. <u>I want cookies</u> 41. <u>I want triangle napkin</u> 42. <u>I want bathroom</u>

Schedule Picture	Time	Staff	Activity	PECS Request
brush 	12:43		Transition to schedule (<i>food is gone and lunch box is cleaned and closed</i>)	
	12:45	Mrs. Y Ms. S.	Brush teeth/wash face. Each Learner has a basket in the bathroom with materials for both tasks. Amy has mastered washing her face so staff periodically sabotage this routine. She completes 40% of the steps in brushing her teeth independently so staff do not yet sabotage this routine.	43. <u>I want towel</u>
art 	12:59		Transition to schedule (<i>Amy finishes task sequence</i>)	
	1:00	Ms. F Mrs. R	Art. Learners walk together to art room. Ms. F (speech/language pathologist) meets the Learners at art. Today the Learners are making collages of fall leaves. They cut out a tree and a variety of leaves and glue them to a piece of paper. Amy has done cut-and-paste activities before and enjoys them. She needs help getting the lid off the glue stick. (bell rings to signal end of art class) At the end of class Mrs. F has a “treat jar” for each child to choose from.	44. <u>I want green leaf</u> 45. <u>I want orange leaf</u> 46. <u>I want red leaf</u> 47. <u>I want orange leaf</u> 48. <u>I want green leaf</u> 49. <u>I want red leaf</u> 50. <u>I want glue stick</u> 51. <u>I want help glue stick</u> 52. <u>I want jelly bean</u>
	1:28	Ms. S Mr. J	Walk to class. Put artwork in book bag.	53. <u>I want water</u>
buddies 	1:33	Ms. S.	Transition to Schedule (<i>Amy arrives at class</i>)	
	1:35	All	Buddy Groups. Typical peers join the class for play. Amy and her friend play with a house set. Mrs. Y then reads a book to all the Learners. Today’s book is an interactive book	54. <u>I want little people</u> 55. <u>I want bed</u> 56. <u>I want table</u> 57. <u>I want dinosaur</u>

Schedule Picture	Time	Staff	Activity	PECS Request
			that allows Learners to request an animal to enact the story. At the end of the activity, all Learners can choose a toy from the “treasure chest.”	58. Let's Read Brown Bear 59. I want bracelet
recess 	1:58		Transition to schedule (Bell/timer rings to signal end of buddy play)	
	2:00	Mr. J Ms. S	Recess. Recess is outdoors. Amy runs to the slide, climbs up, slides down and runs back around to the steps. Mr. J blocks the stairs. After a couple of trips down the slide, Mr. J meets Amy at the bottom of the slide with a basket of balls and Frisbees.	60. I want slide 61. I want swing 62. I want ball
bathroom 	2:23		Transition to schedule (Bell rings at end of recess)	
	2:25	Mr. J Ms. S	Bathroom	
meeting 	2:33	Ms. S	Transition to Schedule (Amy finishes task sequence)	
	2:35	Mrs. Y	Afternoon meeting. Learners sit in chairs with Mrs. Y in meeting area. Mrs. Y hands out home/school logs and then shows the learners available stickers to put in books. Learners dress the class mascot for bed Mrs. Y sings dismissal song—each learner exits area when his/her name is sung.	63. I want sticker 64. I want pillow
bookbag 	2:50		Transition to schedule (Amy hears her name)	

Schedule Picture	Time	Staff	Activity	PECS Request
	2:52		Pack book bags for departure. Learners put home/school book in book bag, put on coats, etc. Amy needs help zipping her book bag. Mr. J is in the cubby area with several hand ink stamps to stamp on Learners' hands as they finish.	65. <u>I want help zip book bag</u> 66. <u>I want blue princess stamp</u>
bus 	2:58	Ms. S	Transition to schedule <i>(hands are stamped)</i>	
	3:00	All	Dismissal	

Alternative Activities:

Schedule	Time	Staff	Activity	PECS Request
music class 			Music. Learners walk to music room where Mrs. W has chairs arranged in a semi-circle. Today they choose which songs they want to sing and which musical instruments they want to use.	1. <u>Let's sing Hokey Pokey</u> 2. <u>I want tambourine</u> 3. <u>I want rhythm sticks</u> 4. <u>Let's sing Old McDonald</u> 5. <u>I want horse</u> 6. <u>I want pig</u>
P.T. 			Physical Therapy. Amy walks with Mr. J to the PT room where individual goals include walking up/down stairs. Amy is allowed to choose either the gymnasium stairs or the cafeteria stairs. She gets to choose a reward at the end of PT.	1. <u>I want gym</u> 2. <u>I want tickle arm</u>
O.T. 			Occupational Therapy. Ms. S accompanies Amy to OT. Amy's OT goals include improved balance, using writing instruments effectively, and cutting with scissors. Mr. Z offers several objects/activities to meet these goals. Ms. S creates an opportunity for Amy to request large or small ball.	1. <u>I want big ball</u> 2. <u>I want markers</u> 3. <u>I want little scissors</u>

HELPFUL HANDY HINTS

Finding Reinforcers

This is an area that is often problematic for many of our learners. The key is to observe their behaviours when left to their own devices and then to use these as a starting point. Remember that a learner's reaction to sensory input can vary between days and even within a day, and therefore whenever sensory strategies are being used, careful observation of the Learner's reactions is advised. For learners with variable or inconsistent reactions to sensory input, an assessment with an Occupational Therapist may be advisable.

Behaviours Observed	The learner gazes at lights or out of the window, fixates at rotating objects, looks at his hands or flaps his fingers in front of his eyes.		
Type of sensory preference	Visual		
Spinning discs Laser discs Spinning toys Sand Egg timers or oil droppers Snow globes TV or video Computer screensaver programmes	Light toys (such as spinning fan or ball) Flashing toys (such as bouncing ball or stress toy) Spinning tops Wind-up toys Coloured acetate sheets	Executive toys (such as swinging balls) Sparking toys (such as toy gun or spin toy) Kaleidoscope View Master® Coil toys	

Behaviours Observed	The learner vocalises, hums, clicks his tongue, taps furniture or clicks fingers		
Type of sensory preference	Auditory (Sound)		
Drum Triangle Musical instruments Radio Push-pull toys that make noise	Toys that make noise Clackers Bells Whistles Tambourine Hair dryers	Talking toys (such as Furbies®) Buzz toys Toy piano or keyboard Music boxes TV or video	Stethoscopes Music Conversation with another person Talking books Walkman or CD player

Behaviours Observed	The learner touches his own or another person's body parts, pinches oneself, places fingers or objects in mouth.		
Type of sensory preference	Tactile (Touch)		
Shower scrunchies Soft toys Puppets Talc Electric fan Shaving cream	Items that touch the learners' body Koosh ball Silly putty Vibrating or buzz toys Massager	Hand painting Face painting Blankets Make up brush Hand or foot massage Hand lotion	Sand or water play Off cuts of different textured materials (such as fur, felt, cotton, nylon etc.) Scrubbing brush Pan scourers

Behaviours Observed	The Learner rocks, bounces or spins his body. He has strange postures (such as head stands or upside-down), toe walks, holds head on one side or head bangs.		
Type of sensory preference	Vestibular (Movement) or Proprioceptive (Body Sense)		
Items that recreate motion or body position Rocking horse Rocking chair Firm stroking or patting of body parts Learner allows or seeks	Therapy or Pilates ball Hammock Swing Action rhymes Vibration or buzz toys	Barrels to roll in or on Pedal cars Spinning office chair Balance ball	Slide Roundabouts Trampolines Push/Pull games against resistance (such as another person)

Behaviours Observed	The learner smells self, other people, items or equipment		
Type of sensory preference	Smell		
Items that smell Scented pens and crayons	Aromatherapy oils, Incense	Play dough Scented candles	Flowers Make a "Smell Kit"
To make a "Smell kit" use some small containers with lids (such as empty camera film containers), place some scented items in the container and top with cotton wool. Keep lid closed until needed.	Some ideas could be : ➤ Herbs and Spices ➤ Peppermint ➤ Onion ➤ Citrus-oil extracts		➤ Soap or Washing up liquid ➤ Cake essences (such as vanilla, coffee, coconut etc)

Behaviours Observed	The Learner licks himself or other people. He may lick objects or put them in his mouth.		
Type of sensory preference	Oral-motor or Taste		
Sweet and sour contrasts (such as lemon or lime juice) Hot and cold contrasts (such as fried ice cream!)	Items that have different tastes Strong flavoured crisps or sweets	Put lots of ice into cold drinks Thick shakes through a straw	For oral stimulation try: Aquarium air tubing to chew Teething rings and toys Chewing gum or sweets Textiles to chew Tooth and tongue brushing Try an electric toothbrush

Ideas!

Specific Materials that might be useful for teaching attributes:

Colour:

Shape:

Size:

Commenting Lesson Ideas:

Learner: _____

Learner: _____

Learner: _____

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PECS Level 2

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