

63<sup>RD</sup> CONFERENCE ON EXCEPTIONAL CHILDREN

# Believing In Achieving

SHERATON FOUR SEASONS | KOURY CONVENTION CENTER | GREENSBORO, NC



## Using Evidence Based Practices in Quality Programs for Students with ASD

Sam Odom

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Evelyn Shaw





# Identifying, Selecting, & Implementing Evidence –based Practices



# Objectives

- o Identify 28 evidence-based, focused intervention practices for students with ASD
- o Describe foundational practices that could be used in a program for students with ASD to address core needs
- o Identify resources available to learning how to use 24 evidence-based, focused intervention practices
- o Follow a process for selecting evidence-based practices to address individual goals for students
- o Use a fidelity checklist to determine the degree to which the practices are implemented as intended

# What are EBP?

Focused interventions that:

- Produce specific behavioral and developmental outcomes for a child
- Have been demonstrated as effective in applied research literature
- Can be successfully implemented in educational settings

(Odom, Colett-Klingenberg, Rogers, & Hatton, 2010)

# Evidence - Based Practices (2013)

Antecedent-based interventions  
Behavioral momentum intervention\*  
Cognitive behavioral intervention\*  
Differential reinforcement  
Discrete trial training  
Exercise\*  
Extinction  
Functional behavior assessment  
Functional communication training  
Modeling\*  
Naturalistic interventions  
Parent-implemented intervention  
Peer-mediated instruction/intervention  
Picture Exchange Communication  
System™

Pivotal response training  
Prompting  
Reinforcement  
Response interruption/redirection  
Scripting\*  
Self-management  
Social narratives  
Social skills training  
Structured play groups\*  
Task analysis  
Technology-aided intervention/instruction\*  
Time delay  
Video modeling  
Visual supports

*\* Added from 2013 literature review*

# Evidence - Based Practices

## Foundational

Antecedent-based interventions

Behavioral momentum intervention\*

Cognitive behavioral intervention\*

**Differential reinforcement**

Discrete trial training

Exercise\*

Extinction

Functional behavior assessment

Functional communication training

**Modeling\***

Naturalistic interventions

Parent-implemented intervention

Peer-mediated instruction/intervention

Picture Exchange Communication

System™

Pivotal response training

**Prompting**

**Reinforcement**

Response interruption/redirection

Scripting\*

Self-management

Social narratives

Social skills training

Structured play groups\*

**Task analysis**

Technology-aided intervention/instruction\*

**Time delay**

Video modeling

Visual supports

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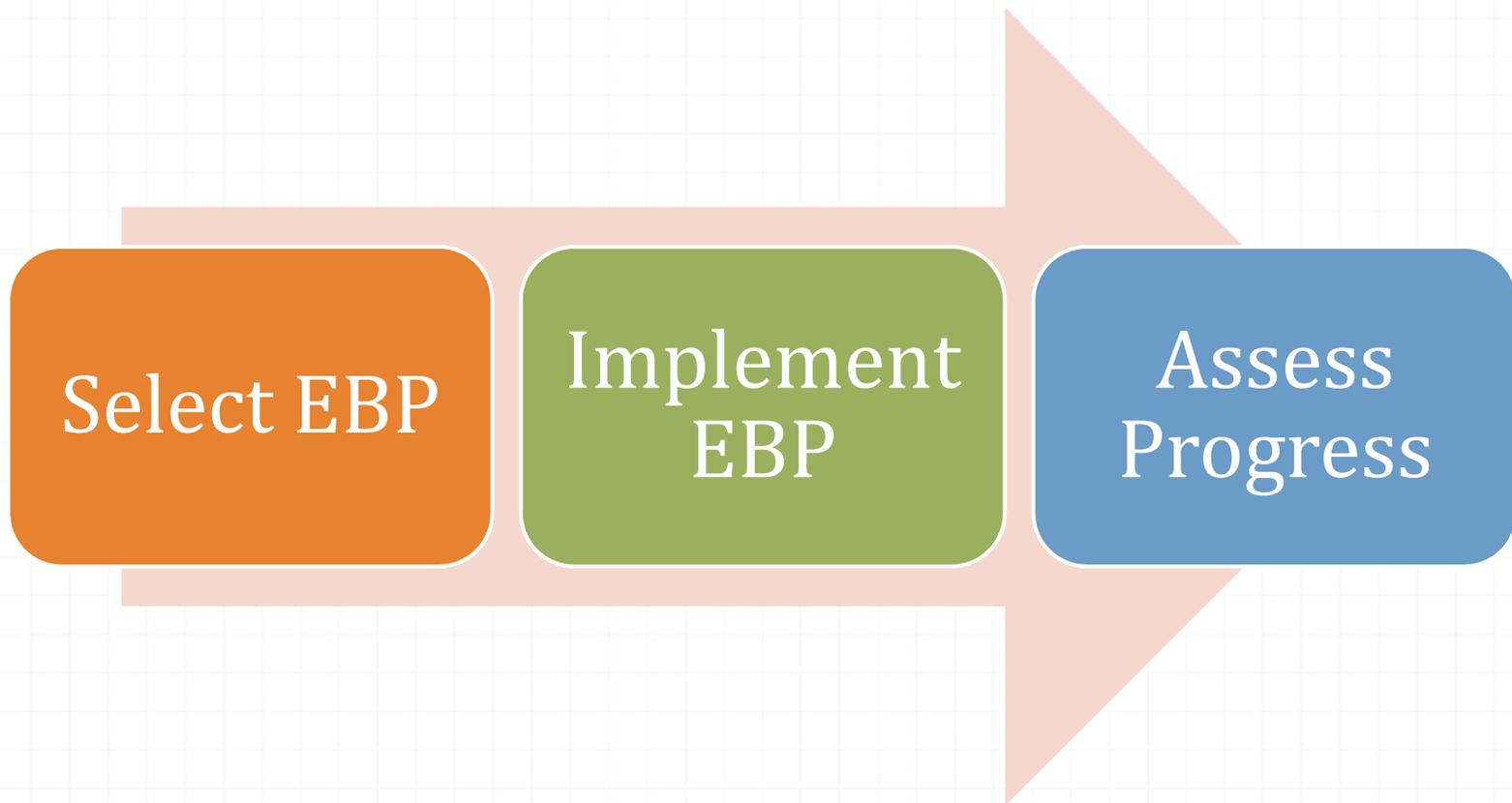
# EBP – Self-Check



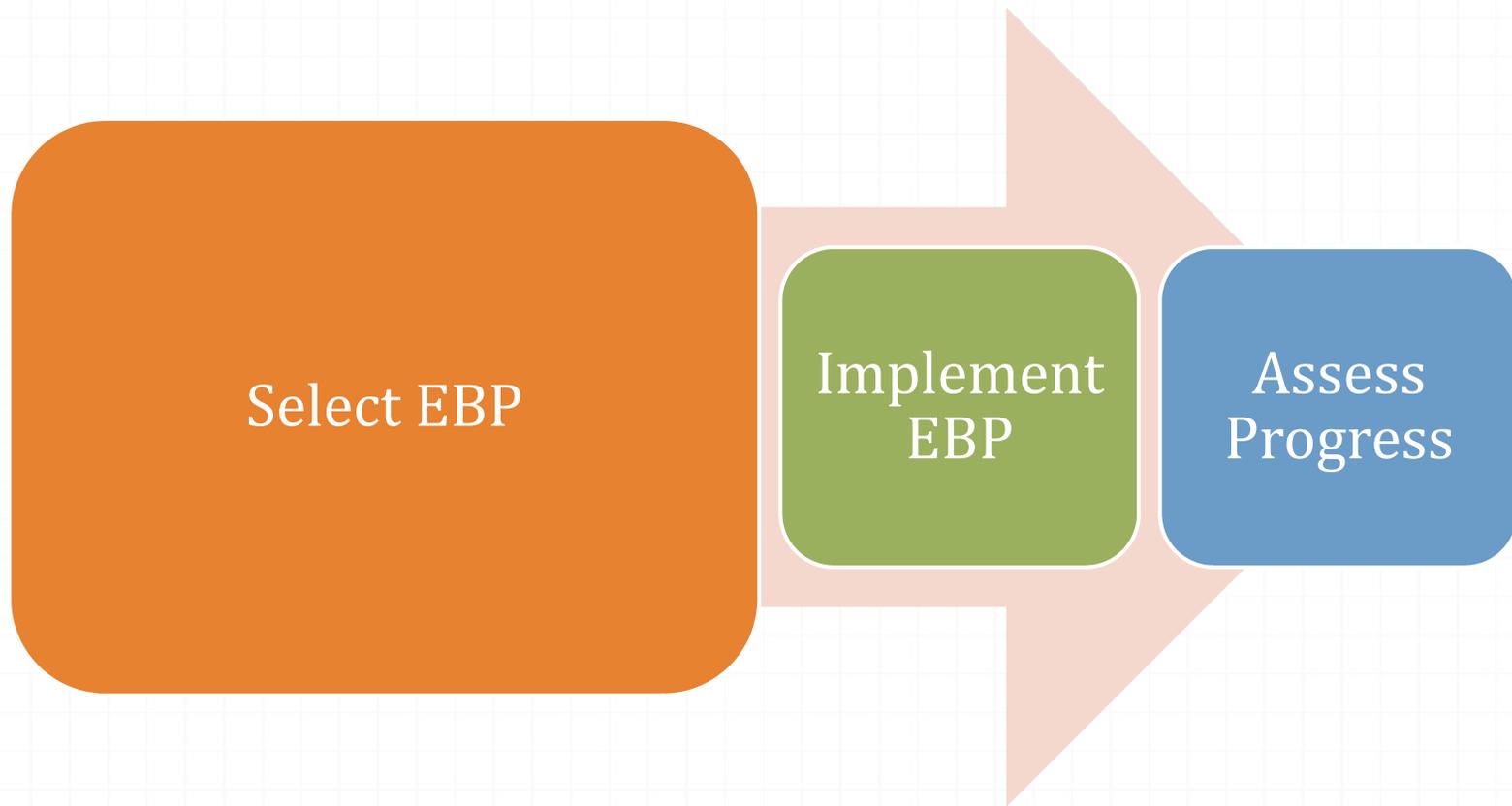
# EBP – Self-Check

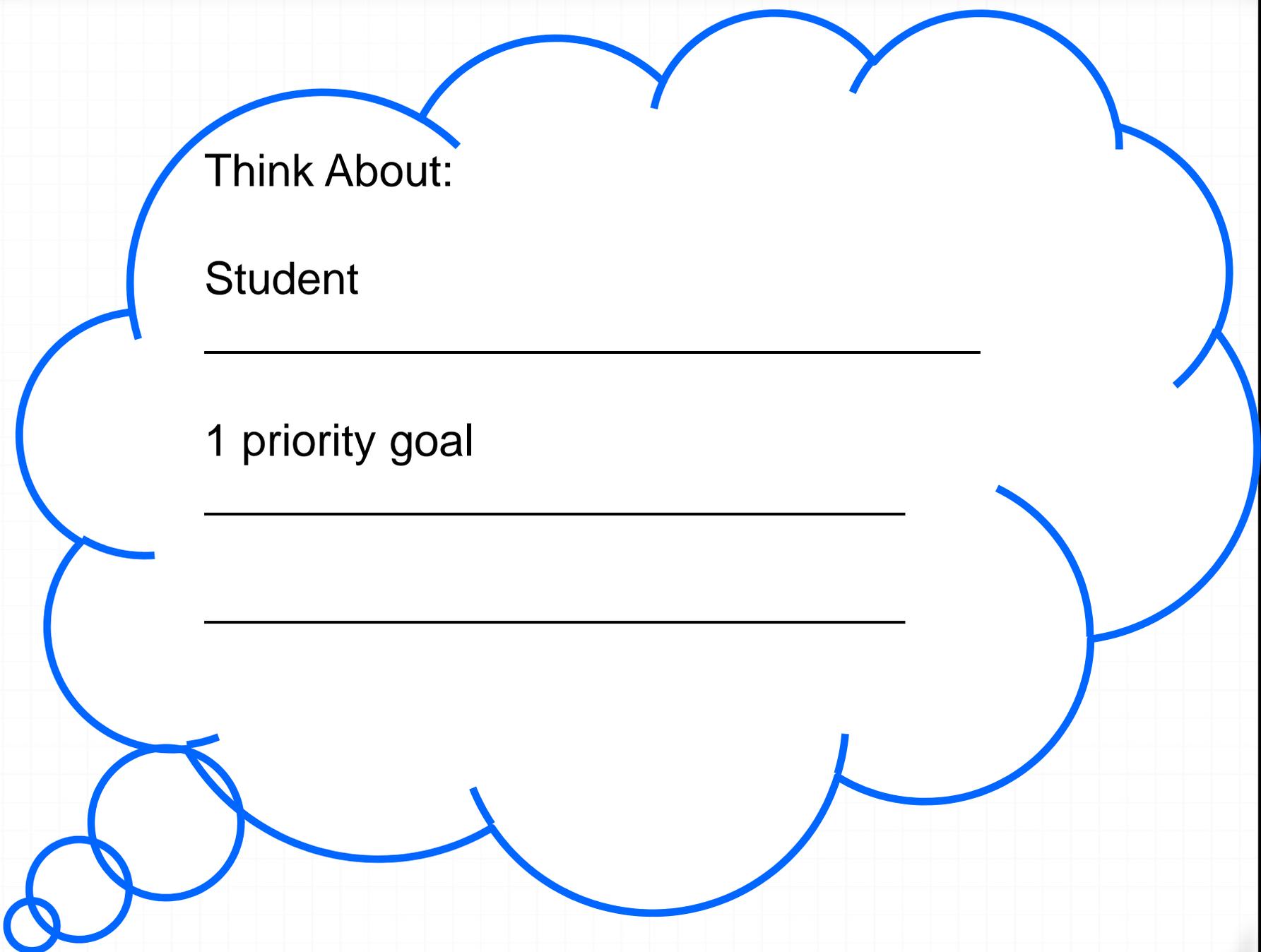
- o Take out EBP list and EBP definitions
- o Check off those that you use and feel confident you are implementing effectively
- o Circle those that you aren't using but would like to learn how to implement
- o Write 3 of the ones you want to learn about here:
  - 1.
  - 2.
  - 3.

# The EBP Process



# The EBP Process





Think About:

Student

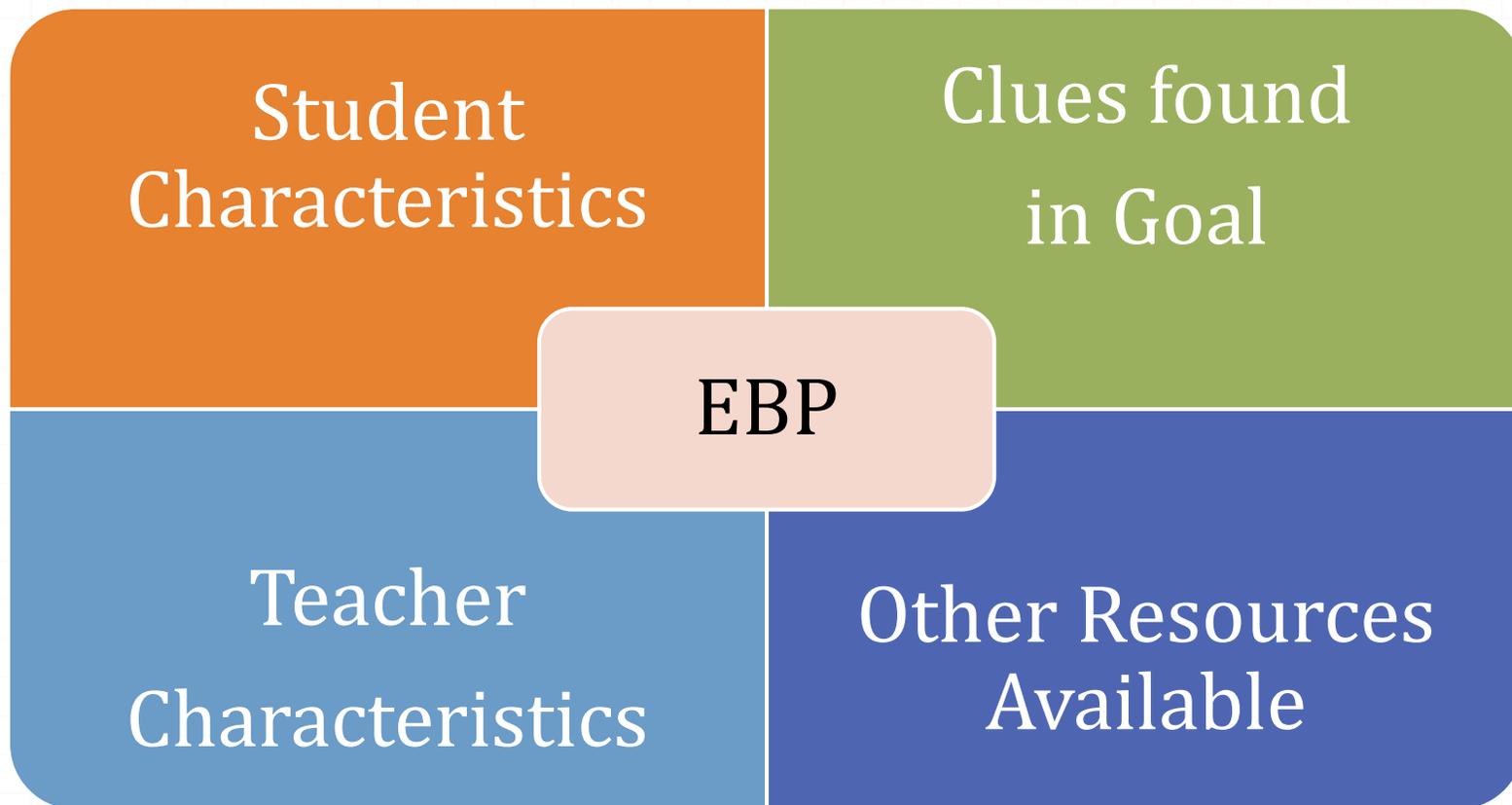
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1 priority goal

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# When Selecting EBP Consider:



# Levi

Using a visual picture with “I need help” printed, Levi will independently ask for help when needed once a day by getting out of his seat, finding someone (any teacher, assistant, peer), and giving them the “I need help” card for 3 out of 4 consecutive days.

- 16 year old
- Very independent
- Avoids interactions

EBP(s):  
\_\_\_\_\_

- Very technologically sophisticated
- “gets” Levi and respects his desire for space
- Well run classroom /few opportunities to need help

- SLP a strong team member
- Multiple work opportunities in and outside school setting

# Matthew

When given an assignment, Matthew will create a to-do list, check it off as he completes each step, and will present assignment and completed to-do list on time to teacher by the due date for 3/5 opps a week.

- 18 year old
- General education setting
- Wants to fit in
- disorganized

EBP(s):  
\_\_\_\_\_

- Great relationship between Sped and Gen ed English teacher
- A student teacher in English class so teacher is more free to help individual students

- Student received iPad for birthday to use at school
- iPads allowed in school

# Aiden

Aiden will engage in 3 different pretend play sequences by following 3 step sequence independently for  $\frac{3}{4}$  opportunities.

- 4 year old
- In inclusive preschool
- Home-based ABA
- Enjoys cars in stereotypic ways
- Follows a model

EBP(s):  
\_\_\_\_\_

- Teacher has great interactions with Aiden
- Teacher TEACCH trained
- Creates nice materials like task boxes

- Dad excited to implement anything and everything at home

# Select EBP(s)



Your Student: \_\_\_\_\_

Goal: \_\_\_\_\_

EBP(s):  
\_\_\_\_\_

# The EBP Process



# See Processes for Implementing EBPs Handout

1. GAS
2. Identify prerequisite/  
foundational EBP
3. Determine setting for  
implementation
4. Implementers
5. Materials needed
6. Collect baseline data
  - o Student goal
  - o Fidelity

Current level of performance	During a week of school, staff counted Levi asking for help by saying "I need help" an average of 3 times a day. He got out of his seat once during that week with prompting.
Initial Benchmark	Using a visual picture with "I need help" printed and prompt from staff, Levi will independently ask for help when needed once a day by getting out of his seat, finding someone (any teacher, assistant, peer), and giving them the "I need help" card for 3 out of 4 consecutive days.
Secondary Benchmark	Using a visual picture with "I need help" printed, Levi will independently ask for help when needed once a day by getting out of his seat, finding someone (any teacher, assistant, peer), and giving them the "I need help" card for 3 out of 4 consecutive days.
Annual Goal	<b>Using a visual picture with "I need help" printed, Levi will independently ask for help when needed 4 times a day by getting out of his seat, finding someone (any teacher, assistant, peer), and giving them the "I need help" card for 3 out of 4 consecutive days.</b>
Exceeds Annual Goal	Using a visual picture with "I need help" printed, Levi will independently ask for help when needed 8 times a day by getting out of his seat, finding someone (any teacher, assistant, peer), and giving them the "I need help" card for 3 out of 4 consecutive days.

Now What?



# When learning something new...

- o Do It Yourself
- o Training
- o Coaching

# DIY



# Evidence-based Practice Resources

- EBP Briefs (<http://autismpdc.fpg.unc.edu>)
  - Overview
  - Evidence Base
  - Steps for Implementing
  - Implementation Checklist
  - Sample Data Collection Forms (optional)

# Example: Step-by-Step Directions

## *Step 1. Identifying and Setting Up the Device*

In Step 1, teachers/practitioners focus on identifying an appropriate SGD device for the learner with ASD by taking into account a number of factors including learner needs and characteristics, and available training and technical assistance.

1. Teachers/practitioners select an appropriate device, taking into account how the information is displayed, the learner's present and potential abilities (e.g., attention span, experience with symbols, ability to establish joint attention), portability of the device, available training and technical assistance, and funding sources.

Teachers/practitioners also choose a number of symbols in the visual field that the learner will be able to discriminate easily by considering the learner's attention span, experience with symbols, and ability to establish joint attention (Ogletree & Ham, 2001).

2. Teachers/practitioners introduce the device to the learner by having a device with few symbols and/or buttons with nothing on them.

To begin, teachers/practitioners introduce a single symbol and have buttons with nothing on them to introduce the idea that the symbol, not the button, is the important factor.

3. Teachers/practitioners include desirable and undesirable symbols to facilitate the learner's ability to discriminate.

# Example: Implementation Checklist

	Observation	1	2	3	4	5	6	7	8
	Date	6/14/11							
	Observer's Initials	AC							
<b>Planning (Steps 1 – 5)</b>									
<b>Step 1. Identifying and Setting Up the Device</b>		<b>Score**</b>							
1.	Select an appropriate device, taking into account how the information is displayed, the learner's present and potential abilities (e.g., attention span, experience with symbols, ability to establish joint attention), portability of the device, available training and technical assistance, and funding sources.	2							
1.	Introduce the device to the learner by having a device with few symbols and/or buttons with nothing on them.	2							
1.	Include desirable and undesirable symbols to facilitate the learner's ability to discriminate.	0							
<b>Step 2. Introducing Direct Support Persons to the Device</b>									
1.	Team members are identified and trained in how to program and use the device.	2							
1.	One or two key members of the team are identified as primary contacts regarding its use.	0							

**\*\* Scoring Key:** 2 – implemented; 1 – partially implemented; 0 – did not implement; NA – not applicable

# Other Website Resources

<http://autismpdc.fpg.unc.edu/>

o Early Identification Module

<http://autismpdc.fpg.unc.edu/content/early-identification-asd-module>

o Online Course Session Content

<http://autismpdc.fpg.unc.edu/content/foundations-autism-spectrum-disorders-online-course-content>

o CSESA Resources

<http://csesa.fpg.unc.edu/resources/learning-resources>

# Implementing Visual Supports in High School Case Study

I need help.



# When learning something new...

- ~~o Do It Yourself (Alone)~~
- ~~o Training Alone~~
- o Coaching

## Training Outcomes Related to Training Components

<i>Training Components</i>	<b>Training Outcomes</b>		
	<b>Knowledge of Content</b>	<b>Skill Implementation</b>	<b>Classroom Application</b>
<i>Presentation/ Lecture</i>	10%	5%	0%
<i>Plus Demonstration in Training</i>	30%	20%	0%
<i>Plus Practice in Training</i>	60%	60%	5%
<i>Plus Coaching/ Admin Support Data Feedback</i>	95%	95%	95%

# What You Need is a Good Coach



# What You Need to be is a Good Coach

[http://www.youtube.com/watch?v=q4880](http://www.youtube.com/watch?v=q4880PjN02E)

[PjN02E](http://www.youtube.com/watch?v=q4880PjN02E)

# The Value of a Coach



# Coaching

Form of embedded, sustained professional development through ongoing relationship and cyclical process used to:

- Refine existing skills and/or acquire new skills
- Support practitioner's ability to apply new knowledge
- Focus on content that utilizes data to inform practice
- Encourage recognition of individual expertise and professional growth by coach through understanding of adult learning principles

# We know that ...

- o Adults learn best when:
  - o They are exposed to new knowledge through *various modalities*
  - o They can *make choices* about “what” and “how” they are learning
  - o They can *apply* new knowledge *directly* and *immediately* within their context
  - o They are provided supportive feedback and opportunities for *self-reflection*

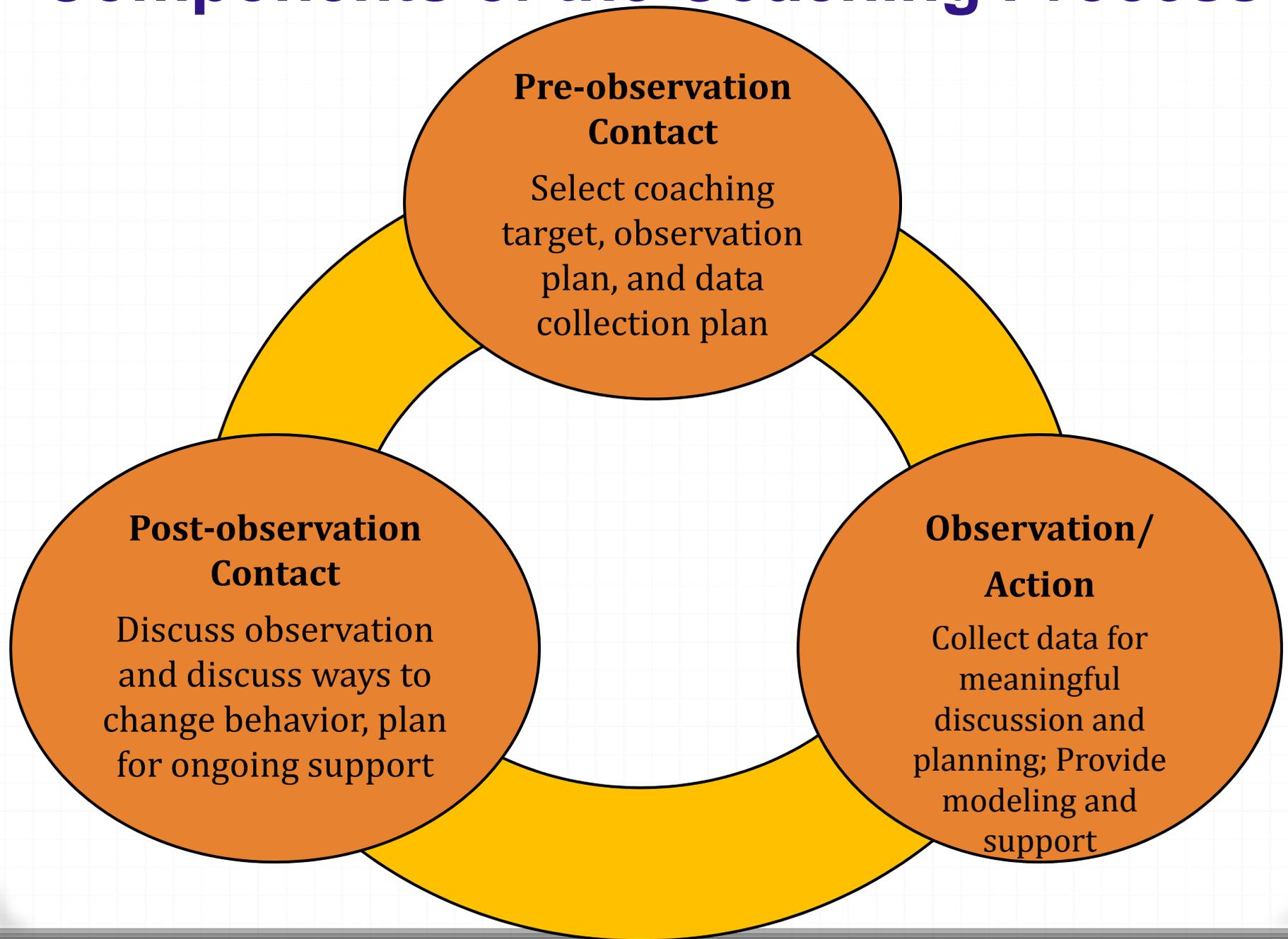
# Coaching – Promising Practice

## **Coaching leads to improvement in ...**

- o instructional capacity - increasing teachers' ability to apply what they have learned to their work with students
- o instructional culture of the school
- o a focus on content which encourages the use of data to inform practice

The Annenberg Institute for School Reform, 2004

# Components of the Coaching Process



# Communication Strategies for Collaboration

- Open questions
- Leveling statements
- Nonverbal techniques



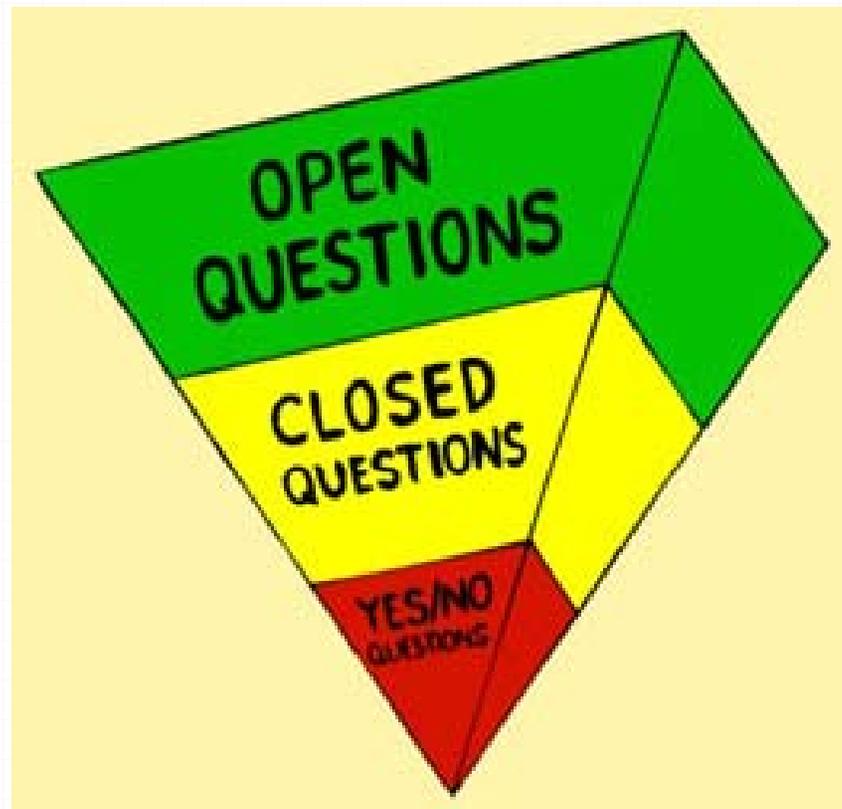
# Open vs. Closed Questions

## Open Question Starters

- o Tell
- o How
- o Describe
- o What
- o Why

## Closed Question Starters

- o Are
- o Do
- o Have
- o Should
- o Will
- o Would
- o Can



# Potential Barriers to Communication

- ◊ Advising
- ◊ Anticipating
- ◊ Avoiding
- ◊ Cross-Examining
- ◊ Denying Others' Reality
- ◊ Diagnosing
- ◊ Directing
- ◊ Judging
- ◊ Lecturing
- ◊ Moralizing
- ◊ Praising
- ◊ Reassuring
- ◊ Teasing

# Other Barriers to Prepare For



## Potential Barrier: Administrative Support

- Administrative support is needed to
  - Provide release time to partners
  - Provide recognition of coaching as a priority
  - Respect confidentiality of teams around the coaching process

## Potential Barrier: Time

- o Include coaching process seamlessly
- o Not an “add on”
- o Seek opportunities to coach in the moment



# Our Coaching Resources

<http://autismpdc.fpg.unc.edu/>

Guidance & Coaching  
on Evidence-based Practices  
for Learners with  
Autism  
Spectrum  
Disorders



Suzanne Kucharczyk  
Evelyn Shaw  
Brenda Smith Myles  
Lisa Sullivan  
Kate Szidon &  
Linda Tuchman-Ginsberg

## The Donovan Family Case Study

Guidance and Coaching on  
Evidence-based Practices for  
Infants and Toddlers with ASD

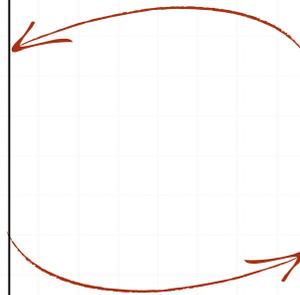
Suzanne Kucharczyk  
Evelyn Shaw  
Linda Tuchman-Ginsberg

Developed in partnership with  
Dathan Rush, Associate Director &  
MLisa Shelden, Director  
Family, Infant and Preschool Program (FIPP)  
Center for the Advancement Study of Excellence (CARE)  
in Early Childhood and Family Support Practices



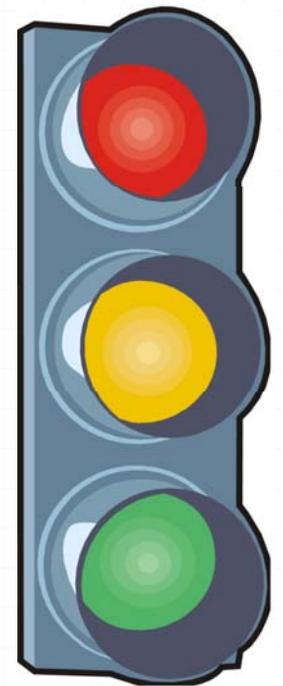
**Who are your  
Coaches**

**Who do you  
Coach**

A large, empty rectangular box with a black border, intended for writing the names of coaches.A large, empty rectangular box with a black border, intended for writing the names of those being coached.

# Tomorrow...

- o What do I/my team need to
  - o Stop doing
  - o Continue doing
  - o Start doing



# The EBP Process



What can implementation  
look like - Levi?

# What can implementation look like - Matthew?

- o Met in Academic Strategies class to teach task analysis-
- o Used visual supports to teach concept, along with prompting, reinforcement

## Let's Practice

- What are the steps to making a call on your phone?
  - Tell me the steps
    - I will write them down
    - I will try them out



8

### Let's practice

- What are the steps to your vocabulary assignment in English each week?
  - Let's type them out
  - Check them off when done!
- How could you use this in class?

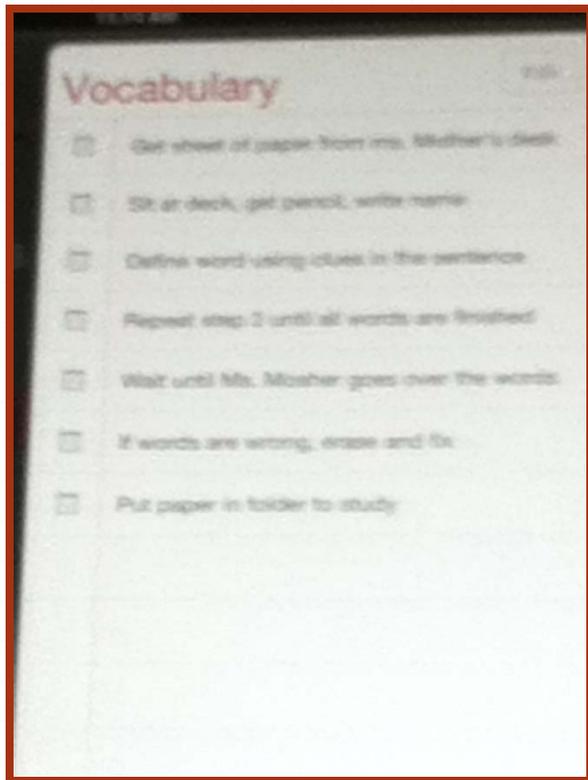


9

### When there is an assignment...

1. Break it down into steps
2. Type steps into ipad
3. Complete steps by checking off
  - What if you don't know a step or need help?
4. Turn assignment in!

o Went to Eng II class



o Saw improvement in:

- o Writing his name & turning in assignments (they were steps in all task analyses)
- o Asking for help when stuck (in task analysis)
- o Turning in assignment (in task analysis)

What can implementation  
look like - Aiden?

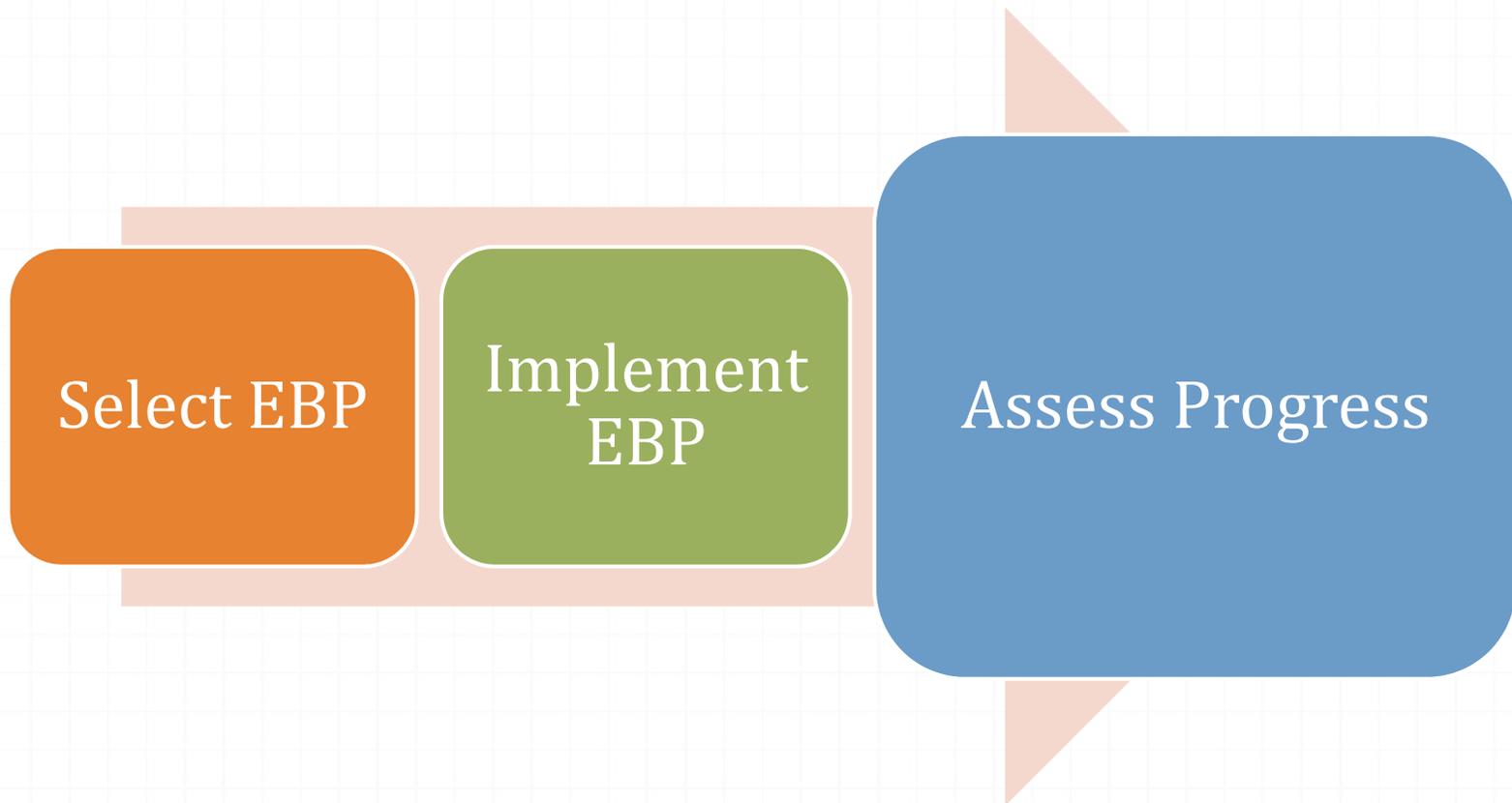
# Make an Implementation Plan



<b>Goal 1:</b>	<b><i>Using a visual picture with “I need help” printed, Levi will independently ask for help when needed 4 times a day by getting out of his seat, finding someone (any teacher, assistant, peer), and giving them the “I need help” card for 3 out of 4 consecutive days.</i></b>			
<b>Interventions</b>	How to implement	Who will implement	When/Where	How will data be gathered? By Whom?
<p>Visual supports Prompting Reinforcement</p> <p>Team considering – PECS as a useful process since Levi has experience with PECS and some success although inconsistent</p>	<ol style="list-style-type: none"> <li>1. Create “I need help” card</li> <li>2. Use prompting and reinforcement to teach Levi to use visual to access assistance using “I need help” card during work &amp; class jobs (e.g. wiping shelves)</li> <li>3. Prompt Levi to get out of his seat, walk to his communication partner (the teacher, speech therapist, peer, etc.), and present the card.</li> <li>4. Ms. Bernard to teach to Levi first in class until he reaches first GAS criterion</li> <li>5. Create opportunities for Levi (modify environment so asking for help is required) – prompt for getting attention and prompt for handing request</li> <li>6. Once first GAS criterion reached Bernard and autism consultant will prep Mr. Meeks and Mr. Brady</li> </ol>	<ol style="list-style-type: none"> <li>1. Ms. Bernard and all paraprofessionals</li> <li>2. Mr. Meeks in PE</li> <li>3. Mr. Brady (job coach)</li> <li>4. Ms. Bernard to talk to mom and dad who want to use same process and visuals at home</li> </ol>	<ol style="list-style-type: none"> <li>1. In classroom</li> <li>2. In PE</li> <li>3. On Job</li> <li>4. At home</li> </ol>	<ul style="list-style-type: none"> <li>• Fidelity: on prompting, reinforcement, &amp; PECS- weekly by CSESA team &amp; Ms. Bernard</li> <li>• Student outcomes: weekly towards GAS goals CSESA team &amp; all team members implementing</li> </ul>
<b>Resources Needed (technology, visuals, etc.):</b>	<p>Create visuals – ask peer buddy to help Lamination Data sheets- CSESA team member to provide</p>			
<b>Professional Development Needed:</b>	What form (coaching, training, modules, etc.):	Team to review prompting and reinforcement module; review fidelity checklists SLP to teach team visual supports using module and fidelity checklists	For Whom:	All those implementing

<b>Goal 1:</b>				
<b>EBP(s)</b>	<b>How to implement</b>	<b>Who will implement</b>	<b>When/Where</b>	<b>How/When to Measure Progress</b>
	Fidelity Baseline _____ Fidelity Check Dates _____ _____ _____			
<b>Plan for Professional Development</b>				
<b>Resources Needed (visuals, laminating, data forms)</b>				
<b>Other</b>				

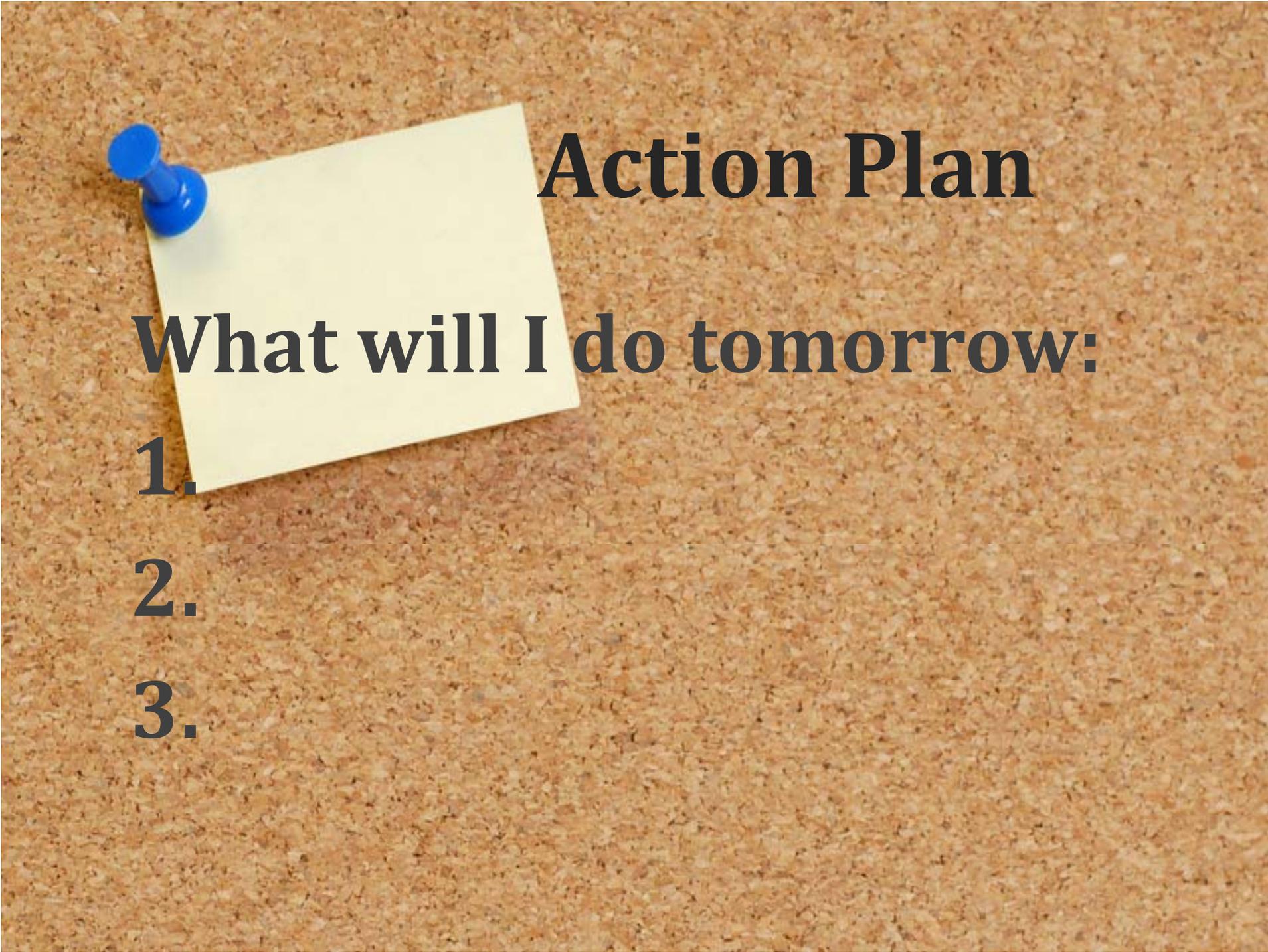
# The EBP Process



# Analyze Progress

- Student Progress
  - Goal based data collection
- Implementer Progress
  - Implementation Checklists
- Revise Plan as necessary





# Action Plan

What will I do tomorrow:

1.

2.

3.

# Putting It Together



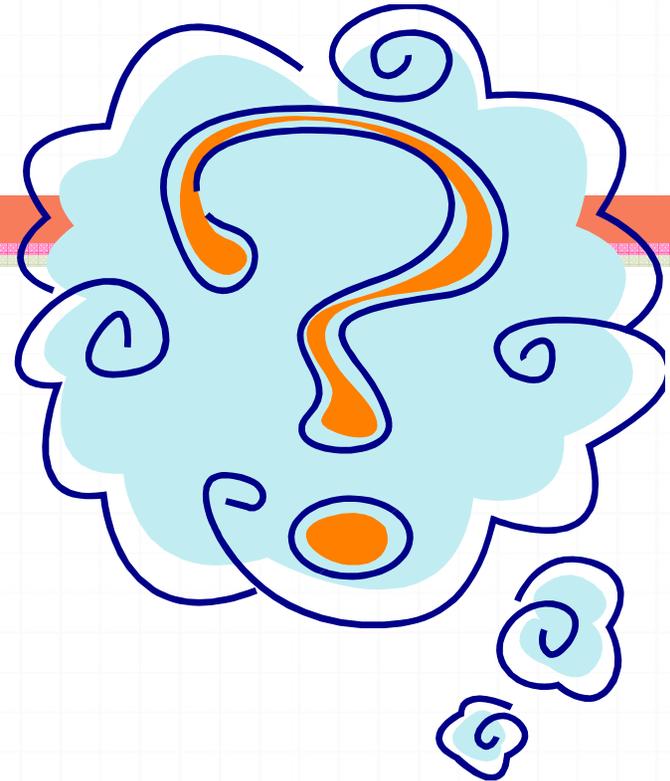
# Contacts

- Suzanne Kucharczyk
  - [Suzanne.kucharczyk@unc.edu](mailto:Suzanne.kucharczyk@unc.edu)
- Evelyn Shaw
  - [Evelyn.shaw@unc.edu](mailto:Evelyn.shaw@unc.edu)

<http://asdtoddler.fpg.unc.edu/>

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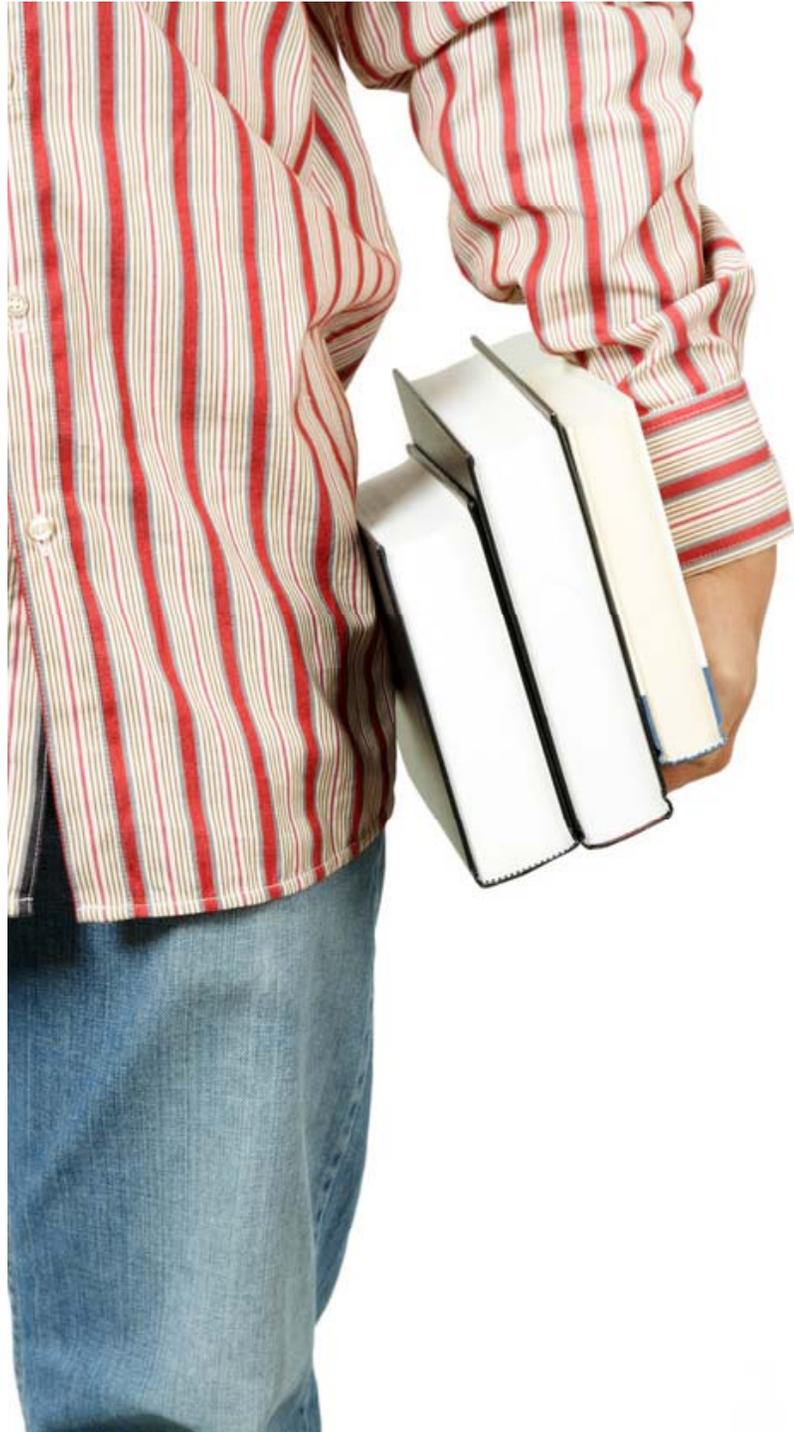
## Implementing Evidence Based Practices in Quality Programs for Students with ASD

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## **Introduction to:**

- The Day**
- A Model of Implementation of Evidence Based Practices for Students with ASD**

# Objectives:

- Understand the overall structure and expectations for the day
- Describe 3 UNC centers working on supporting the implementation of EBPs for students with ASD
- Develop an understanding of a model for the implementation of EBPs for students with ASD

# Plan for the Day

- Introduction to a Model of Implementing Evidence-Based Practices (EBPs)
- Nature, Characteristics, and Assessment of Children with ASD
- Assessing Program Quality as a Foundation
- Measuring Goals for Students with ASD
- Finding, Selecting, and Implementing EBP

# Who We Are



UNC  
FRANK PORTER GRAHAM  
CHILD DEVELOPMENT INSTITUTE

## FPG and Autism Spectrum Disorder Initiatives: Building Capacity in Professional Development and Research

I N I T I A T I V E S  I N  A U T I S M				Post – Doc in ASD						
						Toddler Initiative				
	NPDC									
						CSESA				
					PS in CA					
					Adoles/ adult					
							Parent Training EI – ASD			
					Infant/Toddler TEACCH					
						FX & ASD Genetics				
				Genetics – Language and ASD						
		JAML 1				JAML 2				
	TEACCH/LEAP									
							NPDC Efficacy Study SUBMITTED			
	'07 –'08	'08 - '09	'09 – '10	'10 – '11	'11 – '12	'12 – '13	'13 – '14	'14 – '15	'15 – '16	'16 – '17

# Who You Are

- Your Role
- Age Groups you work with



# **National Professional Development Center on Autism Spectrum Disorders**



**A multi-university  
center to promote  
use of evidence-  
based practice for  
children and  
adolescents with  
autism spectrum  
disorders**

# Site Descriptions (2008-2012)

- 12 States: 225 students
- 76 Model and Expansion Sites
  - 4 Early Intervention
  - 12 Preschool
  - 31 Elementary Programs
  - 16 Middle
  - 13 High Programs
- Breakdown by Program Type
  - 43% are self-contained programs
  - 57% are inclusive programs

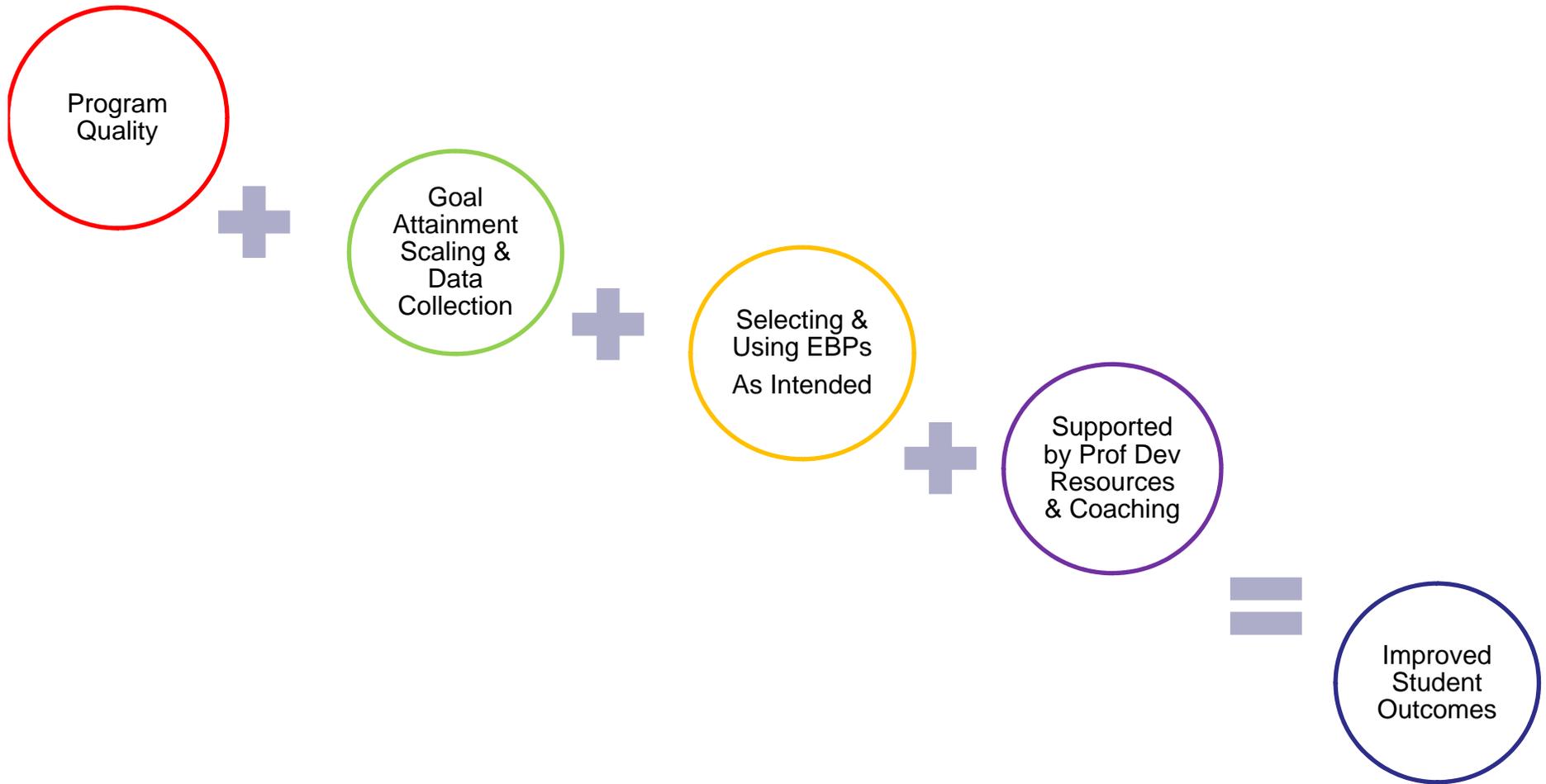


# Goals of the National Center

- Promote development, learning, and achievement of children with ASD and support families through use of evidence-based practices
  - Across public-school years (age 3-22)
- Increase state capacity to implement evidence-based practices



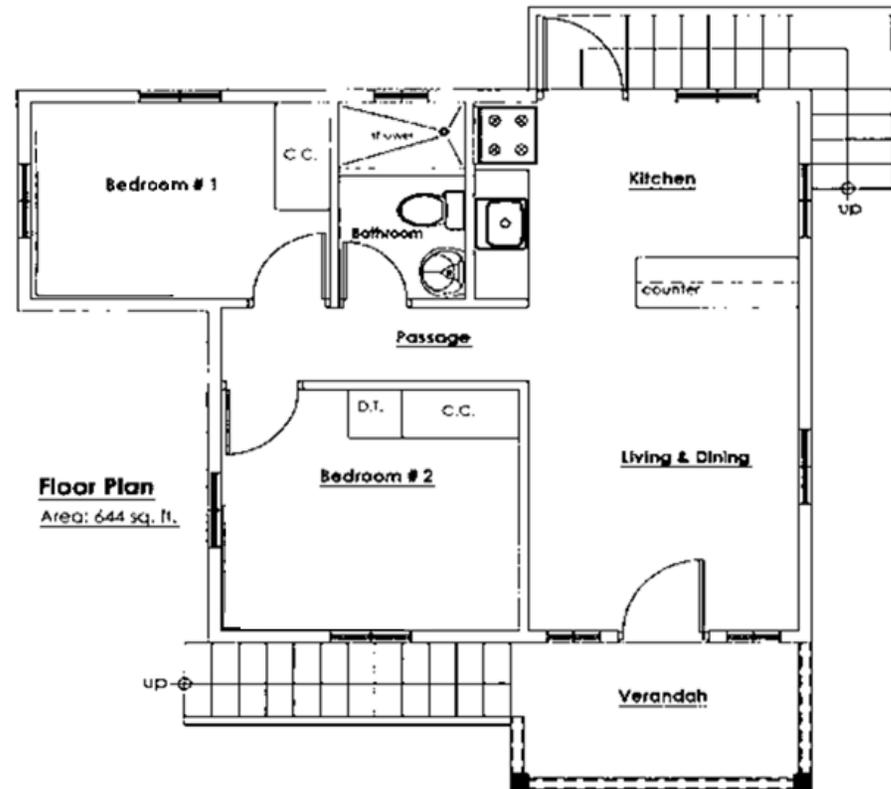
# The Model



# Program Quality Indicators and Evidence-Based Practices (EBP)

## Program Quality

- Contextual features of the program that represent best practices
- Program quality as the house in which practices are employed



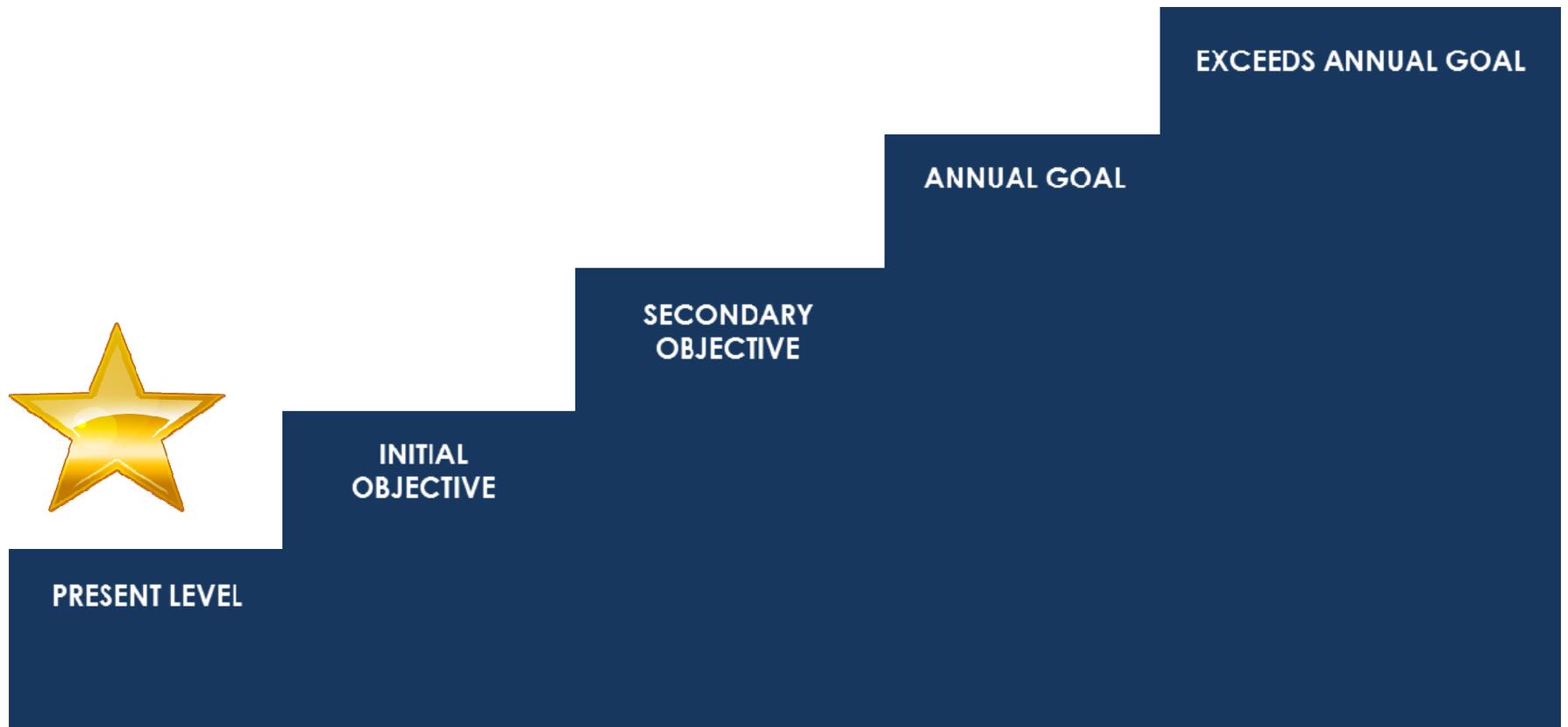
# Program Quality Indicators and Evidence-Based Practices (EBP)

## EBP

- Evidence-based practices as specific tools for specific skills
- EBP as the furniture or appliances designed for specific functions



# Goal Attainment Scaling



# Teacher Use of Evidence-based Practices



# What are EBP?

Focused interventions that:

- Produce specific behavioral and developmental outcomes for a child
- Have been demonstrated as effective in applied research literature
- Can be successfully implemented in educational settings

(Odom, Colett-Klingenberg, Rogers, & Hatton, 2010)

# Evidence-based Practices (2007)

- Antecedent-based interventions
- Computer-aided instruction
- Differential reinforcement
- Discrete trial training
- Extinction
- Functional behavior assessment
- Functional communication training
- Naturalistic interventions
- Parent-implemented intervention
- Peer-mediated instruction/intervention
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- Pivotal response training
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- Social narratives
- Social skills training groups
- Speech generating devices
- Structured work systems
- Task analysis
- Time delay
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- Visual supports

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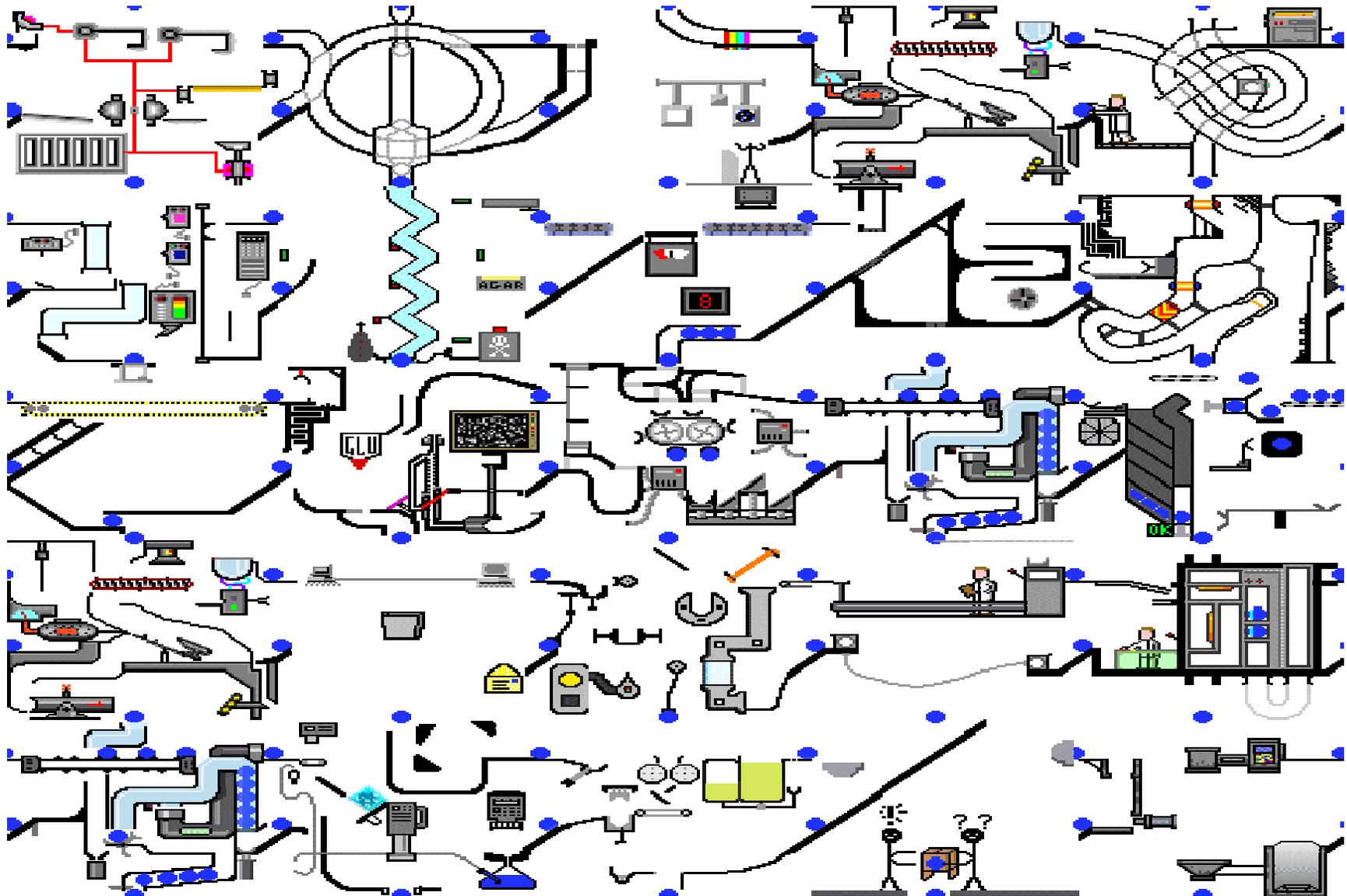
*\* Added from 2013 literature review*

# Professional Development - Supports

- EBP Briefs (<http://autismpdc.fpg.unc.edu>)
- Online Modules (Collaboration with OCALI)
  - Posted on AIM Website  
([www.autisminternetmodules.org](http://www.autisminternetmodules.org))
- Coaching

Form of embedded, sustained professional development through ongoing relationship and cyclical process used to refine skills and support implementation of skills.

# Right now...



**By the end of the day...**



**...all will be clear.**



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## Nature, Characteristics, and Assessment of Children with ASD



# Objectives

- Describe the DSM V and IDEA criteria
- Understand current prevalence rates
- List characteristics of students with ASD and how they change across development periods
- Discuss commonly identified causes for autism and their implications
- Discuss current research
- Become familiar with autism screening and assessment instruments

# **ASD: PREVALENCE, DEMOGRAPHICS, DEFINITIONS, AND RECENT RESEARCH**



# ASD Prevalence ADDM Network 2000 - 2008

Year	Birth Year	# of Sites Reporting	1 in x Children
2000	1992	6	1 in 150
2002	1994	14	1 in 150
2004	1996	8	1 in 125
2006	1998	11	1 in 110
2008	2000	14	1 in 88

# Prevalence and Demographics

## Incidence 1 in 88

- Male/female ratio – 4.9:1

## Unrelated to socioeconomic status or race

- access to diagnosis varies

## Range of IQ scores:

- No intellectual disability: **62%**
- Intellectual disability: **38%**

## Sibling reoccurrence Ozonoff, et al, 2011

- 18.7% risk (1 older sibling)
- More than 1 older sibling – 32.2%

## Multiple causes related to neurobiological causes



# Recent Research

- Autism may be detectable at 6 months
  - Observation of child attention to face
    - Yale University Medical School
  - Changes in brain communication pathways by a year of age
    - Piven, UNC
- Folic Acid 39% lower risk
  - 4 weeks prior to conception – 8 weeks after
  - Norwegian
- Vaccine
  - No known link
- Unsubstantiated treatments
  - Matson, Adams, Williams, Rieske 2012

# Autism Diagnosis

- Not all children that the ADDM Network identified as having ASDs actually had an ASD diagnosis in their records.
- Children with ASDs who had a diagnosis documented in their records: **79%**
- Median earliest age ASDs were documented in their records: **4 years, 6 months**
- Age varied (using DSM-IV criteria)
  - Autistic Disorder: **4 years, 0 months**
  - ASD/PDD: **4 years, 5 months**
  - Asperger Disorder: **6 years, 3 months**

# Trends in Diagnosing



Respondents were asked for the current trend for the earliest age of diagnosis of ASD in their state and could select from 7 age groupings:

a) <18 months

b) 18-23 months

c) 24-35 months

d) 36-47 months

e) 48-59 months

f) 60-71 months

g) >72 months

# Current Trends: Age of Earliest Diagnosis



*87.5% of Part C and Section 619 coordinators indicated a trend in diagnoses before age 3*

*<18 months = 3 (7.5%)\**

*Between 18 and 23 months = 17 (42.5%)*

*Between 24 and 35 months = 15 (37.5%)*

*Between 36 and 47 months = 4 (10%)\*\**

*Between 48 and 59 months = 1 (2.5%\*\*\*)*

*\*Part C only; \*\* 3 of 4 Section 619; \*\*\* Part C*

# DSM-IV and DSM-V

## DSM-IV

- Autistic Disorder
- Rett's Syndrome
- Asperger's Syndrome
- Pervasive Developmental Disorder (Not Spec.)

## DSM-V

- Autism Spectrum Disorders



# DSM 5 Criteria

- **Persistent deficits in social communication and social interaction across contexts**
- **Restricted, repetitive patterns of behavior, interests, or activities**
- **Symptoms must be present in early childhood**



# DSM 5 Criteria

- **Persistent deficits in social communication and social interaction across contexts, not accounted for by general developmental delays, and manifest by:**
  - Deficits in social-emotional reciprocity
  - Deficits in nonverbal communicative behaviors used for social interaction
  - Deficits in developing and maintaining relationships

# DSM 5 Criteria

- **Restricted, repetitive patterns of behavior, interests, or activities as manifested by at least two of the following:**
  - Stereotyped or repetitive speech, motor movements, or use of objects
  - Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change
  - Highly restricted, fixated interests that are abnormal in intensity or focus
  - Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment

# DSM 5 Criteria

- **Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed limited capacities)**
- **Symptoms together limit and impair everyday functioning**

# Three Levels of Severity

- **Requiring Very Substantial Support**
- **Requiring Substantial Support**
- **Requiring Support**



# IDEA Definition of Autism

**Autism** means a developmental disability significantly affecting **verbal and nonverbal communication** and **social interaction**, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in **repetitive activities and stereotyped movements**, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.

- Autism does not apply if a child's educational performance is adversely affected primarily because the child has an emotional disturbance.
- A child who manifests the characteristics of autism after age three could be identified as having autism if the criteria listed above are satisfied.

# **NC Definition: Autism or Autism Spectrum Disorders**

Means a developmental disability significantly affecting:

- **verbal and nonverbal communication and social interaction,**
- generally evident before age three, although a child who manifests characteristics after age three could be identified if criteria satisfied,
- adversely affects a child's educational performance.

# What does Autism Look Like?



# A Child with ASD Might\*

- Not respond to name (e.g., appear to not hear): by 12 months
- Not point at objects to show interest (e.g., not point at an airplane flying over) – by 14 months
- Not play “pretend” games (e.g., pretend to “feed” a doll) – by 18 months
- Avoid eye contact and want to be alone
- Have trouble understanding other people’s feelings or talking about own feelings
- Have delayed speech and language skills (e.g., use words much later than siblings /peers).
- Repeat words or phrases over and over
- Give unrelated answers to questions
- Get upset by minor changes in routine (e.g., getting a new toothbrush)
- Have obsessive interests (e.g., get “stuck” on ideas)
- Flap his or her hands, rock his or her body, or spin in circles
- Have unusual reactions to the way things sound, smell, taste, look, or feel

*\*ADDM 2012 Community Report*

# Diagnosis of autism at 18-24 months

Early autism profile present in 18-24 month olds:

- General delays
- Gestural communication and joint attention deficits
- Impaired emotional responsiveness
- Language delays/deviance
- Lack of imitation
- Lack of symbolic play
- Repetitive behaviors
- Atypical sensory responses



*Charman et al 1998; Johnson et al., 1992; Stone et al., 1997, 1998  
Lord et al., 1995 1997; Wetherby et al 1998; Cox et al., 1999  
Rogers et al., 2003, 2004*



- [http://www.youtube.com/watch?feature=player\\_embedded&v=QMyJoOIqoQI](http://www.youtube.com/watch?feature=player_embedded&v=QMyJoOIqoQI)

# Preschool Children

- Limited communication
- Toilet training
- Limited symbolic play
- Avoid social interactions, especially with peer
- Stereotypic and repetitive behavior

# School-Age Children

- Social skills
  - Initiating and responding
  - Social routines
- Emotional and Self Organization
  - Awareness of feeling/emotions
  - Strategies for dealing with anxiety
- Communication
  - Critical importance of establishing a communication system

# High School and Adolescence

- More complex organizational and social environment
- Mental health issues
  - Social anxiety
  - Depression
- Puberty and sexuality
- Transition



OAR Video Clip

# Autism Rhetoric

Art by William



Well honey, you *did* tell him to keep his eye on the ball...

Write the following words in **alphabetical order**  
(the order they come in the alphabet)

A B C D E F G H I J K L M N O P Q R S T U V W X

~~apple~~

pumpkin

log

river

fox

pond

1. apple

2. fox

3. log

4. pond

5. river

6. pumpkin

# Difficulty in Planning Programs

- ASD Varies Across Age and Functioning Level
- Functioning Level
  - Intellectual disability
  - Severity of Autism Characteristics
- Age Level
  - Early Childhood/Elementary School
  - High School

# Autism Screening for School Use

- **At early age**
  - MCHAT
- **At preschool and school-age**
  - Social Communication Questionnaire
  - ASIEP-3 (Ages 2-13)
    - Autism Behavior Checklist
- **High functioning and older students**
  - Childhood Autism Syndrome Test
  - Autism Spectrum Screening Questionnaire

<http://www.uptodate.com/contents/screening-tools-for-autism-spectrum-disorders>

# Assessment for Eligibility Purposes

*“Core battery” recommended (Ozonoff, Goodlin-Jones, and Solomon, 2005):*

- developmental history
- current functioning in all contexts
- diagnostic testing of the child to assess characteristics of autism
- assessment of (a) cognition, (b) communication/language, and (c) adaptive behavior.

# Assessment for Educational Programming

- Purposes
  - Identification of IEP objectives
  - Document current level of functioning
  - Ongoing progress monitoring (more tomorrow about this)
- Assessment information can come from several sources
  - Direct assessment of students
  - Observations of students in current and future settings
  - Reports from parents

# Examples of Assessments

Assessment	Age Level	Information
ASIEP-3 (Krug, Alrick, & Almond, 2008)	Preschool-Elementary	Receptive Language, expressive language, body concept, speech imitation
Assessment of Basic Language and Learning Skills (ABLIS-R) (Partington, 2006)	Preschool- Elementary	Basic Learner Skills, Academics, Self-help, Motor
Psycho-educational Profile (PEP-3) (Schopler et al. 2005)	Preschool-Elementary	6 developmental abilities and 5 maladaptive behavior subtests
Adolescent and Adult Psycho-educational Profile (Mesibov et al., 1988)	High School	6 functional areas
Underlying Characteristics Checklist (Aspy & Grossman, 2008)	Preschool-High School	Sensory characteristics (part of Ziggurat Model)

# Detecting Concerns and Supporting Families

Listen to parents and other caregivers

- 75% of time parents express concerns, they are right (Glascoe, 2000).
- Accurate regardless of level of education or parenting experience (Squires & Bricker, 1999).
- By time parents express concerns, they've already tried “wait and see”

"I didn't suspect anything when my son was a baby, he had eye contact and laughed and was happy etc. Met all physical milestones on time or was ahead! BUT...now if I look at video his autism was VERY apparent! Yes, he had eye contact but it wasn't the same eye contact that his brothers had as babies his brothers would SEEK OUT eye contact from other people. My son could look you in the eye if your eyes met, but he would never seek out eye contact. Also...at 2 and 3 months old he could lie under the ceiling fan forever, just staring at it happily. My other two boys would get bored quickly with things like that and preferred looking at faces etc. In hindsight there were many signs, I just didn't know what to look for!"

“I started to worry about my son at 10 months old. He just wouldn't look at either me or my husband when we held him facing us. Also I could call his name over and over and he wouldn't respond. He liked to flick pages in books rather than look at the pictures. No reciprocal smile, no babbling. Was late with milestones but was still within the range I believe. No joint attention, wouldn't ever try to get my attention. Was more interested in objects. Lack of facial expression. I could go on, but they were the main ones that got me googling and worrying.”

“I think that for my son in particular there was always a disconnect with his I Q and his other deficits that he had. The teachers, even though they knew his diagnosis would see him as more capable than he actually was, or that they would see him as lazy, or stubborn, or whatever you know, or I was too coddling. “

# Take Action: Approaching Families about Concerns

## Special/General Educator

- Talk about strengths and things student can do.
- Assure family that you are familiar with the student and have closely observed the student's behavior.
- Remain objective "This is what I have observed", but show warmth and caring.
- Describe behaviors when talking to parents and highlight any they also have mentioned.
- Be clear but avoid highly charged words (e.g., antisocial, behavior problem).
- You can say, "I understand you may not see some of these types of behaviors at home because it is a different setting, here's what I see at the at preschool or in the classroom.
- Do a lot of listening. Try not to pass judgment
- Consider cultural differences & sensitivities

# **Take Action: Approaching Families about Concerns**

## **Administrator/consultant**

- Assure teacher/educator understands family dynamics and cultural implications of information presented.
- Caution them about “talking too much” rather than listening.
- Practice developing a script with teacher/educator prior to discussion with family.
- Assist teacher or educator to develop a plan for next steps to explore with parents.

# **Learning Activity: Supporting Families Who Have Concerns About ASD**

- Work in groups at table
- Select one of the Learning Activities:

**Mom's Concerns**

or

**Regular Education Teacher's Concerns**

- Read description and read questions.
- As a group discuss and answer questions.

63<sup>RD</sup> CONFERENCE ON EXCEPTIONAL CHILDREN

# Believing In Achieving

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## Using Evidence Based Practices in Quality Programs for Students with ASD

Sam Odom

Suzanne Kucharczyk

Evelyn Shaw





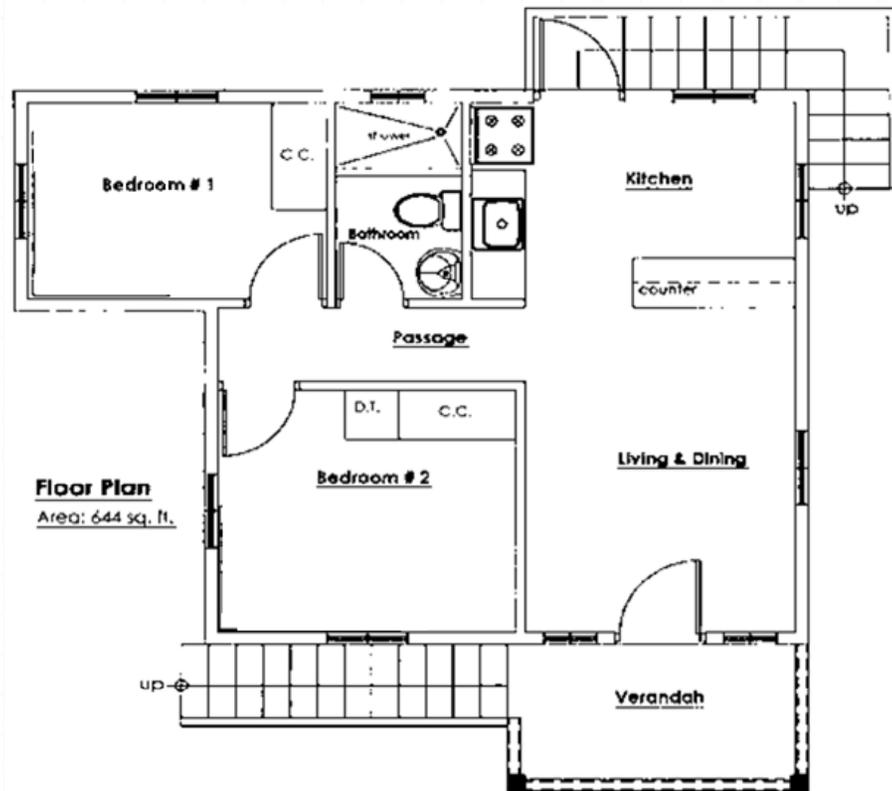
# Program Quality



# Program Quality Indicators and Evidence-Based Practices (EBP)

## Program Quality

- Contextual features of the program that represent best practices
- Program quality as the house in which practices are employed





# Autism Program Environment Rating Scale (APERS)

- o Designed to assess *quality indicators of programs* for children and youth with ASD
- o Purposes of the APERS
  - o Coaching & Consultation
  - o Professional development
  - o Program evaluation

# Features of APERS

- o Three APERS formats:
  - o Preschool/Elementary
  - o Middle/High School
  - o Early intervention (Infant/Toddler)
- o Organized by domains and subdomains
- o Applicable in self-contained and inclusive programs
- o Scored on a five-point scale with behavioral anchors at three points
- o Results can be summarized by scores or graphs

**Interdisciplinary  
Teaming**

**Program Ecology**

Learning Environment

Structure & Schedule

Positive Learning Climate

Curriculum & Instruction

Communication

Social Competence

Personal Independence

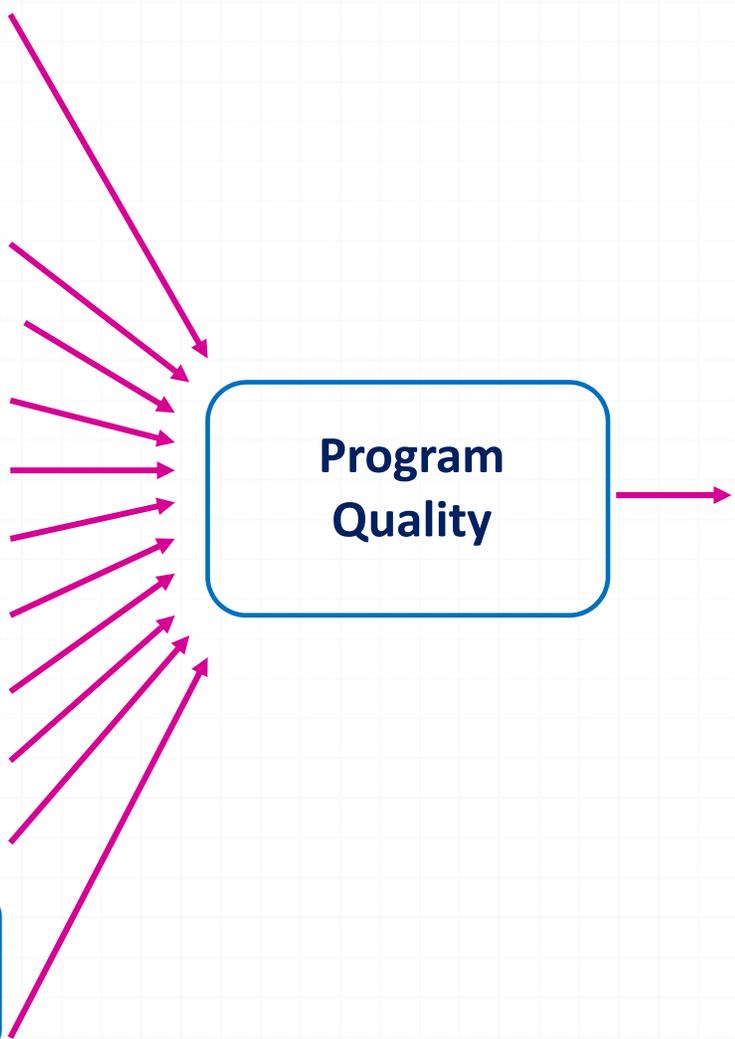
Functional Behavior

Assessment & IEP

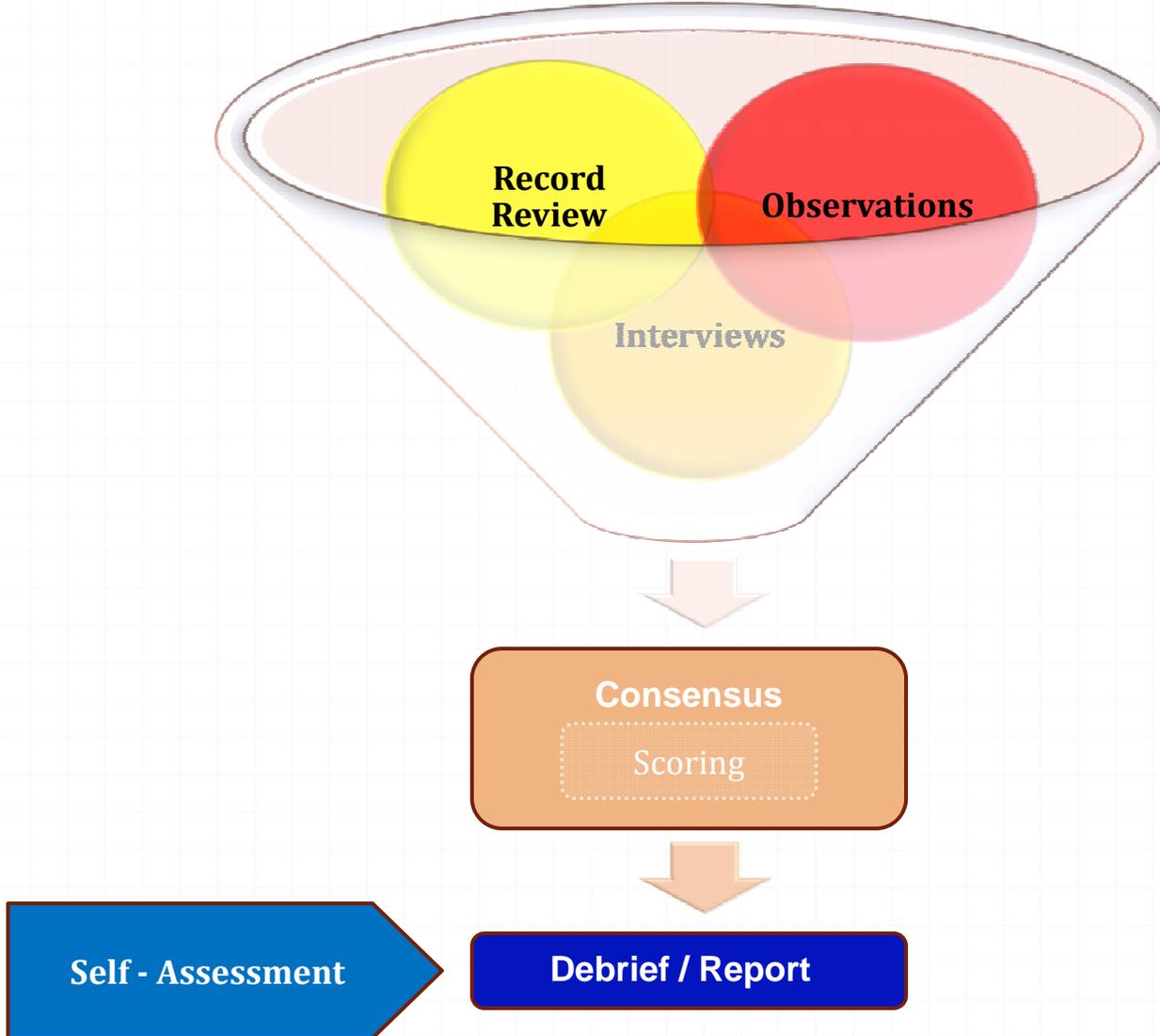
**Family  
Participation**

**Program  
Quality**

**Learner  
Outcomes**



# APERS Process



# **APERS Practice Videos**

***Preview Item 25 (PE)***



TCR 01:09-20:16  
PLAY LOCK



TCR 01:12:35:16  
PLAY LOCK



TCR 13:25 - 00:18  
PLAY LOCK

# **APERS Practice Videos**

*Score Items 39, 40 (PE)*

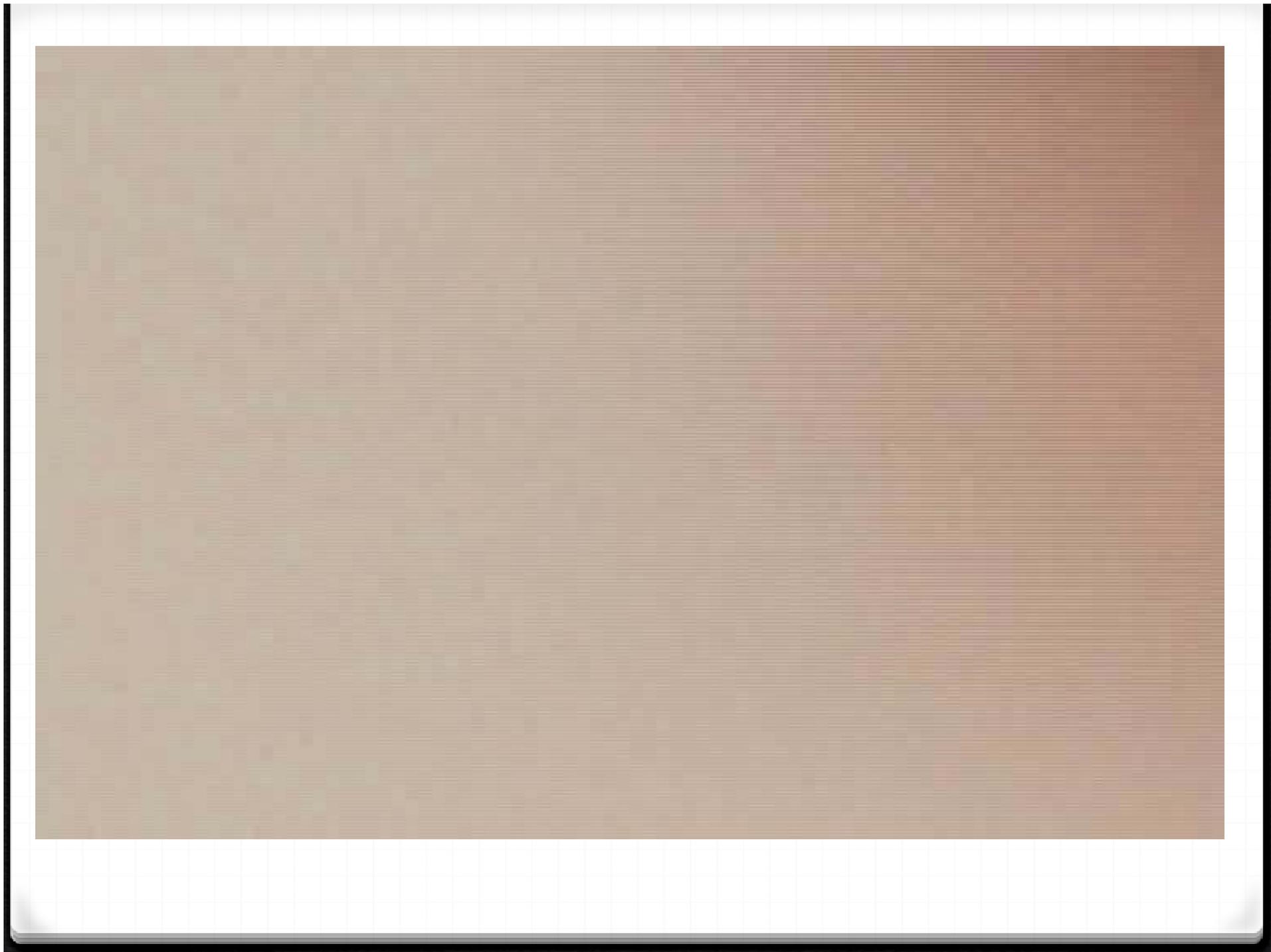
*Preview Items 24, 27, 28, 29 (MHS)*



# APERS Practice Videos

*Score Items 24, 27, 28, 29 (MHS)*

*Preview Item 39-I and 43-I (PE)*



# An APERS Report

- “What is the APERS and how does it work?”
  - Not for comparison between programs
  - Psychometric properties not yet established
  - Effective as a tool for professional development and technical assistance
- Program Strengths
  - General strengths and specific examples
- Areas for Growth
  - Priorities areas to focus change
  - Only choose areas that you have a constructive suggestion for change and growth

# APERS Report



# APERS - Professional Development Plan

In Groups of 2 or 3

- Identify priority strength
- Identify 2 priority areas of improvement
- Develop a 3 - 4 step professional development plan for addressing priority areas of improvement

# Self-Assessment

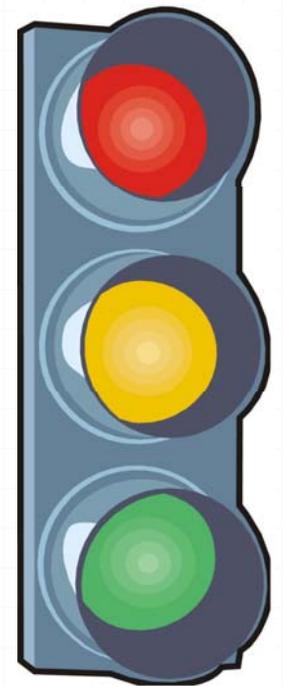


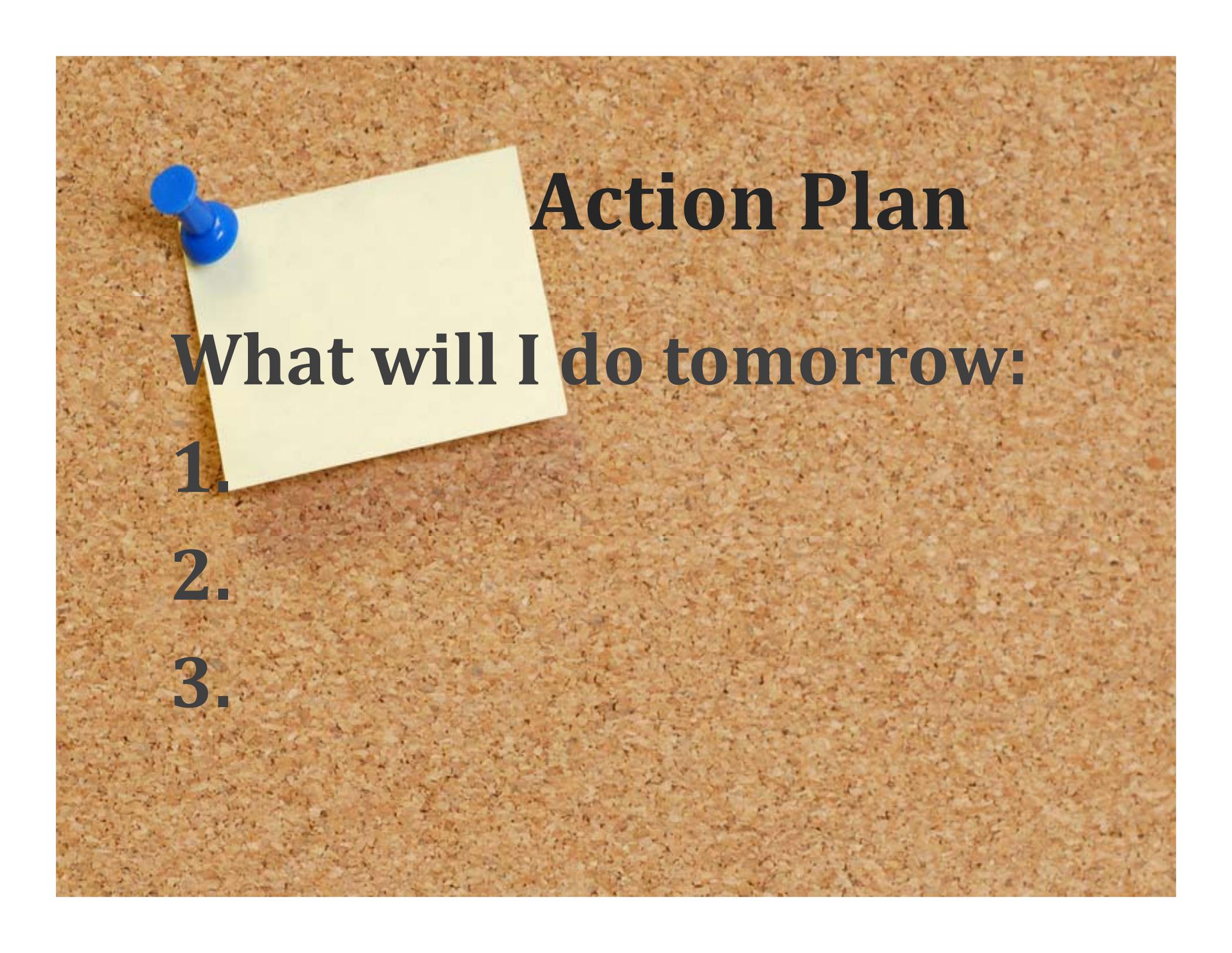
# APERS - Self-Assessment

- Complete the APERS self-assessment
  - For your program or a program you know well
  - Identify strengths and areas to work on
- Pay attention to:
  - How domains are covered by the questions.

# Self – Assessment Professional Development Plan

- o What do I/my team need to
  - o Stop doing
  - o Continue doing
  - o Start doing
- o What do I/my team need to learn?
- o What resources do I/we have?
- o What resources do I/we need?
- o Who can coach me/us through implementation?





# Action Plan

What will I do tomorrow:

1.

2.

3.

63<sup>RD</sup> CONFERENCE ON EXCEPTIONAL CHILDREN

# Believing In Achieving

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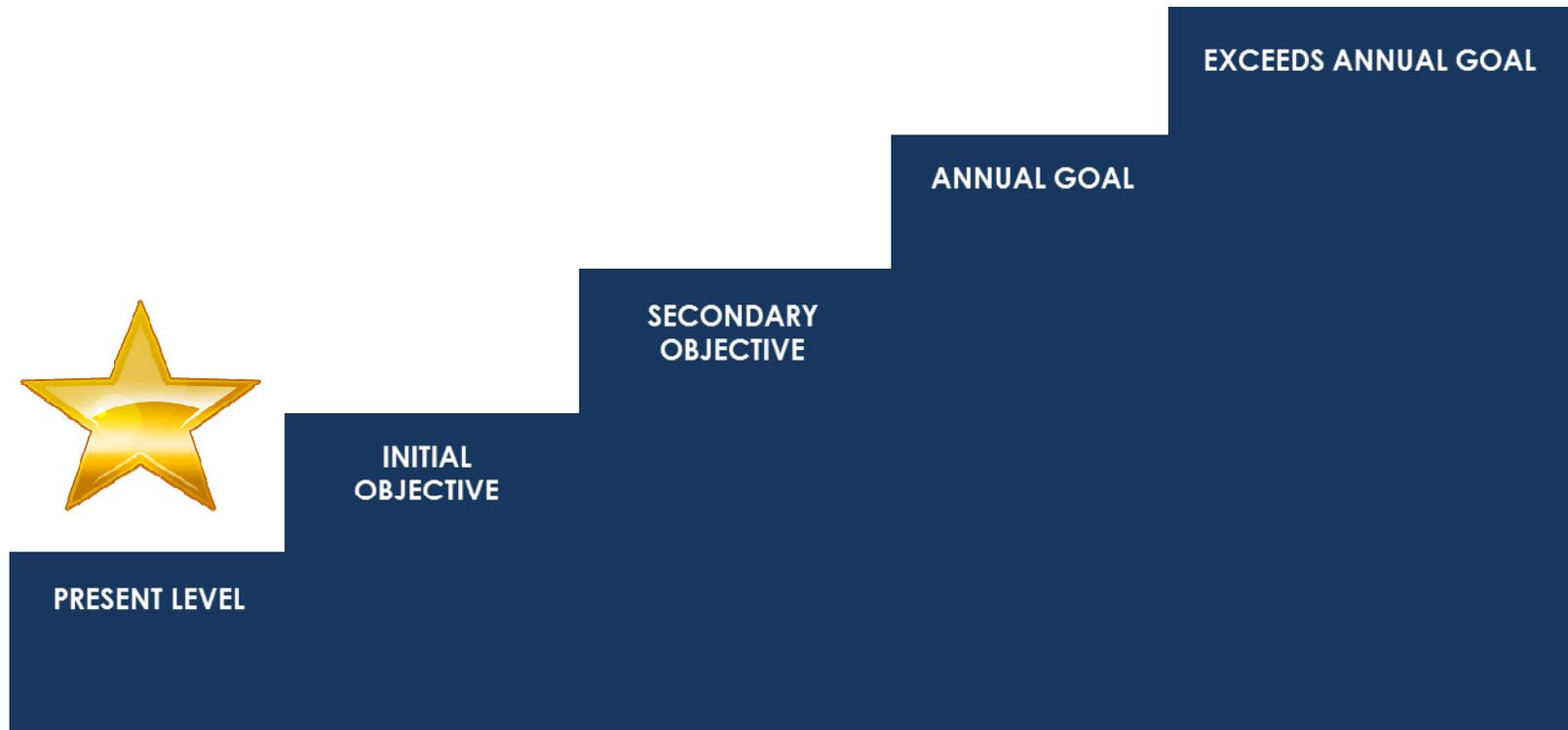


## Monitoring Student Progress with **Goal Attainment Scaling**

GOAL ATTAINMENT SCALE		
0	PRESENT LEVEL OF PERFORMANCE (BASELINE)	
1	INITIAL OBJECTIVE	
2	SECONDARY OBJECTIVE	
3	ANNUAL GOAL	
4	EXCEEDS ANNUAL GOAL	



# Goal Attainment Scaling



# Objectives

- Design high quality goals and objectives for students with ASD
- Create goals related to the specific educational needs of students with ASD (e.g., social, behavior, communication)
- Establish Goal Attainment Scales for students with ASD
  - Create benchmarks that document progress for students with ASD
  - Organize benchmarks into an assessment for attaining goals
- Design data collection systems for assessing student performance related to benchmarks

# TRAINING TOPICS

**SECTION 1:** Introduction to Goal Attainment Scaling

**SECTION 2:** Foundational components to Goal Attainment Scaling

**SECTION 3:** Steps in the Goal Attainment Scaling process

**SECTION 4:** Quality indicators for Goal Attainment Scaling

# SECTION 1: INTRODUCTION TO GOAL ATTAINMENT SCALING

For more than 30 years, educators have struggled with the limitations of traditional assessment methods for monitoring the quality and impact of educational programs of children with disabilities.

“General curriculum based measurement, also pose limitations due to a lack of standards for the nonacademic skills often central to the special education curriculum.”

(Ruble et al. 2012)

# An IEP Problem

High school student TW – age 16  
– has 9 IEP goals in 5  
developmental domains with 4  
benchmarks each



How does the team assess all  
of these skills?

At an annual IEP meeting,  
Mom asks,

“How much progress  
has my son made this year?”

How can educators easily  
summarize?

# A Systemic Problem

School district funds program to support 36 students in inclusive education efforts at Washington High School.

End of the year, a Resource Teacher is asked to summarize progress made across 36 students to compare against progress made by center based students at another high school.

How can the Resource Teacher easily summarize group progress?



**“Alternative measurement approaches  
are necessary and crucial for monitoring progress  
and measuring outcomes of essential skills for  
students in special education, such as those with  
autism.”**

*(Ruble et al. 2012)*

# A Solution!

## Goal Attainment Scaling (GAS)

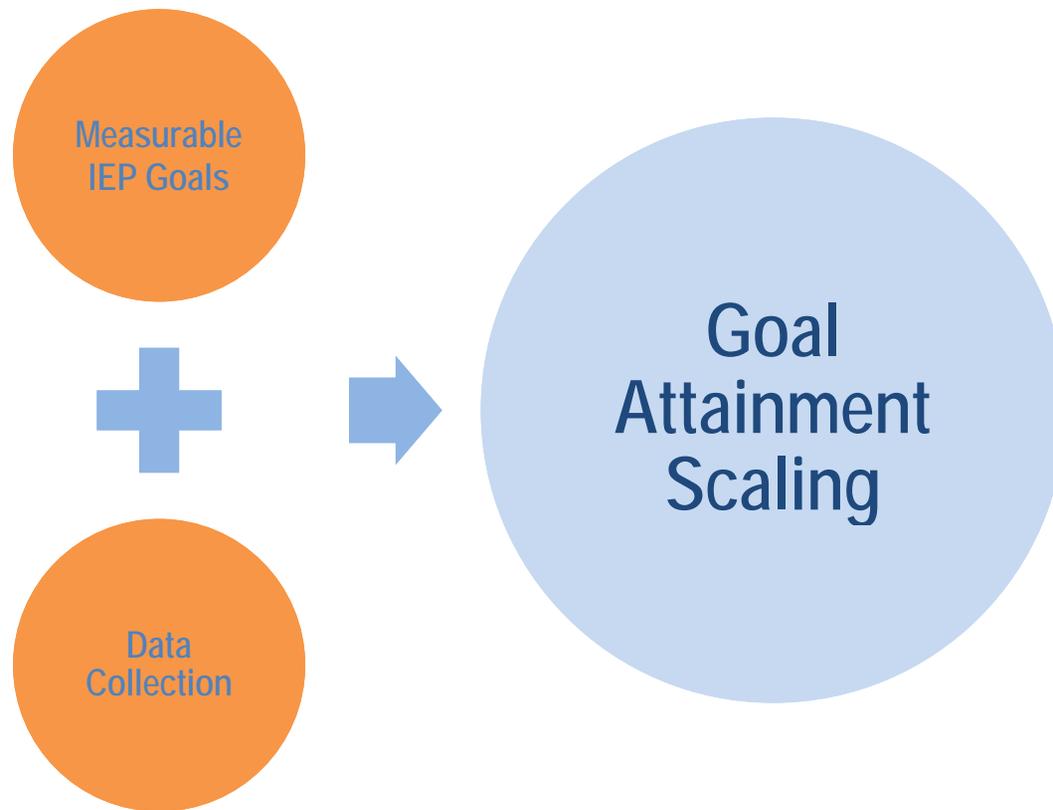


GAS is a tool to help assess and progress monitor fundamental curriculum targets essential to the success of many special education students, such as social-communication, adaptive, vocational, and behavioral skills.

# What is Goal Attainment Scaling?

- a method for measuring amount of progress made on a goal, objective, or benchmark
- compatible with measurable IEP goals
- allows progress to be easily summarized across multiple goals, domains, or students
- supports intervention design and implementation
- used **in conjunction with objective** measurement and data collection procedures

# SECTION 2: FOUNDATIONAL COMPONENTS TO G.A.S. DEVELOPMENT



# Advantages of Measurable IEP Goals

A measurable IEP goal is not only also necessary for appropriate GAS development and use. Other advantages of well-written goals include:

- help teams pinpoint curriculum priorities for students
- provide foundation for accurate progress monitoring
- guide intervention development and evaluation
- are legally defensible

# Components of a Measurable IEP Goal

<u>Antecedent</u>	<u>Behavior</u>	<u>Criteria</u>
<ul style="list-style-type: none"><li><input type="checkbox"/> Setting</li><li><input type="checkbox"/> With whom</li><li><input type="checkbox"/> Supports provided</li><li><input type="checkbox"/> High vs. low structure</li><li><input type="checkbox"/> Academic, social, transition, etc.</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Specific</li><li><input type="checkbox"/> Observable</li><li><input type="checkbox"/> Measurable</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> # of times</li><li><input type="checkbox"/> Amount of time</li><li><input type="checkbox"/> Percent</li><li><input type="checkbox"/> Consistency</li><li><input type="checkbox"/> Data collection method</li></ul>
<p><i>“When this event occurs,</i></p>	<p><i>the learner will do this behavior(s),</i></p>	<p><i>at this rate or level of proficiency.”</i></p>

# GOAL EXAMPLE: ANDREW

Which goal is a highly measurable goal?

## GOAL EXAMPLE 1:

Andrew will socialize more with peers.

## GOAL EXAMPLE 2:

During a peer network activity with visual scripts, Andrew will initiate conversations with at least 2 peers, 4 out of 5 opportunities.

# A Highly Measurable Goal

---

## Antecedent

## Behavior

## Criteria

During a peer network  
activity with visual  
scripts,

Andrew will initiate  
conversations with at  
least 2 peers,

4 out of 5 opportunities.

# DATA COLLECTION FOR ANDREW'S GOAL:

**During a peer network activity with visual scripts, Andrew will initiate conversations with at least 2 peers, 4 out of 5 opportunities.**

*Tracking Andrew's conversation initiations with peers weekly*

---

Session Date	Brian	Josh	Adam	Luke
1/15	-	-	-	-
1/22	-	+	-	-
1/29	-	+	-	+
2/5	-	+	+	-
2/12	-	+	-	+

**GOAL EXAMPLE:  
JOSEPH**

**GOAL EXAMPLE 1:**

Joseph will appropriately transition into the classroom.

**GOAL EXAMPLE 2:**

Before Math and Science classes start, Joseph will independently follow all 6 steps of a transition routine (task analysis) without interfering behaviors, 4 out of 5 days.

# A Highly Measurable Goal

<b>Antecedent</b>	<b>Behavior</b>	<b>Criteria</b>
Before Math and Science classes start,	Joseph will independently follow all 6 steps of a transition routine (task analysis) without interfering behaviors,	4 out of 5 days.

# DATA COLLECTION: JOSEPH'S GOAL

**Before Math and Science classes start, Joseph will independently follow all 6 steps of a transition routine (task analysis) without interfering behaviors, 4 out of 5 days.**

*Tracking Joseph's transition tasks daily, before math and science classes*

Steps	Day 1	Day 2	Day 3	Day 4	Day 5
Math/Science text book	-	-	+		
Math/Science workbook	-	+	+		
Pencil or pen	+	+	+		
Paper for notes	-	-	-		
Walk to class	-	-	-		
Sit at desk quietly	-	-	-		

# Guidelines for Writing Goals

1. Write **annual** IEP Goals relative to present levels of performance.
2. Include **antecedent, behavior, and criteria** components.
3. Target **across domains**: Communication, socialization, adaptive, academic, basic learning skills, motor, & problem behavior.
4. Determine appropriate **data collection** procedures that are practical and easy to use.

# GAS LEARNING ACTIVITY 1:

## Are the IEP Goals Measurable?

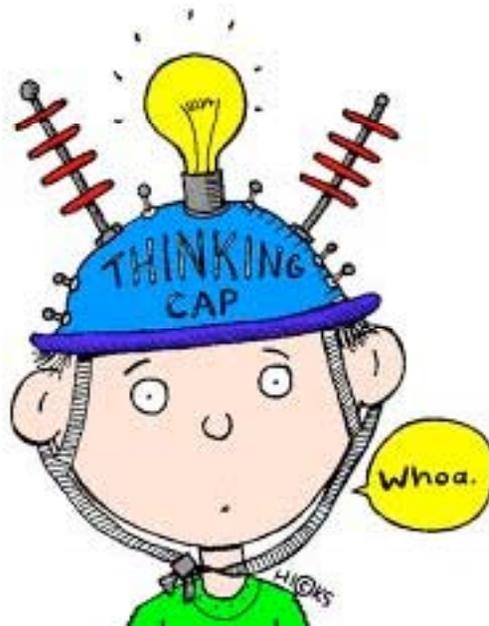
- **Step 1:** Randomly select 3 to 4 IEP goals (across different skill areas) from the sample student IEPs given
- **Step 2:** Assess the presence or absence of measurable goal components for each goal
- **Step 3:** Revise at least 1 – 2 goals that are not measurable using the A-B-C format just described.
- **Step 4:** Discuss a data collection tool to match each the revised IEP Goals.

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<b>Antecedent</b>	<b>Behavior</b>	<b>Criteria</b>
Present or Absent	Present or Absent	Present or Absent

# GOAL ATTAINMENT SCALING PROCESS

Now that you've assessed IEP goals and practiced writing measurable IEP goals, let's apply the GAS process.



## **CASE EXAMPLE: ERIK**

### Applying the GAS process

#### **Meet Erik:**

Erik is a high school student with autism, who is included in the general education curriculum

Erik's general education teachers are somewhat frustrated with Erik, because he asks an excessive number of off-topic yes/no questions during class. This disrupts class, and is annoying to both teachers and peers.

#### **Questions include:**

*Do you still like me—yes or no?*

*Do you like my shirt today—yes or no?*

*Are you mad at me—yes or no?*

**CASE EXAMPLE:  
ERIK**

**Applying the GAS  
process**

Erik senses that he may be irritating those around him, but doesn't know what to do.

Erik talks about this with his parents, who see Erik's excessive yes/no questions as an impediment to Erik's successful inclusion.

Erik, his parents, teacher, paraprofessional, and therapists met and chose the following annual goal as a priority for the year:

**Given visual prompts, Erik will ask teachers at least 2 on topic and less than 2 off topic questions during the class period across one week of data.**

**CASE EXAMPLE:  
ERIK**

Applying the GAS  
process

The classroom team took data for five consecutive days in Erik's biology class and determined that on average, Erik asks 41 off-topic yes/no questions and 0 on-topic questions every class period.

**Review IEP goal:**

**Given visual prompts, Erik will ask teachers at least 2 on topic and less than 2 off topic questions during the class period across one week of data.**

## GAS: SCALING ERIK'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	Erik asks teachers 41 off topic and 0 on topic questions during a class period.
<b>1</b>	INITIAL OBJECTIVE	Given visual prompts, Erik will ask teachers no more than 10 questions (on or off topic) during a class period across one week of data.
<b>2</b>	SECONDARY OBJECTIVE	Given visual prompts, Erik will ask teachers no more than 5 questions (on or off topic) during a class period across one week of data.
<b>3</b>	ANNUAL GOAL	Given visual prompts, Erik will ask teachers at least 2 on topic and less than 2 off topic questions during the class period across one week of data.
<b>4</b>	EXCEEDS ANNUAL GOAL	Given visual prompts, Erik will ask teachers at least 2 on topic questions and no off topic questions during the class period across one week of data.

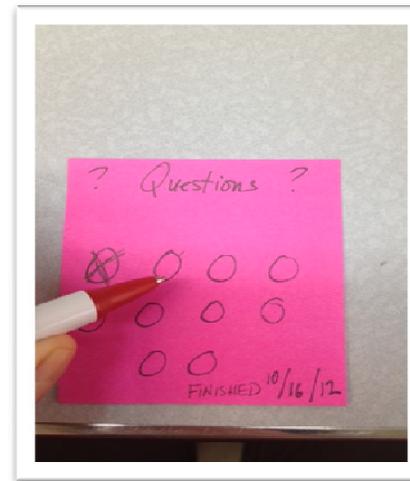
# GAS: SCALING ERIK'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	Erik asks teachers 41 questions off topic during a class period..
<b>1</b>	INITIAL OBJECTIVE	10 questions (on or off topic) + visual supports
<b>2</b>	SECONDARY OBJECTIVE	5 questions (on or off topic) + visual supports
<b>3</b>	ANNUAL GOAL	Given visual prompts, Erik will ask teachers at least 2 on topic and less than 2 off topic questions during the class period across one week of data.
<b>4</b>	EXCEEDS ANNUAL GOAL	2+ on topics and 0 off topics + visual supports

**CASE EXAMPLE:  
ERIK**

Erik's Data

*It could be as easy as using a sticky note!*

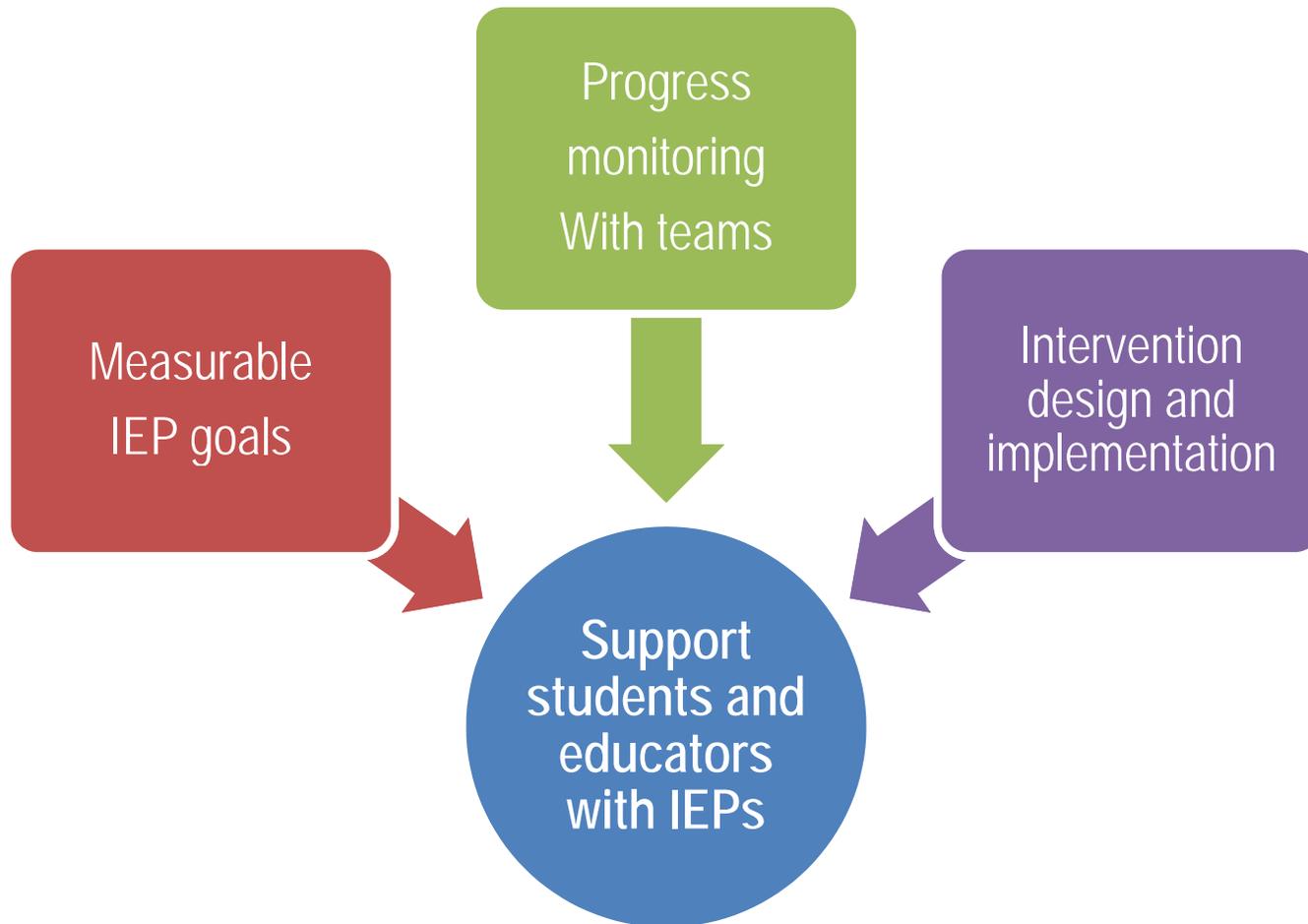


Erik's team decided that if he asks less than 10 questions in a class period, then he can access a reward choice associated with his self-management system.

# DATA COLLECTION: ERIK'S GOAL

Date	Monday	Tuesday	Wednesday	Thursday	Friday
10/7/12	?: +10 Reward: N	?: 6 Reward: Y	?: 9 Reward: Y	?: +10 Reward: N	?: +10 Reward: N
10/14/12	?: +10 Reward: N	?: 5 Reward: Y	?: _____ Break Y/N	?: _____ Break Y/N	?: _____ Break Y/N
	?: _____ Break Y/N				
	?: _____ Break Y/N				

# Essential Elements for GAS



# **SECTION 3: STEPS IN THE GAS PROCESS**

Step 1: Review IEP Goals

Step 2: Determine Present Levels Of Performance

Step 3: Develop Each Goal Into A Goal Attainment Scale

Step 4: Intervene And Evaluate

# **GAS Process Step 1. Review IEP Goals**

Review the student's IEP goals with teacher, parents, student, and others as necessary.

- Identify priority goals or skills to target.
  - must be area of focus for entire school year
  - must be observable and measurable
  - must be agreed on by family, team, and student
- Make modifications to IEP goals as needed (case conference or addendum).

## **GAS Process Step 2. Determine present levels of performance**

Carefully ensure that present levels are:

- highly observable and measurable
- accurate, using clear procedures for measurement (to be used all year)
- Reflect the level of performance for the target behavior
- Include any current prompting strategies, settings, persons, materials, etc. that may affect present levels of performance.
- Make your data easy to collect and meaningful.

# GAS Process Step 3. Develop A Goal Attainment Scale (GAS)

Filling out a GAS form:

- Write the **present level of performance**.
- Write the **annual goal**.
- Determine the **initial objective**.
- Determine the **secondary objective**.
- Determine the **exceeds annual goal objective**.

GOAL ATTAINMENT SCALE		
0	PRESENT LEVEL OF PERFORMANCE (BASELINE)	
1	INITIAL OBJECTIVE	
2	SECONDARY OBJECTIVE	
3	ANNUAL GOAL	
4	EXCEEDS ANNUAL GOAL	

# **GAS Process Step 4. Implement Interventions Using GAS**

The final step of the GAS process is implementing interventions while using the GAS to guide and evaluate those interventions.

**CASE EXAMPLE:  
Tony**

**Meet Tony:**

Tony is an almost 5 year old in a preschool classroom for children with disabilities:

- GAS Team consists of most IEP Team members
- Team reviewed the IEP and determined that Tony's aggressive behaviors remain a priority
- Present levels were determined:  
  
**“Aggresses when given a task he does not want to do. Is difficult to motivate. Does not have a more appropriate way to communicate refusals.”**
- Team develops the GAS . . . . .

## GAS: SCALING TONY'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	Aggresses when given a task he does not want to do. Is difficult to motivate. Does not have a more appropriate way to communicate refusals.
<b>1</b>	INITIAL OBJECTIVE	
<b>2</b>	SECONDARY OBJECTIVE	
<b>3</b>	ANNUAL GOAL	
<b>4</b>	EXCEEDS ANNUAL GOAL	

## GAS: SCALING TONY'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	Aggresses when given a task he does not want to do. Is difficult to motivate. Does not have a more appropriate way to communicate refusals.
<b>1</b>	INITIAL OBJECTIVE	
<b>2</b>	SECONDARY OBJECTIVE	
<b>3</b>	ANNUAL GOAL	When presented with a task menu, visual cues, and opportunity to earn a reward, Tony will complete <u>four</u> 2-3 min. tasks each day w/out aggression across 2 weeks.
<b>4</b>	EXCEEDS ANNUAL GOAL	

## GAS: SCALING TONY'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	Aggresses when given a task he does not want to do. Is difficult to motivate. Does not have a more appropriate way to communicate refusals.
<b>1</b>	INITIAL OBJECTIVE	Task menu, choice board, and visual cues : <u>One</u> 2-3 min task each day w/out aggression across 2 weeks
<b>2</b>	SECONDARY OBJECTIVE	
<b>3</b>	ANNUAL GOAL	When presented with a task menu, visual cues, and opportunity to earn a reward, Tony will complete <u>four</u> 2-3 min. tasks each day w/out aggression across 2 weeks.
<b>4</b>	EXCEEDS ANNUAL GOAL	

## GAS: SCALING TONY'S GOAL

<p><b>0</b></p>	<p>PRESENT LEVEL OF PERFORMANCE (BASELINE)</p>	<p>Aggresses when given a task he does not want to do. Is difficult to motivate. Does not have a more appropriate way to communicate refusals.</p>
<p><b>1</b></p>	<p>INITIAL OBJECTIVE</p>	<p>Task menu, choice board, and visual cues : <u>One</u> 2-3 min task each day w/out aggression across 2 weeks</p>
<p><b>2</b></p>	<p>SECONDARY OBJECTIVE</p>	<p>Task menu, choice board, and visual cues : <u>Three</u> 2-3 min tasks each day w/out aggression across 2 weeks</p>
<p><b>3</b></p>	<p>ANNUAL GOAL</p>	<p>When presented with a task menu, visual cues, and opportunity to earn a reward, Tony will complete <u>four</u> 2-3 min. tasks each day w/out aggression across 2 weeks.</p>
<p><b>4</b></p>	<p>EXCEEDS ANNUAL GOAL</p>	

## GAS: SCALING TONY'S GOAL

<p><b>0</b></p>	<p>PRESENT LEVEL OF PERFORMANCE (BASELINE)</p>	<p>Aggresses when given a task he does not want to do. Is difficult to motivate. Does not have a more appropriate way to communicate refusals.</p>
<p><b>1</b></p>	<p>INITIAL OBJECTIVE</p>	<p>Task menu, choice board, and visual cues : <u>One</u> 2-3 min task each day w/out aggression across 2 weeks</p>
<p><b>2</b></p>	<p>SECONDARY OBJECTIVE</p>	<p>Task menu, choice board, and visual cues : <u>Three</u> 2-3 min tasks each day w/out aggression across 2 weeks</p>
<p><b>3</b></p>	<p>ANNUAL GOAL</p>	<p>When presented with a task menu, visual cues, and opportunity to earn a reward, Tony will complete <u>four</u> 2-3 min. tasks each day w/out aggression across 2 weeks.</p>
<p><b>4</b></p>	<p>EXCEEDS ANNUAL GOAL</p>	<p>Task menu, choice board, and visual cues: <u>Six</u> 2-3 min tasks each day w/out aggression across 2 weeks</p>



# GAS SCALING EXAMPLES

<b>Dimension Examples</b>	<b>Skill frequency</b>	<b>Prompting form</b>	<b>Context</b>	<b>Person</b>
<b>0</b>	Performs skill 0 out of 10 opportunities	Requires full physical prompts	Infrequently performs skill at home	Does not display skill with anyone at school
<b>1</b>	Performs skill 2 out of 10 opportunities	Requires partial physical prompts	In SDC classroom	Performs skill in 1:1 counseling sessions
<b>2</b>	Performs skill 4 out of 10 opportunities	Requires gesture prompts	In general education math class	Performs skill with peers in small group
<b>3</b>	Performs skill 6 out of 10 opportunities	Requires gesture and visual prompts	In general education science class	Performs skill with familiar peers in natural settings
<b>4</b>	Performs skill 8 out of 10 opportunities	Independent with visual prompts	In general education language arts class	Performs skill with unfamiliar peers in natural settings

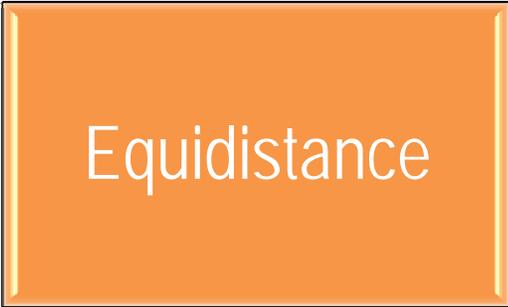
# SECTION 4: QUALITY INDICATORS FOR G.A.S. SCORING



Measurability



Difficulty



Equidistance

# Scoring GAS Quality

## Measurability

- ① None or only one indicator (**prompt level, criterion for success, observable skill**) is described
- ② Two of the three indicators are described
- ③ All three indicators are described; type and frequency of prompting levels noted.

(Ruble et al. 2012)

# Measurability

Example	GAS Scale	Non-example
Andrew does not initiate conversations with his peers during social situations.	Present level of performance (Baseline)	Andrew does not have conversations with other people.
With staff support (verbal and/or visual reminders), Andrew will verbally initiate conversations with his peers during social situations 4/5 times.	Initial objective	Andrew will begin having short conversations with peers.
With visual supports only, Andrew will verbally initiate conversations with his peers during social situations 4/5 times.	Secondary objective	Andrew will have extended conversations with peers.
When initiating a conversation, Andrew will increase his pool of conversation starters to 15, utilizing one of these 15 starters 4/5 times.	Annual goal	Andrew will have conversations with adults.
Andrew will independently initiate a conversation with his peers 4/5 times.	Exceeds annual goal	Andrew will have conversations with community members.

# Scoring GAS Quality

## Difficulty

- ① The **annual goal** describes a skill that closely resembles **present levels** of performance
- ② **Present levels** indicate that the student performs the **annual goal** in limited ways (some people, prompts, places) already
- ③ **Present levels** indicate that the student is unable to perform the **annual goal** with anyone, anywhere, or with any prompts

(Ruble et al. 2012)

# Difficulty

Example	GAS Scale	Non-example
In a group setting, Andrew tends to fixate on an individual making that individual feel uncomfortable.	Present level of performance (Baseline)	Andrew only makes occasional eye contact in group settings with familiar people.
With staff prompts, Andrew will make appropriate eye contact with individuals in a group and not fixate on just one person across a 10-minute period.	Initial objective	With visual prompts, Andrew will make appropriate eye contact with individuals in a group across a 3-minute period.
With visual prompts, Andrew will make appropriate eye contact with individuals in a group across a 10-minute period.	Secondary objective	With visual prompts, Andrew will make appropriate eye contact with individuals in a group across a 6-minute period.
In a group setting, with no more than 2 prompts, Andrew will make appropriate eye contact with individuals in a group across a 10-minute period.	Annual goal	With visual prompts, Andrew will make appropriate eye contact with individuals in a group across a 9-minute period.
In a group setting, Andrew will independently make appropriate eye contact with members of a group across a 10-minute period.	Exceeds annual goal	With visual prompts, Andrew will make appropriate eye contact with individuals in a group across a 12-minute period.

# Scoring GAS Quality

## Equidistance

- ① None or only one indicator are equidistant in reference to the goal
- ② At least two indicators are equidistant in reference to the goal
- ③ All indicators are equidistant in reference to the goal

(Ruble et al. 2012)

# Equidistance

Example	GAS Scale	Non-example
Andrew does not stay on task when given assignments during his school day.	Present level of performance (Baseline)	Andrew does not stay on task when given assignments during his school day.
With constant staff support, Andrew will stay on task for 60% of a 10-minute interval, when given an assignment.	Initial objective	With constant staff support, Andrew will stay on task for 20% of a 10-minute interval, when given an assignment.
With no more than 3 prompts, Andrew will stay on task for 70% of a 10-minute interval, when given an assignment.	Secondary objective	Andrew will independently stay on task for 80% of a 10-minute interval, when given an assignment.
With no more than 1 prompt, Andrew will stay on task for 80% of a 10-minute interval, when given an assignment.	Annual goal	Andrew will independently stay on task for 100% of a 10-minute interval, when given an assignment.
Andrew will independently stay on task for 80% of a 10-minute interval, when given an assignment.	Exceeds annual goal	Andrew will independently stay on task for 100% of a 20-minute interval, when given an assignment.

## **CASE EXAMPLE: JACK**

Assessing for  
measurability, difficulty,  
and equidistance

### Meet Jack:

Jack is a high school student with autism.

Most mornings when Jack arrives to school on the bus, he drops to the ground and refuses to get up. Jack's teacher and a paraprofessional have to pick up Jack and put him in a wheelchair and wheel him into the school and to the classroom.

Because of this behavior, Jack's teacher does not plan any opportunities for Jack outside of the classroom. Jack weighs over 200 pounds, and having to pick him up and move him is a safety concern for staff.

## **CASE EXAMPLE: JACK**

Assessing for  
measurability, difficulty,  
and equidistance

- Jack's father really wants Jack to get some experiences in the community. He is frustrated that Jack is not getting any opportunities to go outside the classroom.
- Jack's teacher and father agree it is important to focus on getting Jack's dropping behavior under control so that he can start attending community outings.

## GAS: SCALING JACK'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	Jack drops to the ground upon arrival and during various times throughout the day. When arriving at school, Jack has to be lifted into a wheelchair and wheeled to the classroom 9/10 days.
<b>1</b>	INITIAL OBJECTIVE	Visual prompts and choice board Walk to the classroom within 15 minutes 3 out of 5 days for 3 consecutive weeks.
<b>2</b>	SECONDARY OBJECTIVE	Visual prompts and choice board Walk to the classroom within 10 minutes 5 out of 5 days for 3 consecutive weeks.
<b>3</b>	ANNUAL GOAL	When arriving at a park site and given visual prompts and opportunity to earn a reinforcing activity, Jack will walk to the meeting area within 5 minutes of exiting the bus 5 out of 5 days for 3 consecutive weeks.
<b>4</b>	EXCEEDS ANNUAL GOAL	Visual prompts Walk to the classroom within 5 minutes 5 out of 5 days for 3 consecutive weeks.

# DATA COLLECTION: JACK'S GOAL

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	Monday	Tuesday	Wednesday	Thursday	Friday
reward selected	cookie	cookie	5 minutes of Computer	5 minutes of Computer	5 minutes of Computer
number of minutes	10	25	15	5	1

---

# **GAS ACTIVITY 2: Scaling your student's goals**

## **Step 1:**

Find a small group.

## **Step 2:**

Identify a target student.

## **Step 3:**

Identify a priority annual goal.

## **Step 4:**

Develop the GAS for the priority goal.

## **Step 5:**

Discuss practical data collection procedures, evidence-based practices, potential challenges, etc.

# Summary

## STEPS IN THE GAS PROCESS

- Step 1: Review IEP Goals
- Step 2: Determine Present Levels Of Performance
- Step 3: Develop Each Goal Into A Goal Attainment Scale
- Step 4: Intervene And Evaluate

# Summary

Well written, measurable IEP Goals include the following components:

## ANTECEDENT CONDITIONS

Specific circumstances, events, or instruction that will affect performance of the target behavior.

## OBSERVABLE BEHAVIOR

A target behavior that is defined in specific, observable terms.

## CRITERIA

How well the student must perform defined in a numerical expression.

# Summary

Time well spent . . .

A well-designed GAS can:

- guide practical data collection procedures
- map out a plan of action, intervention, and support
- identify key components needed in intervention, and
- support progress monitoring.

# Summary

**Goal Attainment Scaling Form**

Student Code: \_\_\_\_\_ GSESA Component: Select \_\_\_\_\_ Other IEP: Indict \_\_\_\_\_  
Date developed: \_\_\_\_\_ Developed by: \_\_\_\_\_

0	Present level of performance		Date
1	Initial Objective		Date
2	Secondary Objective		Date
3	Annual Goal		Date
4	Exceeds Annual Goal		Date

Notes: \_\_\_\_\_

 **CSESA**  
California State Education System  
California State Education System



Measurable IEP goals



Progress monitoring systems



Intervention design and implementation



# GOAL ATTAINMENT SCALING FORM

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	
<b>1</b>	INITIAL OBJECTIVE	
<b>2</b>	SECONDARY OBJECTIVE	
<b>3</b>	ANNUAL GOAL	
<b>4</b>	EXCEEDS ANNUAL GOAL	

# **ADDITIONAL GAS CASE EXAMPLES**

**CASE EXAMPLE:  
Sam**

**Meet Sam:**

Sam is a 7<sup>th</sup> grade student with autism who is included in general education classrooms for most of the day.

Sam's mom tells his teacher that she is worried because even though he spends most of his time in general education classrooms, his only real friends are other students with autism in the special education resource room.

Sam's teacher says that lots of Sam's typical peers try to interact with him, but Sam doesn't know how to respond.

## CASE EXAMPLE:

Sam

### Sam's annual goal

A paraprofessional in the general education classroom took data for 5 days to assess present levels. Peers initiated with Sam over 30 times, but Sam would just smile or laugh instead of responding verbally.

Sam's mom, teacher, paraprofessional, and therapists met and chose the following annual goal as a priority for the year:

When presented with a conversational attempt from a peer, Sam will respond and then continue the conversation by asking a follow-up question for 80% of opportunities over 3 consecutive days.

## GAS: SCALING SAM'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	When presented with a conversational attempt from a peer, Sam will respond and then continue the conversation by asking a follow-up question for 0% of opportunities over 3 consecutive days across 3 different peers.
<b>1</b>	INITIAL OBJECTIVE	
<b>2</b>	SECONDARY OBJECTIVE	
<b>3</b>	ANNUAL GOAL	
<b>4</b>	EXCEEDS ANNUAL GOAL	

## GAS: SCALING SAM'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	When presented with a conversational attempt from a peer, Sam will respond and then continue the conversation by asking a follow-up question for 0% of opportunities over 3 consecutive days across 3 different peers.
<b>1</b>	INITIAL OBJECTIVE	
<b>2</b>	SECONDARY OBJECTIVE	
<b>3</b>	ANNUAL GOAL	Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with no verbal prompts for 80% of opportunities over 3 consecutive data collection days.
<b>4</b>	EXCEEDS ANNUAL GOAL	

## GAS: SCALING SAM'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	When presented with a conversational attempt from a peer, Sam will respond and then continue the conversation by asking a follow-up question for 0% of opportunities over 3 consecutive days across 3 different peers.
<b>1</b>	INITIAL OBJECTIVE	Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with a visual script and no more than 2 verbal prompts for 80% of opportunities over 3 consecutive data collection days.
<b>2</b>	SECONDARY OBJECTIVE	
<b>3</b>	ANNUAL GOAL	Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with no verbal prompts for 80% of opportunities over 3 consecutive data collection days.
<b>4</b>	EXCEEDS ANNUAL GOAL	

## GAS: SCALING SAM'S GOAL

<p><b>0</b></p>	<p>PRESENT LEVEL OF PERFORMANCE (BASELINE)</p>	<p>When presented with a conversational attempt from a peer, Sam will respond and then continue the conversation by asking a follow-up question for 0% of opportunities over 3 consecutive days across 3 different peers.</p>
<p><b>1</b></p>	<p>INITIAL OBJECTIVE</p>	<p>Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with a visual script and no more than 2 verbal prompts for 80% of opportunities over 3 consecutive data collection days.</p>
<p><b>2</b></p>	<p>SECONDARY OBJECTIVE</p>	<p>Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with no more than 2 verbal prompts for 80% of opportunities over 3 consecutive data collection days.</p>
<p><b>3</b></p>	<p>ANNUAL GOAL</p>	<p>Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with no verbal prompts for 80% of opportunities over 3 consecutive data collection days.</p>
<p><b>4</b></p>	<p>EXCEEDS ANNUAL GOAL</p>	

## GAS: SCALING SAM'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	When presented with a conversational attempt from a peer, Sam will respond and then continue the conversation by asking a follow-up question for 0% of opportunities over 3 consecutive days across 3 different peers.
<b>1</b>	INITIAL OBJECTIVE	Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with a visual script and no more than 2 verbal prompts for 80% of opportunities over 3 consecutive data collection days.
<b>2</b>	SECONDARY OBJECTIVE	Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with no more than 2 verbal prompts for 80% of opportunities over 3 consecutive data collection days.
<b>3</b>	ANNUAL GOAL	Given a structured conversation time, Sam will respond to a conversational attempt by a peer and then ask a follow-up question with no verbal prompts for 80% of opportunities over 3 consecutive data collection days.
<b>4</b>	EXCEEDS ANNUAL GOAL	When presented with a conversational attempt from a peer, Sam will respond and then continue the conversation by asking a follow-up question for 80% of opportunities over 3 consecutive days across 3 different peers.

## **CASE EXAMPLE:**

### **Sam**

#### Sam's Data Collection

Sam's team sets up a conversation class for him to practice talking with some peers.

With the help of the peers, his special education teacher makes Sam some scripts with common questions that students might ask each other when talking at school.

Sam is given several opportunities to practice the scripts with his friends and his teacher takes data on how many prompts are needed for him to respond and ask a follow up question.

## DATA COLLECTION: SAM'S GOAL

Script	Date 1/22	Date 1/25	Date	Date	Date
"How was your weekend?" script	Trials	Trials	Trials	Trials	Trials
	1. p=5	1. p=6	1. p=	1. p=	1. p=
	2. p=6	2. p=4	2. p=	2. p=	2. p=
	3. p=4	3. p=1	3. p=	3. p=	3. p=
	4. p=5	4. p=3	4. p=	4. p=	4. p=
	5. p=2	5. p=2	5. p=	5. p=	5. p=
	20%	40%			
"How are your classes?" script	Trials	Trials	Trials	Trials	Trials
	1. p=7	1. p=	1. p=	1. p=	1. p=
	2. p=4	2. p=	2. p=	2. p=	2. p=
	3. p=3	3. p=	3. p=	3. p=	3. p=
	4. p=5	4. p=	4. p=	4. p=	4. p=
	5. p=5	5. p=	5. p=	5. p=	5. p=
	0%				

## **CASE EXAMPLE:**

### **Mary**

#### **Mary's writing goal**

### **Meet Mary:**

Mary is a high school student with autism.

Mary's mother is afraid that her daughter will not be academically successful in high school.

Currently, Mary does not follow simple written directions to complete a writing task. She has good reading skills, but she skips the directions and invents her own rules when completing a writing assignment unless someone verbally explains the directions to her.

Mary's teacher suggests that they think about what kind of skills Mary will need to be successful in the general education classroom and target these skills.

## GAS: SCALING MARY'S GOAL

<b>0</b>	PRESENT LEVEL OF PERFORMANCE (BASELINE)	When given a writing task, Mary follows the written directions approximately 1 - 5% of assignments.
<b>1</b>	INITIAL OBJECTIVE	When given a writing task and verbal instructions to use visual supports/task analysis, Mary will follow all steps of the written directions, 6 out of 10 assignments in a resource setting.
<b>2</b>	SECONDARY OBJECTIVE	When given a writing task and gestural instructions to use visual supports/task analysis, Mary will follow all steps of the written directions, 8 out of 10 assignments in a resource setting.
<b>3</b>	ANNUAL GOAL	When given a writing task and visual supports/task analysis, Mary will independently follow all steps of the written directions, 8 out of 10 assignments in a resource setting.
<b>4</b>	EXCEEDS ANNUAL GOAL	When given a writing task and visual supports/task analysis, Mary will independently follow all steps of the written directions, 6 out of 10 assignments in a general education setting.