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Teaching Strategies for Students with ASD

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Evidence-Based Practices

- What are evidence-based practices?
- Why is using evidence-based practices important?

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Evidence-Based Practices

- 27 EBP's identified by the National Professional Development Center (NPDC)
- 14 identified by the National Standards Project

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Evidence-Based Practices (NPDC)

- Antecedent-Based Intervention (ABI)
- Cognitive Behavior Intervention
- Differential Reinforcement
- Discrete Trial Training
- Exercise
- Extinction
- Functional Behavior Assessment
- Functional Communication Training (FCT)
- Modeling
- Naturalistic Intervention
- Parent Implemented Intervention
- Peer-Mediated Instruction and Intervention
- Picture Exchange Communication System (PECS)
- Pivotal Response Training (PRT)
- Prompting
- Reinforcement
- Response Interruption/Redirection
- Self-Management
- Scripting
- Social Narratives
- Social Skills Groups
- Structured Play Groups
- Task Analysis
- Technology-aided Instruction and Intervention
- Time Delay
- Video Modeling
- Visual Supports

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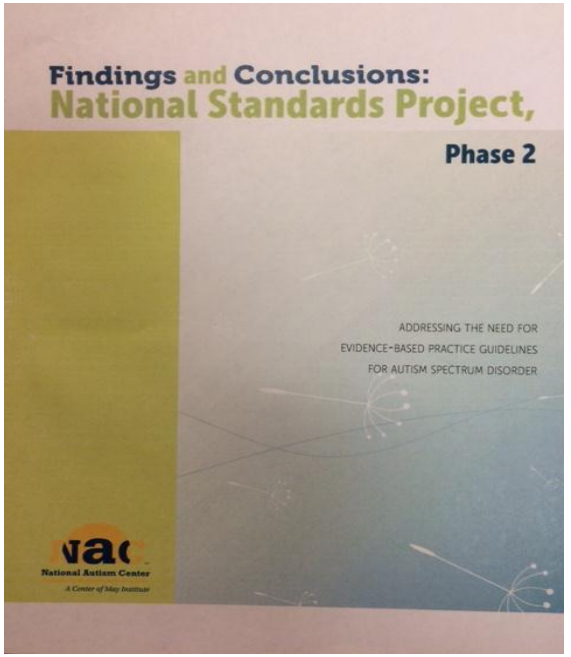
National Standards Report

- Behavioral Interventions
- Cognitive Behavioral Intervention Package
- Comprehensive Behavioral Treatment for Young Children
- Language Training (Production)
- Modeling
- Natural Teaching Strategies
- Parent Training
- Peer Training Package
- Pivotal Response Training
- Schedules
- Scripting
- Self-Management
- Social Skills Package
- Story-based Intervention



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Target Interventions

- In this presentation we will focus on the following evidence-based teaching strategies:
  - Discrete-Trial Training
  - Task Analysis
  - Antecedent- Based Interventions
  - Video Modeling
  - Prompting
  - Story Based Interventions
  - Incidental/Naturalistic interventions

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Behavioral Interventions

- Discrete trial training
- Task analysis
- Antecedent Based Interventions
- Video modeling/prompting
- Prompting

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Discrete Trial Training

Discrete Trial Training is based on Applied Behavior Analysis and breaks skills into small teachable units.

Components of DTI

- Initial ***Instruction*** (Sd) Given only ONCE!!!
- A ***prompt*** to get the correct response (if needed)
- A ***response*** from the student
- A ***consequence*** following student response (correct→ positive reinforcement; incorrect → correction procedure)
- A short ***pause*** between the next trial (3-5 seconds)

Discrete trials do not always have to occur sitting at a table

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Discrete Trial Training

- Demonstrated to be effective for teaching:
  - Academic skills
  - Attending
  - Imitation
  - Symbolic play
- Steps for implementation are available at

http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/imce/documents/Discrete-Trial-complete10-2010.pdf

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Task Analysis

Task analysis:

- Breaking down of a skill into its component parts
- Teaching each component part of the skill separately
- Chaining the component parts together to produce the target skill

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Task Analysis- Making a Sandwich					
Student Name:					
*Response coding: (+)step performed correctly (+P)step performed correctly with peer prompt (-)step performed incorrectly (NP)not performed					
	Date:				
	Step				
1	Open bag of bread				
2	Get out 2 slices of bread				
3	Place bread on plate				
4	Open peanut butter jar				
5	Open jar of jelly				
6	Scoop out peanut butter with a knife				
7	Spread peanut butter on at least ¾ of one slice of bread				
8	Scoop out jelly with the knife				
9	Spread jelly on at least ¾ of the other slice of bread				
10	Place either jelly or peanut better slice of bread on top of the other slice of bread				
11	Close the jar of jelly				
12	Close the jar of peanut butter				
13	Cut the sandwich in half				
14	Give ½ to peer				
Number of steps completed correctly:					

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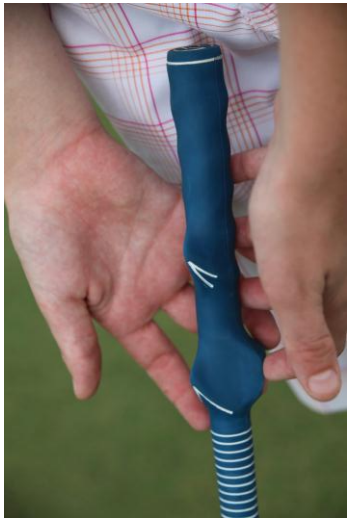
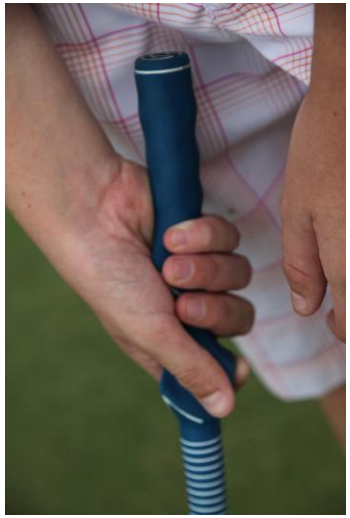
Visual Task Analysis





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Antecedent Based Interventions (ABI)

- **modifying** educational activities, materials, or schedule
  - incorporating student interests
- incorporating student **choice** in educational activities/materials
- **preparing** students ahead of time for upcoming activities
  - priming
- **varying** the format, level of difficulty, or order of instruction during educational activities
  - varying high and low demand requests
- **enriching** the environment to provide additional **cues** or access to additional materials
  - visual cues, access to sensory stimuli
- modifying **prompting** and **reinforcement** schedules and delivery
  - varying access to reinforcement prior to educational activities

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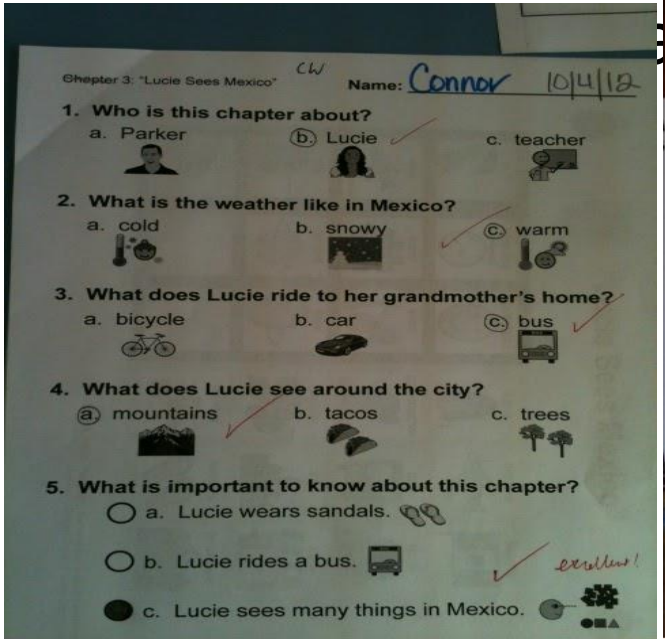
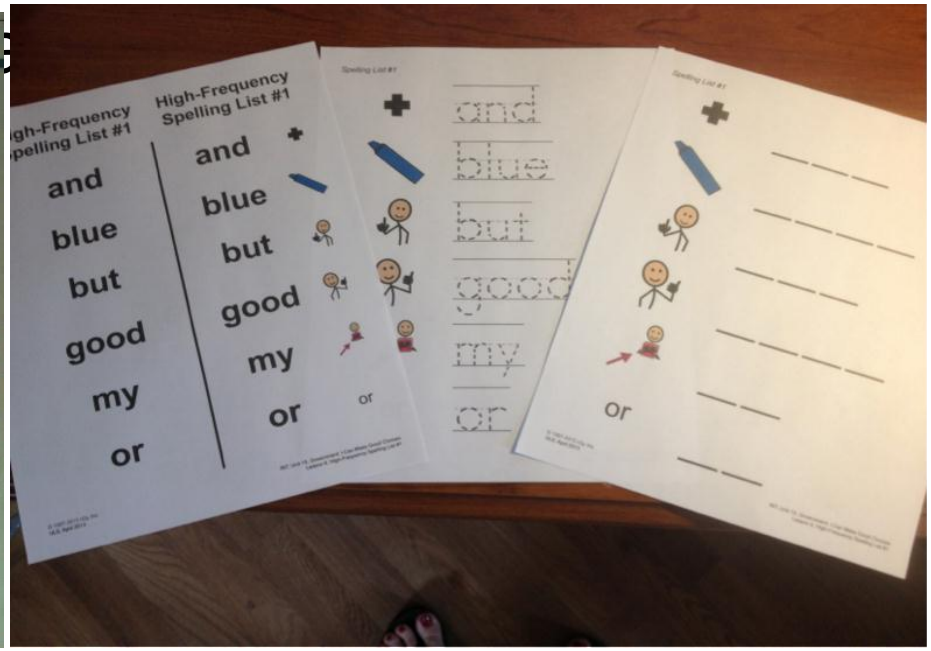
Differentiating Instruction

Students with ASD have diverse learning styles and often have splinter skills. It's important to recognize these





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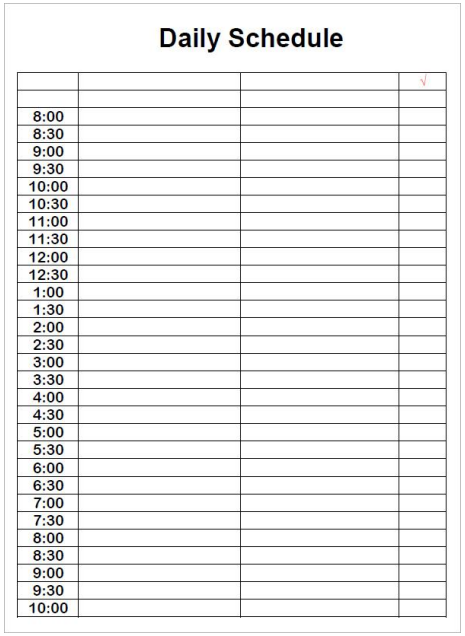
Schedules

- Schedules are a set of pictures, (Boardmaker© or real pictures) an/or words (written or typed) that cue an individual to engage in a sequence of activities
- Schedules can be used in classrooms and other environments to promote independent functioning



Daily Schedule

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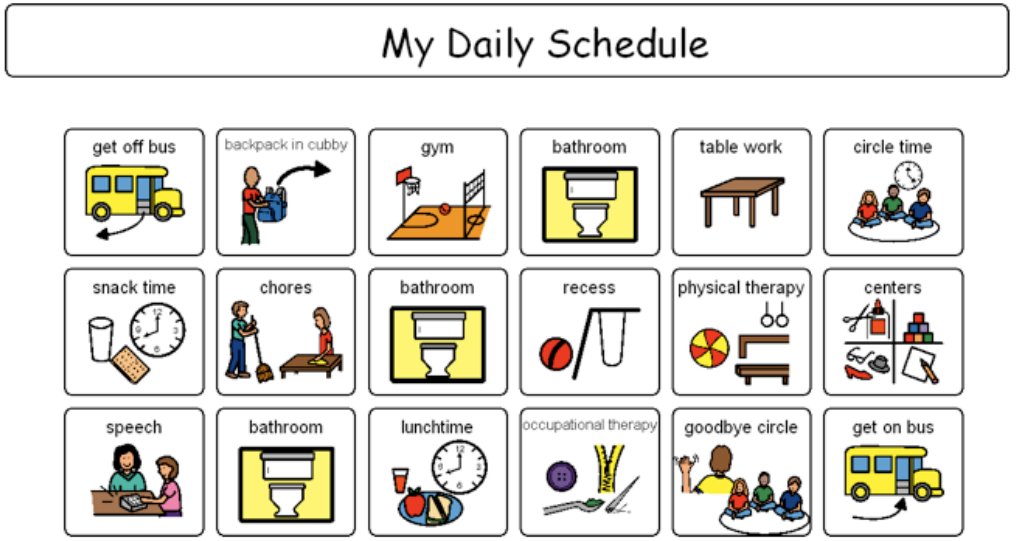

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Modeling

- The goal of modeling is to correctly demonstrate a behavior so that another person an imitate the model

- **Live modeling**
  - When a person demonstrates the target behavior in the presence of the student
- To implement:
  - Clearly define the target behavior
  - Ensure all individuals modeling the target behavior are doing so in a consistent manner
  - Obtain the child's attention prior to modeling the target behavior.
  - Develop a plan to fade or stop the use of modeling

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Modeling

- **Video modeling**
  - Video modeling is a procedure whereby the student imitates videotaped actions/ sequences from a model.
- Has been used to teach
  - Play skills
  - Social skills
  - Communication skills
  - Adaptive skills
  - Academic skills

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Video Modeling

- Procedures for implementation:
  - Teacher identifies skill to be targeted and clearly defines the target
  - Teacher record the target behavior
  - Teacher presents the video to the student
    - Can be viewed on a computer, Ipad, Iphone, etc.
  - Student imitates action without prompting
  - Teacher records data on number of steps completed correctly
- Example

  https://www.youtube.com/watch?v=V2t-ihJJNXI

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Video Modeling

- Types of Video Modeling
  - ***Basic Video Modeling*** – recording someone besides the learner engaging in the target behavior or skill. The video is then viewed by the learner at ta later time.
  - ***Video Self Modeling*** – used to record the learner displaying the target skill or behavior and is viewed later.
  - ***Point-of-view Video Modeling*** – when the target behavior or skill is recorded from the perspective of the learner.
  - ***Video Prompting*** – involves breaking the behavior skill into steps and recording each step with incorporated pauses during which the learner may attempt the step before viewing subsequent steps.

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Prompting

- Prompt
  - An additional cue or extra help from the teacher to aid the student in engaging in the correct response.
- Purpose of prompting is to give the learner more opportunities to respond correctly
- Fading of prompts is necessary to ensure independent responding

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Prompting

Characteristics of prompts

- Should be effective- that is, prompts should ensure that the learner will perform the correct behavior
- Prompt BEFORE the student responds – not as a correction
- Should be easy to fade
  - The goal of prompting is to teach *Independent* behavior

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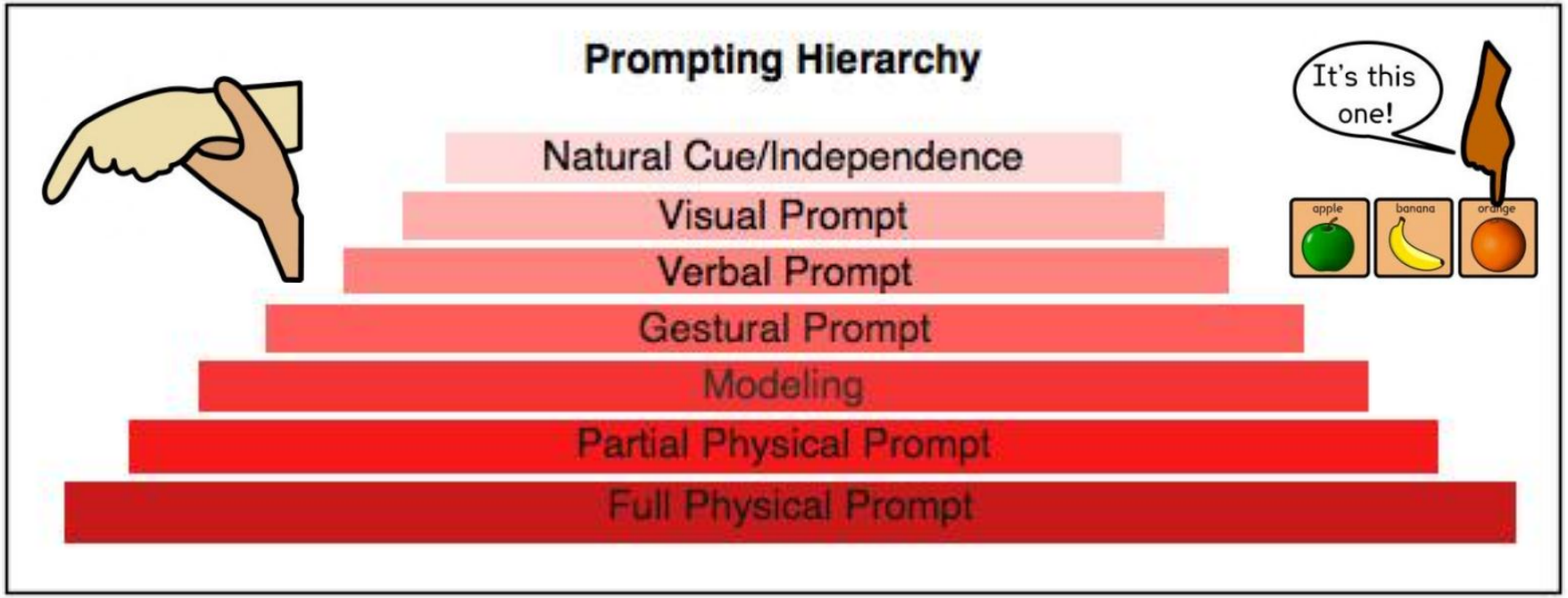
Prompting



NEW skills: most to least
LEARNED skills: least to most

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Prompting

- Full Physical Prompts

- Gestural Prompts

- Partial Physical Prompts

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Prompting Guidelines

- Use non-verbal prompts when possible!
  - A verbal prompt is one of the ***hardest to fade***
- Fade prompts **as soon as possible**!
  - Remember our goal is independent responding
- Decide if you will be using a least to most or most to least prompting hierarchy

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Incidental/ Natural Teaching

- Teaching interaction that occurs in the natural environment
- Capitalize on “teachable moments”.
  - No additional material is needed
  - Capitalizes on high motivation periods
  - Facilitates generalization
  - Techniques can be applied within a broad range of activities and settings
  - Uses naturally occurring reinforcers

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Story-based Intervention

- Most well know are Social Stories ™
- May include other types of narratives such as comic strips
- Social Narratives can be used to:
  - Support schedule changes
  - Promote independence of daily living skills
  - Clarify expectations
  - Promote positive behavior
  - Support social interactions

Story-based Interventions

Ernie Els #GameON Autism ™ Golf Program

Play a Hole Social Narrative

It has been fun learning how to play golf through the Ernie Els #GameON Autism Golf classes

Now I am ready to play a hole. This means I will go on the big golf course. I will take several shots and try to get the ball in the hole.

First I will tee off. This means I will place a tee into the ground, put the golf ball on top of the tee, and then use a full swing to hit the ball far.

Next I will find my ball and use a different golf club to hit it closer to the hole.

Once I get the ball on the green, I will try to putt the ball into the hole. If I don't get the ball in right away, it is ok. I will keep trying. The golf coaches will be with me to help me along the way.

Playing a hole on the big golf course will be a lot of fun.

Here is an example of a social narrative used within the #GameON Autism Golf program. It helps participants understand the flow of the day so that they can be more comfortable, prepared and ready to learn and have fun.

A use of visual cues are paired with words to support comprehension and to ensure applicability to all levels of learners.

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Picture Exchange Communication System (PECS)

- Learner is taught to give a picture of desired item to communicative partner
- Six phases of PECS instruction, each with multiple steps building on last
  - Teaching physical exchange
  - Expanding spontaneity
  - Stimulus discrimination of pictures
  - Building sentence structure
  - Responding to “what do you want”
  - Commenting in response to question

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PECS

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Generalization

- Generalization- when a learner performs a learned behavior under conditions that are different from the conditions that were in place when the behavior was originally learned.
  - Different settings
  - Different people
  - Different stimuli

A skill should not be considered mastered until it can be displayed across these things

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Generalization

Strategies:

- Practice mastered skills in different settings
- Have students work on skills with different teachers
- Use different stimuli to teach skills
- Use incidental teaching strategies
- Make the training setting as close to the target setting as possible

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Maintenance

- When a student has learned a skill and continues to utilize the skill after teaching has been discontinue
- Individuals with ASD often have difficulty maintaining and generalizing skills
- Maintenance and generalization must be explicitly programmed for and taught
- Skills must be practiced in order to remain in a persons repertoire

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Maintenance

- Strategies
  - Fade/thin schedule of reinforcement
  - Introduce naturally occurring reinforcers
  - Make sure to practice and/or probe that skill regularly

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Critical Classroom Practices

- There are several key aspects in supporting learning within the classroom
- Teachers must establishing positive relationships with students and motivate students to learn

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Establishing Positive Relationships

STUDENTS

- **Pairing!**- Establish yourself as a source of reinforcement.
- Find out what motivates your students (interests, favorites)!
- Make learning/ school fun and meaningful

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Maintaining Professional Teacher-Student Relationships

Treat your students the way that you would want your own child to be treated through

- Dignity
- Respect
- Kindness
- Compassion

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Maintaining Professional Teacher-Student Relationships

Make sure students experience success every day and realize the importance in establishing trusting relationships.

Rapport is critical!

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Maintaining Professional Teacher-Student Relationships

Refrain from

- Rough physical redirection
- Using physical intervention with a student not in a crisis
- Reactive responses to challenging behavior
- Loud or assertive directions
- Sarcastic or coercive comments

Instead use

- Verbal and gestural prompting
- Verbal or gestural prompting and reinforcement strategies
- Proactive strategies to support appropriate behavior
- Clear and direct verbal instructions
- Positive behavior specific praise

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Motivate Your Students to Learn

Students with ASD may not have the same motivations as a typically developing student.

Common intrinsic motivators of typically developing students:

- To please an adult
- Social praise
- Pride in completion
- Avoid reprimand
- Because it's fun

(Students with ASD may not have these same motivators)

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Motivate Your Students to Learn

Students with ASD may require additional motivation to participate, comply, learn etc.

Reinforcement programs:

- Conditioned reinforcement
  - Dollars
  - Tokens
- Checklists
- Behavior contracts
- First- then
- DRO/ DRI
- Point/level systems

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Putting it All Together

- How do we know what to teacher and what strategies to use?
- How do we know how well students are responding to intervention?
- We must conduct assessments of individuals skills
- For all intervention program we must collect data
- This information will be addressed in the next learning module

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Resources

- National Standards Project

http://www.nationalautismcenter.org/resources/

- National Professional Development Center

http://autismpdc.fpg.unc.edu/evidence-based-practices

- Autism Internet Modules

http://www.autisminternetmodules.org/