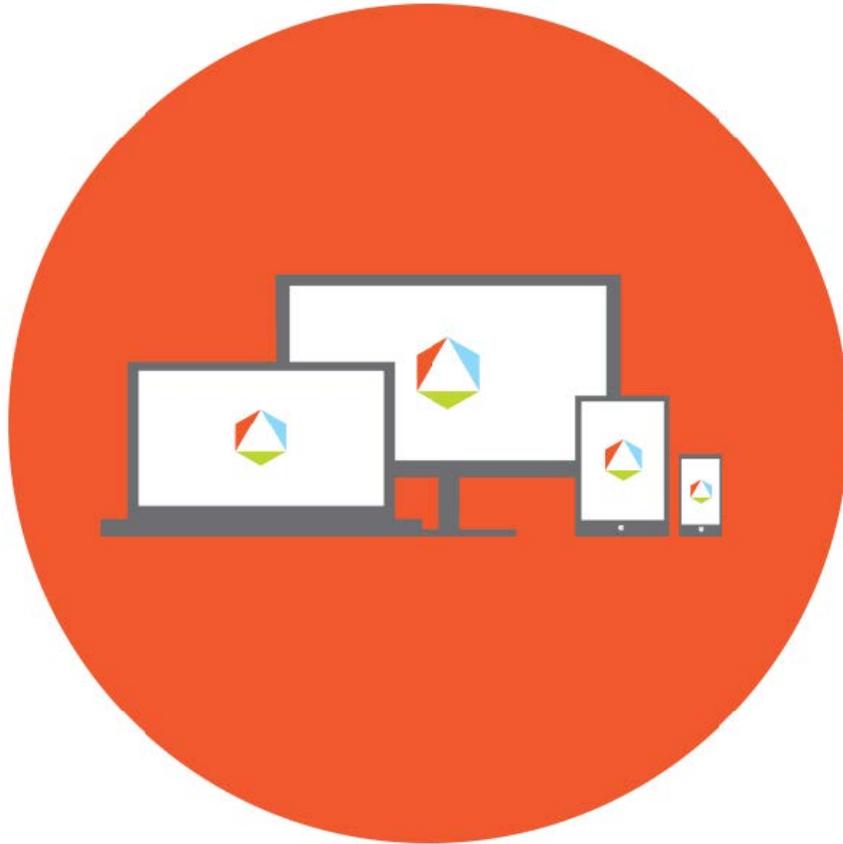




FIRSTPATH
AUTISM



Lesson Guide

64. Counting: Rote and terminal

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Counting: Rote and terminal

Overview

<p>Teaches:</p>	<p>This lesson teaches the child the ability of counting aloud in correct sequence (usually vocally), both with determined (terminal) and undetermined (rote) ending points.</p>
<p>Before beginning:</p>	<p>Before beginning, it will be helpful if the child has had some <i>exposure</i> to numbers (*<u>no</u> mastery of sequencing or identification required*), as well as to simple rhymes or songs performed aloud (basic conversation/intraverbal skills). The child should be able to attend to instruction for an increased duration of time (e.g., 20-30 seconds). Being able to perform multiple sequenced responses is very helpful (e.g., as in short phrase Vocal Imitation, "Complete Sentences" lesson in Advanced Labeling Skills, and/or 2-step and 3-step motor imitation skills).</p>
<p>Why it's important:</p>	<p>Counting is foundational to more advanced math skills. It is a prerequisite to 1:1 Correspondence, Number Sequencing, More/Less Than, and other skills. It is also arguably one of the most functional math skills used by children and adults on a daily basis, and therefore is critical in several other areas such as Self-Help Skills, Conversation Skills, Play Skills, etc.</p>
<p>Materials needed:</p>	<p>Ideally, this lesson should be completed <u>solely via auditory stimulus</u>. Visual assistance will probably be of little help at this point, since many children will not yet have learned Number Identification. ALSO, this lesson does NOT include counting objects (that will be addressed in 1:1 Correspondence lesson). Therefore, <u>the voice of the adult modeling correct counting will probably be the only "material" required.</u></p> <p>**However, keeping in mind that many children with autism are strong visual learners, and that there are always "exceptions", the following may be used to troubleshoot when vocal modeling alone is not successful: 1) counting put to music (memorization is recognized to often be much easier when sung), 2) Leap-Frog style learning tools which provide a visual of</p>

	<p>the number, while simultaneous auditory counting occurs, 3) teacher manually providing accurately timed visual of numerals while counting aloud. The teacher should keep in mind that any visual prompts introduced will need to be faded completely before the target skill is considered mastered.</p>
<p>Generalization activities:</p>	<p>This lesson can be generalized in many creative ways with various activities such as playing Hide 'n' Seek, contests of "who can do something the longest" (e.g., counting to measure "who can stand on one foot the longest?" "Who can stare without blinking the longest?"), distributing snack (giving everyone equal portions), board games such as Hi-Ho Cherry-O, Candyland, etc.</p>

Steps

Prepare

1. Ensure that the child is ready to "earn and learn": a reinforcer assessment has been recently completed, and identified highly preferred items and activities are ready and available.
2. Have data collection ready, either via tablet or pen/paper.
3. Have lesson materials prepared and available.
4. Sit facing the child, in a quiet place free of distractions.
5. Make sure the child is ready to attend, ideally looking at teacher and not engaging in any other activities.

Teach

1. The teacher delivers the instruction applicable to the specific target.
2. Wait 3-5 seconds for the child to begin responding. (Since full response will take longer in this lesson, it should not be expected to be completed in 3-5 seconds; rather, the child should have begun within that timeframe.)
3. Provide feedback on the child's response:
 - **Correct response:** The teacher should provide enthusiastic praise and /or offer the reinforcer that the child has selected to earn.
 - **Incorrect or No response:** The teacher should give the child corrective feedback, and demonstrate/prompt the correct answer or response. Keep in mind that since this is a sequenced skill, a backstep-style of error correction will probably be the most effective (i.e., stepping back to the last numbers on which child counted successfully and continuing forward from there). No reinforcer delivered at this time.
4. Record data.
5. Begin again at step 1.

Examples:

Correct response	Incorrect response	No response
Teacher: "Let's count!" Child: "1, 2, 3, 4, 5, 6, 7, 8, 9, 10." Teacher: "Yeah! Good job counting!"	Teacher: "Let's count!" Child: "1, 2, 4, 5..." Teacher: "Oops, you skipped one! Let's try again. 1, 2, 3 , 4..." (Teacher uses backstep-style of error correction while	Teacher: "Let's count!" Child: (No response.) Teacher: "I don't hear you. Let's count together. 1, 2..." (Teacher begins the sequence along with the child, who will hopefully join

	counting along with child. No reinforcer delivered at this time; start new trial.)	in. No reinforcer delivered at this time; start new trial.)
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Typical order of learning targets:

1. Rote counting up to at least 5 (no specified end point; sample instruction: "Let's count!")
2. Rote counting up to at least 10 (no specified end point; sample instruction: "Let's count!")
3. Terminal counting of various numbers up to 10 (specified end point; sample instruction: "Count to 8.")
4. Rote counting up to at least 20 (no specified end point; sample instruction: "Let's count!")
5. Terminal counting of various numbers up to 20 (specified end point; sample instruction: "Count to 15.")

NOTE: *The targets above may be adjusted based on the needs of the child; for example, some children may skip Target 1 and easily begin with Target 2, or the teacher may skip Target 3 and wait to introduce terminal counting until Target 4 has been mastered. In addition, some children may require highly specific instruction that necessitates terminal counting (a specific end point) from the beginning. The main objective of this lesson is that the child learns to count aloud, in correct order.*