

Priming

This is an alternate version of the characteristics overview chart on the next page. It is provided for accessibility.

Verbal skills

- Nonverbal
- Mixed
- Verbal

Grade Level

- PK
- Elementary
- Middle/High


Cognitive Level

- Classic
- High Functioning

Areas Addressed

- Adaptive Behavior/Daily Living
- Behavior
- Communication/Speech
- Social/Emotional

Priming

 Verbal Skills	Grade Levels	Cognitive Level	Areas Addressed
<input checked="" type="checkbox"/> Nonverbal	<input checked="" type="checkbox"/> PK	<input checked="" type="checkbox"/> Classic	<input type="checkbox"/> (Pre)Academic/ Cognitive/Academic
<input checked="" type="checkbox"/> Mixed	<input checked="" type="checkbox"/> Elementary	<input checked="" type="checkbox"/> High	<input checked="" type="checkbox"/> Adaptive Behavior/ Daily Living
<input checked="" type="checkbox"/> Verbal	<input checked="" type="checkbox"/> Middle/High	Functioning	<input checked="" type="checkbox"/> Behavior
			<input checked="" type="checkbox"/> Communication/Speech
			<input checked="" type="checkbox"/> Social/Emotional



Brief Introduction

Many students with autism (AU) are troubled when they do not know the schedule or upcoming activities. Some repeatedly ask, “What’s next” or “When’s reading?” Others experience high levels of anxiety throughout the day. Priming addresses these needs as a low-cost, time-efficient strategy that provides structure and predictability for students across the spectrum.



Description

Simply stated, the purposes of priming are to (a) familiarize the student with the material before its use; (b) introduce predictability into the information or activity, thereby reducing stress and anxiety; and (c) increase student success. Priming typically involves showing the actual materials that will be used in a lesson the day or morning before the lesson. In some cases, priming may occur right before the activity, such as when a peer mentor overviews what will occur during the science experiment just prior to the beginning of science class. Priming for a school day can be accomplished in less than 10 minutes.

Priming can take place in the classroom or at home. It is most effective when it is built into the student’s routine. The following are important characteristics of effective priming: (a) priming should occur in an environment that is relaxing; (b) the primer should be patient and encouraging; (c) the priming sessions should be short; and (d) materials should be introduced. It is important to note that priming is *not* teaching, correcting, or testing.

Examples of priming include:

- Looking at a worksheet
- Looking through a book
- Overviewing a test
- Showing a visual schedule or list of activities in a task
- Practicing with new art supplies
- Showing a finished product
- Viewing a work sample



The following steps may be used to prime a student:

1. *Determine when to prime.* Priming can occur at the beginning or at the end of the day. Some students who have difficulty processing a lot of information may need to be primed throughout the day. For example, a student may be primed for the morning activities at the beginning of the day and after lunch for the remainder of the day.
2. *Identify who should lead this activity.* Anyone who has a rapport with the student can prime. An adult can even prime for a subject she is not fully familiar with because priming is *not* teaching. It is previewing.
3. *Decide where priming should occur.* Priming should occur in a quiet place to enhance the child's attention.
4. *Gather materials for priming and visual schedule.* Priming was originally designed by Wilde, Koegel, and Koegel (1992) to include the actual materials used (books, worksheets, etc.), so all materials that the student will use should be gathered in the priming area. For middle and high school students, a drop box is typically designated where all teachers can place materials for the priming session. Priming also includes overviewing the visual schedule. Thus, the visual schedule may be used to guide introduction to the materials. Educators may decide *after* successfully using priming with a student to switch to priming using only a visual schedule.
5. *Overview the materials.* Briefly overview each activity with the student, showing accompanying products.
6. *Record priming and make any relevant comments.* During this step, the primer shows the student what will occur during the lesson by introducing the materials and class expectations. As mentioned, priming is not instruction; the primer tells the student what activities she will be doing during each class and shows the materials that will be used, often with an accompanying visual schedule. This brief review of the day's activities usually takes no more than 10 minutes. The primer may condense the activities onto an index card that the child can carry to class and refer to it as needed. The student is reinforced for attending to the material during the priming session.

The following is an example of a priming worksheet.

Priming Worksheet

Student's Name

Date	Primed (Y/N)	Primer	Comments



Brief Example

Instead of meeting her classmates in the gym to await the beginning of a new school day, 10-year-old Kara meets a paraprofessional, Mr. Aaron, in the resource room for priming. Mr. Aaron, who has Kara’s visual schedule as well as the books and materials she will use throughout the day, ensures that Kara is ready to begin priming. Sometimes this means that Kara sits in a beanbag chair during the activity; at other times she sits at a desk.

Mr. Aaron then begins to systematically overview the day. He starts by showing Kara her visual schedule, which starts with an icon representing priming. Mr. Aaron leafs through each book that Kara will use, showing her the pages that she will read and letting her look at each worksheet she will complete. For social studies, he points out that Kara will only read the highlighted sections. He reminds Kara that, according to her schedule, she will have a spelling test. He then shows her a completed spelling test, reminding her that she can choose whether to write the answers or type them. When the 10-minute priming session ends, Mr. Aaron completes the priming worksheet, making a notation that Kara was excited about the spelling test because she knew how to spell all of the words.



Tips for Modifications

Koegel, Koegel, Frea, and Green-Hopkins (2003) proposed many priming modifications. For example, if the student cannot sit and attend, allow him to be primed while lying on the floor or standing. If he is not motivated, offer a small reinforcer at the end of the session. Another modification is to use only a visual schedule or a visual schedule accompanied by a list of activities instead of the actual work products. This is not recommended unless the child has been successfully primed over a period of time using actual work products.



Summary

Priming can help children and youth improve their academic and behavioral skills. This intervention can be used in home, school, and community with children and adolescents with AU.



Research Table

# of Studies	Ages (years)	Sample Size	Area(s) Addressed	Outcome
5	3-15	9	Academic responding, appropriate behavior, disruptive behaviors, spontaneous initiations, toileting	+



Studies Cited in the Research Table

1. Bainbridge, N., & Myles, B. S. (1999). The use of priming to introduce toilet training to a child with autism. *Focus on Autism and Other Developmental Disabilities, 14*(2), 106-109.
A 3-year-old boy with autism participated in a study designed to teach toileting skills. Using video to introduce a toileting routine for 20 days, the boy's toilet initiations and dry diapers increased.
2. Koegel, L. K., Koegel, R. L., Frea, W., & Green-Hopkins, I. (2003). Priming as a method of coordinating services for students with autism. *Language, Speech, and Hearing Services in School, 34*, 228-235.
Two boys with AU (5.6 and 15 years) participated in a study that targeted academic responding and appropriate behavior. Over 21 days, both behaviors increased.
3. Sawyer, L. M., Luiselli, J. K., Ricciardi, J. N., & Gower, J. L. (2005). Teaching a child with autism to share among peers in an integrated preschool classroom: Acquisition, maintenance, and social validation. *Education and Treatment of Children, 28*, 1-10.
A 4-year-old boy with AU participated in a study that targeted verbal and physical sharing with typical peers in an inclusive classroom setting. Using priming in combination with prompting and praise over 60 days, the child's sharing increased.
4. Schreibman, L., Whalen, C., & Stahmer, A. C. (2000). The use of video priming to reduce disruptive transition behav-

ior in children with autism. *Journal of Positive Behavior Interventions*, 2, 3-11.

Three boys with AU, ranging in age from 3 to 6 years old, participated in a study designed to decrease disruptive behaviors. Using video to introduce transition for 21 days, the boys' disruptive behaviors decreased and were maintained in a one-month follow-up.

5. Zanolli, K., Daggett, J., & Adams, T. (1996). Teaching autistic children to make spontaneous initiations to peers using priming. *Journal of Autism and Developmental Disorders*, 2, 407-422.
Two preschool-age boy with AU participated in a study designed to increase spontaneous initiations. Over 20 days, spontaneous initiations increased.



References

- Bainbridge, N., & Myles, B. S. (1999). The use of priming to introduce toilet training to a child with autism. *Focus on Autism and Other Developmental Disabilities*, 14(2), 106-109.
- Koegel, L. K., Koegel, R. L., Frea, W., & Green-Hopkins, I. (2003). Priming as a method of coordinating services for students with autism. *Language, Speech, and Hearing Services in School*, 34, 228-235.
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- Schreibman, L., Whalen, C., & Stahmer, A. C. (2000). The use of video priming to reduce disruptive transition behavior in children with autism. *Journal of Positive Behavior Interventions*, 2, 3-11.
- Wilde, L. D., Koegel, L. K., & Koegel, R. L. (1992). *Increasing success in school through priming: A training manual*. Santa Barbara: University of California.
- Zanolli, K., Daggett, J., & Adams, T. (1996). Teaching autistic children to make spontaneous initiations to peers using priming. *Journal of Autism and Developmental Disorders*, 2, 407-422.



Resources and Materials

- Change Is Good! Supporting Students on the Autism Spectrum When Introducing Novelty: www.iidc.indiana.edu/irca/education/ChangeGood.html
This article gives solid information about the use of priming in the classroom.
- Interactive Collaborative Autism Network: www.autismnetwork.org
This interactive learning module is user-friendly and provides steps for using priming.
- Ohio Center for Autism and Low Incidence Autism Internet Modules: www.ocali.org/aim
Though not yet operational at publication, this site will contain an interactive learning module on priming.
- Priming as a Method of Coordinating Educational Services for Students with Autism: www.lshss.asha.org/cgi/content/abstract/34/3/228
This links the user to an abstract with links for purchasing the full pdf file.
- University of California Santa Barbara Koegel Autism Center: www.kady.education.ucsb.edu/autism/behavior-manuals.html
This link provides information on how to order training manuals, including the manual for priming.