Visual Strategies





Pennsylvania Training and Technical Assistance Network (PaTTAN) Pennsylvania Department of Education

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Visual Strategies

Introduction

Some children find the world to be too chaotic, and expectations and demands they cannot understand may confuse them. Verbal instructions and explanations are often not adequate to provide the information a child needs in order to comprehend. Just as we adults may prefer to write down and refer to lists as we shop or prepare to work, children often need the support of having information presented in visual form. Some children learn best through what they see, and using visual strategies at home and in the classroom builds on this strength.

Many children are not easily able to understand spoken directions. However, it is not always obvious that a child is having difficulty because they may be quite adept at following environmental cues. For example, when the teacher tells the children to get out their Social Studies book and turn to page 71, most children are able to do that because they merely observe what the rest of the class is doing. They didn't have to comprehend one word of the message to be successful at following those directions.

It is also difficult to judge children's ability to comprehend by evaluating their spoken language. Some children are able to repeat very clearly what is said, but still do not understand the meaning of the message. Children who use a lot of echolalia are particularly difficult to judge.

Some visual strategies are already universally accepted and used, such as the use of body language, natural environmental cues, and tools for organizing and giving information (e.g., calendars, day planners and "to-do" lists). Then there are other strategies that are less traditional but that may prove to be helpful for students who have difficulty comprehending spoken messages. This booklet will describe some of those less traditional strategies.

Purpose

This booklet is designed for parents and teachers who may be living and working with children having difficulty comprehending verbal messages. All children will benefit in some way from the use of visual strategies; they are not only for non-verbal students or students with special needs. However, there are some children for whom these strategies may make the difference between success and failure in school, at home and in the community. They include some children with autism, aphasia, attention deficit hyperactivity disorder, behavior problems, central auditory processing disorder, dyslexia, learning disability, language disorder, pervasive developmental delay, traumatic brain injury, etc.

What can you do with Visual Strategies?

These strategies are helpful in many ways. They may improve a child's behavior by clearly showing expectations and visually depicting what will happen next. They allow children to function independently and gain confidence. They improve the child's ability to understand!

Why should we use Visual Strategies?

Visual cues may be what are needed to allow the child to be successful. It is often difficult to judge children's ability to understand, particularly when children are able to speak and repeat what is said to them. Children are usually quite good at following what they see others do, so we cannot always judge ability to comprehend by their response to following group directions. Many times we don't realize how many visual cues we are providing for a child when we make a request (e.g., we say "Pick up your shoes" while we point to the shoes on the floor in front of us). If those cues are taken away, the child may not be able to complete the task. We may think he is unwilling to do what we ask, when actually he may just not know what to do next. Using visual strategies may be the tool needed to help the child process and complete novel requests and/or complex directions.

Types of Visual Strategies

There are many types of visual strategies that we routinely use. This booklet will describe strategies that are used in non-traditional ways. The strategies discussed in this booklet include:

- ✓ Schedules
- ✓ Mini-schedules
- ✓ Calendars
- ✓ Task Organizers
- ✓ Management Tools
- ✓ Work Systems
- ✓ Transition Helpers
- ✓ Communication Between Environments

This is certainly not an exhaustive list of the visual cues that may be used to improve comprehension; these are merely some of the more commonly used strategies. Each will be described in more detail in the following sections of this booklet.

Schedules

Schedules allow students to feel comfortable and competent as they move through their day. The use of schedules makes classrooms run more smoothly and children function more independently. Using schedules builds on the strengths that many children have, including visual perceptual skills, manipulation skills and functioning within routines. The consistency provided by the schedule builds an atmosphere of predictability and security. The permanence of a visual schedule, as opposed to the transience of speech, allows the child to refer to the schedule as often as is needed in order to understand.

We shouldn't assume children already know what comes next in the day, or that they understand us as we tell them verbally what to do. Some children do not. A visual schedule helps children to understand the routine. It may also provide motivation to work through a less desirable activity to get to a more preferred one, thus helping to maintain appropriate behavior.

Schedules may provide such information as:

- ✓ a visual representation of what regular events will happen
- ✓ new activities that may be occurring
- ✓ changes that may be occurring in regular activities
- ✓ the sequence of activities throughout a day
- ✓ when it is time to move from one activity to another

Schedules may help:

- ✓ establish the concept of being finished
- ✓ set expectations
- ✓ decrease "surprises" and reduces anxiety and distress
- ✓ establish routines as they are used over time
- ✓ provide a visible means to anticipate transitions

The use of a schedule often enables the teacher to spend more time in teaching and interacting in a positive manner instead of constantly redirecting and intervening as students are unable to move independently through their day. The skills children develop as they learn to follow directions and complete tasks are invaluable to them as they move into post-secondary vocational, academic or residential placements.

Parents and teachers often notice a marked improvement in children's functioning as the schedule use is implemented, but they need to be extremely cautious about deciding that schedules are no longer needed. Children depend on that visual support. Even though they may appear to be very successful they most often will not function nearly as well if the visuals are removed. Schedules are appropriate for all age groups and educational levels. What busy executive doesn't have a schedule of his day at his fingertips?

How to construct a schedule

Map out the main events in the child's day. After mapping all the activities, decide how much information the child can handle at one time (if there are 10 activities, should you put them all on the schedule at once, or do you need to break it down into smaller increments, perhaps displaying 4-5 or fewer at a time).

Decide on a format and a representation system (see Considerations section, page 23). Please remember that these schedules and all the visual strategies should be individualized for each child. Please experiment and assess until you believe you have a schedule that is functional for your particular child. This is not in any way meant to be 'one size fits all'!

It is often effective to have the child involved in constructing the schedule in some way each day, if possible. This involvement may vary from having the child place the symbols in the correct order on the schedule, to watching as the adult does it, or copying it onto a paper if the child is able to write. The involvement the child has with constructing the schedule is very dependent on their ability.

As the child uses the schedule throughout the day, he should be manipulating it in some way to show that it is changing as activities are completed. He may remove the symbols, turn them over, cross them off, or otherwise indicate that the activity is finished.

As the child removes the symbol from the schedule and goes to the next activity, it may be taken to the area of the activity and then matched with an identical symbol there.

At certain times of the day, the child may have the opportunity to make a choice between activities. This may be depicted by placing the choices side-by-side on the schedule so the child knows he may choose one.



This is a schedule made using objects to represent the various activities in a preschool classroom: free play, circle time, snack and art.

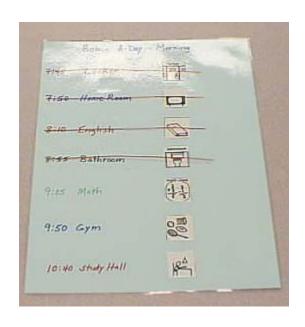
The symbol is taken from the schedule and matched to the same symbol at the computer. It is placed next to that symbol using velcro.





This is a daily schedule for a child in high school. It fits on a page in a notebook so it is portable and doesn't make the child look different from his classmates.

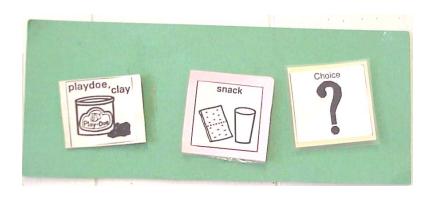
This schedule is used by an older student who crosses out the classes as they are finished. It includes the time, class name and a symbol on an 8 $^{1/2}$ " by 11" sheet of laminated paper.



NAME: ADDRESS:

DAY: Niedscoday DATE: Propagate Propagat

The child copies his schedule each morning and then places an X beside This is a schedule for an older child who is able to read and write. the classes as they are finished. Any special instructions from the teacher are copied in the "Directions for Activity" section.



This schedule is used by a child in a preschool class. It has just three activities listed at one time so it is not overwhelming for the child.

This is a schedule using symbols to represent activities. There are two symbols placed side by side on the schedule to show that the child has a choice at that time. Also, there is an envelope at the bottom of the schedule to hold the transition cards.





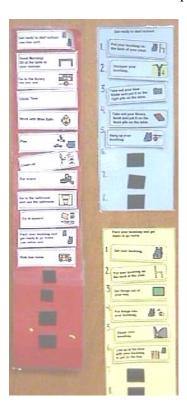
This schedule provides a week's worth of information for a child. It is used at home and is placed on the refrigerator. His mother used a daily schedule until she noticed her son frequently questioned her about what was happening tomorrow. He is now quite satisfied with the weekly information and often checks the schedule to see what activities are coming up.

Mini-schedules

Mini-schedules are similar to schedules, but they cover only one activity or a small part of the child's routine. Mini-schedules may map out the steps in one of the main schedule activities, including many more details than the main schedule can accommodate. The use of mini-schedules allows the child to be independent for a longer portion of the day, since the sequence of activities for a particular period is made available to the child.

For example, a mini-schedule could be used to give information on the variety of tasks to be done during horticulture class, including sorting fresh flowers, making a floral bouquet and clean-up. During a cooking activity, the mini-schedule may list such activities as gathering ingredients, making a pizza, getting drinks, setting table, eating, and clean-up.

The main schedule may refer the child to the mini schedule so the child may move through an activity more independently. However, don't overwhelm the child! Please remember to limit the amount of information presented to what the child is able to comprehend.



The schedule and mini-schedules to the left are used at school. They are color coded to make things visually clearer. The two smaller mini-schedules give the steps for beginning the day at school and getting ready to go home. The child is directed to the mini-schedules from the main schedule.

At the right is a close-up of one of the mini-schedules from the photo above. It contains steps needed for a child to get ready to start school.





This is a mini-schedule for a morning grooming routine at home. The activity listed on the young man's schedule (not shown here), Grooming, is broken down into this mini-schedule. Then the steps of each of these mini-schedule activities can be further broken down in a task organizer.

Calendars

It is not always helpful for children to drill on today is...tomorrow will be...yesterday was..., and children do not need to know that to be able to use a calendar to get information.

The calendar should contain information that is meaningful to the child. It may be used to discuss upcoming events and changes at school and at home. For example, if a child gets upset with weekends, use a calendar at home to show school days and weekend days. Or, use it to discuss changes in who may be home when the child arrives from school, special activities that may be coming up, etc.

Calendars used at home are often very helpful because family activities may vary greatly from day to day. The calendar should be the child's own (not the family calendar) with information included about **his** activities, outings with family members, recreation, etc.

The child should be encouraged to check the calendar when he has any questions or concerns about daily events. It should be available to the child when he wants to refer to it, so be thinking about portability and location as it is being constructed. If the child frequently has questions about his activities, you may wish to place the calendar at his desk or in a very accessible location in the home. If appropriate, he may wish to carry it with him like a day planner.

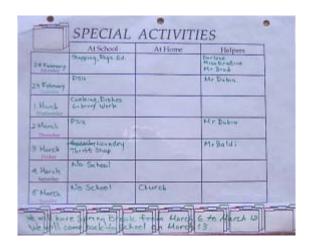
If you are including meaningful information on the calendar at a level that the child can understand, he should find the use of a calendar very helpful. The child should be taught to write in the calendar himself and to check it independently.

Strategies

- ✓ Don't wait until the child learns the days of the week before beginning calendar use.
- ✓ Be realistic about the amount of information that is included on the calendar gear it to what the child can understand.
- ✓ As the child has questions about events, continuously refer the child back to his calendar to get the information.
- ✓ Indicate which days are finished (using an X, covering, or some other way of crossing off).
- ✓ Indicate changes in activities by placing the symbol for the replacement activity over the original event, thus leaving a visual cue to allow for discussion of the change.
- ✓ You may wish to highlight the current day using a movable indicator (perhaps a bright frame, or a colored dot in the corner).



This calendar is placed on a refrigerator with magnets. Days are crossed out as they are finished. The current day is highlighted with a piece of colored plastic held in place with magnets on the back.



This weekly calendar is used by a student who can read. Note that Friday speech is crossed out (not erased), and Laundry has replaced it. In this way, the teacher can discuss the change with the child and also have it represented visually.

The calendar to the right contains the same information as the one above, but symbols are paired with words for another student. It is placed on a blackboard at school, with velcro on the daily pictures so activity pictures for each day can be easily added or changed.





This calendar was made on a computer, with symbols placed to show the child's special activities. Note the use of the international no sign and the replacement activity placed over it (i.e., Special Olympics replaces swimming).

Task Organizers

Performing tasks such as wiping a table, feeding a pet or brushing teeth may seem simple to us. Some children, however, have difficulty completing these seemingly routine tasks. Oftentimes, we think these children are unmotivated or are refusing to finish the task, when actually they may be trying to recall what to do next.

The use of task organizers helps children who may be unsure of the steps of an activity. Task organizers are visual cues that show the steps of an activity. They provide a visual representation of each part of a task so a child always knows the next step. Pictures and/or written instructions (similar to a recipe) can be used to help children complete the sequence of a task in the right order.

To make a task organizer, first write down the steps of the task. It is usually best to go through the activity yourself or observe someone else doing it as you record the steps so you are sure to include everything. Once you have written down the steps, you must decide how much information can be presented to the child at one time. Focus on the essential parts of the task, and decide the order in which they should be presented. Use a symbol representation system (photos, symbols, written words, etc.) that the child easily understands, or can be easily taught.

Once the task organizer is in use, then, the steps are in the same sequence for the child each time he does the task – even when different adults in the child's environment are asking him to do it. Everyone is having him do the task the same way, which reduces confusion and helps him to learn the routine.

The use of task organizers enables the child to be successful, prevents behavior problems and develops the problem solving skills needed to be successful in a job setting and in life.



The task organizer to the left uses objects to represent the steps involved in the morning grooming routine. The dividers are made from a box that has been cut apart and hot glued.

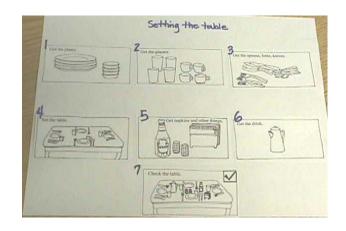
This task organizer lists the steps involved in going to the school library and checking out a book.

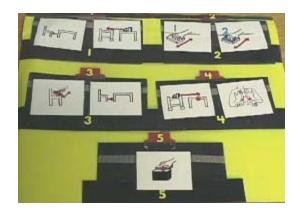




This is Aaron using his task organizer to follow the steps in brushing his teeth. Short sentences describing each step are paired with a small symbol.

This task organizer uses hand drawings to represent the steps in setting the table. Note that the steps are numbered, which helps the young man to sequence them correctly as he performs the task.





This task organizer for clearing tables at a job site had so many steps that it was too much for the young man to successfully follow. His mother broke the task down, including just two steps of the task on each individual card (numbered 1-5). The student learned to remove one card, complete the steps of the task included on that card, then replace it and move on to the next. Once he no longer was confronted by all the steps in front of him at once, the student was able to complete the task independently.

Management Tools

Management tools give children the visual cues they may need to successfully follow routines and rules in the classroom, at home and in the community. Even though children may seem very familiar with the routines, some need to be redirected several times during an activity. Management tools are visual representations of the instructions or rules, so a teacher, parent or other communication partner doesn't have to constantly restate them verbally for the children.

The advantage of using management tools is that they are constantly available to the children to refer to throughout the activity. The adult doesn't have to say the same things over and over. Also, as with other visual strategies, adults are able to use the same language consistently with the child since the wording is usually written on the tool, along with any picture or symbol that might be used. Therefore, the child is getting a familiar message during routine activities even if the communication partner changes. For example, a babysitter at home or a substitute teacher at school will present the instructions and rules the same way as those who are with the child more frequently.

It is important to make sure the instructions are given at a language level the child can easily understand. It is best to write down on the tool what will actually be said as you use it. Instead of writing, "You must always raise your hand when you want to ask a question in class," it may be better to simply write "Raise your hand," on the management tool if that is what the child will understand.

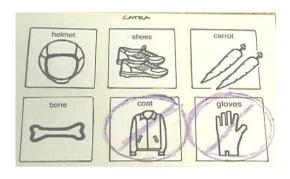


This was a reminder for a child who often didn't raise his hand in class before speaking. It was placed on the table near the child's seat. Shortly after this management tool was introduced, the child began to raise his hand consistently when he wanted to speak.



This management tool is used to help a child remember to turn off the television and the Nintendo at home when he's finished playing.

This tool enables a boy to be more independent in gathering what he needs to go horseback riding. Since it's warm outside, the international 'no' sign drawn on the laminated page indicates he doesn't need his coat or his gloves.





This is a page from a notebook used for a physical education class. Each sport has a file folder in the notebook with activities specific to that sport. Everything is on velcro; activities and the number of repetitions may be changed as the student's skills improve. The teacher has also taken it a step further than is seen here; as the student does the repetitions, numbered cards are used to count down so the student constantly knows how many of each activity are left to do.

Work Systems

Some children respond well to structured activities, with the materials for the activities contained in the area where they are working. Work systems are often used to provide the structure needed by these children. A work system should provide the answers to four basic questions for a child:

- ✓ What work?
- ✓ How much work?
- ✓ How do I know when I am finished?
- ✓ What happens next?

The system is generally set up from left to right. All the work is done to the left and then the work is moved to the right and placed into the finished box. The child is never asked to undo his work at the end of a session (e.g., take the puzzle apart after he has just put it together). He should learn the concept of finished and stop when he has completed the task. When the child has finished with his work, reinforcement should be provided.



This is an example of the independent work a child may be assigned on a given day. In this example, he would be given a card (seen at the bottom of this picture) with the four shapes on it then he would do the work corresponding to those shapes. As he did each task he would match the shape from his card with the task, placing it on the task next to the existing symbol. He would then be able to see when the work was done – that is, when his card is empty of shapes and all completed tasks were in a finished box (not shown).



The independent work that a child is asked to do is placed on these shelves by the teacher. The tasks may vary each day. The child completes each one in turn and places it in a finished bin.

This cart for organizing the work systems is used at home. The child's parents bought a cart from a local store and divided each of the three shelves so there are six areas available for work systems, although the areas may not all be used each time. There is a finished basked attached to the right side of the cart to hold the completed work.



The work systems below are made from laminated file folders. The child works to sort items correctly by placing picture cards backed with velcro in the proper spot (e.g., as shown here: sorting bedroom and bathroom items or matching the correct time to the clocks).





Transition Helpers

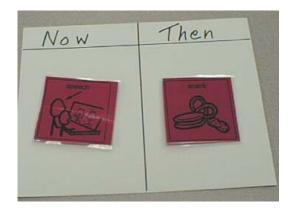
Often children do not like to have their activities disrupted and prefer to keep the world the same. Unfortunately, however, changes in activity are a fact of life and must be dealt with at least several times each day. Even minor changes in activities or routines may be upsetting to children, and stopping one activity and starting another may be the cause of protests and disruptive behavior. Failure to provide information on what is occurring and inadequate preparation are often the cause of problems that may begin as transitions occurs. Visual cues may give the child the information he needs to move from one activity to another in a calm and orderly manner.

Some children may not want to change activities because they enjoy the activity they are currently involved in. Others may not want to change because they don't enjoy what comes next, or they don't know what is next and they are afraid they won't like it. In any case, providing visual information allows the child to have a greater understanding of what is happening so they may be more accepting of change.

The use of a schedule enables a child to know what comes next and helps ease transitions. In addition to the use of a schedule, it is usually helpful to let a child know how long an activity will last. It is also useful to give children a warning that it is nearly time to be done with the activity. A timer is often very helpful for this, or a visual representation indicating how many turns they may have left (perhaps using cards or objects—e.g., 8 cards indicate 8 more basketball free throws left during recess).



Transition cards may be used to cue the child to go check his schedule to see what activity is next. The cards are color coded to the schedule and in this example match the card at the top of the schedule by having the child's name on them. The child is handed a card and told to check his schedule. He then goes to his schedule, puts the transition card in the envelope at the bottom, and takes the top activity card to the next activity.



The Now/Then board is a valuable tool to encourage children to participate in a less desired activity. It lets them know that the activity will end and then they will be able to do something else (hopefully something more desirable!).

This book was made with photos placed in a photo album. The photos prepare a boy for a work experience by introducing him to the new workplace and employees in advance. This strategy can be helpful in preparing children to transition into many new situations, such as new school environments, vacations, field trips, etc.



Communication Between Environments

Those of us who have children know how exciting it was when they were first able to come home from school or Grandma's and share something about what they did that day. Unfortunately, however, not all children spontaneously begin to share stories about their daily experiences. This strategy was developed to allow those who have difficulty communicating to tell teachers, family members and friends about their activities.*

A traditional way of sharing information between home and school is for the teacher or parent to write a note about what the child did. The child may be the bearer of the message, but many times they are not even aware what it says and have no input into composing it.

Communication between environments is a strategy that uses visual supports to allow a child to compose and express a message about his day. The complexity of the message depends on the child's language and literacy skills. Some children may use symbols or objects to share their experiences, while others may use words supported with a picture.

Children compose the message themselves. At a most basic level, the child may choose a symbol from his schedule to take home and tell the family that was his favorite activity that day. He may copy the word from the schedule card onto a paper if he is able and then take the paper home paired with the symbol so he will remember what it says and thus be successful in sharing his message. Children may also use wrappers from food or play items, glued to a piece of paper, with a message written by the teacher describing the activity (the student may dictate or write the message if he is able).

Other variations of this activity, depending on the child's ability, include having the child copy or write words or sentences about his day or weekend onto a piece of paper (a bank of words may be kept so the child can do this independently). A picture or symbol may then be placed by the sentence to cue the child so he can be successful as he re-reads his message.

It is important that the child participate in choosing what to share about his experiences and in composing the message to be shared. A definite period of time should be allowed during the child's day at school or evening at home to allow him to prepare his message without being rushed. He should have the opportunity to rehearse, if needed, so he is confident as he shares his message.

Allowing a child to create a message about his own activities and initiate conversation as he shares that message with others is extremely motivating. The use of visual cues provides the support needed to ensure success.



This is a tool for a student to communicate about his day at school by choosing symbols on the left and placing them on the right to indicate what happened that day. It is made from a file folder which was laminated and then velcro was used to hold the symbols. Many of the toy and food choices were cut from store flyers and catalogs. Classmates' pictures were included so he could indicate his playmates.



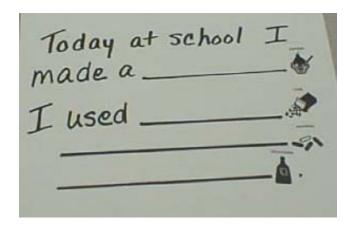
This student really likes the 76ers, and this is his way of sharing information about each game. He can circle the players that played well, indicate the score and whether the team won or lost. The pictures of the players were cut from a game program and the page was laminated so it was more durable and could be written on and wiped off.

This information was dictated by the child and was supplemented with objects and pictures cut from catalogs and product packages.



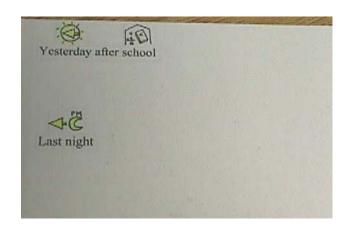


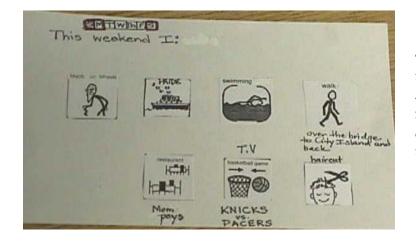
This is an example of how symbols from the child's choice board can be used to communicate about the child's day. If a child is able to communicate with symbols, the symbols from a motivating activity can be included to allow him to tell those at home or school what he enjoyed that day. Here, the child could circle the toppings he placed on his ice cream to make a sundae at school. The teacher just made a photocopy of the choice symbols on a page to take home.



This is a slightly different way to communicate the same information about the ice cream sundae as in the previous example. This child, however, is developing literacy skills, and is able to write some words. The symbols are used so the child can be successful as he communicates his message even if he can't read every word.

This is a blank page from a photo album that a parent has used to share information about her son's evening activities. Symbols may be added each evening by the student so he may take it to school in the morning to tell the teacher what he did yesterday.





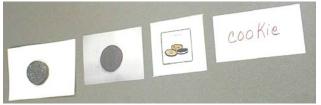
This is an example of the type of message shown above using the photo page – this one describes weekend activities. Symbols from his schedule were used to show what the young man did over the weekend. Anytime the message was not clear through the use of the symbols, the parent supplemented the message with a short phrase or sentence.

*Please note, however, that communication between environments is not meant to replace an augmentative or alternative communication (AAC) system for a child who has difficulty communicating. If the child is in need of an AAC system, communication between environments may be used in addition to the child's system. For more information about developing an AAC system for a child, contact the speech therapist at the child's program or the assistive technology consultant at your local intermediate unit.

Considerations for Creating Visual Strategies

Each visual strategy should be individualized for the child who will use it. In order to create strategies that will be effective tools for each child, consideration must be given to a variety of factors, such as:

✓ **Symbol representation** – Objects, people and events may be represented in many ways. It is up to those working with the child to decide which representation would be most effective in increasing understanding. Objects, photographs, line drawings or words may be used. To promote literacy and provide for consistency of language



used by communication partners, words should be paired with a symbol or used by be understood effortlessly by the child. The child may need to learn to use the strategy (such as a schedule), but

he should not be struggling because he doesn't understand photographs and that is what you chose to use. If he seems to respond best to objects then objects should be used, or if he has no difficulty understanding symbols those may be used. Our goal with the use of the strategies is to improve his understanding of daily events, and we don't want to make it more difficult for him by representing the events with items that are not easily understood.

- ✓ Size The visual strategy should be a size that is effective for the child. If there are issues with the child's vision, make sure the symbols are large enough or distinct enough to be seen easily. Portability and age-appropriateness are also important considerations
- ✓ **Location** The visual strategy should be easily accessible for the child. It may be placed on a wall, on the desk, in a photo album or notebook, etc. It should be wherever the child needs it to be.
- ✓ **Durability** It is suggested that you laminate or cover visual tools with clear contact paper to make them last longer. Photo album pages may also be used to provide protection from damage. As you are developing the strategies, don't spend too much time making them in perfect form until you are sure they are going to work for the child. Try a rough model first, spend some time perfecting it, then make it to last.
- ✓ Color Using color may help with the discrimination of the symbols. It may also help to define categories or different types of visual strategies (e.g., a schedule and a mini schedule for the same child may be different colors, or two children could have schedules of different colors).

Final Thoughts

It is important to begin slowly as you work to develop and implement these visual strategies. It is suggested that you pick one strategy to develop and try with a child, then make changes to that until it is working effectively. It can be overwhelming to both the adult who is developing the strategies and to the child who is using them if several are introduced at once. Be kind to yourself and the child by easing into the use of these strategies slowly over time. It will greatly increase your chance of success.

The question is often asked about when the visual strategies may be "faded out" of the child's routines. The answer to that question is that fading out or eliminating the use of visual strategies is not the goal. Those of us who need to use grocery lists each week at the store are not looking forward to the day when we can go without the list. Could we go to the store without our lists and come home with some of the groceries that we need? Sure we could! Would we be successful every time in coming home with all we needed? Probably not. Likewise, the students who truly need visual strategies may never be quite as successful without them, and we should focus on making the strategies inconspicuous and age appropriate instead of working to eliminate them as the child experiences success. Our goal should be to change and modify them as the child grows so that we can continue to meet his needs.

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