

## **Executive Functioning Interventions:**

### **Framework for Implementing Intervention Strategies:**

The material on this page provides a general framework to follow when implementing the various specific intervention strategies for the behaviors measured in the CEFI that may appear on subsequent pages of this report.

### **General Developmental Issues**

- A child's developmental level should be taken into account when planning intervention strategies.
- Utilize intervention strategies that initially include external controls, prompts and cues to help the child learn and develop new skills.
- Gradually remove external controls to promote internalization of new behaviors and explicitly encourage children to develop and use their own strategies.
- Encourage the child by explicitly communicating that change is possible with effort and motivation to achieve.
- Carefully consider strategies to enhance generalization of new skills, across tasks, time, and settings.

### **External Support**

- Structure the environment (e.g., cues, prompts), including the child's schedule (e.g., create a consistent routine with breaks and extra time for tasks) until internal control of behavior is mastered.
- Provide lists and charts that give specific suggestions for how to accomplish tasks and activities.
- Encourage children to develop their own solutions to getting things done.

### **Motivation**

- Make use of natural motivations to encourage desired behavior.
- Promote positive behavior through reward and encouragement.

### **Internalization**

- Provide feedback on the child's performance and encourage self-monitoring.
- Teach awareness strategies (e.g., training in self-management and self-monitoring skills; the technique of "self-talk").

## **Skill Building**

- Build a child's vocabulary and language skills to help him/her gain control over successful expression of his/her emotions and thoughts.
- Develop verbal mediation skills (e.g., verbal cues, questions, and discussion) to guide thinking and social processes.
- Provide meditation techniques to help improve self-control over attention, affect, and behavior.
- Model behaviors that illustrate strategic problem solving, self-reflection, and thoughtful approaches to work.

## **Intervention Strategies for Attention**

### **Developing Attention**

- Teach the use of verbal self-commands (e.g., "Okay, calm down and think about the question.").
- Teach focusing strategies (e.g., checking for critical features and careful listening).
- Teach the child to use only required materials.
- Teach strategies that increase inhibition and organization.
- Encourage the use of date books and special notebooks for organizing papers.
- Teach the child to stop and think before responding.
- Teach the child to count to 10 before answering.
- Teach strategies to increase alertness.
- Teach the child to be aware of his or her level of alertness.
- Teach the child to use calming self-statements.
- Encourage planned breaks so that the child does not have to sustain his or her effort for too long.

### **Helping a Child Overcome Problems with Inattention**

*First, help the child understand the nature of his or her attention problems, including:*

- Concepts such as attention, resistance to distraction, and control of attention.
- Recognition of how attention affects daily functioning.
- Recognition that the deficit can be overcome.
- Basic elements of the control program.

***Second, teachers and parents can help the child improve his or her motivation and persistence:***

- Promote success via small steps.
- Ensure success at school and at home.
- Allow for oral responses to tests.
- Circumvent reading whenever possible.
- Teach rules for approaching tasks.
- Help the child define tasks accurately.
- Assess the child's knowledge of problems.
- Encourage the child to consider all possible solutions.
- Teach the child to use a correct test strategy.
- Discourage passivity and encourage independence.
- Do not rely too heavily on teacher-oriented approaches.
- Require the child to take responsibility for correcting his or her own work.
- Help the child to become more self-reliant.
- Encourage the child to avoid:
  - Excessive talking.
  - Working fast with little accuracy.
  - Giving up too easily.
  - Turning in sloppy, disorganized papers.

***Third, teachers and parents should give the child specific problem-solving strategies.***

- Model and teach strategies that improve attention and concentration.
- Help the child to recognize when he or she is under- or over-attentive.

### **Helping Students Improve Their Attention**

Teachers and parents can do a number of things to help students improve their attention. Here are several suggestions:

- Break lessons and assignments into segments that the child can complete.
- Simplify instructions and present them in segments that the child can manage.

- Establish a cue that the teacher or parent always uses to help the child recognize when attention is lost.
- Teach the child to systematically and carefully look at materials before responding (e.g., look at all the options before choosing an answer).
- Decrease the amount of distracting information in the environment.
- Use materials that are interesting to the child.
- Teach the child to check work using calculators, spell checkers, and other helpful items.
- Encourage the child to slow down and look carefully at how words are spelled, for example.

### **Making Instructions Easier to Process**

- Make sure you have the child's attention.
- Provide both oral and written instructions.
- Give one instruction at a time and then repeat the instructions to the child, if necessary.
- Have the child repeat back the instructions to confirm that he/she understands what to do.

### **Structuring the Environment to Improve Attention**

- Be clear and concise when discussing behavior changes with the child. Avoid lengthy discussions of problematic behaviors.
- Develop a strategy and an action plan for how the child can increase positive attention from others.
- Seat the child at the front of the class near the teacher.
- Avoid open concept classroom layouts. A more enclosed, traditional classroom environment reduces distractions.
- Modify a student's schedule so that more demanding classes are taught earlier in the day.
- Schedule activities and courses in a way that maximizes the attention of the child by alternating tasks that require a lot of attention (instruction classes) with other activities (physical activity) and breaks. It is best if the schedule is predictable so that the child has consistency.
- Suggest strategies for reducing distractions and sensory stimulation, such as using headphones or earplugs.
- Provide only those materials that are necessary for the task and model this practice so that the child will learn to focus and use only what is needed to complete his/her work.
- Assign a job or task during large group activities or when the child needs to be patient for his/her turn, to keep the child engaged throughout the activity.

- Provide the child with activities to do (e.g., organized sports, volunteering) during unstructured free time (recess, lunch, breaks).
- Decrease workload (e.g., break tasks up into smaller, more manageable tasks) so that it aligns with a child's attention level and abilities. Increase workload as the child gains a greater attention span.
- Reduce the length of assignments to emphasize quality over quantity of work.
- Accommodate regular breaks during tasks that allow the child to get out of his/her seat and move around.
- Allow extra time on assignments, quizzes and tests.
- Consider restructuring tests to a format that best suits the child's abilities (e.g., multiple-choice will reduce writing demand; some children do better giving answers orally, whereas, other children like to use a word processor to type out their responses).
- Provide an unlimited amount of time to finish tests and provide breaks as necessary.
- Teach meditation, yoga, martial arts or tai-chi that require a child to focus his/her attention.
- Encourage the child to play games that teach attention regulation, sensory awareness, awareness of other people, or awareness of the environment.

## **Intervention Strategies for Emotion Regulation**

### **Helping Children Tolerate and Regulate Negative Emotions**

- Outline the difficulties a child has with negative emotions and build strategies to help him/her deal with and overcome these vulnerabilities.
- Discuss the barriers a child has to changing his/her emotions and develop a plan for overcoming these obstacles.
- Give the child instructions on how to recognize and label emotions; help him/her identify emotional reactions that are specific to particular contexts.
- Provide training that enables a child to identify the physical effect of emotions. Skills training in deep breathing exercises and muscle relaxation techniques may help alleviate some of the physical symptoms of negative emotions, especially anxiety.
- Help the child develop strategies to tolerate rather than avoid distress. If a child is able to fully experience and develop an awareness of his/her emotions, he/she can learn to experience distress without judgment and then to let go. Avoidance behaviors may make the situation worse and become harmful over time.
- Teach a child the technique for regulating negative emotions of expressing the opposite emotions. For example, if a child is feeling sad, he/she would try to feel the opposite emotion, happy.

- Provide strategies that will help a child be more aware of and increase the number of positive events in his/her life. These strategies may include providing techniques on how to avoid giving up, being more mindful of positive events, and building positive relationships with others.

## **Using Plans to Overcome Anxiety**

Follow these steps to help anxious children use plans to reduce their anxiety:

### **Recognize anxiety.**

- First, adults working with children need to recognize those students for whom anxiety is interfering with their ability to be successful. Sometimes it may be obvious because a child says he or she is scared, hides, or cries in response to a difficult task. In other cases, anxious children hide their anxiety by avoiding activities, acting tough, or saying they do not care. Watching for these signs and recognizing they may indicate anxiety is the first step.

### **Determine how a plan might help.**

- Once it is recognized that a child is anxious about something, look to determine how a plan could help. Try to determine what part of the situation is causing the anxiety. For instance, a student trying out for a new sport may be comfortable talking to peers but may be anxious about what to do. Conversely, a student meeting new people may be comfortable with what to do, but may not know what to talk about. Give the children some ideas of how they could respond in these situations.

### **Develop a plan.**

- When it is clear what is making the child anxious, the next step is to make specific plans for how to handle it.

These plans may include specifically figuring out what to do, where to go, or what to say. For instance, if a student is going to call to ask about a volunteer job, some specific plans should be made about whom to call, what questions to ask, and what information to provide. Plans can be written out, discussed, and/or memorized. Sometimes simply talking to a child before something is about to happen and giving the child some ideas for what to do is enough to reduce his or her anxiety.

### **Practice the plan.**

- Often it is important to practice the plan. If a student has actually had a chance to do what makes him or her anxious, even if it is just role play, it can help reduce anxiety. For instance, if a student has to give a speech, he or she can plan out what to do and say and then practice it in front of friends or family who are supportive.

### **Revise and/or add plans.**

- It is important that the child monitor the success of the plan. Sometimes after a plan has been used it becomes clear that the initial plan is not best. In this case, a new plan can be developed. In other cases, additional plans can be added. For example, if a student is going to be interviewed but does not know what the questions will be, he or she can come up with several plans for how to respond and practice them all.

## **Intervention Strategies for Flexibility**

### **Helping a Child to Be More Adaptable**

#### **Teach a child the processes involved in adaptive thinking:**

- Define the goal.
- Identify strategies to accomplish the goal.
- Develop a series of steps that define the plan.
- Gather necessary materials and information.
- Initiate the plan.
- Monitor progress and modify the plan if necessary.
- Complete the task and examine the results.

#### **Use the following process to assist the child in being more adaptable:**

- Identify how a child perceives his/her environment and the problems he/she tends to experience.
- Create ways to alter the environment that will address the identified challenges.
- Develop strategies to help the child adapt to the environment and deal with his/her specific problems.
- Reward positive behavior change; avoid rewarding inflexibility.

#### **Helping a Child to Be More Flexible**

- Set graded expectations of flexibility that increase with time and build on a child's strengths.
- Provide guidelines and expectations that are consistent across environments (e.g., home, school) and activities.
- Identify a child's barriers to behavioral adaptation or flexibility and devise a plan to overcome these barriers.
- Motivate and encourage the child with rewards when he/she has demonstrated behavioral flexibility.
- Encourage the child to set goals and to make a resolution to adopt new behaviors.

- Explain to a child the consequences of not adapting his/her behavior to fit the situation.
- Develop and create routines for dealing with change to help individuals who are very structured, rely heavily on routines, and have difficulty with change.

Discuss and practice changes in routine to help mitigate some of the difficulties that may occur.

- Post a daily schedule (either a written or picture-based schedule) that includes changes in routine. For example, indicate when an activity like soccer practice is cancelled. Advance notice gives the child time to adjust to a change in schedule.
- Provide transition warnings between tasks or activities.
- Encourage the child to reflect on the behavior of his/her peers (i.e., give him/her an opportunity to engage in social comparison). This may involve creating a buddy system where an example of flexible behavior can be set by a child's peer.
- Teach stress management techniques to help a child tolerate distress produced by change.

## **Intervention Strategies for Inhibitory Control**

### **Teaching a Child to Stop and Think!**

To encourage positive self-control, a child should be first directly taught to pay attention to and think about his or her behavior. A child can be explicitly taught that when the phrase "Stop and think!" is said, the child should think about what he or she is doing. The child then should be taught to ask him- or herself appropriate questions about actions, such as "What am I doing?" and "Is what I'm doing okay?" If the child is about to do something, the questions "What do I want to do?" and "Is what I want to do okay?" may be posed. Initially, these questions could be put on the child's desk or posted on the wall as a reminder. The child may be given the following plan to follow to determine what is going on in a situation, think about what his or her options are, and choose the best one.

- Stop and think.
- Identify the situation.
- Ask, "What do I want to do?"
- Ask, "Is there a problem?"
- Ask, "What are possible solutions?"
- Consider the consequences to each solution.
- Choose the best solution.
- Evaluate the results.



## **Improving Inhibitory Control**

- Increase the child's awareness of the possibilities that exist to regulate thoughts, feelings, efforts and actions; this will eventually improve the child's ability to self-regulate.
- Create an environment that is free of overt distractions, one that is structured to prevent unexpected changes in routine, and that supports a child's abilities and growth through behavior management planning.
- Place behavioral expectations, rules and regulations of the class around the room or in a student's notebook for quick reference.
- Use extinction training to reduce inappropriate behaviors. Some extinction training strategies include ignoring unwanted or negative behaviors and giving praise for positive behaviors.
- Teach the child behavioral control techniques, such as developing cues that will prompt him/her to stop and take a break, to calm down or adjust his/her behavior.
- Give the child techniques to use that will allow him/her to stop and think before speaking.
- Create non-verbal cues that will help the child to improve inhibitory control. Visual learners, for instance, can be taught to inhibit behavior by envisioning a stop sign.
- Use positive reinforcement to encourage repetition of desired behaviors.

## **Intervention Strategies for Initiation**

### **Helping Children Learn to Initiate Behaviors**

- Create routines for the child that address tasks or activities that he/she has difficulty initiating. For example, develop a bedtime routine that helps the child initiate activities associated with preparing to go to bed.
- Start tasks early to give the child enough time to overcome difficulties with initiation.
- Reduce time constraints that might discourage the child from starting an activity or task.
- Create cues that a child can use without the presence of others. For instance, record verbal cues, set an alarm, or use reminder setting on cell phones that prompt a child to begin a task (e.g., homework). Avoid excessive use of cues for improving a child's initiation behaviors; however, as this can be perceived as nagging and can cause the child to avoid initiating a given task.
- Use a series of cognitive exercises that move the child from thinking to planning to verbally talking through what they will do to start a task.
- Employ errorless learning techniques to teach the child how to initiate tasks and activities. Errorless learning involves immediately providing the correct answer. Future errors of the same kind are followed by nonjudgmental corrective feedback.
- Monitor a child's progress once a task is initiated to ensure that it gets completed.

# **Intervention Strategies for Organization**

## **Teaching Strategies for Organization**

The teacher should provide the students with instruction about strategies for specific instructional areas (e.g. decoding, reading comprehension, vocabulary, spelling, writing, math problem solving, and science).

### **There are two basic steps:**

· Teachers should tell students that 1) a plan is a method for how to do something that involves thinking about the activity and outcome, and 2) a plan requires a person to:

- Think: What do I want to do? What is my goal?

- Do: Act. Begin to complete the task.

- Monitor: Is it working? Am I getting what I wanted?

- Modify: Do I need to modify my plan?

- Verify: Am I finished with the task?

· Teachers should explicitly encourage students to accomplish several things when doing schoolwork:

- Discover and use strategies.

- Monitor their performance.

- Generalize their use of strategies.

- Be aware of the importance of strategies.

- Achieve self-regulated strategy use.

- Become thoughtful, planful, and evaluative.

### **Teaching Plans for Organizing**

One way to help children organize their materials is by color coding the information. For children who have trouble keeping different subjects organized, each subject may be given a color, and all materials, including books, handouts, and notebook tabs, should be labeled with that color. For example, a science book would be covered in orange paper, science handouts would be printed on orange paper, science notes would be written on orange paper, and the science notebook tab would be orange. Other subjects would use other colors in the same way, and a key would be made for the notebook listing each subject and its corresponding color. When using colored paper is not possible, colored sticky notes placed on the materials or large marks with colored markers in highly noticeable places could be used.

For a child who has trouble prioritizing material, a similar approach could be used. Instead of using colors to code different subjects, colors could be used to code for priority or urgency. A red sticky note or mark could be put at the top of homework materials, and red pencil could be used to note “hot” or urgent homework in a datebook. Purple could be used for less urgent work, and blue could be used for “cool” or least important work.

## **Teaching Children to Use Graphic Organizers**

Graphic organizers are fairly simple to create. They need not be reserved for factual information. They can be used for activities such as exploring creative concepts, organizing writing, and developing language skills. The following four steps can be used to create a graphic organizer:

- Select information that you need to present to the child (which may be from a story, a chapter, or any concept).
- Determine the key components that are necessary for the child to learn.
- Create the graphic representation of the information. The illustration should include the key concepts, concepts the child already knows, and the linkages between the concepts.
- Present the organizer to the child and discuss it to be sure he or she understands the information and sees the connections.

Children may also be taught to develop their own graphic organizers as a strategy to help them understand and learn information independently.

## **Improving Organization**

- Teach a child to set goals and determine desired outcomes so that appropriate organization strategies can be designed.
- Decrease clutter in the child's environment.
- Provide a set of textbooks for home use if the child has difficulty remembering to bring the appropriate books home for homework.
- Encourage the child to use graph paper when doing math or handwritten assignments, to keep work neat and organized.
- Use email for homework assignments. Reminders about upcoming projects and activities can also be sent via email.
- Create storage solutions with the child so that a consistent system is in place to organize the materials for his/her courses and activities. For instance, provide different plastic bins with lids for each course or activity.
- Provide the child with charts or maps that contain the information necessary for completing different tasks so that the child will know what to do and in what order.

- Allow the child five minutes at the end of a class to organize his/her materials for the next course. Include travel time for this child to get to his/her locker before the hallway becomes crowded and full of distractions.
- Teach problem solving and time management skills.
- Model good organization to emphasize how important and beneficial it is.
- Create a buddy system: pair the child with a responsible student who can help with taking notes and doing class work, and who can model appropriate classroom behaviors. An organized student, for instance, could be asked to take notes on carbon paper or duplicate his/her notes to share with the child. Note: it may be important to rotate buddies so that a given student does not become worn out.
- Engage the child in cooperative learning groups or peer tutoring where the child will be exposed to positive peer models.

## **Intervention Strategies for Planning**

### **Teaching Students Better Planning Skills**

- Teach children about plans and strategy use.
- Discuss the importance of planning in class and how it helps students organize themselves so that they can be more successful and finish on time.
- Encourage children to develop, use, and evaluate their own strategies.
- Encourage verbalization of ideas and strategies.
- Explain why some methods work better than others.
- Ask questions related to planning, such as:
  - "How did you do the task?"
  - "Did you make a plan before you started the task?"
  - "What did you do last time? Did it work?"
  - "Why did you do it that way?"
  - "These are hard. Is there a way to make them easier?"
  - "Is there a better way or another way to do this?"
  - "What strategy worked for you?"
  - "Do you think you will do anything differently next time?"
  - "How can you check your work to see if it is right?"

### **Interacting Smartly with Other People**

A child should always use a plan with the people in his/her life. The following are suggestions a child can use to interact smartly with other people:

- Think about how you want to behave.
- If what you are doing is not working, plan for another way to reach your goal.
- Think about what you want to say and choose your words carefully before you say it.
- Think about how the other person might feel or act after you say something.

Doing these things will help other people understand the child better, and he/she will understand them better, too. Using a plan with other people is another way to be smart!

## **Improving Planning**

- Encourage a child to think strategically and plan ahead by giving the child training in problem solving, verbal reasoning, study skills and task-specific skills.
- Use a calendar to map out and plan long-term goals and tasks.
- Use daily or weekly worksheets or notebooks to plan and organize short-term tasks.
- Build a list with the child that prioritizes tasks and activities. Have the child refer to this list regularly in order to plan his/her time.
- Teach the child how to tackle complex tasks by breaking them up into smaller steps.
- Provide checklists of step-by-step instructions with examples of how to accomplish a task or goal.
- Schedule more frequent but shorter work periods.
- Create smaller quotas or more benchmarks to increase the sense of productivity. Increase these work quotas as the child's productivity improves.
- Limit the amount of time spent on each task by setting reasonable time limits and providing the child with a means to keep track of time (e.g., a timer).
- Define what it means to have a completed activity or task. Example: Your math work is finished once you have answered all 10 questions and have corrected any mistakes. Do not begin your next task until your math work is complete.
- Set up resources for the child to use when he/she needs help at home or at school. Encourage the child to use these resources and to understand that it is okay to ask for help.

## **Intervention Strategies for Self-Monitoring**

### **Teaching Self-Monitoring**

- Provide specific description of academic accuracy and academic productivity.

- Hand out a record sheet, and explain that at the end of each session the child is to record the number of items completed with the total number of items given (productivity) and the number of items correct with the total number of items given (accuracy) in the appropriate columns.
- Explain that self-monitoring is important for on-task behavior and successful learning and demonstrate how to calculate and record the percentages for accuracy and productivity at the end of the session (10- to 30-minute period).
- Provide a session in which the students work on a task with a specific number of items (e.g., spelling list, math problems, and question sheets related to a story). It is acceptable for students at different levels to have different activities.
- At the end of the session, have students record and calculate their progress.
- Have students keep daily logs and encourage students to compare percentages of previous sessions to recent sessions. Teachers may choose to have students graph their own progress or to post a graph in class charting the productivity and accuracy of individual students or the whole class. Reinforcement or rewards are not necessary, but some teachers do choose to reward students for certain levels of success.

Throughout these steps the teacher should model self-recording and monitoring, provide feedback, allow students to independently record their performance, encourage students to examine their performance over time, praise accurate self-reporting, and be patient—success may not come immediately.

## **Teaching Self-Awareness**

In general, students must be made aware of the importance of learning strategies. Educators should teach knowledge of learning by discussing that:

- Students can do some things that help them remember better.
- People sometimes forget things they have learned.
- Some things are more difficult to remember.
- People forget things for different reasons.
- Attention and effort have roles in improving memory.
- Repetition can be helpful.
- Knowing and using strategies can be very helpful.

Teachers should spend time discussing with students their methods for learning tasks and what ways are better than others. Students should be instructed to pay attention to the learning situation. In other words, students should ask themselves the following questions:

- “What is the reason for doing this?”
- “Have I done something like this before?”

- “What are the different ways I can do this?”
- “What is the best way to do this?”

Students can also be instructed to evaluate what they are doing while they are doing it:

- “Is this strategy working?”
- “Is there another way I can do this that is better?”
- “Is this working for me?”

Recognizing the importance of using specific strategies is critical because at first strategies may not seem worth the effort. Using strategies can be encouraged by giving regular positive feedback when the student is using a strategy, by highlighting when a student was successful because a strategy was used, and by attributing failure to the lack of strategy use. When students realize they have some control over their success through strategy use, they are more likely to be self-aware and to use strategies. Also, if a teacher regularly uses and models a strategy, students are more likely to use it themselves.

## **Improving Self-Monitoring**

- Teach the child to identify a goal, predict performance, and outline possible strategies based on imagined outcomes. Explain to the child how to monitor behavior and assess performance in order to develop new strategies if desired outcomes are not met.
- Provide training in self-management and self-monitoring skills. The goal is to help a child develop strategies for monitoring his/her own behavior and performance. One technique is to provide a routine checklist that the child can fill out to periodically monitor behavior. A sample checklist question is, "Am I listening?" The checklist can include questions (e.g., "Have I defined my topic?" or "Have I completed the outline?") that relate to task-specific performance metrics.
- Check in regularly on a child's progress to ensure that a task is being completed. This can serve as a way to model self-regulation.
- Teach the child cues to help determine when he/she is off track on a task.
- Include a plan to gradually transfer responsibility for cueing behavior to the child. Planning prevents the child from relying too heavily on external support.
- Use videotaped feedback to allow the child to view his/her behavior and develop new strategies.
- Provide a model of desired behaviors for the child to follow.
- Reward the child several times a day, at home and at school to engage him/her and to reinforce positive behaviors. Examples of good rewards include high energy, attention-getting rewards such as computer games, and desirable activities. Increase the frequency or magnitude of rewards as positive behaviors increase. A token system can be used to promote and reward

positive behaviors. Transition into teaching the child to self-reward when a goal is met in order to motivate self-monitoring.

## **Intervention Strategies for Working Memory**

### **Using Focusing Strategies to Improve Memory**

Actively employing strategies that improve learning helps students remember more information. If a student's environment is not distracting, the student is more likely to be able to manipulate information in his or her mind. In turn, the student will be better able to remember the information over time. Furthermore, if the student employs strategies to self-monitor how distracted he or she is, the student is more likely to be able to focus. This strategy uses the mnemonic acronym PATS. PATS stands for:

#### **Pick the right environment to study.**

- Pick a good place to study that is comfortable. Consider how quiet the place should be, how busy it should be, and how bright it should be (bright light can be distracting and low light can make it difficult to see).
- Set aside a dedicated place to study. A student's mind might be confused and distracted by trying to study in bed, for example, because a bed is associated with sleeping.

#### **Always reduce visual distractions.**

- Find a place such as at a desk facing away from activity.
- Only have the necessary material. Other books, toys, magazines, and computers can be distracting.

#### **Try to eliminate noise around you.**

- Study in a quiet room. Lights and fans may contribute noise, so earplugs may be helpful.
- Some people like to study with music. Be sure it is not distracting. If it is, pick a quieter volume or different style of music.

#### **Self-talk to control internal distractions.**

- Some students may be distracted by internal factors such as thoughts about other things, hunger, or worry. Students should monitor their internal distractions and use positive self-talk to focus. For example, if a student is eager to e-mail a friend, the student should say to himself, "I'm distracted by wanting to e-mail, but I need to study more. I'll study for 15 more minutes and then take a break to e-mail." In this example, a timer would be a great way to help quantify study time and focus.

The student should be explicitly taught PATS and guided to use it. During class or study at home, a teacher or parent can remind the student to use PATS when he or she needs to really focus and remember information.



## **Improving Working Memory**

- Explain errorless learning techniques to the child. In errorless learning, individuals are not allowed to guess on recall tasks, but are immediately provided with the correct response, instructed to read the response, and write it down. If errors do occur they are followed by nonjudgmental corrective feedback.
- Teach study skills to help the child remember course material for tests and assignments.
- Combine the actions of seeing, saying, writing and doing when presenting information to the child, to help reinforce the child's ability to learn and remember the information.
- Teach memory mnemonic strategies (e.g., rhymes, acronyms, visual images, method of loci, catch phrases, and alliteration) to increase working memory ability.
- Use working memory tasks such as counting, spatial, word, and digit recall to help train and improve working memory.
- Start a memory log for the child that may include maps, checklists, schedules, a journal for thoughts and feelings, cues and reminders and instructions for different activities.
- Encourage the child to bring an audio tape recorder to class to help reinforce his/her learning.
- Provide a copy of in-class presentations and notes to the child.
- Use a study buddy strategy for each class subject, to help the child learn course material and good study habits.
- Set up co-operative learning groups or peer tutoring for the child.

