



Trainer Orientation

Introduction

Brain Power® is a comprehensive Cognitive Skills Training Program that is designed to promote neuroplasticity and enhanced cognitive functioning in individuals with Brain Injuries, Learning/Developmental Disorders, or anyone who desires General Cognitive Enhancement. The Brain Power® Program is unique in many ways. First, one of the hallmark features of this program is the fact that the training modules are structured in a way that will drive skills to the point of being automatic. This has proven to be a critical component necessary to develop processing skills to a level of proficiency that will translate into meaningful functional changes in the real world. This is accomplished by either requiring the patient to perform the task “on beat” along with a metronome or progressively reducing the amount of time allowed to complete a task. This “driving technique”, in combination with daily training, is what allows Brain Power® to produce significant changes in neurological brain function and cognitive ability.

Second, Brain Power® is the only cognitive skills training program that retains demographic data, pre-training and post-training cognitive test results, pre-training and post-training functional rating scale results, and performance data from every training session and for every person that is treated with this program. The data is kept in a secure centralized database maintained on the Brain Power® server. The database was created in order to confidentially allow for a powerful and detailed analysis of the effectiveness of each of the training modules in promoting improved brain functioning. Further, analysis of this data allows us to make modifications of the Brain Power® Program so that it will become progressively more effective. Last, it provides objective measures of treatment outcome which will serve to validate the efficacy of cognitive skills training in treating various disorders.

In order to provide effective treatment, it is critical that the Brain Power® Program be utilized in a standardized fashion. For this reason, this program was converted from a tabletop administration to a computer assisted administration in order to minimize variability in treatment delivery from one Trainer to the next. However, there are still aspects of the program which require direct intervention from a training facilitator (Trainer or Support Trainer). Therefore, it is important that prospective Trainers have an understanding of how this program is to be utilized and personally possess certain basic skills in order to effectively facilitate cognitive skills training for another person. *The Brain Power® Program is challenging but intuitive, and a caring family member or friend should have no difficulty using the program after completing the Trainer Orientation.*

A. Trainer Roles and Responsibilities:

1. Trainer

Trainer is the term used for the professional registered within the Provider’s organization which may provide direct treatment to a Patient, as well as maintain responsibility for oversight and coordination of the treatment provided to a particular Patient by a Support Trainer. The Trainer should be the person that is available to guide the Support Trainer in the appropriate use and implementation of the Brain Power® Program. The Trainer will have the responsibility for establishing the Treatment Plan and determine which parts of the Brain Power® Program the Support Trainer will have access to. The Trainer will also have

responsibility for designating the dates or time period that the Support Trainer will be able to provide training.

2. Support Trainer

Support Trainer is the term used for the family member or friend that will be providing training off-site, presumably in the Patient's home. The Support Trainer should only need to become familiar with the parts of the Brain Power® Program that are included in the patient's treatment plan. There is no need for the Support Trainer to understand how to provide training utilizing parts of the program that are not going to be utilized with the patient. The Support Trainer should rely on the Trainer to answer any questions regarding which parts of the program they should become familiar with and the appropriate way to provide training with the Brain Power® Program.

If the Patient is responsible for purchasing training credits, the Support Trainer will have to facilitate this transaction by logging into the website and acquiring access to PayPal so that the patient can carry out this transaction.

Trainer Readiness

The following information will help you, the Trainer or the Support Trainer, to understand the recommended way treatment should be delivered, how each of the treatment modules works, and what you should be paying attention to as you provide treatment to your patients or family members. There are also certain skills that we strongly recommend you practice until you reach a level of proficiency that leaves you confident in your ability to provide appropriate training and feedback to those you are working with. Support Trainers only need to be concerned with the Trainer Readiness section of the Trainer Orientation.

In order to administer this program correctly, there are certain basic skills that you will have to possess. Please review all of the following material and practice the skills as directed. For some skills, we ask that you have another person independently verify that you can accurately perform the skill in question. We cannot stress enough the necessity of mastering these basic skills so that the training you provide to another person is done correctly. When you feel that you have adequately reviewed the materials, as well as the functionality of the Brain Power® Program (exploring it in demo mode), you must go to www.TrainMyBrain.com and access the "Trainer Orientation" page contained under the "Getting Started" tab. At the bottom of the page you need to accept the following statement;

NOTE: You must click the Affirmation below, after you complete the Trainer Orientation, in order for you to be Certified to provide training. This will then change the Brain Power® program from Demonstration Mode to Training Mode. You cannot access a patient's account and provide training until you do this.



I affirm that I have thoroughly reviewed the trainer orientation material and the attached files. I further affirm that I have practiced all of the skills described in the trainer orientation material and, where appropriate, have had an independent person confirm that I am able to perform these skills accurately.

You will then be certified to train with Brain Power®.

Below, are some basic skills that you will need to develop prior to patient training. Although most of the Brain Power program is intuitive to administer, there are some basic principles that must be understood. In order to expedite this process, go to www.trainmybrain.com, login and go to the Reference Materials page and scroll down to Trainer Orientation. Below, you will be directed to

open support files from this webpage to support your orientation. You can check off these sections as you complete them.

Mastery of Sound-Letter Associations

Auditory processing skills cannot be effectively trained unless the Trainer can accurately identify and reproduce the appropriate sounds for each letter. In order to proceed with this part of the Trainer Orientation, please access the file labeled "[Phonemic Production](#)" from the Reference Materials page. Play the wav files associated with each letter. It is critical that you practice reproducing each sound multiple times. Start with the vowels sounds (a, e, i, o, u) as these are the hardest for many people to master, particularly the difference between "e" and "i". Once you have mastered the vowels, then work on the remaining consonants/letters.

Once you feel confident that you have mastered the sounds, have an independent person verify that you are accurately producing each sound. Independent verification should be performed by you saying the sound for each letter followed by the person playing wav file for that letter for comparison. In this way the person can compare what you said with the correct sound.

Training Basic Speech Sound Production

There will be occasions when the Patient will not be able to correctly produce some of the sounds that go with certain letters due to difficulty coordinating the oral musculature. Consequently, you may need to provide assistance in learning how to produce these sounds.

Please go to the Reference Materials page and access the file labeled "[Training Speech Sounds Production](#)" that describes these procedures. Please read this information thoroughly. We recommend that you print this document for future reference.

Rhythm Perception

Many of the training tasks require that the patient respond "on beat" in response to a metronome. It is the Trainer's responsibility to determine if the Patient is able to stay on beat while performing the training task. Consequently, you must have an adequate perception of rhythm in order to satisfactorily accomplish this. It is important that you practice clapping or tapping on beat along with a metronome at 30 beats per minute (bpm), 60 bpm, 120 bpm. Also, tap on every other beat at 120 bpm.

Please go to the Reference Materials page and access the file labeled "[Rhythm Perception](#)" and play the wav files which will help you to practice this skill. Once you are confident in your ability, have an independent person verify that you are accurately staying on beat at each speed, including every other beat at 120 bpm.

Fine Motor Sequencing Skills

In order for a Trainer to administer the Fine Motor Sequencing module, it will be necessary to have a basic mastery of the fine motor sequencing skills that will be trained. Most importantly, the Trainer will have to be able to recognize when performance errors are made. Please go to the Reference Materials page and access the file labeled "[Fine Motor Sequencing](#)" that describes these procedures.

This task requires the Patient touch his thumb to every finger as specified at each level. It is important that the Trainer is able to demonstrate this skill. This will take some practice on the part of the Trainer as this is a learned skill, not one that comes naturally. Further, the Trainer must be able to visually recognize when the Patient is not doing the task correctly. The Trainer should open the Brain Power[®] Program and view the demonstration of each level in

Practice Mode. You should also practice teaching this to someone else so that you can learn to recognize when someone is not doing it correctly.

There are 4 different fine motor sequencing skills:

1. The Patient must touch his thumb to each finger of one hand, starting with the index finger and proceeding to the little finger, and then beginning back again at the index finger. This must be done for 30 seconds without error. This is performed at 60 and 120 bpm with each hand.
2. The Patient must touch his thumb to each finger on both hands at the same time, starting with the index finger and proceeding to the little finger, and then beginning back again at the index finger. This must be done for 30 seconds without error. This is performed at 60 and 120 bpm.
3. The Patient must touch his thumb to each finger from left to right with both hands at the same time (i.e. touch the little finger to the thumb of the left hand first and the index finger to the thumb of the right hand first and proceed in sequence and then back the other direction). This must be done for 30 seconds without error. This is performed at 60 and 120 bpm.
4. The same as #3, but the Patient's right thumb should touch on every beat and his left thumb should touch on every other beat (i.e., every time one thumb touches one finger, the other thumb has touched two fingers). This must be done for 30 seconds without error. This is performed at 60 and 120 bpm.

Gross Motor Sequencing Skills

In order for a Trainer to administer the Gross Motor Sequencing module, it will be necessary to have a basic mastery of the gross motor sequencing skills that will be trained. This is not a computer administered task. It is administered directly by the Trainer. Therefore, it is crucial that you are able to perform each of these skills yourself which will, at a minimum, require that you go to the Reference Materials page and access the file "[Gross Motor Sequencing.](#)" However, it is recommended that you practice performing these skills with another person.

Understanding Conceptual Reasoning

In order for a Trainer to administer Conceptual Reasoning, it will be necessary to have a basic proficiency of how to identify correct and incorrect conceptual sets. Please go to the Reference Materials page and access the file "[Understanding Conceptual Reasoning](#)" that provides a written description of how to identify conceptual sets. You should then open the Brain Power[®] Program and successfully pass levels 1-6 of Conceptual Reasoning to assure that you understand how to identify sets.

Understanding Deductive Reasoning

Deductive Reasoning should not be administered until the Patient can pass Level 4 of Conceptual Reasoning because the patient must possess basic conceptual reasoning abilities in order to perform this task. Also, a Trainer needs to have a good understanding of the problem solving strategies needed to perform this task so that they can be taught to the Patient. Please go to the Reference Materials page and access the file "[Understanding Deductive Reasoning](#)" which provides a description of the deductive reasoning process. You should then open the Brain Power[®] Program and successfully pass levels 1-11 of Deductive Reasoning to assure that you understand how to teach this reasoning process.

Recognition of the Pictures used for Confrontation Naming and Spatial Picture Memory

The Confrontation Naming and Spatial Picture Memory tasks utilize a large number of pictures of familiar objects. It is important that you know the names of all of these objects, as well as acceptable alternate names. Open the Confrontation Naming module and review the pictures and names on Levels 1 and 6. It is important that you acquire a level of proficiency where you can name each of these pictures at a rate of one per second (including knowledge of all alternate responses). Please go to the Reference Materials page and access the file "[Confrontation Naming and Spatial Picture Memory Picture Names](#)" and review the names of the pictures.

Practice vs. Training Mode

All of the training modules have a Practice Mode and a Training Mode. The Practice Mode allows you to present the task to the Patient and provide an appropriate demonstration of how to perform the task. It is important that you do not provide training in the Practice Mode. This should only be used for the purpose of a brief explanation and demonstration to confirm that the patient understands the task. The Training Mode is used for actual training purposes. A Patient can only pass a level while in the Training Mode and performance data is only gathered in the Training Mode.

Pre-training Skills

There are some basic skills that a patient will have to possess in order to adequately work on certain training modules. It is recommended that you begin training by confirming that the patient possesses these skills.

Basic rhythm perception

The Patient needs to have sufficient rhythm perception to be able to keep a steady beat along with a metronome. Open the "Rhythm Perception" wav files described earlier and have the patient tap or clap in beat with the metronome at 60 bpm and 120 bpm, and on every other beat at both speeds. The Gross Motor Sequencing training module can also be used to work on rhythm perception.

Basic math

Certain modules (i.e. Divided Attention Auditory Calculations) require that the patient perform basic mental math calculations. It is important to assure that the patient possesses these basic math skills before attempting these tasks. Children should be able to pass Level 6 of Basic Skills Addition and Subtraction, and adults should also be able to pass Level 3 of Multiplication. Access "[Math Training Tips & Tricks](#)" from the Reference Materials for instructions on how to evaluate and train basic numerical skills.

General Training Guidelines

While the Brain Power[®] Cognitive Skills Training Program is extremely comprehensive, it is recommended that training only occur in areas where the patient has identified weaknesses. Working in too many areas will dilute the overall effect of the treatment. The object is to stimulate very specific parts of the brain on a daily basis to promote development. You should use the "[Brain Power[®] Treatment Plan](#)", which can be downloaded from the Reference Materials page (Treatment Planning section) of the website, to help you choose the appropriate training modules. You will see that some modules provide training in more than one functional domain.

For individuals with more complex Learning Disorders or Brain Injuries, the training should be done in stages, typically training the two most basic processing skills (i.e., visual and auditory

processing) for 12 weeks and then more complex processing skills (i.e., executive functions and language skills) for 12 weeks.

In order for a patient to receive maximum benefit from cognitive skills training, it should ideally be provided on a daily basis, one hour per day, always achieving a minimum of 6 days per week (7 recommended). Only consistent, intense stimulation will result in maximum development of new neural connections (neuroplasticity).

It is very important to avoid unnecessary frustration and maintain task novelty which will assure maximum motivation to perform throughout the training session. Generally, the Patient should not work on any task for more than 10 minutes. If the Patient begins to show signs of frustration prior to this, try giving an endpoint (i.e. trying the task 3 times and then move on to something else or continuing the task for a specified amount of time) so that there is a “light at the end of the tunnel.” Further, give plenty of praise and reinforcement for their effort.

Initially, the Patient will likely pass early levels of a training module very quickly until reaching levels that are difficult to pass. This is where the real therapy begins. The Patient could remain stuck on a level for several days before mastering it. Don't be discouraged. You are working to develop new neural connections and this takes repetition and time. (There has been a consistent observation that progress is slow in the first 6 weeks of treatment and then it seems like the “wall” comes down and therapeutic gains come more quickly from that point forward)

One of the side benefits of this experience is that it teaches the Patient about perseverance and that they can master difficult tasks if they don't give up. This builds self-confidence and self esteem. Parents frequently report after training is completed that the child's increased self-confidence and perseverance are seen in the classroom. They don't give up when faced with difficult tasks because they believe that they are capable and will keep trying until they succeed.

All of the tasks require the Patient to respond on beat to a metronome or complete the task with a time limit. This is designed to drive the skill to the point of being automatic. There are some tasks where the metronome is played but the task does not require responding on beat. Also the time bar is present at the bottom of the screen. These features are there as a distraction. Although this can be disabled, it is important for the Patient to be able to ignore distractions and perform a task at an optimal level. Many situations in the real world require this (i.e., driving).

Each training module has a **Practice mode and Training mode**. The Practice mode allows you to demonstrate the training task so that the patient comprehends what the task requires. However, you should never provide training in the Practice mode as none of the patient's performance will be saved in the database and they will not be able to pass the level in Practice mode.

There may be times when you work with children that demonstrate significant behavior problems. This can seriously compromise the treatment outcome. If such problems exist, a more structured behavior management plan may need to be implemented. There are many excellent books that cover this topic. Two books that are complimentary and get right to the point of describing effective behavior management strategies are SOS Help for Parents by Lynn Clark, Ph.D. and 1-2-3 Magic by Thomas W. Phelan. If you are a professional providing treatment then these books should be recommended to the parents and a coordinated behavior management plan should be put in place. If behavior/motivation problems can't be adequately resolved then treatment should be discontinued and help should be sought from a mental health professional. Treatment can be resumed once the problem is resolved.

You should also access the "[Brain Power® Treatment Log](#)" from the Reference Materials webpage which will allow you to document each day of treatment and any important observations that you need to keep track of.

Coaching and Support

It is important to always keep in mind that the training exercises contained in the Brain Power® Program are difficult and typically require a great deal of work to master. Many times, the Patient may have to attempt the same level of the task several times, over several training sessions before mastery is attained. Consequently, it is critically important to provide frequent praise and encouragement in order to maintain motivation and perseverance. You must become their personal "cheerleader." Sometimes, you may find that a Patient enjoys working on a particular task. If so, save this task for the end of the session as a "reward" for working hard on earlier tasks.

Program Description and Instructions

As part of your Trainer Orientation, you should now open the Brain Power® program and explore the various training modules. Every New User is allowed 15 days in Demonstration Mode so you can explore the various levels of each module. During actual training, the patient will advance through each incremental level in order. This progression through increasingly challenging levels is a key component of neurological stimulation and development. Please go through each module in order to develop familiarity and proficiency. Check off the box below as you complete each module so you have a clear record of your orientation progress.

A. Visual Processing

It should be noted that some of these tasks can be used to develop Language Processing Skills and Executive Functions. Please refer to the Brain Power® Treatment Plan. When necessary, many of the Visual Processing tasks can be done without a Trainer present.

Visual Tracking

This task develops Oculomotor Control and Precision. It is a very basic task which involves tracking a ball with the eyes that moves across the screen in different directions. It is helpful for individuals that have visual tracking problems interfering with reading of oculomotor weakness due to a Brain Injury.

Line Orientation

This task develops Spatial Visualization and Directionality. There are several ways that a response can be entered on this task. The Patient can use the mouse to click on the number of the line that is chosen, enter the number using the numeric keypad and hit Enter, or call out the number and the Trainer can enter the number using the numeric keypad and hit Enter. If the Patient is having difficulty when first trying this task, it is often a good idea to try the task in "Practice Mode" so that you can discuss the strategy that is being used to make a choice. It is acceptable to provide suggestions. Be sure that you switch back to "Training Mode" before resuming training.

Visual Discrimination Speed

This task develops Rapid Visual Perception and Discrimination. This task requires locating one or more target stimuli from an array of letters or figures which get progressively smaller in later levels. This task is very similar to Visual Scanning Sequential (VSS) except that VSS uses only the letters b, d, p, and q. Because VDS is

perceptually more difficult, training of visual processing problems should probably start with VSS and later incorporate VDS.

Visual Scanning Sequential

This task develops Rapid Visual Scanning and Discrimination. As mentioned above, this task requires rapidly scanning an array of the letters b, d, p, and q that are randomly ordered and clicking on every occurrence of the designated target letter. The letter become smaller as the levels progress.

Visual Scanning Random

This task develops Rapid Visual Scanning and Discrimination. This task is similar to VSS except that the letters are randomly, rather than sequentially, presented on the screen.

Spatial Number Visualization

This task develops Spatial Visualization and the ability to maintain and work with a mental image. This task is also useful for training Language Processing. The Patient is presented with a number line (0-9) and must move around the number line in response to one or more verbal commands. On certain levels the number line disappears and the person must maintain an image of the number line in their head in order to follow the commands.

Spatial Visualization

This task develops Spatial Visualization and the ability to maintain and work with a mental image. This task is also useful for training Language Processing. The Patient is presented with either a 2 x 2 or 3 x 3 grid and must move around the grid in response to one or more verbal commands. On certain levels the grid disappears and the person must maintain an image of the grid in their head in order to follow the commands.

Visual Matching

This task develops Rapid Visual Discrimination and Spatial Orientation. This task requires that the Patient scan an array of geometric figures and find the one that matches the target. This task requires attention to detail as well as spatial perception.

Visual Construction

This task develops Spatial Perception and construction of multi-colored geometric designs. This task requires the Patient to drag and drop different colored triangles that are presented in different orientations in order to complete a geometric design.

Puzzle Construction

This task develops Spatial Perception and attention to visual detail. The Patient must construct jigsaw puzzles of pictures. Models are present in early levels. In later levels there is no model to work from and the pieces are rotated. Also, the number of pieces contained in the puzzle increases in later levels.

B Auditory Processing (Oral Motor Control)

Phonemic Processing I-VIII were originally designed to work on developing Auditory Perception of speech sounds. However, it quickly became apparent that individuals with articulation disorders benefitted from these tasks because they require that the person repeat the sounds accurately. While these tasks are not meant to replace speech therapy, they have definitely facilitated improved speech production.

Phonemic Processing I-VIII should be trained in sequence. In other words, these modules should be completed one at a time, in sequence (i.e. Phonemic Processing I C/V, then Phonemic Processing II CV/VC, etc.) as these modules build on one another. Do not train on PP II CV/VC until you have completed all levels of PP I C/V. You can incorporate the other auditory processing modules (i.e. Phonemic Blending, Phonemic Elimination, etc.) into the

treatment plan once they have progressed through Phonemic Processing VI (CCVC) as these other training modules are dependent on the skills that are trained in Phonemic Processing I-VIII. You may also skip the last level of each module which requires the patient to type the answer if typing skills are poor.

Rhythm Discrimination

This task develops discrimination of rhythmic patterns.

Pitch Discrimination

This task develops discrimination of tonal patterns.

Phonemic Processing I (V/C)

This task develops discrimination and production of single vowels and consonants. The patient must correctly identify, reproduce and type the sounds of the letters, depending on the level.

Phonemic Processing II (CVVC)

This task develops discrimination and production of consonant and vowel combinations. The patient must correctly identify, reproduce and type the sounds of the letter combinations, depending on the level.

Phonemic Processing III (CVC)

This task develops discrimination and production of consonant and vowel combinations. The patient must correctly identify, reproduce and type the sounds of the letter combinations, depending on the level.

Phonemic Processing IV (CCV)

This task develops discrimination and production of consonant and vowel combinations. The patient must correctly identify, reproduce and type the sounds of the letter combinations, depending on the level.

Phonemic Processing V (VCC)

This task develops discrimination and production of consonant and vowel combinations. The patient must correctly identify, reproduce and type the sounds of the letter combinations, depending on the level.

Phonemic Processing VI (CCVC)

This task develops discrimination and production of consonant and vowel combinations. The patient must correctly identify, reproduce and type the sounds of the letter combinations, depending on the level.

Phonemic Processing VII (CVCC)

This task develops discrimination and production of consonant and vowel combinations. The patient must correctly identify, reproduce and type the sounds of the letter combinations, depending on the level.

Phonemic Processing VIII (CCVCC)

This task develops discrimination and production of consonant and vowel combinations. The patient must correctly identify, reproduce and type the sounds of the letter combinations, depending on the level.

Phonemic Blending Auditory-Visual

This task develops the ability to blend individually written letters into a whole word. The patient must first say the sounds for each letter in the consonant-vowel combination that is presented on the screen and then pronounce the sound of the letters together while staying on beat with a metronome.

Phonemic Blending Auditory-Verbal

This task develops the ability to blend auditorily presented phonemes. The patient is presented with the sounds of individual letters which must be blended together and spoken while staying on beat with a metronome.

Phonemic Segmenting Oral

This task develops the ability to segment auditorily presented words and verbalize the individual phonemes. The patient is presented with a consonant-vowel combination which must be segmented into its individual sounds and spoken aloud.

Phonemic Segmenting Written

This task develops the ability to segment auditorily presented words and write down the individual phonemes.

Phonemic Identification

This task develops the ability to isolate and verbalize a specified phoneme within a word.

Phonemic Elimination

This task develops the ability to verbalize a word after eliminating a specified phoneme within that word.

Phonemic Addition

This task develops the ability to generate new words by replacing the vowel sound.

Phonemic Reversal

This task develops the ability to hear a word and either verbalize or write down the individual phonemes in reverse order.

C. **Visual and Verbal Memory**

These training modules can be used to work on Language and Visual Processing skills as well as Memory.

Visual Word Memory

This task develops the ability to memorize a list of visually presented unrelated words.

Auditory Word Memory

This task develops the ability to memorize a list of auditorily presented unrelated words.

Visual Association Word Memory

This task develops the ability to memorize a list of visually presented words utilizing an association strategy. *If the Patient will be working on Visual and Auditory Word Memory, then these tasks should be completed before performing Visual Association Word Memory.*

*To perform this task, the Patient will need to develop a “room list” which involves picking four rooms in the person’s house (that are labeled first, second, third and fourth) then identifying and mentally visualizing five objects in each room that can be visualized in sequence, as if looking around the room from left to right. In the end, the person will have a list of 20 objects that they can visualize in their mind in sequence, starting with the first room, then the second room, etc. The trainer should download the “**Room List**” from the Reference Materials (Trainer Orientation section) and write down this list for reference when performing this task.*

Auditory Association Word Memory

This task develops the ability to memorize a list of auditorily presented words utilizing an association strategy. *If the Patient will be working on Visual and Auditory Word*

Memory, then these tasks should be completed before performing Auditory Association Word Memory.

To perform this task, the Patient will need to develop a “room list” which involves picking four rooms in the person’s house (that are labeled first, second, third and fourth) then identifying and mentally visualizing five objects in each room that can be visualized in sequence, as if looking around the room from left to right. In the end, the person will have a list of 20 objects that they can visualize in their mind in sequence, starting with the first room, then the second room, etc. The trainer should download the “Room List” from the Reference Materials (Trainer Orientation section) and write down this list for reference when performing this task.

- Visual Word Pairs**
This task develops the ability to memorize a list of visually presented word pairs.
- Auditory Word Pairs**
This task develops the ability to memorize a list of auditorily presented word pairs.
- Visual Story Memory**
This task develops the ability to recall a visually presented narrative story.
- Auditory Story Memory**
This task develops the ability to recall a verbally presented narrative story.
- Spatial Figural Memory**
This task develops the ability to memorize the spatial location of geometric figures within a grid.
- Spatial Picture Memory**
This task develops the ability to memorize the spatial location of pictures within a grid.

D. Executive Functions

- Concentration Inhibition - Auditory**
This task develops Concentration and Response Inhibition. The Patient must attend to the random presentation of high and low tones, clicking the mouse whenever the high tone is played. Distracter sounds are presented on later levels.
- Concentration Inhibition - Visual**
This task develops Concentration and Response Inhibition. The Patient must attend to the random presentation of large and small squares, clicking the mouse whenever the small square appears. Later levels utilize multiple targets and distracter stimuli.
- Divided Attention-Letter Discrimination**
This task develops Rapid Visual Discrimination, Concentration, Response Inhibition, Conceptual Tracking and Divided Attention. This task requires that the Patient rapidly tab through non-target letters and hit a specific key on the keyboard when a target letter is encountered. On later levels there are up to four target letters, each paired with a different letter on the keyboard. This requires conceptual tracking to use the correct key for each target letter.
- Divided Attention-Auditory Calculations**
This task develops Divided Attention, Concentration, Immediate Memory, and Simple Computations. The computer initially presents two auditory numbers which the Patient must add (subtract or multiply) together and verbally provide the answer. The computer

then presents a new number which must be added to the last number that was previously presented, not to the answer that the Patient gave. The answer that they gave is irrelevant. The object is for the Patient to hold the last number given by the computer in memory while they give their response so that it is available to be added (subtracted or multiplied) to the next number provided by the computer. It may be necessary to train the Patient on the Basic Math modules so that they can perform this task. An example of how this task progresses is presented below:

Addition

$$\begin{array}{l} 3 + \\ 4 = 7 \\ + \\ 2 = 6 \\ + \\ 7 = 9 \end{array}$$

Subtraction

(On this type of problem, the answer is the difference between the numbers. The answer is an absolute number, not a negative number)

$$\begin{array}{l} 3 - \\ 1 = 2 \\ - \\ 5 = 4 \\ - \\ 2 = 3 \\ - \\ 7 = 5 \end{array}$$

(Note: 1 minus 5 is actually a negative number. 4 is the difference between the numbers)

Multiplication

$$\begin{array}{l} 2 \times \\ 3 = 6 \\ \times \\ 1 = 3 \\ \times \\ 5 = 5 \end{array}$$

The Trainer will need to provide whatever feedback is necessary after an error is made so that the trainee can resume the task correctly.

Divided Attention-Visual Calculations

This task develops Divided Attention, Concentration, Immediate Memory, and Simple Computations. This task is the same as Divided Attention-Auditory Calculations. The computer initially presents two numbers on the computer screen which the Patient must add together and type in the answer. The computer then presents a new number which must be added to the last number that was previously presented, not to the answer that the Patient gave. The answer that they gave is irrelevant. The object is for the Patient to hold the last number given by the computer in memory while they give their response so that it is available to be added (subtracted or multiplied) to the next number provided by the computer. It may be necessary to train the patient on the Basic Math modules so that they can perform this task. See the example of this task above under Divided Attention-Auditory Calculations.

Color Arrows

This task develops Concentration, Conceptual Tracking and Shifting Sets. The Patient is presented with colored arrows presented in different directional orientations. The Patient

must call out the color or the direction of each arrow, depending on the level. The Trainer should download the "[Color Arrows Answer Sheet](#)" from the Reference Materials (*Trainer Orientation section*) and use it to score the patient's responses. This task can be very challenging for the Trainer to fluidly input the data and correct incorrect responses by the patient. The Trainer will be required to input whether the patient's response is Correct or Incorrect by typing 1 for Correct or 2 for Incorrect. The Trainer should try to input the response quickly so that the box highlighting the item moves forward appropriately. If the patient makes an error, the Trainer should also quickly call out the correct response from the answer sheet, while inputting 1 or 2, before the patient gives the next response. The patient should keep going, even when corrected, and try to stay on beat.

Color Words

This task develops Concentration, Conceptual Tracking and Shifting Sets. The Patient is presented with the words black, blue, red and yellow in colored font that is different than the word. The Patient must call out the word or the color of the font it is printed in, depending on the level. Like Color Arrows, this presents the same challenge for the trainer to input the Patient's responses and provide error feedback. The Trainer should download the "[Color Words Answer Sheet](#)" from the Reference Materials (*Trainer Orientation section*) and use it to score the patient's responses. As with Color Arrows, the Trainer will be required to input whether the patient's response is Correct or Incorrect by typing 1 for Correct or 2 for Incorrect. The Trainer should try to input the response quickly so that the box highlighting the item moves forward appropriately. If the patient makes an error, the Trainer should also quickly call out the correct response from the answer sheet, while inputting 1 or 2, before the patient gives the next response. The patient should keep going, even when corrected, and try to stay on beat.

Number Color Sequencing

This task develops Sequencing, Shifting Sets, and Response Inhibition. The Patient must click on a random array of numbered and colored dots in sequence within a time limit.

Conceptual Reasoning

This task develops Conceptual Reasoning skills. The Patient must analyze an array of figures and identify sets of three figures that are conceptually related. Please download the file "[Understanding Conceptual Reasoning](#)" from the Reference Materials page (*Trainer Orientation section*) for an explanation of how this task works.

Deductive Reasoning

This task develops Deductive Reasoning skills. The Patient must develop and test hypotheses, and use feedback about the accuracy of the guesses to figure out the solution. Please download the file "[Understanding Deductive Reasoning](#)" from the Reference Materials page (*Trainer Orientation section*) for an explanation of how this task works.

Post Office

This task develops Planning and Organization Skills. The Patient must deliver mail to specified addresses on a map and, when directed, pick up mail from one or more mailboxes. Some levels require that the Patient find the shortest route to deliver mail, sometimes within a time limit. Further the Patient may not move backwards or retrace their path. ***Before attempting any level of this task, the Patient should study the map on the screen so as to become familiar with the system used for the street names and numbering.*** Further, once a level has been started, the Patient should first study the addresses to be delivered to and plan a route before moving the mail truck. Note that the addresses are not listed in the order of delivery.

E. Academic Skills / Basic Math

These training modules were not developed to improve academic achievement. They are designed to train the basic math skills needed to work on certain training modules (i.e. Divided Attention-Auditory Calculations). They should be used any time math skills appear to be interfering with task performance.

- Basic Addition**
This task develops basic addition skills.
- Basic Subtraction**
This task develops basic subtraction skills.
- Basic Multiplication**
This task develops basic multiplication skills.

F. Motor Skills

This group of training modules works on Fine Motor Speed and Coordination, Visual-Motor Integration and Gross Motor Coordination. Some of these tasks must be administered directly by the Trainer. Therefore, the Trainer needs to be proficient at both performing the skills for demonstration purposes, but must also be able to recognize when the patient is not performing the task correctly. On those tasks administered by the Trainer, you should not pass the patient on a level until the task can be performed smoothly and efficiently. It is not enough that no errors are made.

- Finger Tapping Speed**
This task develops Fine Motor Speed. This is a computer administered task.
- Fine Motor Sequencing**
This task develops Fine Motor Sequencing skills. This task is administered directly by the trainer.
- Visual-Motor 1**
This task develops Visual Scanning, Visual Tracking and Visual-Motor Integration. This is a computer administered task.
- Visual-Motor 2**
This task develops Visual Scanning, Visual Tracking and Visual-Motor Integration. This is a computer administered task.
- Gross Motor Coordination**
This task develops Upper and Lower Extremity Coordination, and the ability to crossing midline. This task is administered directly by the trainer.

G. Language Processing

- Confrontation Naming**
This task develops word finding ability. The patient is presented with pictures and must provide the correct name for each picture.
- Verbal Commands**
This task develops the ability to follow multi-step commands. The patient must follow commands to place different colored shapes in a grid.

There are several visual processing, executive function and verbal memory tasks that work on language processing.

- Spatial Number Visualization**
- Spatial Visualization**
- All of the Verbal Memory Modules**
- Color Arrows**
- Color Words**