

# Welcome!

The UAB Home Stimulation Program provides activities for you to use with individuals following their brain injury. These activities are designed to assist the individual in the recovery of their thinking skill. Each activity provides a group of tasks listed by their level of difficulty. The tasks range from the least challenging, Level 1 to higher levels that are progressively more challenging. Select activities that you feel might be appropriate and follow the directions, increasing the level of difficulty as the progress warrants. Work on several tasks each day and shift tasks after a few days to provide variety. These tasks are not meant to substitute for professional therapy and use of the tasks does not guarantee recovery. The tasks are offered to provide some guidance and structure to people with brain disorders and their families.

You may print any part of it for use at home. The entire program is also found on the Internet at <http://main.uab.edu/show.asp?durki=49377>. You may not publish any part of this work and any mention of the program must include a reference to where it was obtained. We request that you notify us ([tbi@uab.edu](mailto:tbi@uab.edu)) of your use of the program and if you find the information useful. The only way we will know if the program has met our expectations is if people contact us. We appreciate it!

The program is set up so you can easily access the tasks. The Activities Table of Contents lists all 48 activities. After the Table of Contents is the Skills Index, which provides a listing of activities that focus on particular thinking skills. The areas include Fine Motor Control, Attention/Concentration Skills, Memory-Orientation Skills, Reasoning/Problem Solving Skills, Visual Spatial Skills, and Language Skills. Be sure to also look at the Appendices, particularly Appendix A (a listing of published materials) and Appendix I (a listing of popular games that can be used for cognitive stimulation).

We would like to express our appreciation to the people who have helped us develop and field test this program. Augusta Cash, Director of TBI Services for the Alabama Department of Rehabilitation Services has been very supportive. The TBI Care Coordinators of Alabama (Nadine Dunn, Karen Wisenbaker, Leigh Ann Walker, Carol Pinkard, Ron Haynes, Rena Kiel, and Jan Humphries) have used these activities with clients and provided valuable suggestions. Thanks!

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# HOME-BASED COGNITIVE STIMULATION PROGRAM

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# Home-Based Cognitive Stimulation Program

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- 8 All Levels
- 9 All Levels
- 10 All Levels
- 11 All Levels
- 12 All Levels
- 25 All Levels
- 34 All Levels
- 35 All Levels
- 36 All Levels
- 38 All Levels
- 43 All Levels
- 44 All Levels

**Attention/Concentration**

2	<u>All Levels</u>	23	<u>All Levels</u>
3	<u>All Levels</u>	24	<u>All Levels</u>
4	<u>All Levels</u>	25	<u>All Levels</u>
5	<u>All Levels</u>	26	<u>All Levels</u>
6	<u>All Levels</u>	27	<u>All Levels</u>
7	<u>All Levels</u>	28	<u>All Levels</u>
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15	<u>All Levels</u>	39	<u>All Levels</u>
16	<u>All Levels</u>	40	<u>All Levels</u>
17	<u>All Levels</u>	41	<u>All Levels</u>
18	<u>All Levels</u>	42	<u>All Levels</u>
19	<u>All Levels</u>	43	<u>All Levels</u>
21	<u>All Levels</u>	44	<u>All Levels</u>
22	<u>All Levels</u>	45	<u>All Levels</u>

## Memory-Orientation

3	<u>All Levels</u>	24	<u>All Levels</u>
4	<u>All Levels</u>	25	<u>All Levels</u>
5	<u>All Levels</u>	26	<u>All Levels</u>
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21	<u>All Levels</u>	43	<u>All Levels</u>
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27	<u>All Levels</u>	36	<u>All Levels</u>
30	<u>All Levels</u>	43	<u>All Levels</u>
32	<u>All Levels</u>	44	<u>All Levels</u>
34	<u>All Levels</u>	45	<u>All Levels</u>
35	<u>All Levels</u>		

### Visual Spatial Skills

2	<u>All Levels</u>	27	<u>All Levels</u>
4	<u>All Levels</u>	28	<u>All Levels</u>
5	<u>All Levels</u>	29	<u>All Levels</u>
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## Language Skills

1 Levels 7 through 9

14 All Levels

19 All Levels

21 All Levels

23 All Levels

24 All Levels

25 All Levels

26 All Levels

27 All Levels

28 All Levels

30 All Levels

31 All Levels

32 All Levels

34 All Levels

37 All Levels

38 All Levels

39 All Levels

40 All Levels

41 All Levels

42 All Levels

# HOME-BASED COGNITIVE STIMULATION PROGRAM

## Tasks List

### 1. Working with money

LEVEL 1 -- Lay 5 to 10 coins on a table (increase the number of coins as attention improves). Ask the student to identify or sort out all quarters, nickels, pennies dimes, etc. and put them in bowls or saucers. Have the student stack coins. Ask the student to alternate, upon command, picking up different sized coins, for example: "Pick up a quarter", "pick up a penny", "now, pick up a dime".

LEVEL 2 -- Have the student puts coins into his or her pocket or a small sack and ask the student to reach inside and pull out a quarter or a dime just by feeling it with the fingers. Ask for each denomination of coin.

LEVEL 3 -- Engage in making change. Ask the student to tell you which coins would make up 35 cents, 54 cents, etc. Give the student some coins and ask him or her to add the coins and give a total.

LEVEL 4 -- Increase the amount of money handled by using both coins and paper bills. Have the student determine how much change should be given if something were being purchased (for example, "If you bought something that costs \$9.41 and paid for it with a \$10 bill, how much change should you get back?"). If the student has difficulty doing the math mentally, provide coins and bills and perform transactions to demonstrate.

LEVEL 5 -- Increase the amounts of money for financial transactions in making purchases. Create false bank account balances and have the student figure new balances considering both credits (additions) and debits (subtractions).

LEVEL 6 -- Have the student practice creating a monthly budget, including reasonable amounts for food, rent, utilities, clothing, savings, and transportation.

LEVEL 7 -- Brief, planned trips to the store can be a very good exercise for the student.

A) To work on reasoning, plan the trip and make a list of things to get at the store. Ask the student to generate the shopping list with some assistance and write down estimated prices for the items, which can then be checked against the actual price. At this level of recovery, the list should be short (4-6 items) and the trip should be brief (no more than 30 minutes in the store, especially the first couple of times). A trip to the grocery store is often a good choice.

B) As progress is evident, add more items to the list allowing for more time and more flexibility. This is a good time to challenge the student by engaging in everyday financial transactions!

C) Encourage the student to plan several stops on a day of errands. Let the student be the initiator of where you go and the best routes to take as well as the best use of sequence and time. (For example, how long will it take to go to the grocery store, the drug store, and the dentist? In what order should we visit these places?)

## **2. Playing Cards**

LEVEL 1 -- Give the student a deck of cards. Ask the student to “deal” the deck, (doing it faster/slower at different times). At this point, it does not have to be to any one person. You are not playing a game at this point. Have the student sort the deck into the 2 colors (black and red).

LEVEL 2 -- Ask the student to “shuffle” the deck. Have the student sort the deck by the 4 suits (Hearts, Diamonds, Clubs, and Spades).

LEVEL 3 – Lay out 10 cards in only 2 of the suits, for example Hearts and Spades, in random fashion and ask the student to put them in numerical order and in groups of suits. Add more suits and numbers of cards, as the student is successful.

LEVEL 4 – Deal a group of cards (10 to 15) face up and ask the student to count how many red or black cards as you deal. Start out dealing slowly and increase speed and the number of cards, as the student is successful.

LEVEL 5 – Increase number of cards used to 20 – 35.

LEVEL 6 – Use the entire deck of cards.

LEVEL 7 -- Teach or re-teach the student to play solitaire.

LEVEL 8 – Play a card game with another person (for example, Gin, War, etc). Ask the student to “deal” the deck. (Ask the student to do it faster/slower at different times).

LEVEL 9 -- Play more complex games with multiple people (like Hearts, Spades, Go Fish, Uno, Poker, etc.)

## **3. Daily Activities**

Many activities of “everyday” life can be used to help a person with fine-motor control, problem solving or attention difficulties. Ask the person to help you with certain chores. Perhaps help him or her to learn or re-learn how to use an appliance or electronic device. Remember to use simple instructions and limit distractions when working with someone at a lower level of recovery, with more complex instructions and increasing distractions in the environment (such as a radio or television playing in the background) for those who are further along in recovery. What follows is a suggested list of activities that could be used for cognitive treatment.

- LEVEL 1 -- Making a bed.  
 Dressing  
 Bathing  
 Repotting a plant  
 Washing dishes  
 Doing laundry  
 Getting a bowl of cereal  
 Setting the table or putting away the dishes  
 Washing a car  
 Making juice from frozen concentrate
- LEVEL 2 -- Preparing a simple meal (for example a sandwich, chips and drink.)  
 Work a VCR for playing of a movie or recording a show from the television  
 Setting the time and alarm on a clock-radio  
 Setting the stations on a radio  
 Craft activities  
 Using a camera (still or video)  
 Programming a microwave oven  
 Building replica models (look for “Level 1” on the box)  
 Simple car maintenance (checking fluid levels, checking tire pressure)
- LEVEL 3 -- Programming a VCR for multiple shows or repeated scheduled programs  
 Programming and using a cell phone, using all the functions such as memory calls and voice mail  
 Setting up a computer (if you already have one connected, disconnect cables and ask the student to reconnect it)  
 Following a difficult recipe in the kitchen  
 Building replica models (look for “Level 2” or “Level 3” on the box)  
 Managing a transaction at an automatic teller or in a bank

#### **4. Sequencing Activities**

(This game can be played with household objects as described below. If desired, picture story cards can be obtained from several publishers, including (1) Proed, Inc., <http://www.proedinc.com>, 800-897-3202 with the Advanced Descripto-Cards®, (2) Academic Communication Associates, Inc. at 1-888-758-9558 or <http://www.acadcom.com> with the Visual Sequencing software program, (3) The Speech Bin 1-800-4-SPEECH with Everyday Activities to Sequence®)

LEVEL 1 -- Ask the student to tell you 3 steps in a simple activity of daily living (ADL). This involves having to visualize and remember the activity, as well as communicate in a sequential, logical way. Break the activity down into its most basic components. For example, if the activity you choose is fixing a bowl of cereal:

Step 1 might be: Get the bowl from the cabinet,  
Step 2 might be: Pour cereal into the bowl.  
Step 3 would be: Pour milk over the cereal.

If the student has difficulty telling you the steps to the activity, have the student go through the physical actions of the activity and discuss it as you go along. Then after the activity is finished, discuss what was done in a step-wise fashion. Progress to more challenging tasks, such as the steps in making a bank deposit. The student must verbally describe the steps in a logical order, which is often more difficult than actually doing the task. This type of task can be used in tandem with the Daily Activities already described, which involves actually doing tasks.

LEVEL 2 -- Obtain or make cards with pictures on them that relate 3 scenes in a single story. You can draw pictures or cut out the panels of a Sunday comic from the newspaper. Show the pictured activity set up in the correct sequence. Then shuffle the cards or pictures and have the student put the pictures into sequenced order, describing the pictures and telling the story.

LEVEL 3 -- Present a pictured activity in 4 to 5 different pictured steps. After allowing the student to view the correct order for several seconds, mix up the order and ask the student to place the pictures in the correct order.

LEVEL 4 -- Scramble 4 to 6 pictures of a story without showing the correct order prior to asking the student to put them back into order.

## **5. Puzzles**

LEVEL 1 -- Puzzles can be obtained from retail stores or teachers' resource/supply stores. You can also make puzzles by taking a page from a magazine and cutting it into pieces. To make the pieces firm, paste the picture on poster board and then cut the picture into pieces. Initially, use puzzles with just a few pieces. Start out by doing a puzzle together as a joint activity. Ask the student to put one piece in at a time for his/her turn and progress toward the student working independently.

LEVEL 2 – Use 10 to 15 piece puzzles. Let the student see the picture of the intended finished puzzle to “go by”.

LEVEL 3 – Use 25 to 50 piece puzzles.

LEVEL 4 – Use puzzles with 100 pieces.

LEVEL 5 – Increase the number of pieces as warranted by the student's progress. If possible, introduce 250, 500, and 1000 piece puzzles as a family activity. Leave the puzzle up for several days and work on it a bit each day. Introduce the idea of organizing how the puzzle is to be completed, such as locating all border pieces, selecting and separating pieces of similar color, and separating oddly shaped pieces.

## **6. Working with clay.**

LEVEL 1 -- Clay and Play-Do® is inexpensive and can be obtained at retail stores, or Thera-putty® can be ordered at: <http://www.magneticpainrelief.com/theraputty>

Have the student take out small amounts of clay from a bigger piece.

Roll small pieces into balls. Make blocks from small pieces. Make balls of clay big enough to fit into hand to squeeze for strengthening.

LEVEL 2 -- Make shapes with clay like bowls, animals, etc.

LEVEL 3 -- Hide small objects in the clay or Thera-putty® such as pennies, dried beans/peas, buttons, etc. and have the student search for and remove these items.

LEVEL 4 – Create rolls of clay by rolling it on a flat surface. Use the rolls to create pots of varying sizes and shapes.

LEVEL 5 – If a recreation center is available in the community, look into using a potter's wheel to create pots and artistic creations.

## **7. Finger Tapping**

LEVEL 1 -- Ask the student to tap any key on a computer keyboard or typewriter as fast as possible for 10 seconds with one finger from the preferred hand. Count how many letters were typed. (Be careful that the student does not keep the key on a computer keyboard depressed, as this will generate a continuous string of letters. Emphasize that finger movement is required.) Do this 5 times, with rest period of about 30 seconds between each trial. Repeat with different fingers on both hands.

LEVEL 2 -- Have the student tap two keys with two fingers on the same hand, alternating between the keys (such as: d f d f d f d f d f), for 10 seconds. Allow a rest period and repeat, as noted in Level 1. Change fingers and/or hands after five trials.

LEVEL 3 -- Have the student alternate tapping/typing two keys, one with a finger from the left hand, the other with a finger on the right hand.

LEVEL 4 -- Using four fingers of the right hand, have the student press four keys in sequence (L,K,J,H) for 30 seconds. Repeat several times, then try the left hand (A,S,D,F).

LEVEL 5 -- Have the student type short words and phrases using both hands.

At this level, if you are working on a computer, you could utilize a software program that teaches typing that can be found on the Internet or at any computer supply store.

LEVEL 6 – Type email messages if a computer is available or type letters to family and friends.

## **8. Tossing bean bags**

(You can make bean bags as described below or purchase bean bags at a local store. Koosh® balls or Nurf® balls would also be appropriate.)

LEVEL 1 -- Make beanbags with 2 socks and a one pound bag of dried beans. Divide the beans in half and put into each sock. Twist the “leg” of the sock and fold back down over the “foot” to close or they can be quickly and simply sewn shut. Beans can be added to the beanbag for more weight and more challenge. Start with just one ball or bag and toss it back and forth to the student. Ask the student to catch the ball/bag with both hands at first, if possible; in order to develop a rhythm. When both of you are comfortable with this, ask the student to catch the ball/bag with one hand only.

LEVEL 2 -- If possible, switch back and forth between dominant and non-dominant hands.

LEVEL 3 -- When this is achieved, give the student one ball or bag while you hold the other. Have the student throw his/her ball at the same time you throw yours. You will be throwing and catching at the same time and it is likely to be confusing or difficult at first. If after 5 trials the student is unable to do this go back to using only one ball at a time but varying the speeds and distances at which you throw.

LEVEL 4 – Set up a box or some type of target and ask the student to toss the beanbag or ball in the box or hit the target. Do this from varying distances using both hands. Get creative by doing “hook” shots, “bank” shots, and behind the back shots. This can be organized like a game, in which points are scored for hits and people must imitate the types of shots being made.

LEVEL 5 -- Teach the student how to juggle, if possible, using at least 2 balls. This might be easier with tennis balls and should be done outside.

## **9. Nuts and Bolts**

LEVEL 1 -- Using 100 nuts and 100 matching bolts approximately one to two inches long and three empty shoeboxes or plastic food keepers. If nuts and bolts are not available, any two small items could be used (for example: buttons, paperclips, coins, toothpicks). Place the nuts in one box and place an empty box approximately 12 inches away. Using the right hand, ask the student to place nuts, one at a time, into the empty box. After some practice, assess speed by allowing 10 seconds to transfer. Switch hands when tired.

LEVEL 2 -- Place all the nuts in one box. Arrange two empty boxes on each side of the full box, about 12 inches away. Ask the student to place individual nuts in the empty boxes, alternating between the two. If the student stops alternating, provide a reminder. When one hand tires, switch to the other hand.

LEVEL 3 -- Place three boxes in a row with the box full of nuts in the middle. Ask the student to transfer the nuts using both hands simultaneously. The left hand is to fill the box on the left, the right hand the box on the right.

With the 3 boxes in a row, as above, place both nuts and bolts in the center box. Using the left hand, the student is to place the nuts in the box on the left, and using the right hand place the bolts in the box on the right. Encourage the use of both hands simultaneously and look for approximately equal numbers of items in each box.

LEVEL 4 -- Place nuts in one box and bolts in the others. Instruct the student to pick up a bolt with one hand and a nut with the other and screw the nut on the bolt in a few turns. The completed assembly is to be placed in the remaining empty box. Increase difficulty by putting a time constraint on the activity.

LEVEL 5 – Allow the student to turn screws and bolts into scrap wood. This might involve drilling holes into the wood as a guide for the screws and bolts. Under close supervision, allow the student to drill the holes. Also using scrap wood, allow the student to hammer nails. Initially, this will likely require that the trainer start the nail and the student should hammer without holding the nail (to avoid striking their hand with the hammer). Use of a hand-held saw (not a power tool) could also be considered.

LEVEL 6 – Do small construction projects together, such as building a simple bench, birdhouse, or shelf. This provides the student with a sense of purpose and accomplishment, in addition to good cognitive and physical stimulation.

## **10. Spatial/Writing Skills**

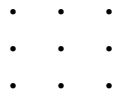
LEVEL 1 -- Draw different shapes on paper with pencil or brightly colored markers. (For people having difficulty using the hand they write with or their arm and hand muscles in general, it is easier for them to hold a big marker and it is easier to see). Draw shapes, one at a time, and ask the student to copy the shape. Have them copy straight lines, curvy lines, circles, squares and triangles. Try different letters of the alphabet as well. Ask the student to copy 2 shapes one after another.

LEVEL 2 -- Draw a straight line on the paper and ask the student to mark each end of the line with a pencil or marker. Correct any errors. Then ask the student to mark the center of the line. Provide feedback and repeat, varying the length of the lines. Draw an enclosed figure (for example: a circle, square, triangle, etc.) and ask the student to place a dot in the center of the figure. Repeat with varying figures of different sizes.

LEVEL 3 -- Create an entire page of different sized lines scattered all over the paper. The lines should be laid out in any and all directions, for instance, horizontal, vertical and horizontal. Ask the student too quickly draw a line in the middle of each line.



LEVEL 4 -- Have two pieces of paper with multiple nine-dot squares on each as shown.



A) Draw a line connecting two dots in one of the squares. Using another sheet, ask the student to copy the line on a nine-dot square. Repeat several times using a new square each time.

B) Next, connect 2 dots and then a 3<sup>rd</sup> in a continuous line. Ask the student to copy this on his/her paper. Repeat using a different square each time.

C) When this is done successfully on 3 consecutive trials, connect four dots. Do not let the lines cross. As the student is more successful, keep connecting more dots but without crossing lines.

D) Cross lines while connecting multiple dots and ask the student to duplicate the pattern.

E) Increase the number of dots from 9 to 16 (4 X 4 square), eventually reaching 36 dots (a 6 X 6 square). Cross lines while connecting multiple dots and ask the student to duplicate the pattern.

LEVEL 5 -- Have the student copy or write 3- to 4-letter words. Don't expect letters or words to be any smaller than one-inch in size. You may draw one-inch guidelines on the paper to help the student "stay on the line" and write straight and more legibly.

LEVEL 6 -- Give the student sheets of paper with one-inch guidelines on the paper and ask the student to practice writing different letter of the alphabet.

LEVEL 7 – Write brief "thank you" notes to friends and relatives.

## **11. Search and Find**

LEVEL 1 -- Pour a bag of uncooked rice into a large bowl. Put 2 small objects that can fit into the palm of your hand into the bowl of rice. Mix the objects into the rice well so that they are somewhat hidden. Ask the student to find the objects hidden within the rice with one or both hands. The student should either keep eyes closed for this activity or at least not "look" for the objects visually. Let the student "feel" for them and dig them out of the rice. Also, before the student looks at the found object, ask them to tell you what they found.

LEVEL 2 – Place 4 smaller objects (such as a paper clip, a screw, a key, and a coin) in the bowl of uncooked rice. Without the benefit of vision, ask the student to locate the items and identify them.

LEVEL 3 – Place 4 very small objects (such as a dried pea, a small stone, an uncooked macaroni noodle, and a toothpick) in a bowl of uncooked rice and ask the student to locate and identify the objects.

LEVEL 4 – Perform the same tasks as in Levels 1-3, but place the objects in a bowl of sand, rather than uncooked rice. Sand is more difficult to manipulate and search.

## **12. Driving Simulation**

This activity may be more appropriate for higher-level work or the student who is further along in his or her recovery. It is mentioned here because of the importance of driving to most people. It is easy to motivate people to engage in tasks that they regard as important to their recovery! There are many software programs that involve driving. Most require an up-to-date computer and work best with steering wheel and pedal attachments. Many of the programs are intended to be fun and allow “driving” in all sorts of terrain and allow “crashes” to take place. For those who are more serious about a return to actual driving, the software program Driver’s Ed® from Sierra at [www.sierra.com/sierra/driversed99](http://www.sierra.com/sierra/driversed99) is very appropriate to begin addressing driving issues with the student at higher levels of recovery. This program has study guides and tests for each of the 50 states’ Department of Motor Vehicles driving evaluations/requirements. It also has a driving simulation that requires an additional steering wheel attachment available at most computer supply stores. It is important to remind your the student that this activity cannot assure that they will be ready to drive, but is an activity to begin the process of preparing for a possible return to driving, as well as a great activity that addresses mental and physical flexibility, memory, sequencing and visual perception and concentration. It also addresses reading skills and auditory comprehension.

## **13. Recall of Pictures and Places**

LEVEL 1 – Place two different cards from a deck of playing cards face up on a table and allow the student to view the cards for 5 seconds. Turn the cards face down. Ask the student to point to the cards as they are named (“Point to the ace.”). Periodically ask for a card that was not among those shown. Increase the number of cards to a maximum of 5 as the student progresses.

LEVEL 2 – Select identical cards from two decks of cards to form two pair (for example, two king of spades, two nine of diamonds). Place the cards face up in front of the student for 5 seconds and then turn the cards face down. Ask the student to match the cards by turning over two at a time. If a match is not successful, turn the cards face down again in the array. Keep repeating until the student gets the correct pairings. Remove correctly paired cards from the array.

LEVEL 3 – Increase the number of card pairings to three with a challenge to the student to minimize the number of turns before the table is empty of cards. Remember to remove cards when correctly paired. Keep increasing the number of pairings to a maximum of 15 pairs as the student progresses. Increase the time to view the cards face up before matching begins by 5 seconds for each additional pairing (for example 6 pairs are allotted 30 seconds of viewing time).

LEVEL 4 – Same as Level 3 except that viewing of the cards face up is not allowed. The game begins with the instructor distributing the cards in an array (with columns and rows) face down.

Assist the student in developing a strategy for turning over the cards (such as beginning with the corners) and remembering the position of the cards (such as rehearsing verbally). This can be very challenging. The student may do better with just a few cards initially.

LEVEL 5 – Select four cards in sequence (for example the 3, 4, and 5 of clubs) and place in random order face up in front of the student. After five seconds turn the cards face down. Ask the student to turn the cards over in sequence (3, then 4, then 5). Turn the card back over if an incorrect choice is made. Increase the number of cards in the sequence, allowing one more second of view time for each card added, to a maximum of 7 cards.

LEVEL 6 – Whenever you park your vehicle in a large parking lot, ask the student to remember where the vehicle has been parked. Emphasize the use of strategies, such as things located near the vehicle (such as a tree or a marker of some kind), as well as the position of the vehicle in the parking lot (for example, to the right side and towards the back).

LEVEL 7 – While walking through a grocery store or department store identify 2 or 3 food items or pieces of merchandise. Go to the front of the store and ask the student to locate the items that had been identified. Increase the number of items up to 7. Allow the student to write down the items (but not the location!) if necessary.

#### **14. Physical exercise**

LEVEL 1 -- Take a walk in the yard or through a park. (This can be done at any level of recovery if the person is physically able.) Engage casually in conversation about the things you encounter or see during the walk. Ask the student periodically what you saw or spoke of 2 to 3 minutes ago.

LEVEL 2 -- Ask the student to tell you where you started the walk and what you talked about during the walk. Ask for an estimate of how long you have been walking and how far you have come (quarter mile, half mile, etc.). Have the student tell you how to get back. Can he or she find the way?

LEVEL 3 -- Scheduled physical exercises. Help the student make up a daily schedule that includes physical exercises. For the scheduled exercise time, have the student prepare a list of exercises that will be done each time. A physical or occupational therapist with whom the student has worked may be able to provide some ideas. Encourage the student to follow the written list as well as to recall it and anticipate which exercise comes next. Include easy and fun competitions, such as playing “HORSE” with a basketball or counting the number of dribbles with a ball (both hands, left hand, right hand).

## **15. Shell Game**

LEVEL 1 -- With 2 clear glasses and a marble, turn the glasses upside down, placing the marble underneath one of the glasses with the student watching. Ask the student to point to the glass containing the marble. Once this has been accomplished, move the glasses and ask the trainee to indicate the location of the marble again. Repeat several times.

LEVEL 2 -- With 2 identical glasses that cannot be seen through, repeat the directions for Level 1 knowing that this time the student can no longer see the marble in the container. On repetitions, slowly increase the amount of time spent moving the containers/glasses.

LEVEL 3 – Proceed as in Level 2 using 3 or more identical glasses or containers that cannot be seen through and one marble. Follow the directions from above.

LEVEL 4 -- Using 3 or more identical glasses or cups that cannot be seen through, and 2 or more distinctly different colored marbles, place all marbles under separate containers with the student watching. Ask the student to identify where each colored marble may be found. Move the containers about and ask again. Repeat several times and increase the time spent moving the containers.

## **16. Visual Scanning/Cancellation Tasks**

(You can perform the tasks outlined below with household materials. If you would like more tasks of this nature you may wish to obtain the Processing Workbook from Brainwave-R®, (ProEd @ <http://www.proedinc.com>, 800-897-3202),

LEVEL 1 -- Using a plain piece of paper, print the letters K B L Z B O Y across the middle of the page in large print. Ask the student to mark out the letter B. This can be done with other letters, with shapes, or with numbers. Repeat this several times with different letters, shapes or numbers. The target that is to be crossed out can be changed.

LEVEL 2 -- Once the student understands the task and does this well, make 2 rows of letters (or shapes or numbers) on the page. Increase the number of lines of letters etc. after each successfully completed page.

LEVEL 3 -- Once the student understands the task and does well, make an entire page of rows of letters (or shapes or numbers) on the page. Change the task by making pages of different sized letters and shapes.

LEVEL 4 -- Put 2 columns of pairs of pictures (4 to 5) down in front of you and the student , one column on the left and one on the right. Put the pictures on the right column in a different order than the ones in the left column. Ask the student to find the match on the right to the pictures on the left.

LEVEL 5 -- Down the left side of a sheet of paper write a string of individual letters of the alphabet, in random order. Down the right side of the same sheet of paper, write another string of letters in a different random order. Ask the student to read each line of letter pairs, from left to right aloud (i.e. "b, f"). Reduce the size of the print as you are able. Move on to using simple words (3-4 letters) in the column format

LEVEL 6 -- Start having the student read aloud articles from the newspaper or from magazines as there is much more challenge for left to right scanning with more columns and smaller print.

## **17. Number Sequences**

LEVEL 1 -- Ask the student to say or write the numbers 1 to 10 in sequence. If this is too difficult, present the 10 numbers written on individual squares of paper and ask the student to order the numbers by sight. Repeat several times, increasing the number span if the student succeeds. You could also use the alphabet, days of the week, and months of the year for sequencing in this manner.

LEVEL 2 -- Ask the student to count by odd or even numbers or by 10's. Begin by providing the initial four digits in the sequence, either written or spoken. Repeat several times, alternating the directions (odd versus even) and the starting point.

LEVEL 3 -- Provide the student with the first four digits of a sequence in which a set number is added or subtracted each time (for example: 3\_\_7\_\_11\_\_15). Tell the student what is to be done (for example: "Add 4 to each number to get the next number in the sequence). Repeat and change the number and indicate if it is to be added or subtracted each time.

LEVEL 4 -- Do the same as above but this time don't tell the student what operation to perform (i.e., don't tell them what is to be subtracted or added). This requires the student to figure out what has to be done.

LEVEL 5 -- Add multiplication to the operations that can be done. Create new and more challenging sequences (such as successive square numbers: 1, 4, 9, 16).

LEVEL 6 -- Create a pattern of arithmetic operations, such as adding 6, then subtracting 4 (6, 2, 8, 4) which the student is to identify and continue.

## **18. Auditory Attention**

(This exercise can be performed as outlined below or an exercise like this can be found in the Attention workbook from Brainwave-R ®, at ProEd @ [www.proedinc.com](http://www.proedinc.com), 800-897-3202.)

LEVEL 1 -- Read a string of numbers aloud to the student for 20 to 30 seconds at a time. Pause in between numbers at least 2 seconds. Ask the student to write down the number “2” every time he/she hears that number, or simply to make a mark every time the student hears the number “2” read aloud. Record how many correct marks are made.

LEVEL 2 -- Read letters of the alphabet aloud at random. The student is instructed to raise his or her hand on hearing a particular letter (such as “K”).

LEVEL 3 -- Ask the student to raise a finger when either of two letters is said (for instance, “B” or “T”).

LEVEL 4 – Instruct the student to raise a finger when a specific number sequence is read aloud (such as when a “2” follows a “6”). You can also do this in written form by creating a sheet with lines of numbers.

LEVEL 5 – Watch an educational television program with the student while the student takes notes on the major themes in the program. Discuss the themes after the show.

## **19. Locating Information**

LEVEL 1 -- Have the student locate information in common items such as the phonebook (business and residential) and the newspaper (such as the classifieds or entertainment features), dictionary, and encyclopedia. For instance, ask the student to find the phone number of several plumbers from the business phonebook, look up the definition of a word in the dictionary, or locate a topic in the encyclopedia. Ask the student to locate sections of the newspaper and specific information, such as the weather or sport scores.

LEVEL 2 -- Reading the Television Schedule

A) Use any television schedule that is available such as those found in the paper or grocery store. Find the schedule for THAT day. Have the student find the shows that are on television at that moment. Have the student locate a specific show on TV that should be on according to the schedule.

B) Ask the student to find multiple shows that will be on television later that day at a specific time. Ask the student to find specific shows and tell you what time and channel they will be on. Have the student list all the shows on a specific channel over a span of several hours. Ask the student to recall the shows that you have looked up during this session.

C) Have the student plan an evening (no more than 2 hours) of television viewing. At the conclusion of each show ask the student for a brief summary of the show.

LEVEL 3 -- Use dictionaries and encyclopedias to encourage the student to locate information and focus their attention longer.

LEVEL 4 -- Encourage the collection of information that leads to a decision. For instance, give the student the basic requirements of a used car (4 door sedan, 1995-1998, air conditioned, etc) and ask the student to locate appropriate vehicles in the For Sale section of the classified advertising in the newspaper.

LEVEL 5 -- Have the student learn or re-learn how to locate information on a computer and on the internet utilizing a search engine. If you do not have a computer with internet access at home, this service is usually available at public libraries.

#### LEVEL 6 -- Report Writing

A) Ask the student to choose a topic of interest (perhaps that has to do with an area of study or work that they are interested in). Have the student write a report on that topic. Limit the report to approximately a page in length, typed; 2 pages hand-written.

B) Assist them in outlining material, library use (you may need to assist the student in obtaining a library card, which can be a good community outing) or Internet research (good search engines to recommend could include: [www.altavista.com](http://www.altavista.com) and [www.lycos.com](http://www.lycos.com)). This activity could take a week or more, depending on what the student is involved in. Have the student turn in sections of the report, such as the outline and the first draft. Discuss with the student any thing in the report that is not understood or is incorrect, including spelling or grammar. See if the student can catch their own mistakes and do the editing for the report themselves.

## 20. Coding

LEVEL 1 -- Re-familiarize yourself and the student with the different types of traffic signs. (Refer to your state's driving licensing study manual.) There are many different shapes and color of signs as well as pictures on the signs that stand for something. (For example, a red octagon shaped sign is a Stop sign.) Ask the student to identify the different traffic signs.

LEVEL 2 -- Write symbols that correspond to numbers and ask the student to identify each number based on the code. (For Example: 0=\*, 1=@, 2=\$, 3=(;, 4=);, 5=%, 6=&, 7= +, 8=!, 9= ? and so on).

LEVEL 3 -- Write a sequence of symbols corresponding to familiar numbers, such as the student's phone number, age, zip code, etc. Have the student "solve" the code.

LEVEL 4 -- Write a code for each letter of the alphabet and have the student decipher words and then phrases based on the code.

Example code:

A=Q, B=W, C=E, D=R, E=T, F=Y, G=U, H=I, I=O, J=P, K=A, L=S, M=D, N=F, O=G, P=H, Q=J, R=K, S=L, T=Z, U=X, V=C, W=V, X=B, Y=N, Z=M.

Example of words and phrases to decipher:

Qhhst (apple), eqz (cat), rkofa ngxk vqztk (drink your water).

## **21. American Guidance Service, Inc. Workbooks**

Visit the AGS website at [www.agsnet.com](http://www.agsnet.com) or call American Guidance Service at 1-800-328-2560 to learn about the variety of programs and workbooks that can be ordered that are appropriate for this level student focusing on functional activities and themes. They are community based and provide not only educational information but also functional practice and testing, as well. These workbooks and pamphlets can be very inexpensive and offer a wide variety of exercises and learning material to help the student prepare for functional independent community involvement and success. The areas focused on include: job skills, employer/employee relations, understanding benefits, reading graphs, and opening a checking account. They can also be a good functional source for the student for reading comprehension practice, attention/concentration, memory recall, writing and problem solving.

## **22. GED or Community Classes**

(See also Appendix A Where Else to Go for Help under the heading Community Skills)

Check local community catalogs for appropriate and interesting classes (such as sponsored by a recreation center or community college) in which the student can enroll. Art or exercise classes could be appropriate as well.

## **23. Volunteer Work**

(See also Appendix A Where Else to Go for Help under the heading Community Skills)

Contact the Chamber of Congress or United Way agency in the student's community to see what volunteer opportunities are available. Accompany the student to the volunteer site until the student is comfortable and able to perform the activities.

## **24. Recall of Story Material**

(Also see Appendix A- Where Else to Go for Help under the heading Memory Functioning.)

LEVEL 1 -- You can use paragraphs from periodicals such as the Reader's Digest or Sports Illustrated, depending on the interests of the student. Read the paragraphs one at a time to the student or have the student read them aloud to you. Then ask the student questions about the paragraph. Begin with 2-sentence "paragraphs". Give a minute in between each set but do about 3 or 4 per session, if tolerated.

LEVEL 2 -- Increase the length of information read (either by you or the student, as both are important). Try 5-sentence paragraphs, ½ page stories and page-length stories. Always follow the



reading with questions. The questions can be multiple choice, yes/no, fill-in-the-blank or narrative answer.

LEVEL 3 -- Have the student begin incorporating daily reading, either from the newspaper, magazines, or a book of their choice. Ask the student daily what they have read. If they have trouble relaying any information, ask more direct questions, (for instance, “Who was in the story?” and “What happened to the person in the story?”).

LEVEL 4 -- Read the newspaper, listen to the radio news or watch news programs on the television. Pick out one major news event that the student is to recall on request during the day. Provide cueing as needed. Cueing can consist of re-reading the article or listening to the news story more than once during the day. Cueing can also consist of asking the student “WH-questions” (for example: What was the news about? Who was it about? Where did it happen?) A great way to assist the student is to ask these things during the reading or listening to the newscast or story, not only when you want the person to answer your question. Another method of cueing is to use a sentence completion task that leads the person to the answer (for example: “The woman in the news story was trapped in a \_\_\_\_\_.”)

LEVEL 5 -- Go with the student to the periodicals and newspaper sections of the local library. Encourage the student to write down some ideas or questions regarding the top news stories for that week. Suggest that the student take these questions and look for more information either from other news periodicals or the librarian.

LEVEL 6 -- Have the student look up information regarding news articles or stories on the Internet. This can be done at a local library if access to the Internet is not available at home. Have the student answer questions regarding this information at different time intervals, such as immediately following receiving the information, 10 minutes after, 15 minutes, 30 minutes, and later that day.

LEVELS 7 -- Have the student make up his or her own questions about the news events. Tell the student that answers must be provided, as well. This encourages memory to be used in a more subtle way while also using other cognitive skills like reasoning.

## **25. Orientation Tools**

LEVEL 1 -- Help the student to develop a highly structured daily schedule. Schedule everything that the student should or will do during the day. Create a simple form with times of the day organized into 30-minute slots of time. Start with the basics of getting up in the morning, washing face, brushing teeth, etc. Schedule meals, chores and “rehab” activities. Also remember to schedule in break periods several times a day, which should last 30 minutes to an hour. Every day should be similar in schedule. Create and review each day’s schedule with the student and keep the schedule posted in several places around the home. Refer to the schedule often with the student throughout the day, especially when changing activities. Ask questions such as, “What

are you supposed to do next?” When appropriate, have the student fill out the schedule with your assistance.

LEVEL 2 -- Either use a calendar already in the student’s home or make a realistic one up on paper. Ask the student to tell you what day, date, month, and year it is. Show the student on the calendar what the date is. Cross off days that have passed. Review this date with the student often throughout the session and the day. Write important events, such as appointments and birthdays, on the calendar. Talk about the events coming up in the next several days. Encourage caregivers to keep calendars around the house and to review the date several times a day.

LEVEL 3 – Ask the student to provide the month, date, year, and day of the week before checking the calendar. Then proceed as in Level 2.

LEVEL 4 – Ask the student to provide the date of a day removed in time. For instance, ask what the date will be tomorrow, next week, in 10 days, 5 days ago, etc. Ask the number of weeks or months until, or since, important dates, such as Christmas, birthdays, etc. Refer to the calendar as necessary.

LEVEL 5 – Ask the student how much time has passed since specific events have occurred. For example, ask how long it has been since lunch, since the last visit to mall, the last time the person saw a movie, the last trip out of town, etc. Talk about events that happened a few hours ago, a few weeks ago, months ago, or even years ago. Help the student develop a chronology of events in time.

LEVEL 6-- Once the student is able to follow and be responsible for his own daily schedule, encourage him or her to buy a schedule book or calendar that can easily be carried.

LEVEL 7 -- Acquire an inexpensive electronic personal organizer or scheduler, preferably one with an alarm function on it (this will also assist with memory and problem-solving skills). These can be bought at local discount department stores or at office supply retail stores. Help the student learn how to use the device, program the device and encourage them to use the alarm functions to increase success in recall of daily routines and schedules or even for medication times.

LEVEL 8 -- Help the student to make a Memory Notebook. Things that could be included can be 1) an autobiographical background section to assist the student with long-term, recent and short-term memory, 2) a section for daily schedules, 3) a section for medication schedules, 4) important telephone numbers and family/friends’ names, etc. Make it part of the student’s routine that the notebook be referenced for information several times daily in response to specific questions, (for example, “What time are you supposed to do your worksheets?” or “Can you find that information in your notebook?”).

LEVEL 9 -- A “daily activity” could be to check this Memory Notebook and mark off things that have been completed for that day or week. At this point the student should be taking on more of the responsibility for keeping his notebook and daily schedule up to date and following it as appropriate. Give the student more opportunity to use the notebook more independently by

suggesting that he or she check the notebook to see if there is anything to be done or if they might have certain information handy.

LEVEL 10 -- The student should be using the memory notebook spontaneously and independently. The student might want to transfer this and similar information into a more effective and efficient daily calendar or electronic, personal organizer.

## **26. Clock Work**

LEVEL 1 -- Have available, if possible, both an analog (regular clock with a face and hands) and a digital clock. Change the times on the clock and ask the student to tell you the time. Work only, at this stage, with 15-minute increments of time, (such as 8:00, 8:15, 8:30 and 8:45, etc). Ask what time it will be in 15 minutes or 30 minutes, keeping the time changes simple, at this point. Also periodically ask the student what time they think it is. Ask how much time has passed after doing another kind of activity, such as mathematics work. Let the student know how close to being accurate he or she is and ask again later on. (For example, "How long ago did I come into your room?").

LEVEL 2 -- Once the student is successful with this, you can ask questions about less obvious time changes, such as "What time will it be in 23 minutes?" Draw several "clocks" on a piece of paper that are missing the hands on the face. Write below each analog clock example, a digital time, for instance, 4:15. Ask the person to draw the hands on the clock above so that it reads, 4:15. Repeat with several different examples or trials. Reverse the task by giving the person examples of clock WITH the hands indicating different times. Have them write out the digital representation of those times.

LEVEL 3 -- Use the clock in combination with the review of daily schedules. Obtain workbooks from discount department stores or teacher supply retail stores that provide word problems based on time calculations.

(Look for workbooks graded for 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> grades). You can also generate these types of questions on your own, without having to buy workbooks. Questions like: "The guests will arrive at 6:30. The roast takes 2 hours and 20 minutes to cook. What time should you put the roast in if you want to eat as soon as the guests arrive?"

LEVEL 4 -- Present time questions that involve changing of time zones. For instance, if someone leaves Texas at 10:00 am (Central Time) and travels for two hours to reach Georgia (Eastern Time), what would be the arrival time in Georgia (correct answer: 1:00 pm). These questions can become quite complex, such as involving travel to different continents. A map of time zones in the U.S. can be found in the front pages of the phone book. A world atlas, which can be found at the public library, will provide world-wide time zones.

LEVEL 5 -- Creating meals with recipes and meal plans can challenge time orientation and calculation as well as judgment. The person must be able to read and calculate time passage as well as be able to estimate how to coordinate cooking times for various dishes.

## 27. Crossword Puzzles

Crossword puzzles can be done in writing, aloud, with assistance, or independently. Cueing can be provided as needed, such as partially filling in the blanks or allowing multiple choice responses. Crossword puzzles can range from being very basic to extremely challenging. It is important to match the puzzle with the student's level of recovery to avoid frustration. Books of crossword puzzles can be obtained at bookstores or teacher supply stores.

## 28. Language Exercises

(For more extensive work in this area, exercises are available in the Workbook for Aphasia from The Speech Bin @ 1-800-4-SPEECH.)

LEVEL 1 -- Have an array of 10 objects to choose from. Show the student one object at a time. Ask the student to name the object in question. If there is difficulty, give progressive clues or cues by:

- Letting the student hold and manipulate the object.
- Giving the student a descriptive sentence to complete. For example, if the object in question is a cup, say: "You drink from a \_\_\_\_\_".
- Giving the student the written word describing the object: CUP.
- Giving the student an auditory cue of the word where you say the first sounds of the name of the object, such as: "Cu...".

LEVEL 2 -- Use published pictures of objects or pictures of objects cut out of magazines, advertisements, etc. If there is success in naming the object, ask the student to tell you what you do with the object. If difficulty is evident at this level, give progressive clues/cues as described above. Ask the student to name an attribute or quality of the object, such as "RED", when looking at a red truck. If there is success describing an object's function, ask the student to use the word in a sentence.

Also refer to Appendix A for help understanding language.

LEVEL 3 --Have the student provide you with words for the following:

Synonyms (words with the same or similar meaning, such as "big" and "large"), Antonyms (words with opposite meanings, such as "sick" and "well"), or Homonyms (words that sound the same, but have different meanings, such as CAN {a container for food or drink} and {the ability to do something} or SHOULDER {the side of a highway} and {a body part}).

(You can create your own materials for these tasks, as described below, or obtain materials from several sources including the Workbook for Aphasia® or Workbook for Language Skills® or Brubaker on Disk®, all available from Parrot Software® at 1-800-727-7681 or [www.parrotsoftware.com](http://www.parrotsoftware.com). If you use the Parrot Software® Brubaker on Disk program, choose "Make Workbook" for any of the areas listed such as Word Recall or Reasoning or Sentence

Formulation by clicking on the box at the top of each category. Then choose any of the specific types of exercises under that section.)

Create worksheets for the student to use by making up 10 different examples for each of the tasks that are suggested here:

a. Circle the correct spelling:

electric          elektik          ellektric

b. Circle the correct spelling:

ruler              pensel              papre

c. Make up sentences but leave one and then two blanks or missing words in each sentence and ask the student to fill in the blank with an appropriate word or words.

My \_\_\_\_\_ went to town and bought groceries.

OR

I saw my \_\_\_\_\_ yesterday and \_\_\_\_\_ him to go with me.

d. Ask the student to give synonyms or words that mean the same as the ones provided.

Sick                      \_\_\_\_\_

Baby                     \_\_\_\_\_

Argue                    \_\_\_\_\_

e. Ask the student to give opposite words to the ones provided.

Old                        \_\_\_\_\_

Sit                        \_\_\_\_\_

War                       \_\_\_\_\_

Remember that these are just suggestions. You can make up more (10 for each type of task). You can get ideas for words or sentences from newspapers or magazines that may be around the house.

LEVEL 4 -- Make a list of 10 object words or nouns, preferably common household objects. Do not tell the student which word you are thinking about. By giving 3 to 4 clues as to what the object is, have the student guess the object in mind. It may help the student to see the list of words or to hear them read aloud prior to the activity to enhance their ability to recall the words in description.

Example: Clue #1: A Body Part.

Clue #2: A Covering.

Clue #3: Found on the Chin.

The word to be guessed: BEARD.

## **For working with the Brubaker on Disk® CD-ROM:**

LEVEL 3 -- For each Target area, choose Easier difficulty level and Yes/No or Multiple Choice response type with 2 choices of words.

Help the student work through 1 to 5 exercises off of one sheet at a time.

Read the exercise out loud to the student and prompt for answers if there is no response.

Complete one exercise as an example and then proceed with the student providing answers.

Encourage the student to read each exercise aloud.

LEVEL 4 -- Select Easier difficulty level and add the ability to use any response type by clicking "Select All" under Response Type. Also require the person to work through 10 questions before stopping. To increase the difficulty, Choose Letters, Words, and Phrases with 2 or 3 choices in Response Type. Choose from Target Areas: Word Recognition, Word Finding and Sentence Formulation.

LEVEL 5 -- Increase difficulty by choosing Average difficulty level and using a variety of response types by clicking "Select All" as above.

LEVEL 6 -- Further increase difficulty and complexity by choosing Harder difficulty level and have the student work through a combination of different sheets, perhaps as many as 20 to 30 questions during a 15-minute session.

## **29. Categorization Exercises**

LEVEL 1 -- Gather a variety of household objects. You must have 3 to 4 different objects that can be categorized into a group based on how these objects are related to one another. Common ways to group objects is by size, weight, shape, what they are made out of, what they are used for, etc. Spread the items (9 or 10 from a couple of different groups or categories of objects) on the table off to the side of you and the student. Lay 2 or 3 objects directly in front of the student and ask him or her to find other objects from the larger group that match each object chosen. Ask the student to tell you why they go together.

Example: The groups could include things such as magazines, books and news clippings, forks, spoons and knives, pens, pencils and colors/markers, string, tape and paper clips, watches, clocks and timers, flashlights, light bulbs and candles, etc... Groups could also include things that you read, things you eat with, things you write with, things you use to hold things together, things that keep time, things that generate light, metal things, plastic things, small things, large things, silver things, black things, paper things, etc.

LEVEL 2 -- Given a general heading (such as tools, animals, plants, countries, occupation, foods, sports, etc.), ask the student to name (verbally or in writing) as many items in that category as possible. If the trainee is stumped, hints are appropriate. For instance, in generating the names of animals, the student could be advised to think of a zoo or a farm. For foods, a grocery store could be brought to mind.

LEVEL 3 -- Ask for members of a more specific category, such as sports that involve running, animals at a zoo, or foods found in the dairy section of the grocery store. This involves a decision process in which the student must rule out inappropriate items.

LEVEL 4 -- At this level, categorization should be more challenging than simple objects. You can provide just written words and they could include things such as attributes or qualities, (for example: things such as cotton, milk, and a wedding dress could all go in the same category as they are all typically white). Provide 3 words in a group and have the student provide a 4<sup>th</sup> or 5<sup>th</sup> possibility.

LEVEL 5 -- Provide a list of words in which one word DOES NOT belong. Have the student: 1. Exclude this word from the group, 2. Explain why it doesn't belong, and 3. Provide a new alternative.

LEVEL 6 -- Tell the student that you bought something at a grocery store (such as pork chops or potato chips) and he or she must figure out what it is by asking questions. Encourage the student to ask general questions at first (for example, "Is it a vegetable?" or "Is it a meat?") rather than specific questions (such as, "Is it a cucumber?"). After general questions are answered, more specific questions can be asked. Initially allow as many questions as necessary and provide hints and guidance. After the student has guessed correctly on a few items, start limiting the number of questions allowed, starting with 30, then 20, and finally 15.

### **30. Organizational Activities**

(For more extensive exercises in this area, consult the Workbook for Aphasia®, which can be found at The Speech Bin at 1-800-4-SPEECH.)

Problem solving requires that a person be able to organize their thoughts as well as the information that they have available in any given situation to work their way through it. The following activities can help someone having difficulty solving problems, practice organizing gradually more complex groups of information.

LEVEL 1 -- Ask the student to tell you the alphabet, the days of the week, the months of the year. Write down 3 or 4 examples from these groups (3 or 4 numerals, or 3 or 4 days of the week, or 3 or 4 months of the year). Write them in the incorrect order, for example:

- 5, 3, 8
- Monday, Saturday, Thursday
- June, January, February

Ask the student to either tell you or write down the correct order of these.

LEVEL 2 -- Write down 10 to 15 simple sentences, (3 to 4 words, subject+verb+object). Rewrite the sentences on another sheet of paper so that the words in each sentence are scrambled, for example:

- The cat is hungry.
- Is hungry cat the.

Ask the student to re-order the sentences into the correct manner. Do not show the student the original, correctly written sentences unless you have already tried to give them other cues.

Clues for this kind of activity may sound like:

- “What is this sentence about?”, ‘A cat.’
- “What about the cat?”, ‘He’s hungry.’
- “Ok, now, say the full sentence.”

LEVEL 3 -- Increase the length and complexity of the scrambled sentences that you give to the student, for example:

- find can’t my sweater I. (I can’t find my sweater.) \*
- end street a this is dead. (This is a dead-end street.)
- know she don’t I where went. (I don’t know where she went.)

\*Tip: To give a clue you may capitalize the word that is supposed to start the sentence. ( ‘end street a This is dead.)

LEVEL 4 -- Use items that are readily available in the student’s home such as music tapes or CD’s, books on a shelf, magazines, clothing, pantry items and/or linens. Limit the number of items to 10 to 12 at this time and the activity to perhaps 20 minutes at a time. Have the student organize these items in a variety of ways. Perhaps one way the first time and another way the next time you do this exercise and so on. Suggestions for organizational methods could begin with: Alphabetically, increasing the complexity by ranking by style or size, grouped by color, or by frequency of use.

LEVEL 5 – Ask the student to organize something in the home, such as a workbench, the kitchen cabinets, the pantry, the family library, a toy closet, or a linen closet. Organizing things in this fashion provides a sense of purpose as well as cognitive stimulation.

LEVEL 6 -- Try arranging some volunteer time for the student at a local library or charity headquarters. Suggest that the student be involved in activities such as filing, organizing data on a computer, or organizing as mailing addresses.

### **31. Map Use**

LEVEL 1 -- Connect-the-dots books can be found at most school supply retail stores or discount department stores. You can make your own connect-the-dots worksheets. It is not necessary for the dots to create a picture. The object of the activity is to find your way through the trail or path in an organized manner. The “dots” can be either numbered (i.e., 1, 2, 3...etc.) or lettered (A, B, C...etc.).

LEVEL 2 -- Maps of local or unfamiliar places can found at convenience stores, grocery stores or downloaded and/or printed from most search engines on the Internet such as [www.yahoo.com](http://www.yahoo.com) or [www.expedia.com](http://www.expedia.com). Simply type “maps” in the bar labeled “Search for...”. The best type of



map to view at this level is a map of the student's home area. Have the student find their home's location and then other points of familiarity.

LEVEL 3 -- Orientation within buildings can be a challenge, for instance finding your way around a large library or store. This is particularly true in most large shopping malls, where you have to keep track of where you are within a store, but also where you are within the mall.

LEVEL 4 -- In the car have the student (as the passenger!) tell you which directions to take in order to get to local places in your community. Also encourage the student to navigate the way home on the return trip.

LEVEL 5 -- Have the student look up on a map how to get to places near by the home that he or she is not familiar with. Have the student call a business that you plan to visit and ask for directions to the business. The student is then responsible for giving directions as you drive to the business. Have the student tell you how to return home after the outing.

LEVEL 6 -- Use a road atlas of the United States to plan imaginary (or real!) trips to vacation spots, such as the Grand Canyon, the Everglades, and Yellowstone Park. Pick any location you or the student might find interesting! The student must figure out the route to take when traveling by car to the location. This includes listing of the roads in sequence, making sure to provide the direction (north, south, east, or west). To make this more challenging, ask the student to figure out the mileage to the destination and how many days it might take to get there (assuming for instance that you can travel 400 miles a day). This leads to further questions, such as where you might plan to stop in the evening, the costs involved for gas and accommodations, and food expenses.

## **32. Right-Left Orientation**

LEVEL 1 -- Ask the student to raise or point to his or her right and then left arm. Have the student identify body parts on the right and left. For instance, ask him/her to touch the right ear. Provide guidance or models if necessary.

LEVEL 2 -- Draw a picture of a person (or use a picture from a magazine, preferably of a person standing up face forward). Holding the picture in front of the student, ask the student to point out the pictured person's right and left features (which are now opposite to the student's right and left). If there is some confusion, reverse the drawing (if using a picture from a magazine try to find one that is of someone standing facing away from you) so that the pictured person's right and left correspond to the student's. If necessary keep reversing in this fashion. Have the student point to your left and right body parts. This would be the reverse of the student's left and right. You can make this more challenging by crossing your legs or arms.

LEVEL 3 -- Make 2 beanbags or get 2 tennis balls. Play catch with the student with only a short distance between you (no more that 10 or 12 feet, less if the student's physical or visual

difficulties require). Once a good rhythm is achieved, ask that you and the student only throw with your right hands and catch with your left hands.

### **33. Mazes**

LEVEL 1 -- You can make mazes at home with a pencil and ruler, but most people find it easier to purchase a book of mazes at a teacher's supply store, grocery stores or department stores in the children's book sections. Have the student attempt the mazes, tracing them with a pencil or marker. Start with very simple mazes, printed with large pathways and a minimum of dead ends. Progress to more challenging mazes. Complex mazes also can be found in the Visual Processing Workbook of the Brainwave-R, (ProEd @ <http://www.proedinc.com>, 800-897-3202), beginning with Exercise 24.

### **34. Solitaire**

Either engage the student in a game of Solitaire on the computer (which can be found under the Start menu and under Accessories and then under Games), or with a deck of playing cards.

### **35. Word Search**

LEVEL 1 -- Write four letters with a three-letter word imbedded inside, (for example: PDOG). Ask the student to circle or underline the word. Make as many letter sequences with imbedded words as possible.

As the student is successful, imbed the words in 5-letter strings, (i.e., PDOGF) or use four letter words in five- or six-letter strings, (i.e. TDOOR, YSPITB).

LEVEL 2 -- Once the student is successful with this, word search blocks can be attempted. These can easily be found at grocery stores, teacher resource centers or discount department stores. You can also create your own.

LEVEL 3 – Obtain the game Boggle or create something similar by writing letters on small squares of paper and arranging them randomly in a square. You can make the game easier by limiting the number of letter squares and turning all the letters to face the student.

### **36. Written Language or Written Expression**

(For more exercises in this area, consult *Therapy Guide for Speech and Language Disorders Volume 3: Working with Words* published by the Visiting Nurse Service and available at [www.vnsa.com](http://www.vnsa.com).)

For help with the students with motor difficulties or difficulty using their hands/arms, see [Click Here\\*](#).

LEVEL 1 -- Have the student copy shapes, numerals and letters. Ask him or her to write some functional information such as their name, the date, etc. Progress from tracing to copying to writing to dictation to spontaneous writing.

LEVEL 2 -- Present the student with common household objects and ask him/her to write down the name of the object.

LEVEL 3 -- Have the student write down words about the object's function or appearance. Have the student write down a phrase or sentence about the object.

### **37. Reading Comprehension**

(For more exercises in this area, consult *Therapy Guide for Speech and Language Disorders Volume 5: Reading Comprehension Materials* published by the Visiting Nurse Service and available at [www.vnsa.com](http://www.vnsa.com).)

LEVEL 1 -- Ask the student to read numerals, words for those numbers, letters of the alphabet, their name, days of the week, months of year, etc.

LEVEL 2 -- Create index cards with simple single words representing things that you have around the house or things you have pictures of. Have the student match an object to a written word from a choice of 2 objects. Increase the difficulty by increasing the number of objects from which to choose. Increase the number of words and objects to match.

LEVEL 3 -- Have the student read short paragraph stories obtainable through the Visiting Nurse Service at [www.vnsa.com](http://www.vnsa.com) with *Therapy Guide for Language and Speech Disorders Volume 5: Reading Comprehension Materials*. If the student is unable to read or to attend to reading, read the paragraphs aloud to him/her and ask appropriate questions.

LEVEL 4 -- Encourage the student to read daily from books, or magazines and newspapers if able. Ask questions regarding the content to test for comprehension. Teach the student to ask themselves questions during reading to increase comprehension and retention.

\*Note: Those with poor memory skills or poor attention skills may demonstrate poor reading comprehension skills when they actually have fairly intact reading abilities. You can address this by asking the student to read increasing more difficult or complex written instructions and ask them to follow the instructions.

### **38. Following commands**

Utilize Appendix A sheet entitled Following Instructions. Start with more simple instructions first. With success, move on to more complex instructions.

### **39. Fill in the Blank**

Other uses – reading comprehension, visual-spatial skills

#### Instructions:

LEVEL 2 -- Provide the student with a simple sentence that has a space for a missing word. Provide a picture that corresponds with the sentence. (Example: Picture of a black dog with the sentence “The color of the dog is \_\_\_\_\_.”). Examples of this can be found in both the Workbook for Aphasia® and Workbook for Language Skills® from Brubaker.

LEVEL 3 -- At this level of recovery, sentences with 2 or more blanks should be used with the student.

LEVEL 4 -- Increase the difficulty by supplying a sentence and having the student make up another sentence that is related, as if you were taking turns making up a story.

### **40. Hang Man**

LEVEL 1 -- Hang Man is a guessing game in which one person thinks of a word or phrase and the student is to guess what that word or phrase is by the process of elimination of chosen letters from the alphabet. The trainer thinks of a word and draws spaces corresponding to the number of letters (for example, \_ \_ \_ , representing “cat”). A scaffold or “hanging post” with a noose is also drawn. The person is then given chances to guess the letters in the word. If a letter in the word is guessed correctly, that space is filled in. If the letter is not in the word, then a body part (for example, a head, the trunk, an arm) is added to the figure on the scaffold. The challenge is to guess the word before the man on the scaffold is complete and thus “hung.” Provide a definition of the word being sought and write down letters guessed within sight of the student. If the student is successful with simple words, increase the difficulty of the words being guessed. You can also do common phrases.

LEVEL 2 – Same as Level 1 except a definition of the word is not provided. Write down letters guessed by the person. This prevents duplication of guesses.

LEVEL 3 – Same as Level 2 but do not write down the letters guessed.

## 41. Deductive Reasoning

(This game can be played with household objects as described below. It is available in stores as MasterMind ®, or on the internet at:

[http://www.industrious.com/mastermind/jburke\\_mastermind.html](http://www.industrious.com/mastermind/jburke_mastermind.html).)

LEVEL 1 – Select 3 small objects of varying color (buttons, candy, etc.) and show them to the student. Have available colored pencils or crayons that match the color of the objects. Out of sight of the student select two of the objects and place them in your closed hand. Ask the student to figure out the color of the objects in your hand. Give immediate feedback about whether the student has selected the correct colors. If the student has not made the correct choice, provide specific feedback (for example, “Blue is correct, green is not correct.”). Ask for another selection by the student. Assist him or her with the reasoning involved if necessary. Repeat this until the student is able to generate a correct response within two turns consistently.

LEVEL 2 – Proceed as in Level 1, but provide less specific feedback if the student is in error. Say only that one of the colors selected is correct, but do not indicate which color. The student must then make a second selection of two colors (by necessity, substituting one of the two colors in the first selection). Provide feedback again and allow a third selection if necessary. Review the reasoning involved with the student and play again. Repeat the game until the student can consistently generate a correct response within three selections.

LEVEL 3 – Same as Level 2, but using objects of four colors. Out of sight of the student place two objects in your closed hand and ask the student to guess the colors. This becomes much more challenging and many selections may be required. Begin with general feedback but proceed to specific feedback (indicating that a particular color is correct) if the student is becoming frustrated.

LEVEL 4 – Same as Level 3, but instruct the student that you might be holding objects of a different color or the same color in your hand.

LEVEL 5 – Same as Level 4, except that you place 3 objects in your closed hand and the student must select three colors each time. Because this process may become lengthy, it is a good idea to keep track of the students’ selections by making marks with colored pencils or crayons corresponding to the colors of the 4 objects you are using. Ask the student to make colored marks corresponding to his or her color selections each time. Each row of marks can represent a different turn. Next to each row write down the response received (for example, “Two correct.”). Assist the student with reviewing previous responses so that selections are made in a logical fashion.

## 42. Fine Motor Control

(This task can be performed as outlined below. As a recommended alternative, the game Jenga® can be purchased at most discount department stores.)

LEVEL 1 – Obtain wooden blocks of similar size that can be easily manipulated with a single hand. On a flat firm surface, ask the student to stack the blocks as high as possible, paying attention to the alignment of edges

LEVEL 2 – Remove blocks one at a time from the top of a stacked array without knocking over the stack

LEVEL 3 – Create a multi-tiered stack of blocks rather than a single column of blocks. Take turns adding blocks with an emphasis on building a stable structure as high as possible.

LEVEL 4 -- Remove blocks from the midst of the stack (not the top blocks). This involves having to identify loose blocks, which takes some practice. Allow the use of two hands at first, but encourage it to be done with one hand eventually.

LEVEL 4 – Remove blocks from the midst of the stack and place them on top of the stack.

## 43. Mathematical Reasoning

(If you do not wish to create your own worksheets, they can be obtained at a local teachers' resource center, local discount department stores, book stores [look for GED preparation workbooks], in Brubaker's *Workbook for Reasoning* (yellow version) which can be purchased through The Speech Bin at 1-800-4-SPEECH or from American Guidance Service at 1-800-328-2560 or [www.agsnet.com](http://www.agsnet.com)..

LEVEL 1 -- You can create your own original worksheets for mathematics abilities using simple addition and subtraction problems; 1-column and 2-column problems. Start out with problems that do not require "borrowing" across columns in subtraction. As appropriate, add simple multiplication and division problems.

LEVEL 2 -- Begin challenging the student with more difficult mathematical problems as age or previous education allows. Addition and subtraction of 3column numbers would be appropriate.

LEVEL 3 -- Encourage the student to do addition, subtraction, multiplication and division with a wide range of problems. Use decimal points and word problems calculating time and money issues.

LEVEL 4 -- Alternate between these 4 types of mathematics more rapidly. Have plenty of each type on one page of problems to be worked instead of doing *just* addition or multiplication. Also encourage the student to work through more problems or for a longer period of time each time you work on this.

#### **44. Time Sense**

LEVEL 1 – Give the student a digital stopwatch (many wristwatches have a stopwatch mode) and instruct the student to start the watch and then stop it when 10 seconds have passed. This is done with the watch in full view of the student. Repeat this with variations in time up to one minute. Aim for the student being able to stop the watch within two seconds of the target time.

LEVEL 2 – After the student has started the watch announce the time to stop, between 8 and 60 seconds. The student can see the watch at all times. Repeat with variation in the target time.

LEVEL 3 – The student should not be allowed to see the stopwatch. With a command of “Begin!” from the instructor, the student is to estimate when 10 seconds has passed and then say “Stop!”. Counting out loud should be encouraged at first. Repeat with variations in the time span up to two minutes. With increasing length of time, a wider span of error should be expected. For instance, when estimating 30 seconds, a response between 25 and 35 seconds would be acceptable.

LEVEL 4 – Instructions are the same for Level 3 except that the trainer is to fill in the time with conversation, questions, etc. The student must try to keep track of the passing seconds despite these distractions. A larger range of error should be expected under these conditions.

#### **45. Spatial Centering**

LEVEL 1 – Draw a straight line on a paper and ask the student to mark each end of the line with a pencil mark. Correct any errors. Then ask the student to mark the center of the line. Provide feedback and repeat, varying the length of the lines.

LEVEL 2 – Draw a straight line on the paper and ask the student to divide it into thirds. Provide feedback and repeat. Vary the length of the line, number of divisions (for example, fourths, fifths) and the orientation of the line (vertical, diagonal, horizontal).

LEVEL 3 – Draw an enclosed figure (for example a circle or square) and ask the student to place a dot in the center of the figure. Repeat with varying figures of different sizes.

LEVEL 4 – Draw a square and ask the student to divide the square into four equal portions using intersecting lines. Then ask the trainee to place a dot at the center of each of the smaller squares. Repeat with varying size squares. As performance improves, make the division more demanding. For instance, ask for six or nine squares created by intersecting lines.

#### **46. Two Dimensional Arrays**

LEVEL 1 – Create a grid like that used to play tic-tac-toe. At the top, mark the columns with the letters A, B, and C. At the left margin, mark the rows with the numbers 1, 2, and 3. Ask the student to point to the squares under the letter B and then to the squares in row 2. Do this for other columns and rows.

LEVEL 2 – Using the same array as in Level 1, ask the student to point to the intersection of row 2 and column B. Encourage the use of a finger for pointing as a means of structuring the task. Do the same thing for other columns and rows.

LEVEL 3 – Using the same array, point to a square and ask the student to provide the row number and column letter (for example, row 1 and column C).

LEVEL 4 – Using the same array, give the student a row number and column letter and ask that an “X” be placed in that spot.

LEVEL 5 – Using the array, play tic-tac-toe with the trainee providing only coordinates which the student must fill in (for example, “I select 3B). Ask the student to make choices using the same system.

LEVEL 6 – Increase the number of squares by adding rows and columns to the grid, labeling each by a new number or letter. Provide coordinates and ask the student to locate the squares.

LEVEL 7 – Create a 10 X 10 grid labeled in the margins with letters for the columns and numbers for the rows. Out of sight of each other, the student and instructor locate “ships” on the grid. For instance, one ship could be several squares positioned in a row, column, or diagonally. The size and number of ships can be varied, but should be the same for both players. Each player is then to take turns in trying to guess the location of the other person’s ships given three guesses per turn. Guesses are made by giving coordinates (such as 5E). If a player provides the coordinates of an opponent’s ships, the opponent indicates this by saying, “hit.” When all squares comprising a single ship are “hit” the ship is considered sunk. The first player to sink all his or her opponents ships wins. This game can be made more complex by adding more rows and columns. It is important to work with the student in developing a strategy for searching and opponent’s grid and then how to narrow the search once a “hit” is achieved. The student needs to keep track of his or her guesses to avoid repeating a previous guess.

#### **47. Drawing Figures**

LEVEL 1 – With the student watching, the instructor draws a shape beginning with the most simple, such as a vertical or horizontal line, circle, square, or triangle. Given a different color pencil the student is asked to trace the edge of the figure. Repeat several times, varying the figure. As performance allows, the figure may become more complex, such as a hexagon, octagon, etc.

LEVEL 2 – Have the student shadow trace figures. For best results the original page with figures to be traced should be taped to the table with a clean sheet of paper taped over the top.



LEVEL 3 – Provide dotted outlines of figures on a clean sheet with the expectation that the student fill in the figures. The more dots provide the easier the task. For greatest complexity, a dot at each corner of the figure is all that should be provided.

LEVEL 4 – Ask the student to copy figures on a clean sheet, matching the standard in terms of size and orientation. Once geometric shapes are mastered, move on to drawing of objects, such as a house, automobile, tree, etc.

LEVEL 5 – The student is asked to draw geometric figures and objects free hand, that is without a standard from which to copy.

LEVEL 6 – Ask the student to draw objects that include three-dimensional perspective, such as a box, a chair, or a house.

#### **48. Rhythm Matching**

LEVEL 1 – With the student sitting in front of you, tap out a simple, two-step rhythm several times with your hand on the table (tap-delay-tap-tap). Allow the student to see what you are doing and explain it verbally. Ask the student to join you in doing the tapping and then allow the student to proceed on his or her own. Provide guidance, including physical assistance, as necessary.

LEVEL 2 – Increase the complexity of the rhythm that you ask the student to imitate, using perhaps a 3 or 4 step rhythm (for example, tap-tap-delay-tap-delay-tap). Still allow the student to see what you are doing and explain your actions. Have the student do the tapping with you initially. Then vary the speed you deliver the patterns and require the student to imitate.

LEVEL 3 – Continue as above but ask the student to turn his or her chair around so that the student can no longer rely on vision, but can only rely on his or her auditory processing. Ask the student to explain the rhythm.

LEVEL 4 – Obtain music that has a clear and consistent rhythm. “Marching” music, such as that of John Phillip Sousa is an example. As the music plays, help the student recognize the rhythm and together tap hands on the table to the beat. Withdraw your hand and allow the student to proceed on his or her own.

LEVEL 5 – If the student played an instrument (no matter how well!) prior to the injury, take out the instrument and encourage the student to play. Making any sounds on a rhythmic basis is adequate at first. Slowly review what the student had learned about music and the instrument before the injury. Encourage playing of the instrument (at any level) on a daily basis. If the student can read music, encourage the student to play in that fashion. Be patient and always encouraging. You will not find a better cognitive stimulation activity than generating music, particularly if reading music is involved. This also serves as an outlet for stress and has the potential to build confidence.

## Appendix A

### WHERE ELSE TO GO FOR HELP

#### Language Skills

Worksheets can be found in Workbook for Aphasia® or Workbook for Language Skills® or Brubaker on Disk®, all available from Parrot Software ® at 1-800-727-7681 OR [www.parrotsoftware.com](http://www.parrotsoftware.com). If you use the Parrot Software® Brubaker on Disk program, choose “Make Workbook” for any of the areas listed such as Word Recall or Reasoning or Sentence Formulation by clicking on the box at the top of each category. Then choose any of the specific types of exercises under that section.

#### Visual Scanning

Visual Processing Workbook from Brainwave-R®, (ProEd @ <http://www.proedinc.com>, 800-897-3202),

#### Memory Functioning

*Brainwave Exercises*, found at ProEd @ <http://www.proedinc.com/>, 800-897-3202.

Exercises 1 through 23 are about Memory Strategies

Exercises 24 through 41 are about Learning About Your Memory

Exercises beginning with number 42 are practice and functional exercises.

The User’s Guide to the Brainwave ® series has several pages that would be an excellent resource and explanation to the brain injured the student on different aspects of memory skills and memory loss.

*Therapy Guide for Language and Speech Disorders, Volume 5, VNA Workbook* [www.vna.com](http://www.vna.com). Utilize short stories similar to those found in the beginning sections of the workbook. Several different types of questions for each story are provided, such as multiple choice, yes/no, fill-in-the-blank, and narrative answer.

#### Community Skills

Visit the AGS website at [www.agsnet.com](http://www.agsnet.com) or call American Guidance Service at 1-800-328-2560 to learn about the variety of programs and workbooks that can be ordered that are appropriate for this level student focusing on functional activities and themes. They are community based and provide not only educational information but also functional practice and testing, as well. These workbooks and pamphlets can be very inexpensive and offer a wide variety of exercises and learning material to help the student prepare for functional independent community involvement and success. The areas focused on include: job skills, employer/employee relations, understanding benefits, reading graphs, opening a checking account.

## Appendix B

### FOLLOWING INSTRUCTIONS

#### IDENTIFICATION OF SINGLE OBJECTS NAMED

##### LEVEL 1

- ARRANGE 3 TO 9 OBJECTS IN AN ORGANIZED FASHION
- HAVE THE STUDENT VISUALLY SCAN THE OBJECTS TO GET FAMILIAR WITH THEM
- NAME ONE OBJECT AT A TIME AND HAVE THE STUDENT TO POINT TO THAT OBJECT.
- REPEAT AS THE STUDENT SUCCEEDS.

##### LEVEL 2

- WITH SUCCESS, HAVE THE STUDENT IDENTIFY OBJECTS BY THEIR FUNCTION, FOR EXAMPLE: “SHOW ME THE ONE YOU USE TO DRINK FROM...”

##### LEVEL 3

- FOR MORE COMPLEXITY, MAY ASK THE STUDENT TO IDENTIFY 2 OR 3 OBJECTS NAMED CONSECUTIVELY, FOR EXAMPLE: “Show me the radio, umbrella and phone.”

#### ANSWERING ONE-PART YES/NO QUESTIONS

##### LEVEL 1

- Are you a man?
- Are you asleep?
- Are you married?
- Are you hungry?
- Do you have a cold?
- Are you thin?
- Are you tired?
- Are you tall?
- Are you in a hospital?
- Do you have on makeup?
- Do you wear a mustache?
- Do you have hands?
- Do you have a nose?
- Are you bald?
- Are you dressed?
- Are you awake?
- Do you have legs?

## **TWO-PART YES/NO QUESTIONS**

### LEVEL 2

- Are you wearing pants?
- Do you have brown eyes?
- Do you have a sister?
- Are you wearing a watch?
- Do you have your shoes on?
- Do you live alone?
- Do you have short hair?
- Do you wear braces?
- Do you live in Texas?
- Are you wearing a coat?
- Do you wear a ring?
- Are you wearing earrings?
- Are your hands dirty?
- Are you wearing pajamas?
- Are your socks red?
- Do you have blond hair?
- Have you eaten lunch?
- Do birds have beaks?
- Do girls wear beards?
- Is my sister a girl?
- Do you see with your tongue?
- Does ice feel cold?
- Do fish have feet?
- Does a cat have feathers?
- Do cars have wheels

## **FOLLOWING TWO-PART INSTRUCTIONS**

### LEVEL 1

- Touch your nose and your chin.
- Raise your hand and smile.
- Wink at me and wave.
- Wiggle your thumb and touch your knee.
- Point to me and make a fist.
- Close your eyes and stick out your tongue.
- Open your mouth and cough.
- Smile at me and shut your eyes.
- Wrinkle your nose and scratch your head.

- Shake your head and point your finger.
- Raise your foot and stomp.
- Straighten your leg and shake my hand.
- Point to your ear and then your forehead.
- Show me your teeth and pucker your lips.
- Make a fist and shake it.

## **TWO-PART INSTRUCTIONS WITH OBJECTS**

### LEVEL 2

- Turn over the cup and move the watch.
- Pick up the pencil and write your name
- Give me the phone and get the pen.
- Point to the spoon and pick up the knife.
- Touch the book and turn the page.
- Pick up the dollar and give it to me.
- Turn over the watch and touch the paperclip.
- Point to the brush and turn on the flashlight.
- Give me the dime and pick up the hammer. Etc.....

## **FOLLOWING THREE-PART INSTRUCTIONS**

### LEVEL 3 and 4

- Blink your eyes, scratch your head and nod.
- Point to me, smile and wave.
- Scratch your head, open your mouth and make a fist.
- Tap your shoulder, touch your knee and stomp your foot.
- Nod your head, turn to the window and point.
- Touch your nose, your mouth and your hair.
- Smile, shake your finger and wink.
- Scratch your chin, squint and clear your throat.
- Smile, rub your hands and clap.
- Raise your left hand, wave and snap your fingers.
- Bend your right arm, make a fist and raise your arm.

### LEVEL 4

- Point to the ceiling the floor and me.
- Close your eyes, raise your hands and look at me.
- Blink twice and point at me.
- Tap your right shoulder with your left hand.

- Touch your nose, your wrist and your thumb.
- When I touch my nose, you raise you hand.
- Shake your finger, then shrug your shoulders.
- When I nod my head, you put your hands together.
- Touch your left hand with your right index finger.
- Instead of touching your chin, touch your nose.
- When I shrug my shoulders, you nod your head.
- Touch your knee, your elbow and your chin.
- Shrug your shoulders, and stomp your left foot.
- Touch your chin with the back of your left hand.
- Scratch your head, point to me and then smile.

## **ANSWERING THREE-PART YES/NO QUESTIONS**

### LEVEL 2

- Do you get milk from a horse?
- Are windows made of paper?
- Do you eat dinner in the morning?
- Do you see with your ears?
- Does the mail carrier deliver letters?
- Do you pick up food with a pencil?
- Do you get wool from a sheep?
- Do firemen use ladders?
- Do we see stars in the daytime?
- Does a cat say woof?
- Do you use a hose in the house?
- Does a boy wear a mustache?
- Is milk always fresh?

## **MULIT-PART YES/NO QUESTIONS**

### LEVEL 4

- Do people eat food when they are hungry?
- Do people wear coats to keep cold?
- Can you run as fast as a bird can fly?
- Can you breathe with your head under water?
- Is Nancy, Fred's cousin, a girl?
- Will a wooden block bounce as high as a ball?
- Are airplanes the only things that fly?
- Can you see both the moon and the sun at night?
- Do we read newspapers, magazines and pens?
- Can you get a chair over here by pulling it?

## Appendix C

### **SUGGESTIONS FOR THE STUDENTS WITH APRAXIA (OR SEVERE INCOORDINATION)**

#### **For Tasks which require Fine-Motor Control**

- Put a weight on the student's wrists. Weights can be purchased at a local sporting goods store.
- In some tasks, putting your hand over the student's hand for a guide can help.
- Practice with the student, doing more gross-motor activities such as: Putting your hands up in front of you. Have the student put his/her hands on yours, palms touching. Move your hands with the student's on yours in forms or "shapes" in the air. Have the student follow your movements. Draw shapes, numbers and letters of the alphabet in the air. The student should be mirroring or following your movements. Once the student is able to do this, have him/her move his/her hands slightly back off of your hands but continue to mirror or follow your movements as you draw shapes, etc. as before. When success is achieved with this, ask the student to lead the movements and you mirror or follow the student. Once the student is comfortable with this, you can do the same with more fine-motor activities such as mirroring finger movements.
- When using computer tasks, utilize the Accessibility's Options in the Control Panel of Windows. For instance, you may use Filter Keys® to ignore unintentional repeated keystrokes or use Toggle Keys® for obtaining a generated sound when the Caps Lock or Number Lock is hit. You can also change the speed and properties of the mouse.

## Appendix D

### VISUAL IMPAIRMENTS

#### SUGGESTIONS FOR USE WITH THE STUDENTS WITH VISUAL IMPAIRMENTS

- On computer tasks, utilize the Accessibility's Options in the Control Panel in Windows. Use Toggle Keys® to generate a sound when using functions such as Caps Lock and Numbers Lock. Use High Contrast of fonts and icons under the Display tab to make the screen easier to see.
- In Brubaker on Disk®, choose large Fonts.
- Utilize tape recordings of stories, paragraphs, sentences and news articles when reading is not an option for memory recall, language and/or reasoning skills tasks.
- Working on language skills will be very important in cases of visual impairment or blindness, as these the students will need to be able to rely on verbal directions a good deal.
- Throwing beanbags or Koosh Balls® may not be able to be done.
- Utilize bold, colorful markers in any writing tasks.
- Reasoning/Problem solving, Memory recall/Orientation and Language target areas will need to be largely presented auditorily or aloud depending on the depth of the visual impairment.
- **Naming Tasks:** Ask the student to name objects that you give him/her to hold in the hand. Let the student hold the object and feel it. Then ask for the object to be named. Give cues as suggested in the program text.

Inferential Naming: Describe objects with progressive cues/clues. For example: if the object is a tree, give the following clues one at a time: It is a plant. It usually grows outside. It is tall and shady. It is a \_\_\_\_\_.

Responsive Naming: Ask questions about objects and their functions. For example: "What do you write with?" or "What do we wash our clothes in?"

Synonyms and Antonyms: Provide words one at a time aloud and ask the student to provide another word that has the same meaning (synonym) or ask the student to provide a word with the opposite meaning (antonym). For example: a synonym of the word PISTOL could be: GUN; an antonym for the word LARGE could be: SMALL.



## **Appendix E**

### **SUGGESTIONS FOR USE WITH STUDENTS WITH HEARING IMPAIRMENTS**

- Sit on the side of the student's "best ear".
- Speak to the student in a manner where they can see your face. They may not be a "lip reader" but much is gained by facial expressions.
- When speaking to hearing impaired persons, do not simply raise your voice but attempt to speak stronger and in lower pitches. The most frequent hearing losses are of the higher pitches and lower pitched voices are the more easily understood. Men's voices are typically better understood by hearing-impaired persons as than are those of women.
- Purchase a Personal Listening Device for the student. Obtainable at most electronics stores such as Radio Shack®. Use with a head set.
- Turn off other auditory distracters such as televisions, radios, stereos, etc. when the student is trying to concentrate or communicate.

## Appendix F

### SUGGESTIONS FOR USE WITH STUDENTS WHO HAVE MOTOR-SPEECH DISORDER

#### DYSARTHRIA, VERBAL APRAXIA AND AUGMENTATIVE COMMUNICATION CONSIDERATIONS

- There are several characteristics of persons with TBI that need to be considered at each recovery phase that will affect whether or not Augmentative Communication systems can be implemented. These include the cognitive sequelae, language disorders, and motor control deficits that are commonly seen in persons with TBI.

The cognitive areas typical to TBI include:

- **attention/concentration** which can impede learning, message production, and attending to details for specific system features;
  - **organizational deficits** which may interfere with knowledge of location of available vocabulary and sequencing of vocabulary for message formulation;
  - **poor initiation**, not only for interaction but also for use of strategies for effective communication;
  - **inability to inhibit responses** which may cause perseveration (excessive repeats) on vocabulary use;
  - **recall deficits** which can create difficulties with remembering symbol meanings, encoding accesses, and operational features;
  - **difficulties in new learning** which can impact negatively on attempts to introduce or change systems; and
  - **concrete thinking/reasoning skills** that need to be considered when using abstract associations and may interfere with abilities to formulate messages with limited vocabulary available.
  - Language disorders that are characteristic of individuals with TBI include:
  - **auditory processing** impacting rate, quantity, and complexity of information accurately interpreted;
  - **aphasia** which can result in poor use of syntax, and most commonly,
  - **Word-finding deficits** that can interfere with ability to clearly generate an understandable message.
  - Motor control deficits include:
  - **apraxia and dysarthria**, which can play a role in recovery of intelligible speech,
  - **Ataxia, contractures, posturing, spasticity, etc.**, which all play a significant role in the ability to access any AUGMENTATIVE COMMUNICATION system introduced.
- When considering Augmentative Communication for persons with TBI, often the most frequently asked question relates to the prognosis for recovery of speech. Prognosis can impact the design and overall long-range plan for development of a permanent Augmentative

Communication system. The primary determining factor in prognosis appears to be severity of motor deficits. If a severe motor speech deficit exists that impacts oral/motor control for basic oral movements, feeding and swallowing, the prognosis for speech recovery is poorer, indicating the potential need for a long-term Augmentative Communication system

- Communication goals can and should be written as a vehicle to address cognitive deficits as well. For example, goals can be designed to address initiation deficits by emphasizing initiation of system use, or improving length of attention, to allow for complete formulation of a short sentence or appropriate response to a conversational turn.
- While it has been accepted practice to use Augmentative Communication systems with persons with TBI, it has been generally applied in the later stages of recovery after it has become evident that the prognosis for the recovery of speech is poor. However, if the use of Augmentative Communication systems is introduced immediately, it can facilitate the recovery process not only by making persons with TBI active participants, but also by providing them with some control in a situation that is primarily out of their control. It may also assist in the ultimate implementation of a long term Augmentative Communication system, should it become necessary, by creating an early atmosphere of communication participation and control.

## **Appendix G**

### **Helpful Tips**

#### **About the Use of Distractions**

As people with brain injury recover, distractions should be introduced into many of the activities done with the student to help improve focused, sustained, selective and divided and attention skills.

When doing any “rehab” activities, begin introducing distractions into the environment such as music, television shows, someone else talking on the telephone, etc. The challenge is for the student to be able to achieve accuracy and maintain mental endurance in the midst of such distractions. When distractions are first being introduced, it may be best to have the student do activities that are familiar and those that he/she has already had success with. Then it would be best to move to activities that the person is unfamiliar with or ones that require new learning.

#### **Life Habits**

Stress the importance of regular exercise, nutrition and sleep for the student . Assist the student and caregiver to develop a schedule that allows for each of these, daily. Supply reading material that will assist the student in learning how important these are to improving and maintaining good physical and mental energy and endurance. Perhaps assist the student enroll in a local gym to ensure regular, safe exercise.

## Appendix H

### Game List

Games are a great way to focus on cognitive skills. Most games require thinking skills at some level and playing games is fun! People who do not like to do “homework,” including both students and instructors, don’t mind playing a game. There is no need to buy all the games listed, although purchasing some of them as gifts may be very thoughtful. Most families have games that are gathering dust in a closet. Go find them! Below is a listing of games that are available at toy or department stores. Most of them are **board games**.

There are also many **electronic/video games**, ranging from those that use your television (such as Nintendo), those for a home computer, and those that are hand-held. The electronic/video games are too numerous to mention and change so often that any list of games would be quickly outdated. Visit a computer store to view the selection. Look for games that have levels of difficulty and allow for slower response speeds, if needed.

Many games focus on **response speed**. For instance video games often require rapid responses using hand-held controls. There is also a new generation of electronic games that require a variety of rapid reactions, such as Torx (Hasbro), Bop It (Parker Bros.), and Top It (Hasbro). Don’t overlook the classic Simon (Milton Bradley) game and even jacks and a ball.

**Card games** are also an excellent source of enjoyment and stimulation, and require only a deck of cards. Begin with simple games, such as War, Blackjack, and Go Fish, extending to more challenging games, such as Gin and Poker, as the person progresses. If possible, introduce very challenging games, such as Spades, Hearts, and Bridge. Some card games can be purchased, such as Uno, which is excellent for concentration and flexible thinking.

Finally, there are many games and activities that focus on **construction**, requiring the application of spatial skills, fine motor abilities, reasoning, and concentration. Building games/toys are readily available, such as Lincoln logs, Tinker Toys, Legos, K’Nex, and Connetrix (Toyo Toys). Some of these come in large varieties, which would be easier for people with hand weakness or fine motor difficulties. There are also more challenging erector sets that involve the use of simple tools. For those with a particular interest and high level of ability, kits can be purchased at stores such as Radio Shack to create electronic devices.

Following the listing for each game, there is a letter code reflecting the cognitive abilities stressed in that game. You might be able to use this to select games to focus on particular skills. Keep in mind, however, that many games require a combination of skills, so you really cannot go wrong in selecting any game! The following list is not complete. Go to a store and find games that fit your unique needs!

Letter Codes

FM = Fine Motor Skills

AC = Attention/Concentration Skills

M = Memory Abilities

R = Reasoning Skills

VS = Visual-Spatial Skills

L = Language Skills

SP = Speed of Processing

A = Academic Skills (particularly reading or arithmetic)

<b>Name of Game</b>	<b>FM</b>	<b>AC</b>	<b>M</b>	<b>R</b>	<b>VS</b>	<b>L</b>	<b>SP</b>	<b>A</b>
Backgammon		X		X	X			
Battleship	X	X	X	X	X			
Bingo	X	X			X			
Boggle		X			X	X	X	X
Checkers	X	X		X	X			
Chess	X	X	X	X	X			
Chinese Checkers	X	X		X	X			
Clue		X	X	X	X			
Connect Four	X	X		X	X			
Guess Who			X	X				
Jenga	X	X			X			
Life		X				X		X
Mastermind	X	X		X				
Memory Game		X	X		X			
Monopoly		X		X				X
Outburst		X				X	X	
Password		X		X		X	X	X
Perfection	X	X			X			
Pictionary	X	X		X	X	X	X	
Racko	X	X		X				
Risk	X	X	X	X	X			
Scattergories		X	X	X		X	X	X
Scrabble	X	X		X	X	X		X
Sorry	X	X		X				
Stock Market		X	X	X				X
Stratego	X	X	X	X	X			
Tri Bond		X	X	X		X		X
Tri-Ominos	X	X		X	X			
Trivial Pursuit			X	X		X		X
Upwords	X	X		X	X	X		X
Yahtzee	X	X		X				X

