

WALC™ 10: Memory

Workbook of Activities for Language and Cognition

by Kathryn J. Tomlin

Skills	Ages
<ul style="list-style-type: none">■ use of visual-auditory-kinesthetic (VAK) coding strategies■ associations■ following directions■ recalling information	<ul style="list-style-type: none">■ 16 and up <div data-bbox="938 577 1474 632" style="background-color: black; color: white; padding: 2px;">Grades</div> <ul style="list-style-type: none">■ high school and up
Evidence-Based Practice	
<p>According to the <i>Preferred Practice Patterns for the Profession of Speech-Language Pathology</i> (http://www.asha.org/members/deskrefer-journals/deskref/default, 2004), the <i>Clinical Guidelines of The Royal College of Speech & Language Therapists</i> (www.rcslt.org/resources, 2005) and the National Stroke Association (2006), the following therapy principles are supported:</p> <ul style="list-style-type: none">■ Intervention should address processing of varied types of information in various activities and settings (e.g., ability to attend to, perceive, organize, and remember verbal and nonverbal information including social cues, reasoning, and problem solving).■ Communication, both verbal and nonverbal, is a fundamental human need. Meeting this need by facilitating and enhancing communication in any form can be vital to a patient's well-being.■ Therapy should include tasks that focus on semantic processing, including semantic cueing of spoken output, semantic judgments, categorization, and word-to-picture matching.■ Therapy may target the comprehension and production of complex, as well as simple, sentence forms.■ Therapy should be conducted within natural communication environments.■ Rehabilitation is an important part of recovering from a stroke, and the goal is to regain as much independence as possible. <p>This book incorporates the above principles and is also based on expert professional practice.</p>	



LinguSystems, Inc.
3100 4th Avenue
East Moline, IL 61244

FAX: 800-577-4555
Phone: 800-776-4332
E-mail: service@linguisystems.com
Web: linguisystems.com

Copyright © 2007 LinguSystems, Inc.

All of our products are copyrighted to protect the fine work of our authors. You may only copy the client materials needed for your own use. Any other reproduction or distribution of the pages in this book is prohibited, including copying the entire book to use as another source or "master" copy.

Printed in the U.S.A.

ISBN 978-0-7606-0751-0

About the Author



Kathy and her therapy dog, Zanmi

Kathryn J. Tomlin, M.S., CCC-SLP, has been working with clients who have memory loss for over 25 years, and the techniques in this book have evolved through her experiences. She has authored many materials with LinguiSystems over the last 20 years. Some of her works include:

The Source for Apraxia Therapy

WALC (Workbook of Activities for Language and Cognition) Series—

- *WALC 1: Aphasia Rehab (English and Spanish versions)*
- *WALC 2: Cognitive Rehab (English and Spanish versions)*
- *WALC 8: Word Finding*
- *WALC 9: Verbal and Visual Reasoning*
- *WALC 11: Language for Home Activities*

Zanmi, Kathy's Samoyed, goes to work with her to encourage clients. Her clients enjoy feeding and spending time with Zanmi, and Zanmi enjoys their company. Everybody wins!

Acknowledgments

My special thanks to all those clients and professionals I have had the pleasure to work with and learn from over the years. I especially acknowledge Lana Liberto, Pam McAbee-Nesbit, and Cliff Nesbit who have taught me more than I will ever know.

My appreciation also toward all those who have worked with me at LinguiSystems. I thank you for your patience, encouragement, and humor. But most of all, I humbly thank God for all the gifts He has given me. May you and your clients benefit from those gifts.

*Edited by Lauri Whiskeyman
Illustrations by Margaret Warner and Tom Vaccaro
Page layout by Jeanne Ketelaar
Cover design by Jason Platt*

Table of Contents

Introduction	7
How Do We Code Information?	9
Memory/Coding Systems Chart	10
Therapy Tips	11
Identification of Systems	12
Word/Mental Picture Associations	20
Chaining Word Lists	28
Associated Lists	30
Associated Phrases	33
Varied Lists	34
Creating Lists	37
Following Written and Oral Directions	38
Two-Step – 4 Components	40
Three-Step – 6 Components	44
Drawing Shapes	46
Recalling Boxed Information	50
3 Shapes	51
4 Shapes	54
5 Shapes	56
Complex Shapes	57
Figural Designs	58
Numbers	62
Words	64
Create Your Own	67
First Letter Mnemonics	68
Words	69
Sentences	71
Word List Retention	73
Category Inclusion	74
Category Exclusion	75
Word Placement	76
Recall by Attribute Inclusion	78

Associated Visual Pairs	80
Name-Picture Association	87
Memory for Numbers and Sentences	104
Converting Telephone Numbers to Words	105
Chunking Numbers	106
Chunking Sentences	107
Picture Associations	109
Person to Object	110
Object to Object	113
Person to Place	117
Memory for Shapes and Pictures	119
Review of Shape Names	120
Remembering Shapes – 4 Figures	121
Remembering Shapes – 5 Figures	123
Remembering Shapes – 6 Figures	125
Remembering Pictures – 4 Pictures	127
Remembering Pictures – 5 Pictures	129
Remembering Pictures – 6 Pictures	131
Remembering Pictures – 7 Pictures	133
Remembering Pictures – 8 Pictures	135
Picture Retention	137
Sorting and Remembering Categories	147
Words	148
Pictures	150
Functional Memory Tasks	152
Memos	153
Appointments	154
Directions	155
Paragraphs with 3-4 Elements – Inclusion	157
Paragraphs with 3-4 Elements – Exclusion	159
Specific Information Retention	161
Paragraph Retention	163
Narrative Retention	166

Memory and Mental Manipulation	172
Reverse Order – 3 Words	173
Reverse Order – 4 Words	174
Scrambled Sentences – 4 Words	175
Scrambled Sentences – 5 Words	176
Word Order – 3 Words	177
Word Order – 4 Words	178
Ranking	179
Alphabetical Order – 3 Words	180
Alphabetical Order – 4 Words	181
Size – 3-4 Words	182
Resources and References	183

Introduction

Working with clients who are experiencing memory loss, no matter the degree, is extremely challenging and can be frustrating for both you and your client. *WALC 10: Memory* has been written to add some structure to that challenge and to reduce possible factors which may interfere with your client's attempts to reestablish her skills.

There are two main factors underlying all the exercises in *WALC 10*.

1. To initially make all of the processes involved with memory highly intentional.

The most common erroneous belief a client frequently expresses is that she has never used memory strategies. It is imperative to help her understand that although she is unaware of it, all memory skills are tied to some kind of strategy. It's just that the strategies functioned more on an automatic (habit) basis prior to the injury or illness. As your client improves with intentional use of strategies, the emergence of spontaneous, automatic use frequently occurs. The ultimate goal is for the client's memory skills to return to a functional, automatic level once again.

2. To focus on retraining processes as opposed to content.

As you learn about your client's predominant system for learning and coding information (see pages 9-10), and then instruct her on this information (remember, it's a goal to make everything highly intentional), you will constantly focus on the processes she is using, identifying which portions of the process work and which don't, and aiding her to develop strategies for compensation and remediation.

Working with emphasis on the process requires active and constant therapeutic intervention initially but as your client's awareness and abilities increase, she will take on more of the training responsibilities herself. As skills increase, your client will frequently begin telling you of times she has found success using her memory skills outside the therapeutic situation.

I devised the exercises in *WALC 10* for use primarily with individuals who have suffered from a head injury, a non-dominant hemispheric stroke (usually a right CVA), and other neurological deficits resulting from various causes (e.g., Lyme's Disease, anoxia, Moya Moya Disease). In addition, the exercises have also had a positive effect with clients with aphasia and with students who have been referred for therapeutic intervention for learning disabilities and ADD. Success becomes apparent as the client's functional interaction with life situations increases (e.g., social interaction, employment, schooling).

Each section in this book has an introductory page with information about the tasks, including an explanation about the process to be used for the tasks. Task instructions are addressed to the therapist primarily because this book has been designed as a teaching manual for identifying, using, and learning visual, auditory, and kinesthetic (VAK) representational systems for improving memory skills. In addition, a client requires assistance from another party for making his use of strategies intentional and for receiving feedback on effectiveness.

In addition to being a therapeutic intervention tool, *WALC 10* is also a professional growth resource. As you focus on the visual and auditory learning styles of clients to retrain their memory skills, your repertoire of skills used in all areas of language and cognitive-communication therapy will be enhanced. The skills and processes used in this book can be transferred to the retraining of reading, writing, verbal expression, and auditory comprehension, as well as cognitive-communication skills required for organization, problem solving, reasoning, and integration of all communication abilities.

Although *WALC 10* only touches upon the intricacies involved in memory, I hope it becomes a catalyst for growth for each person who uses it.

Kathy

How Do We Code Information?

The first step in retraining memory processes is to determine the primary strategies a client uses most successfully. There are three main systems we use to code and learn information. The systems are *visual*, *auditory*, and *kinesthetics/feelings*. Even though we have the ability to use all three systems, each person has one system that is strongest. Determining which system is your client's strongest will greatly aid you in being able to help her retrain her memory.

A person who learns *visually* codes things in her memory with pictures (either "snapshots" or entire "movies"!), graphs, colors, and so on. A person who learns *auditorily* uses words, stories, and dialogues to code information. A person whose *kinesthetic* system is strongest learns and codes with movement and feelings. Kinesthetic learners watch and imitate with their hands by actually doing the activity. Since it is difficult to simulate that kind of learning with pen and paper exercises, this book will focus primarily on visual and auditory systems. But, as stated earlier, people have a capacity to use all three systems, so even if a client's primary system is kinesthetic, doing the tasks in this book will help retrain all her systems.

The chart on the next page will help you determine which system appears to be your client's strength. Hopefully it will also help you learn about your own preferred system. By identifying your own system, you will have a greater awareness of how to help those who have a pattern similar to your own and help you to shift to a different system in order to assist someone who learns and codes information differently from yourself.

Memory/Coding Systems Chart

	Visual	Auditory	Kinesthetic
Learn by	Seeing things; being able to make a picture of the information	Hearing things; being able to make a story of the information	Doing things; being able to actively move through the experience
Distracted by	Conflicting or too much visual stimuli; too many words provided too fast to switch to visual coding	Conflicting audible information or background noise; too much visual stimuli given too fast to switch to auditory coding	Conflicting auditory or visual stimuli; not being able to “move” or “do”
Processing style	Tends to gaze up when thinking; “thinks” at a fast pace	Eyes tend to stay mid-plane when thinking; “thinks” at a moderate pace	Tends to look down when thinking; “thinks” at a slow pace
Key phrases used	Words reflect visual system, as in “I see the picture,” “That’s clear,” and “Look at this”	Words reflect auditory system, as in “I hear what you’re saying” and “That rings a bell”	Words reflect movement or feeling, as in “That feels okay,” “I can handle it,” and “Let me touch base with you”
Environmental interaction	Notices what is going on around her (“Did you see that?”)	Hears things going on around her and not all that aware of visual things	Very aware of mood and tone; generalized coding; not greatly aware of visual or auditory activity around her
Organizational styles	Looks at the whole picture first, then at the components if deemed necessary	Methodic, organized, step-by-step learning; very language oriented – uses verbal rehearsal and writing out information	Slow, creative, global, divergent organization

Therapy Tips

1. As you work through these exercises, remember that retraining the memory processes is your primary concern. Don't be concerned with achieving 100% on the tasks. Each of these tasks reflects certain skills needed in everyday living, although it will not always be obvious.
2. Within a therapy session, focus on several different tasks. For example, begin with a visual task of associating figures to shapes, progress to working with ten associated words, and then do some of the functional memory tasks or memory and mental manipulation tasks.
3. Be aware that initially, this retraining will feel very strange to your client and he will frequently state that using strategies is not necessary because he never used strategies before his illness or injury. As he sees that the strategies really work, he will become more interested in using them.
4. Due to the nature of memory loss, those with a more serious impairment will have little carryover from session to session until skills improve. Your client will forget that he forgets, and he will forget the successes he had in therapy. Just continue to build the foundations and watch for spontaneous use of memory strategies (e.g., learning his way around the facility, remembering something he did at home the previous day) and reinforce those milestones.
5. There will occasionally be clients for whom these processes do not appear to help. Most frequently it has been with clients who have had profound memory loss from anoxia or encephalitis.
6. Whenever possible, aid your client with developing strategies for things directly associated with his life. For example, if you know he has a 2:00 appointment with his neurologist on Wednesday, October 22, assist him with coding the information or devising compensatory strategies.
7. Encourage the use of Daytimers, calendars, logbooks, or diaries. Be aware, though, that initially your client will frequently forget to look at the written reminders or he will tell you that he doesn't need these things because he knows he'll remember without them.

Identification of Systems



Introduction

The exercises in this section are designed to provide you and your client with tasks that will reveal which learning system she predominantly uses. Knowing your client's system preference will aid you in assisting her in developing the best-suited coding strategies and will insure that you are both speaking the same language.

If your client has a predominant visual system, assist her in developing visual coding strategies. If, on the other hand, her predominant system is auditory, act as a guide for using auditory strategies. As your client becomes more aware of her own systems, she will become more effective in developing appropriate strategies. Be aware that although one system is predominant, your client will use both visual and auditory systems. You only need to "step in" and steer her toward her predominant system when she is being unsuccessful.

Process

Initially, have your client complete the exercise without your assistance. Listen to and watch how she processes and codes the information. Ask her to verbalize how she did it. It is common for a client to initially say, "I don't know how I did it." With encouragement, though, she will be able to recall pieces of strategies that will key her into recalling more of the components. At this point, be careful not to provide too many possible suggestions because they can interfere with the processes she used. If your client is unable to create any strategy, provide two visual and two auditory strategies for her to choose from. After providing the choices, it's helpful to ask, "Will one of these work for you?" This will either aid your client in picking one that "feels" right, or it will provide enough choices for an independent strategy to be triggered.

Build a list of possible memory strategies to suggest to your client by listening to other clients talk about their strategies. Code these strategies and share them with other clients. For example, the task may be coding the figure  with the figure .

Other clients might have stated they coded the figures as:

- I see a *glass* and a *frying pan*.
- It's a *lounge chair* and a *sofa*.
- When the *cup* fell over, it became *flat*.
- I had a *glass of juice* when I got out of *bed*.

Identification of Systems, *continued*

Closely watch your client's face as you present possible strategies to choose from. A client usually gives very clear signs of when she feels a strategy will not work and when one "clicks." Then have her intentionally rehearse the strategy that she feels will work, as this greatly improves coding skills.

You will frequently need to guide your client in using strategies that are directly associated. If the strategy is not associated, the client will be ineffective in retrieval. Intentionally make the client aware of how the association wasn't actually present. Then help her determine one that is related.

Once you've identified a client's predominant system, make her very aware of it. Discuss your client's system and compare it to your own. Remember, you want your client's skills to be at a highly intentional level. Once you and your client are aware of the client's system, you can guide her to use that system in the various tasks throughout this book.

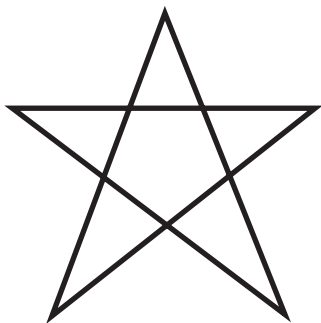
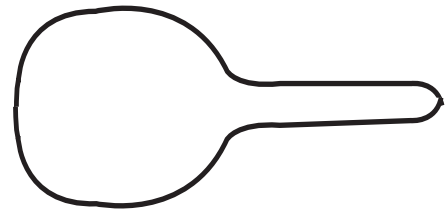
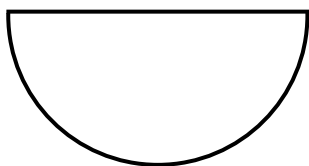
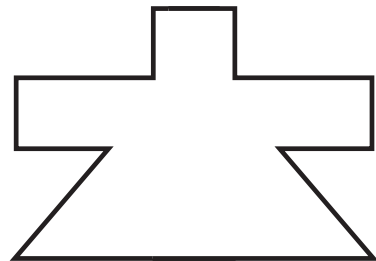
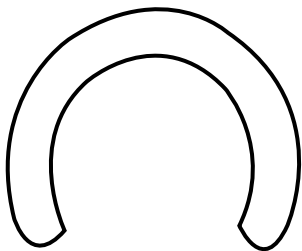
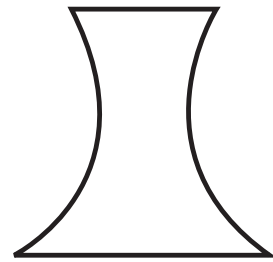
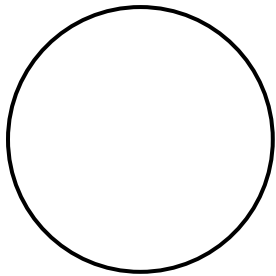
Identification of Systems

Exercise 1

Have your client study the shapes below. On the next page, have him draw the geometric shape associated with each line drawing.

Geometric Shape

Line Drawing



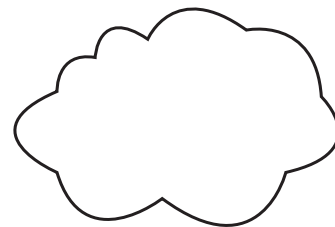
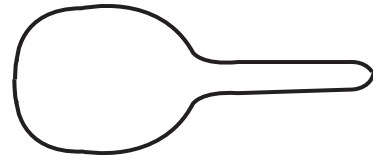
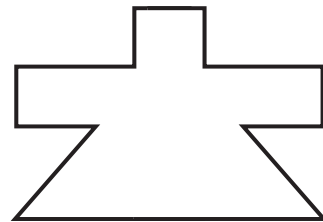
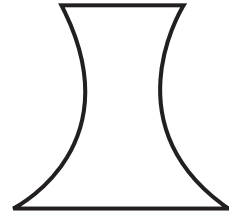
Identification of Systems

Exercise 1, *continued*

Have your client draw the geometric shape that went with each line drawing from the previous page.

Geometric Shape

Line Drawing



Ask your client to tell you how she remembered which objects went together. What system did she use? Did she code in pictures? For example, did she visualize a tree out of the first set, a person out of the second set, a bowl and spoon out of the third set, and star with a cloud out of the fourth set? On the other hand, did she code in words, phrases, and sentences? She might have said to herself, "There is a sun setting by the volcano" for the first set. Did she describe what she saw and associated together? If she is having difficulty determining how to code, help her devise strategies that will work for her.

Identification of Systems

Exercise 2

Have your client code this list of seven words. When you think she has them memorized, have her cover the list and say them aloud or go to the next page and write them down.

Bush

Tree

Grass

Path

Garden

Flowers

Bird

Identification of Systems

Exercise 2, *continued*

Have your client write the seven words she memorized on the previous page.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Once again, analyze how the client coded the words. What system(s) did she use? What are you finding out about how she learns and remembers?

One of the first steps in retraining memory is to make the information coding very *intentional*. If the client is *aware* of how she learns and recalls, it will be much easier for her to *intentionally* code new information. As the client becomes more accurate and faster at recalling information, the goal will be to make those recall skills *automatic* again.

Identification of Systems

Exercise 3

Have your client code these people's names to their faces. When you think he has them memorized, go to the next page and have him write their names under their faces. The pictures will be arranged differently than they are on this page.



Tamara



Yuet



Margo



Cheryl



Kaitlin

Identification of Systems

Exercise 3, *continued*

Have your client write the name of each person from the previous page under the correct picture.



How did the client code the names? Bring it to your client's conscious awareness. If he didn't get them all, go back and help him code. Encourage your client to code out loud.

Remember, your client has the capacity to use all three systems—visual, auditory, and kinesthetic. Don't be surprised if you find that although he uses one system the most, there are times when he will use one of the other systems to code things.

Word/Mental Picture Associations

Introduction

By now, your client should be becoming aware that memories work best when we use some kind of strategy. Instruct your client not to assume he'll just remember information because our minds don't work that way. Everything we learn is coded in some way. There is always an association with something already in our minds. If your client is finding that he is not remembering things, then his associations aren't strong enough. Sometimes it is helpful to exaggerate the associations so they really stand out in the mind. For example, an association for remembering to buy soap could be a mental picture of a gorilla sitting in the bathtub washing with a large bar of soap.

The focus of word and mental picture associations is to establish coding patterns. The associations on the following pages are initially broken down into specific patterns to provide practice. This progresses to mixed groups of words so your client can use the patterns in an integrated manner. The final word groups lead your client into developing associations between words that have no clear association. This encourages them to use the coding patterns they have practiced as they link the unrelated words together.

Process

Present the pairs in a slow manner—one, two, or three pairs at a time. Watch your client for signs of coding. Review the list of pairs periodically as you go through it. After your client codes all ten pairs, slowly provide the first item in each pair, allowing your client to provide the second item in the pair. If your client misses any, go back and help him code the pair in his visual or auditory system. If your client codes something incorrectly, aid him in changing the strategy to replace the wrongly coded item with the correct item.

The example on the next page will help you get started.

Word/Mental Picture Associations, *continued*

Example

Therapist: These words are going to be related to each other by associating a color with an item. When I say “yellow,” you will say “canary.” When I say “blue,” you will say “ocean.”

Therapist: yellow

Client: canary

Therapist: blue

Client: ocean

Therapist: Great! Now, when I say “green,” you will say “grass.” When I say “white,” you will say “salt.” (pause) “yellow”

Client: canary

Therapist: blue

Client: ocean

Therapist: green

Client: grass

(Continue until you have finished the list.)

If your client has been successful in creating strong associations, then he will be able to retain the list after a delay. The pattern that usually appears to be most successful is to review the list:

- a. immediately after training all 10 paired sets
- b. approximately 5 minutes later, after conversation or another therapy task
- c. at the end of the session
- d. at the beginning of the next session

Tell your client that you will be following this sequence (or whatever sequence you devise) as it will help strengthen his motivation for efficient coding.

There will be times, particularly with impulsive clients, that the client will either silently associate or state aloud a different word from the one you present. For example, you might say, “When I say *yellow*, you will say *canary*.” But instead of coding *canary*, your client independently codes *banana*. This can sometimes be counteracted by explaining to your client before the training event begins that he will have to try to keep his mind open to your paired words and to actively inhibit any other words from “popping” into his head. If this pretraining shaping doesn’t work, you can attempt to erase his code and establish a new code with the appropriate paired word. If this is not successful, accept your client’s coded version and expect that paired word to be the one provided after the delays. Although this is not the best result because it reflects decreased new learning abilities, it still reflects that your client used an association strategy.

Word/Mental Picture Associations

Exercise 1

Train the client to associate the paired words in each list below. Use the Verbal Format below to instruct him on the association for the group of words to aid his intentional coding. Begin with two to three pairs, then review until he learns the entire list. Practice with and without a delay.

Verbal Format: When I say _____, you will say _____.

Word Lists

Part/Whole Coding

knob – radio
muzzle – dog
legs – table
lens – glasses
nail – finger
page – letter
wheel – car
cord – lamp
lace – shoe
hands – clock

Category Coding

vehicle – train
clothing – jacket
food – roast
flower – tulip
holiday – Thanksgiving
spice – pepper
candy – gum
animal – bear
tool – pliers
jewelry – watch

Whole/Part Coding

chair – cushion
plant – root
TV – channel
hand – knuckle
bed – mattress
space – moon
store – cashier
sandwich – mustard
shirt – collar
bike – pedal

Paired Items Coding

cup – saucer
comb – brush
picture – frame
hand – glove
wind – rain
towel – washcloth
computer – screen
sheet – blanket
letter – stamp
hammer – nail

Word/Mental Picture Associations

Exercise 2

Train the client to associate the paired words in each list below. Use the Verbal Format below to instruct him on the association for the group of words to aid his intentional coding. Begin with two to three pairs, then review until he learns the entire list. Practice with and without a delay.

Verbal Format: When I say _____, you will say _____.

Word Lists

Action/Agent Coding

cooking – stove
driving – car
passing – football
digging – shovel
writing – pen
flying – airplane
wrapping – present
cleaning – soap
reading – magazine
burning – fire

Color Coding

white – snow
black – pepper
blue – sky
green – leaves
yellow – sun
pink – dress
brown – toast
red – tomato
gold – wedding ring
orange – carrot

Agent/Action Coding

lunch – eating
ball – throwing
knife – cutting
chair – sitting
tree – growing
water – washing
music – dancing
door – closing
money – spending
book – reading

Characteristics Coding

soft – kitten
tall – skyscraper
cold – ice cream
heavy – truck
bright – sun
clear – glass
salty – pretzel
rough – sandpaper
long – highway
straight – ruler

Word/Mental Picture Associations

Exercise 3

Train the client to associate the paired words in each list below. Use the Verbal Format below to instruct him on the association for the group of words to aid his intentional coding. Begin with two to three pairs, then review until he learns the entire list. Practice with and without a delay.

Verbal Format: When I say _____, you will say _____.

Word Lists

Location (Home) Coding

closet – coat
basement – tools
attic – trunk
box – shoes
cabinet – plates
shelf – books
garage – car
drawer – photos
windowsill – plant
ceiling – light

Occupation/Object Coding

plumber – pipe
veterinarian – dog
lifeguard – towel
teacher – desk
reporter – microphone
actor – script
cashier – money
photographer – camera
barber – scissors
truck driver – map

Location Coding

cake – bakery
whale – ocean
dogs – kennel
vines – jungle
clown – circus
teacher – school
bear – den
grass – ground
cactus – desert
skier – slopes

Composition Coding

deck – wood
fireplace – bricks
beams – steel
jewelry – gold
box – cardboard
window – glass
mug – ceramic
cabin – logs
can – aluminum
book – paper

Word/Mental Picture Associations

Exercise 4

Train the client to associate the paired words in each list below. Use the Verbal Format below to instruct him on the association for the group of words to aid his intentional coding. Begin with two to three pairs, then review until he learns the entire list. Practice with and without a delay.

Verbal Format: When I say _____, you will say _____.

Word Lists

Mixed Associations – Level I

red – stop sign

salt – pepper

book – pages

chef – cook

doctor – thermometer

phone – talk

tire – tread

dollar – cents

hot – sun

doughnut – sugar

dog – pet

shoe – heel

shirt – cotton

truck – road

towel – dry

tree – tall

summer – winter

bird – fly

green – go

pan – fry

Mixed Associations – Level II

remember – forget

diamond – expensive

cherry – pit

asphalt – street

slither – snake

flip – pancakes

graze – cattle

brag – boast

vine – trellis

skill – mechanics

holiday – celebrate

lemon – rind

carpenter – hammer

switch – change

helmet – protection

stone – emerald

shuttle – astronaut

quenches – drink

sliver – wood

buff – polish

Word/Mental Picture Associations

Exercise 5

Train the client to associate the paired words in each list below. Use the Verbal Format below to instruct him on the association for the group of words to aid his intentional coding. Begin with two to three pairs, then review until he learns the entire list. Practice with and without a delay.

These pairs have no obvious association, but they can be linked together creatively. Go slowly and insure that a code has been devised before moving to the next pair.

Verbal Format: When I say _____, you will say _____.

Word Lists

Mixed Associations – Level I

pencil – air
shirt – cross
seven – time
cat – thin
think – beard
world – soft
wave – bridge
paper – sing
knee – store
blue – near

charge – lot
laugh – check
who – pen
thought – get
cup – bank
school – down
park – hard
deal – tuna
fly – sun
kind – furnace

Mixed Associations – Level II

all – it
star – right
off – mix
run – week
when – ten
grab – broke
here – oil
east – soda
under – ice
cage – good

that – nothing
swing – just
turn – millionaire
dream – caffeine
last – my
side – practice
need – center
hair – understand
fast – yet
should – clinch

Word/Mental Picture Associations

Exercise 6

Use this page to create some of your own word lists or to compile items from the previous pages your client may be having trouble with. Having your client create his own lists can be an excellent way of firmly establishing association patterns.

Word Lists

-
1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____

-
1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____

-
1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____

-
1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____

Chaining Word Lists

Introduction

This area builds on the paired association strategies used in the previous section but takes the skill one step further. Instead of just coding pairs of words, your client will be able to code entire lists of words or ideas. These tasks help to reestablish the need for making associations between items and linking them to information already stored in the brain. As we frequently need to retain more than two items, these tasks also aid in retraining the brain's ability to code lists of information.

Process

Basically, the strategy the client will use in this section is the same as the last section but each word gets chained to the next through an association. As before, have your client attempt each exercise independently at first. Offer assistance if needed.

Example

Associated Word List	Possible Strategy
milk	cleaned up spilled milk with tissues
tissues	
hot dogs	dried out the tissues on the grill while cooking hot dogs

Varied Word List	Possible Strategy
dentist	dentist bill came in the mail with some letters
letters	
crayon	child scribbled all over the letters with a crayon

Chaining Word Lists, *continued*

If the codes are successful, the chain can go on almost indefinitely, although testing that with clients is not suggested. Also, the list should remain in the client's mind after a delay or a distractor if the codes are strongly associated. Listening to each of your client's codes will help you cue her if she gets stuck and will provide you with possible strategies to recommend to other clients when they have difficulty devising an association.

Since it will be possible for a client to make a mental picture (visual system) or story (auditory system) that incorporates all the components, make sure the client is coding the words in order. Once the client has mastered the chain, challenge her to recall the list in reverse order. She will be surprised how easy it is by using her associations.

Chaining Word Lists

Associated Lists

Exercise 1

Have your client use a strategy to memorize the words in each list in order. Have her associate each word directly to the one below it. After you feel your client has coded the whole list, have her cover it and say the list out loud.

3

beach

sand

shells

3

trees

trails

hills

3

teacher

computer

lesson

3

film

lens

pose

4

hands

date

wrist

time

4

cold

glass

milk

ice

4

cake

surprise

card

balloons

4

quiet

books

table

read

4

sofa

relax

TV

nap

Chaining Word Lists

Exercise 2

Associated Lists

Have your client use a strategy to memorize the words in each list in order. Have her associate each word directly to the one below it. After you feel your client has coded the whole list, have her cover it and say the list out loud.

5

parking
theater
ticket
popcorn
seat

5

lunch meat
rolls
mustard
knife
plastic bags

5

door
seat belt
key
gear
drive

6

alarm
rise
wash
dress
eat
leave

6

garage
mower
gasoline
start
cut
rake

6

coffee
spoons
cups
sugar
cream
cake

Chaining Word Lists

Associated Lists

Exercise 3

Have your client use a strategy to memorize the words in each list in order. Have her associate each word directly to the one below it. After you feel your client has coded the whole list, have her cover it and say the list out loud.

7

newspaper

memo

note

letter

pamphlet

magazine

postcard

7

home

dinner

relax

TV

read

phone

bed

7

match

flame

wood

logs

burn

cook

marshmallow

8

bush

dirt

tree

shovel

grass

hoe

weeds

flowers

8

drive

enter

sit

order

wait

talk

eat

pay

8

lettuce

carrots

noodles

popcorn

crackers

soda

napkins

cereal

Chaining Word Lists

Associated Phrases

Exercise 4

Have your client use a strategy to memorize each phrase in each list in order. After you feel your client has coded each list, have her cover the list and recall each item on the list in order.

List 1

Check the oil.
Add oil, if needed.
Check the radiator.
Add antifreeze, if needed.
Wash the car.
Wax the car.
Admire your work.

List 2

Put the “soaps” on TV.
Listen while you work.
Dust the downstairs.
Put in a load of laundry.
Take something out of the freezer for dinner.
Check the wash.

Chaining Word Lists

Exercise 5

Varied Lists

Have your client use a strategy to memorize the words in each list in order. Have her associate each word directly to the one below it. After you feel your client has coded the whole list, have her cover it and say the list out loud.

3

work

five

chair

3

school

rock

wall

3

dollar

brass

lamp

3

foot

green

house

4

corn

today

ring

talk

4

hat

picture

time

music

4

lid

back

tree

nail

4

jump

fountain

pen

stairs

4

train

slow

park

blanket

Chaining Word Lists

Exercise 6

Varied Lists

Have your client use a strategy to memorize the words in each list in order. Have her associate each word directly to the one below it. After you feel your client has coded the whole list, have her cover it and say the list out loud.

5

blue
week
home
word
nose

5

ring
beard
twist
hour
punch

5

table
weekend
glasses
robe
book

6

license
carrot
three
piano
china
mayor

6

camera
tooth
peanut
night
crack
beach

6

bird
think
spend
month
bench
towel

Chaining Word Lists

Exercise 7

Varied Lists

Have your client use a strategy to memorize the words in each list in order. Have her associate each word directly to the one below it. After you feel your client has coded the whole list, have her cover it and say the list out loud.

7

park
million
microphone
pan
stick
knee
clock

7

step
feather
soda
drum
vacation
gold
raisins

7

cheese
hair
state
test
left
summer
train

8

calendar
confidential
spread
shiny
freezer
tube
day
shirt

8

star
cotton
vase
position
hungry
moose
key
field

8

holiday
soft
instrument
double
shelf
easy
promise
number

Chaining Word Lists

Creating Lists

Exercise 8

Help your client create several lists of things she might have to recall in daily life. Some topics you might use are a shopping list, a weekend schedule, or a gift list.

List 1

Topic: _____

List 3

Topic: _____

List 2

Topic: _____

List 4

Topic: _____

Following Written and Oral Directions

Introduction

The exercises in this section pair following written or spoken directions with motor execution on visual figures, letters, words, and numbers. This is a skill your clients will use every day. Many things we do require us to listen to or read directions and carry them out in some manner. For example, we need direction-following skills to write an appointment in an appointment book, put toys or furniture together from printed directions, or remember to pick up a specific newspaper at the convenience store while you're on your way to watch your child play soccer on Field B at 6:30 against the blue team.

Process

These exercises can be presented in one of two ways. You can either read each direction aloud to the client and he then carries it out, or you can have your client read each direction, code the information, and then carry it out.

Either method should incorporate a specific focus on coding. As your client hears or reads each step within a direction, watch his eyes to insure he is scanning for the specific item he will be targeting. It is important that each step is presented at a rate that allows sufficient time for coding.

The first group of exercises includes two components in each step. One component leads the client to determine which items are to be targeted or acted upon in that direction. Examples of these components include a shape, a letter, a number, or a word. The execution component is the method the client will use to act on the other component. Examples of the execution component include *circle*, *underline*, and *cross out*. Frequently, the client will recall the item but not the method. If necessary, help the client in his mental visualization or word coding of the method to be used.

Example Explanation of Task Format

"I will be giving you a two-step direction. Listen carefully to remember what you are going to do and which figures you are going to do something to. Try to picture in your mind how the page will look when you've carried out the directions. Feel free to ask me to repeat the direction before you start. Any questions?"

Following Written and Oral Directions, *continued*

Although it is not encouraged because mental manipulation is faster, your client might benefit from talking specifically about what he plans to do in order to follow the direction. Move this toward mental manipulation of the information as soon as possible.

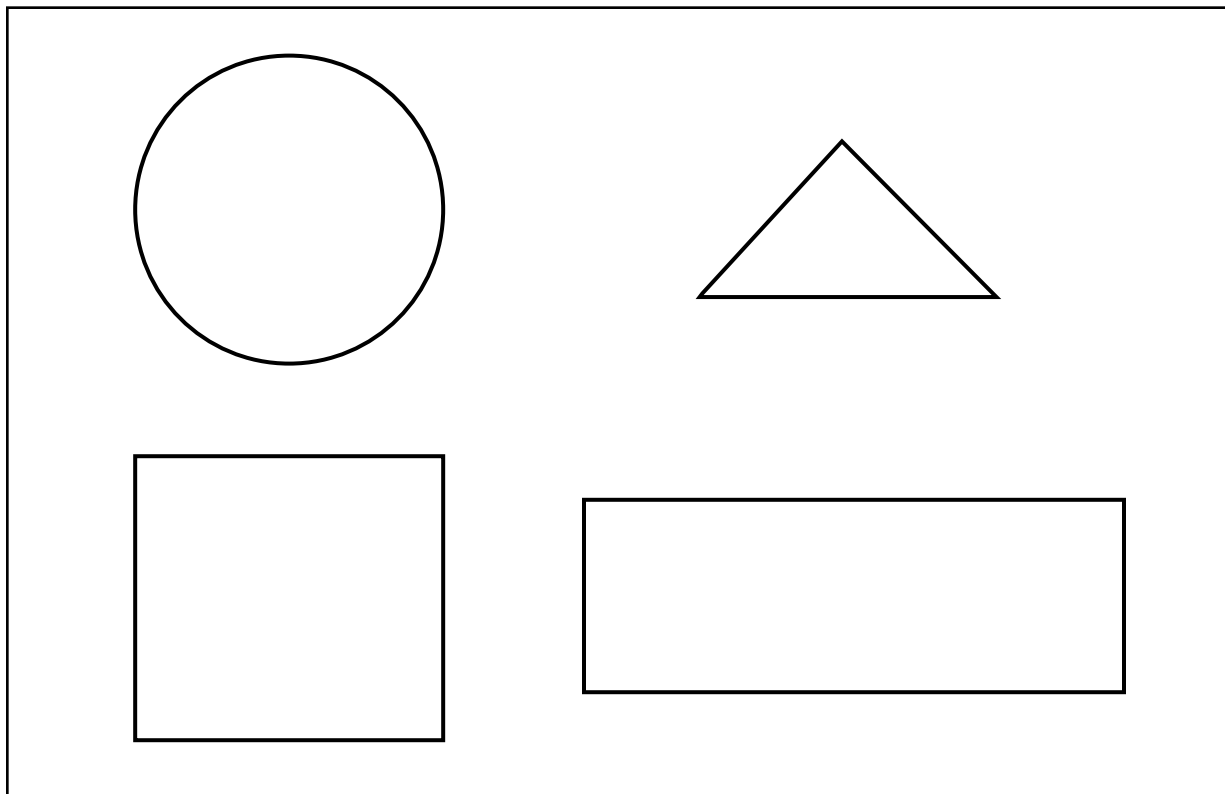
The second group of exercises requires your client to make a word picture or mental visual picture of what the directions request and then to carry it out in its entirety. Have him verbally describe what he will be drawing before actually doing it. If it appears he has not coded it correctly, aid him with coding the information.

Following Written and Oral Directions

Two-Step – 4 Components

Exercise 1

Read one direction at a time to your client or have him read it. Have him code what he is to do to the items in the box. Encourage your client to make a word or visual picture of what the box will look like after he has followed the directions. Then have him carry out each direction.



1. Draw a line from the square to the triangle. Shade in the circle.
2. Put a line over the triangle. Make a small X in the rectangle.
3. Divide the square in half. Draw a circle in the triangle.
4. Underline the rectangle. Shade in the bottom of the square.
5. Put a dot under the circle. Write your name above the rectangle.

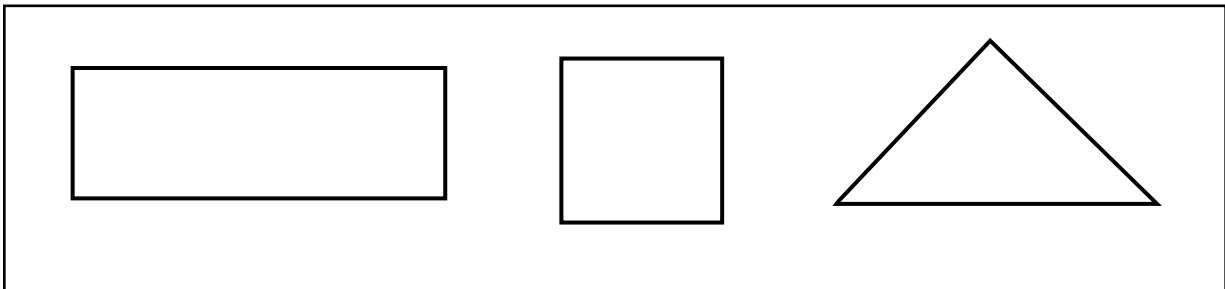
Following Written and Oral Directions

Two-Step – 4 Components

Exercise 2

Read one direction at a time to your client or have him read it. Have him code what he is to do to the items in the box. Encourage your client to make a word or visual picture of what the items will look like after he has followed the directions. Then have him carry out each direction.

Box 1



Box 2



1. Underline the B. Divide the triangle in half.
2. Circle the even number. Draw a box around the A.
3. Shade in the rectangle. Cross out the C.
4. Put a small circle in the square. Underline the 3.
5. Put a line over the 1. Cross out the triangle.

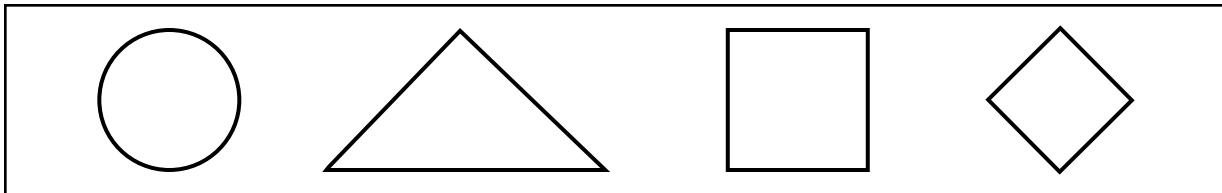
Following Written and Oral Directions

Two-Step – 4 Components

Exercise 3

Read one direction at a time to your client or have him read it. Have him code what he is to do to the items in the box. Encourage your client to make a word or visual picture of what the items will look like after he has followed the directions. Then have him carry out each direction.

Box 1



Box 2



Box 3



1. In Box 2, cross out the letter that comes before D and put a dot in the diamond in Box 1.
2. Circle the item that is clear in Box 3 and shade the square in Box 1.
3. In Box 2, put lines above the two numbers that equal 9 when added together, and in Box 3, put a box around the word that means the same as *fall*.
4. Draw a line to divide the circle in Box 1 in half and underline the vowels in Box 2.
5. Cross out the vehicle in Box 3 and put a star in the triangle in Box 1.

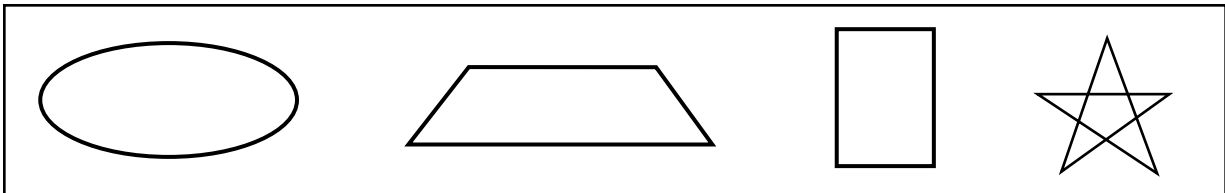
Following Written and Oral Directions

Two-Step – 4 Components

Exercise 4

Read one direction at a time to your client or have him read it. Have him code what he is to do to the items in the box. Encourage your client to make a word or visual picture of what the items will look like after he has followed the directions. Then have him carry out each direction.

Box A



Box B



Box C



1. Put a line through every A in Box C and shade in the four-sided figures in Box A.
2. Draw a line from the third letter to the number that equals $13 - 1$ in Box B and circle the metal in Box C.
3. Underline the even numbers in Box B and put a line over the star in Box A.
4. Put a box around the clothing in Box C and draw a small circle inside the oval in Box A.
5. Put a line over each letter that is in the word *RUST* in Box B, and put a check in front of the 11 in Box B.

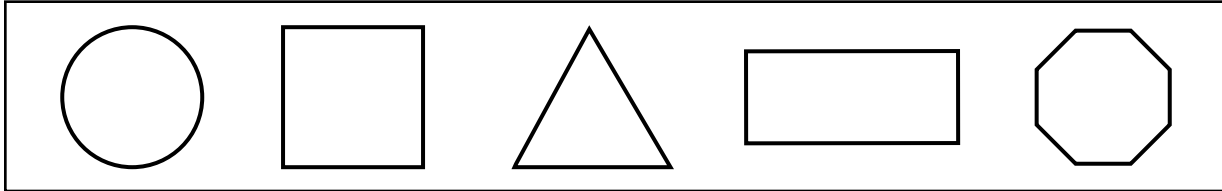
Following Written and Oral Directions

Three-Step – 6 Components

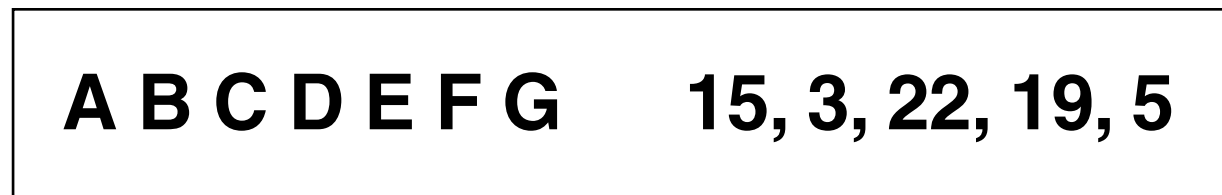
Exercise 5

Read one direction at a time to your client or have him read it. Have him code what he is to do to the items in the box. Encourage your client to make a word or visual picture of what the items will look like after he has followed the directions. Then have him carry out each direction.

Box 1



Box 2



Box 3



1. In Box 3, put a box around each thing with legs. In Box 1, draw a circle in the square. Underline the two numbers in Box 2 that equal 22 when added together.
2. Draw a line from the middle letter to the last letter in Box 2. In Box 3, cross out the thing that opens a lock. Write the word *STOP* in the eight-sided figure in Box 1.
3. In Box 3, put a line through the opposite of *black*. Shade in the triangle in Box 1. Put a line over the first three letters of the alphabet in Box 2.
4. Circle the even number in Box 2. In Box 1, put a dot in the circle. Cross out the numbers containing 5 in Box 2.

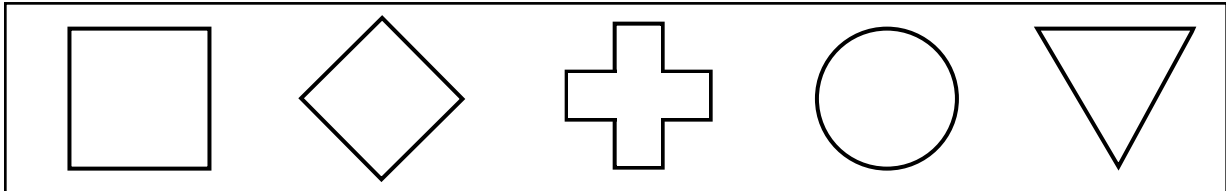
Following Written and Oral Directions

Exercise 6

Three-Step – 6 Components

Read one direction at a time to your client or have him read it. Have him code what he is to do to the items in the box. Encourage your client to make a word or visual picture of what the items will look like after he has followed the directions. Then have him carry out each direction.

Box A



Box B



Box C



1. Put a box around the shortest word in Box C. Draw a line over the two letters following W in Box B. Divide the square into four equal parts in Box A.
2. Put an X inside the twelve-sided figure in Box A. In Box B, cross out the largest number. Circle the word that means the opposite of *over* in Box C.
3. In Box B, underline the last two letters of the alphabet. Draw a line from the triangle to the diamond in Box A. In Box C, cross out every E in the word *CEREAL*.
4. Put a check mark after the place of business in Box C. In Box B, circle the letter after X. Shade in the three-sided figure in Box A.

Following Written and Oral Directions

Exercise 7

Drawing Shapes

Read one direction at a time to your client or have him read it. Have him make a visual or word picture in his mind of what the directions are telling him to draw. When your client has coded the directions, go to the next page and have him draw in the space provided.

1. Draw a circle and a square.

The circle should be on the right side of the square.

The square is about twice the size of the circle.

Shade in the circle.

(When you're ready, go to the next page and draw the figures.)

2. Draw a rectangle that is about four inches long and two inches high.

Divide the rectangle in half using a horizontal line.

Draw a triangle in the top half of the rectangle.

In the bottom half of the rectangle, draw three small squares.

(When you're ready, go to the next page and draw the figures.)

Following Written and Oral Directions Exercise 7, *continued*

Drawing Shapes

Have your client use the spaces below to draw the shapes described on page 46.

1.



2.



Following Written and Oral Directions

Drawing Shapes

Exercise 8

Read the directions to your client or have him read them. Have him make a visual or word picture in his mind of what the directions are telling him to draw. When your client has coded the directions, go to the next page and have him draw in the space provided.

1. Draw a large equilateral triangle with the point pointing down.

To the left of the triangle, draw a star.

Under the triangle, draw a three-inch curvy line.

Write today's date somewhere inside the triangle.

(When you're ready, go to the next page and draw the figures.)

2. Use a horizontal and a vertical line to divide the space into four equal sections.

Put three small circles in the bottom right section and draw a triangle in the top left section.

Draw two squares, one inside the other, in the bottom left section.

Don't draw anything in the top right section.

(When you're ready, go to the next page and draw the figures.)

Following Written and Oral Directions Exercise 8, *continued*
Drawing Shapes

Have your client use the spaces below to draw the shapes described on page 48.

1.



2.



Recalling Boxed Information

Introduction

The exercises in this section are designed to improve coding of visual content coupled with placement. Throughout the day we automatically use this skill for daily functioning (e.g., when placing things in the refrigerator, when putting keys on a table next to a purse, when filling out a Daytimer, when reading a prescription) but the skill is frequently impaired in someone with a memory impairment. The tasks begin with shapes and progress to coding entire designs, numbers, and words.

Process

For these exercises, have your client study the shapes, figures, numbers, and words and devise a strategy to code them and their placement within the boxes or on the page. Then have your client cover the shape(s) and draw them in the provided boxes or in the space provided.

Initially, do not assist your client. Only aid her if she is having difficulty devising an effective strategy. Encourage the client who uses a visual system to create mental pictures and the client who uses an auditory system to use her word strategies.

Performance can be negatively affected by visual perception difficulties (e.g., visual field neglect or cut). Be prepared to help her compensate (e.g., verbally direct the client to look at the left [or right]). If she is impulsive, insure she takes enough time to code the content.

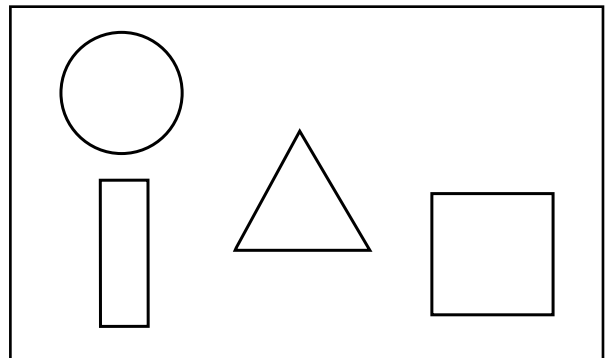
Example

For the client who uses a predominant visual system:

The two shapes on the left could be seen as a tree. A triangular-shaped apple fell off the tree and turned into a square-shaped apple when it hit the ground in the lower right-hand corner.

For the client who uses a predominant auditory system:

Going diagonally from upper left to lower right is a no-sided shape (circle), then a three-sided shape, and a four-sided shape. In the lower left is a tall rectangle.

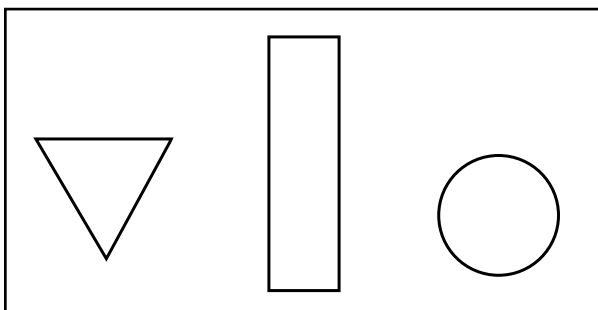
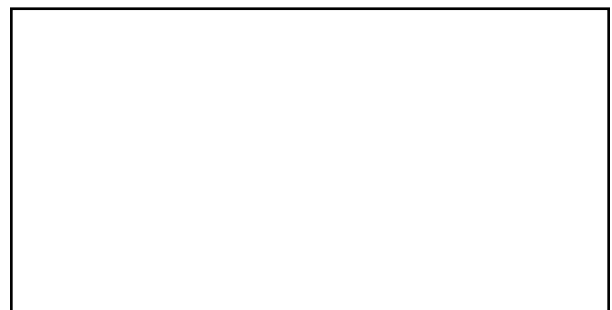
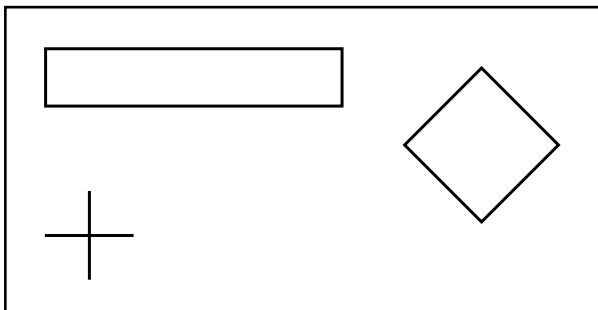
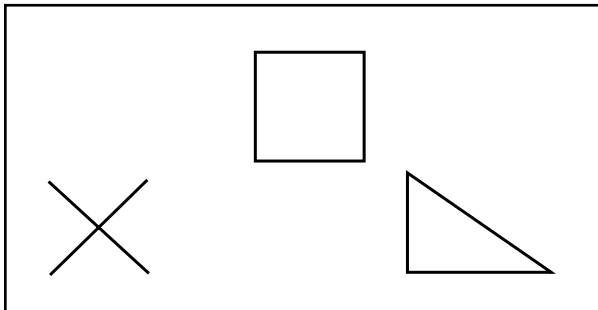
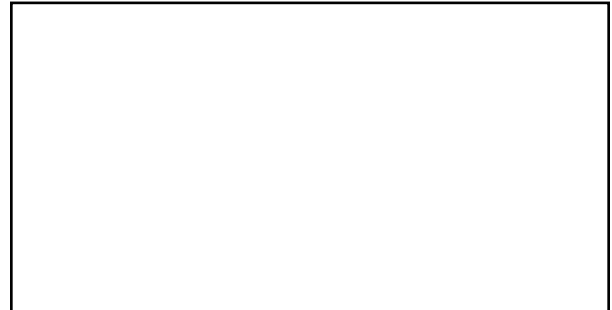
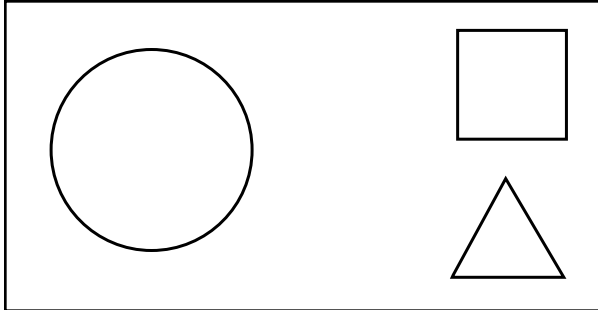


Recalling Boxed Information

Exercise 1

3 Shapes

Have your client study the shapes in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the shapes and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and draw the shapes in their correct positions in the box on the right.

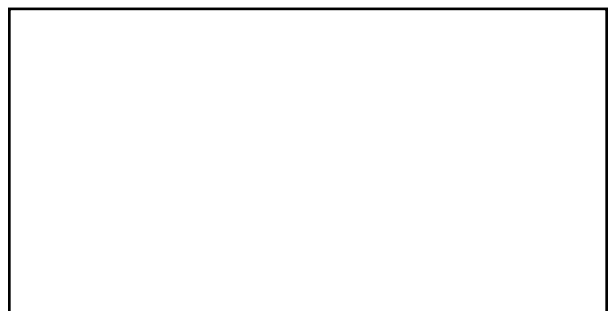
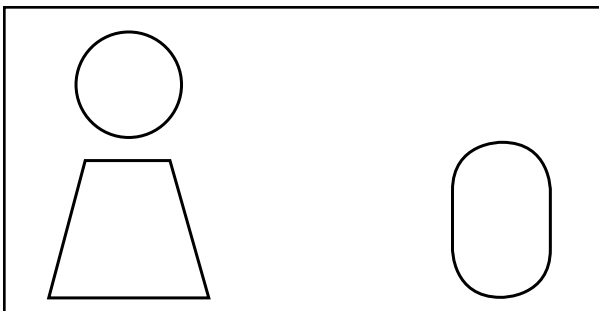
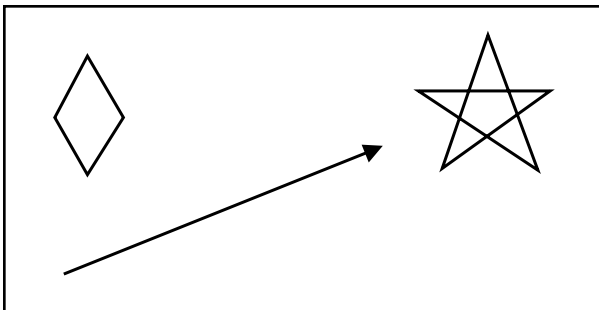
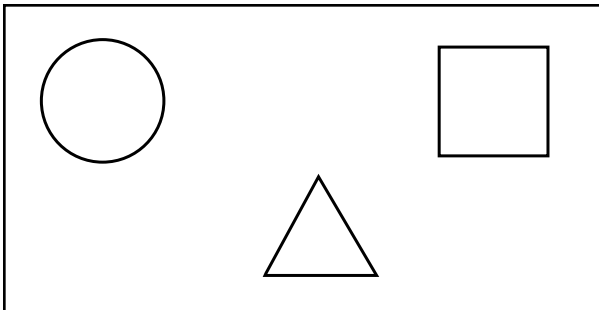
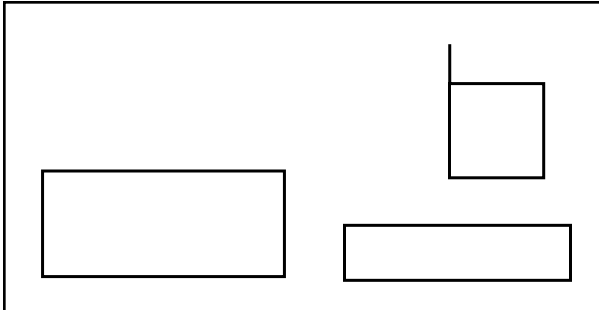


Recalling Boxed Information

Exercise 2

3 Shapes

Have your client study the shapes in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the shapes and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and draw the shapes in their correct positions in the box on the right.

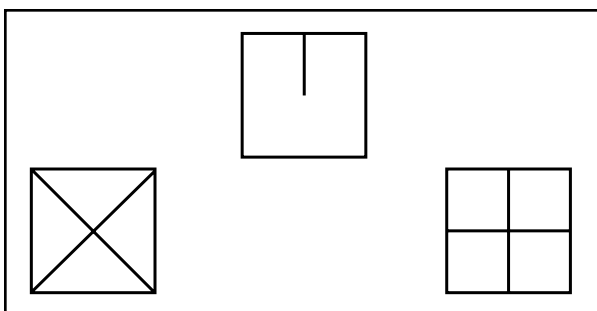
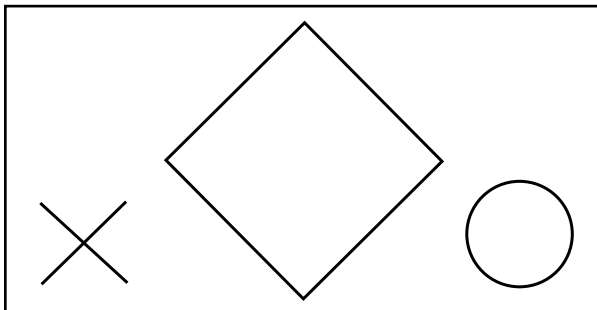
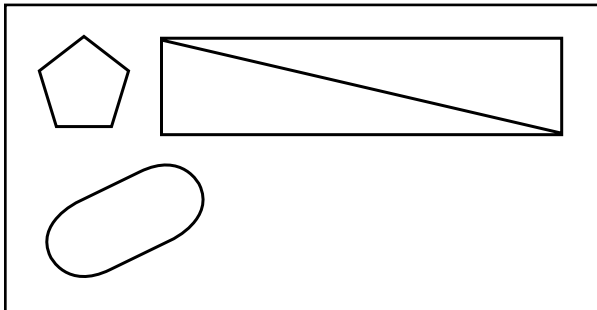
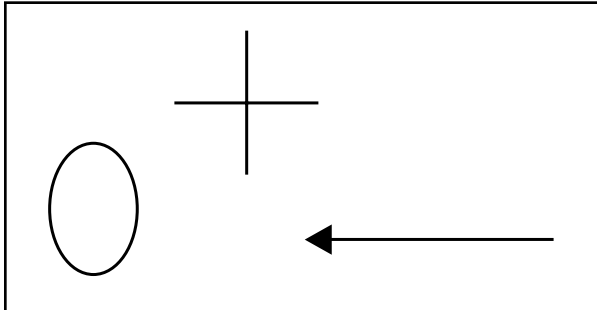


Recalling Boxed Information

3 Shapes

Exercise 3

Have your client study the shapes in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the shapes and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and draw the shapes in their correct positions in the box on the right.

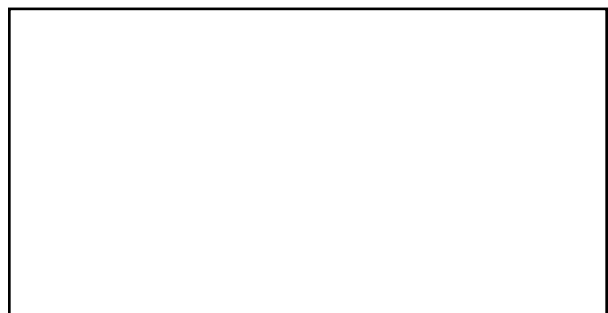
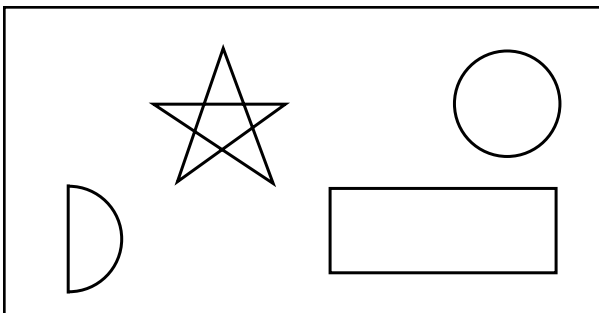
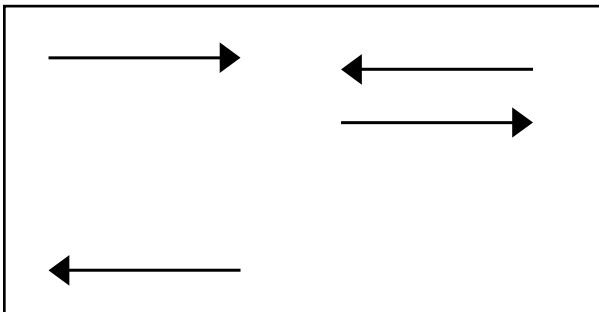
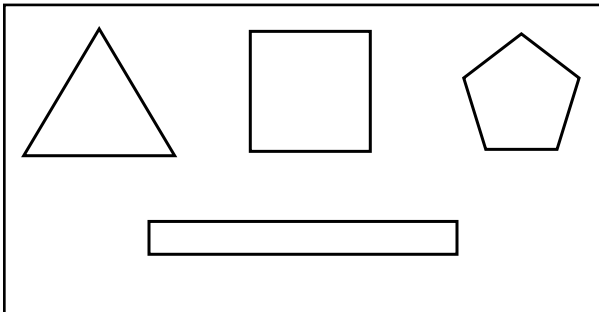
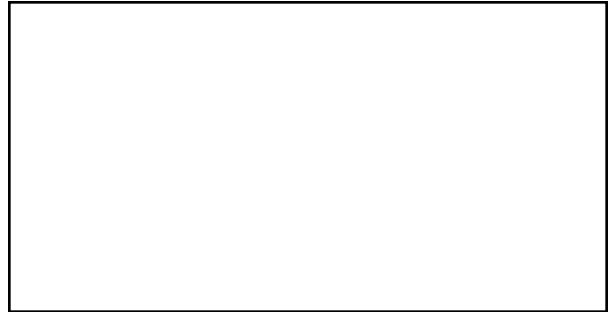
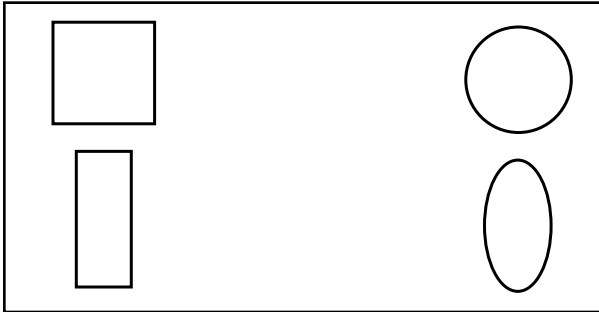


Recalling Boxed Information

4 Shapes

Exercise 4

Have your client study the shapes in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the shapes and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and draw the shapes in their correct positions in the box on the right.

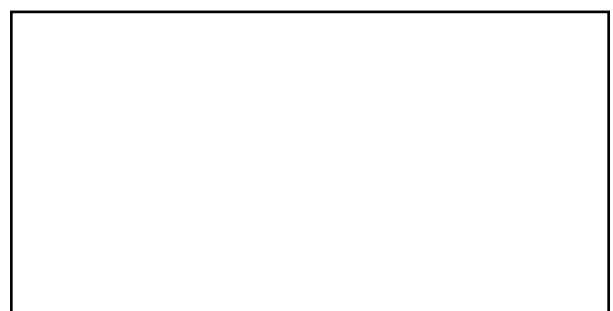
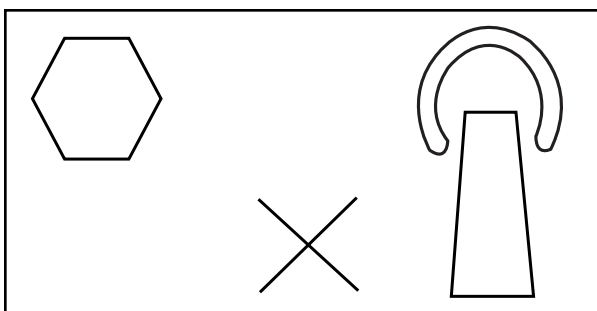
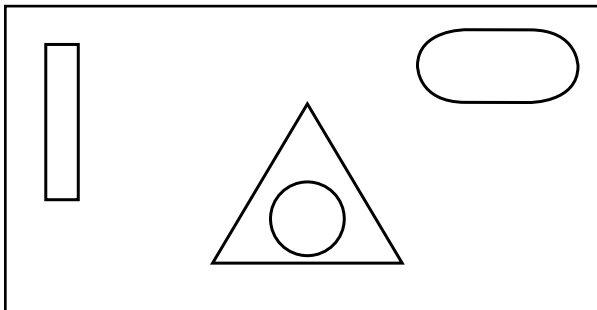
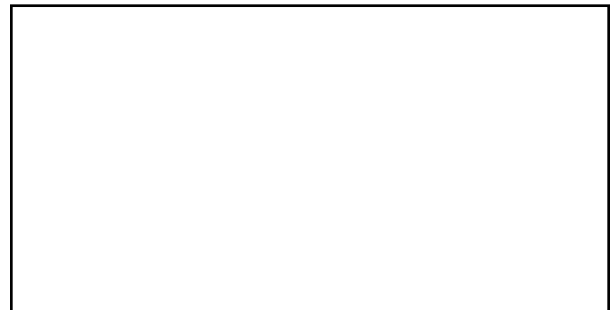
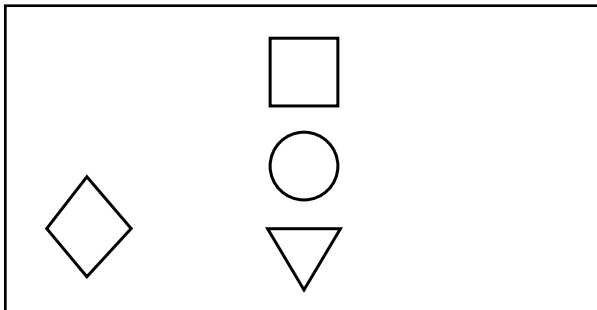
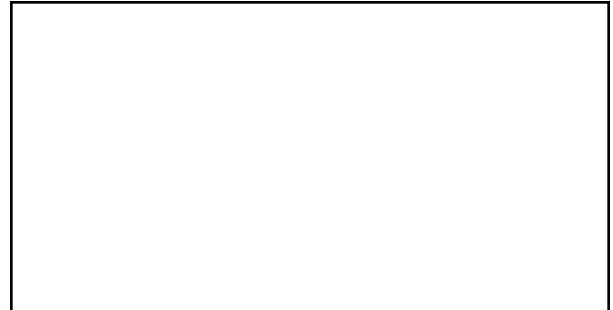
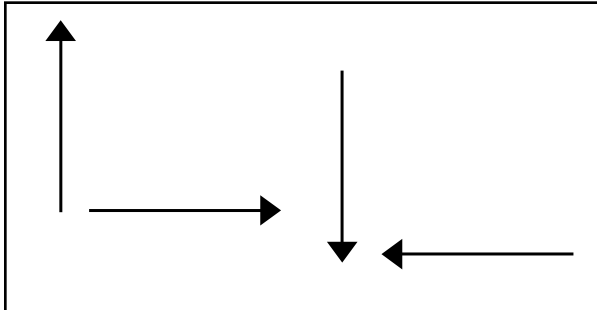


Recalling Boxed Information

Exercise 5

4 Shapes

Have your client study the shapes in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the shapes and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and draw the shapes in their correct positions in the box on the right.

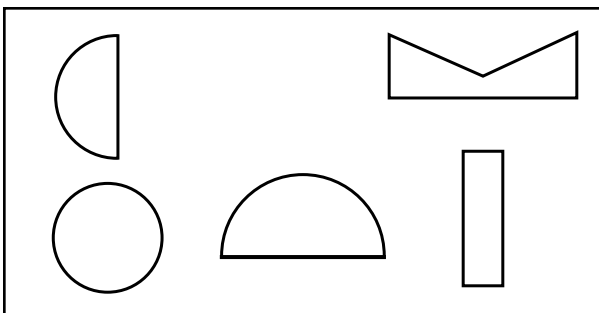
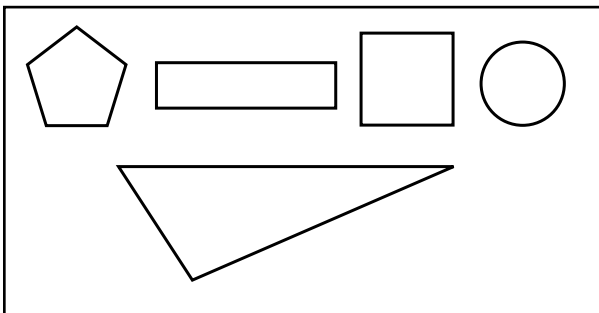
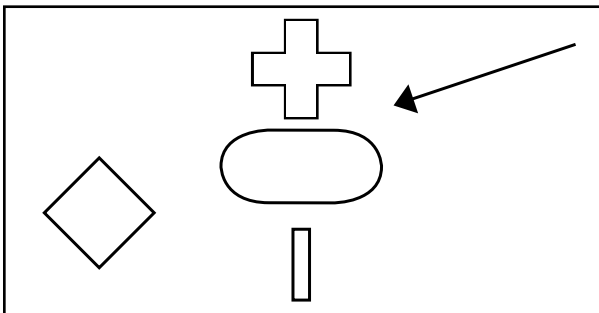
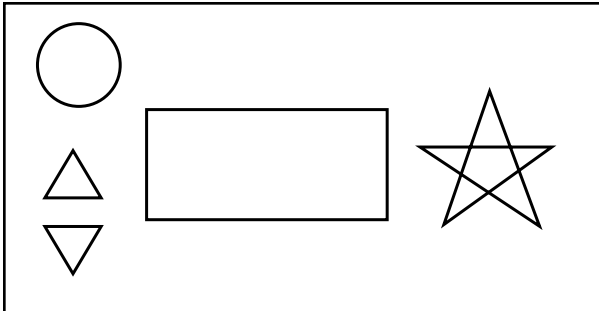


Recalling Boxed Information

Exercise 6

5 Shapes

Have your client study the shapes in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the shapes and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and draw the shapes in their correct positions in the box on the right.

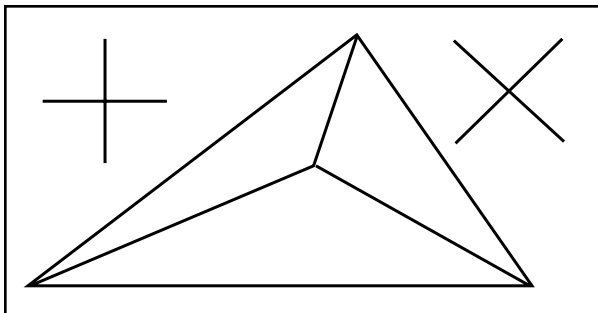
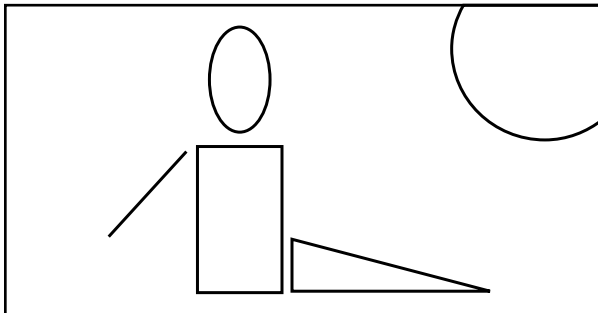
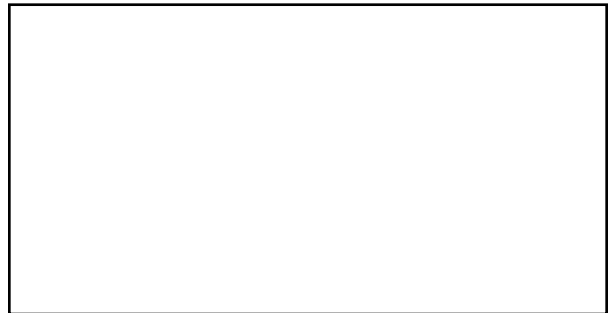
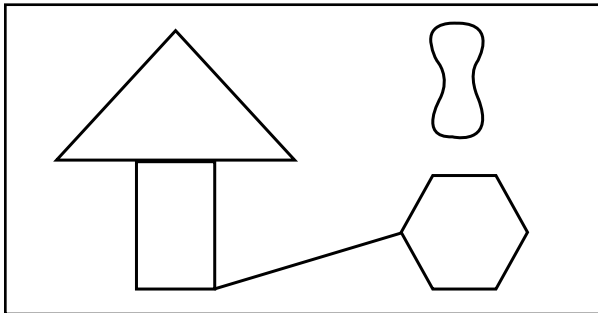
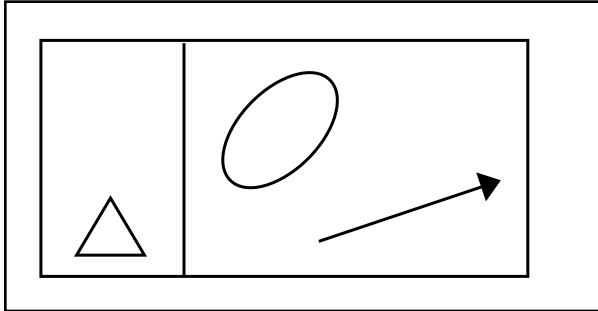


Recalling Boxed Information

Complex Shapes

Exercise 7

Have your client study the shapes in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the shapes and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and draw the shapes in their correct positions in the box on the right.

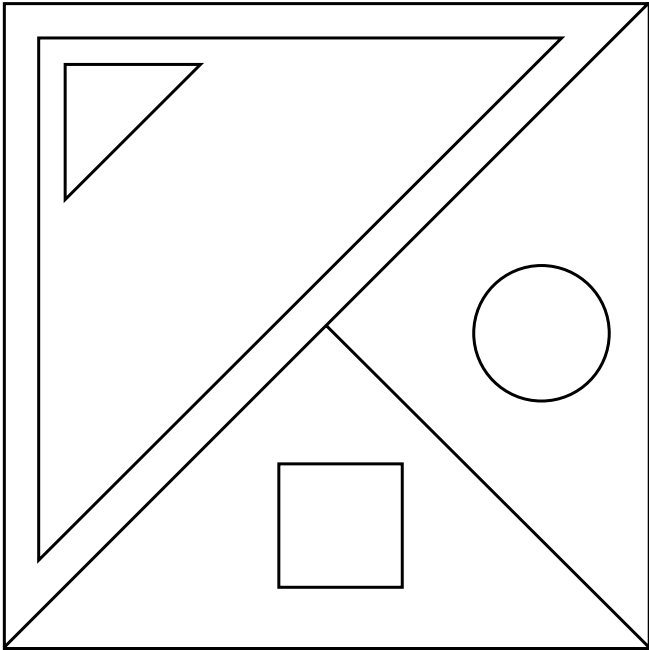


Recalling Boxed Information

Figural Designs

Exercise 8

Have your client study the figure. When she has it memorized, have her cover it and draw it in the space below.

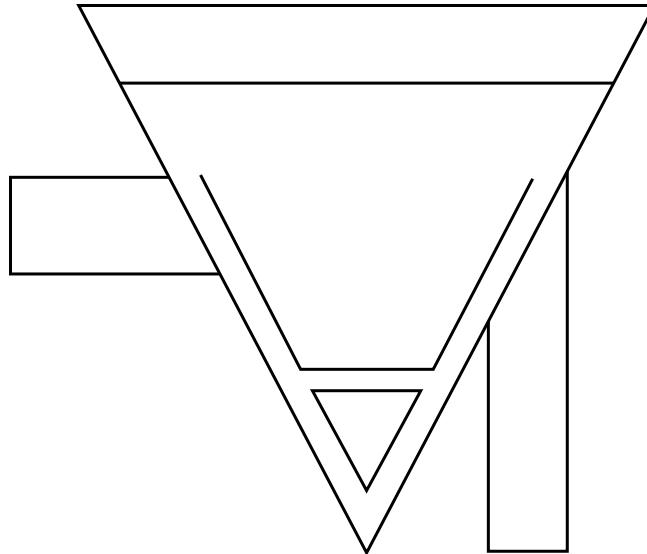


Recalling Boxed Information

Figural Designs

Exercise 9

Have your client study the figure. When she has it memorized, have her cover it and draw it in the space below.

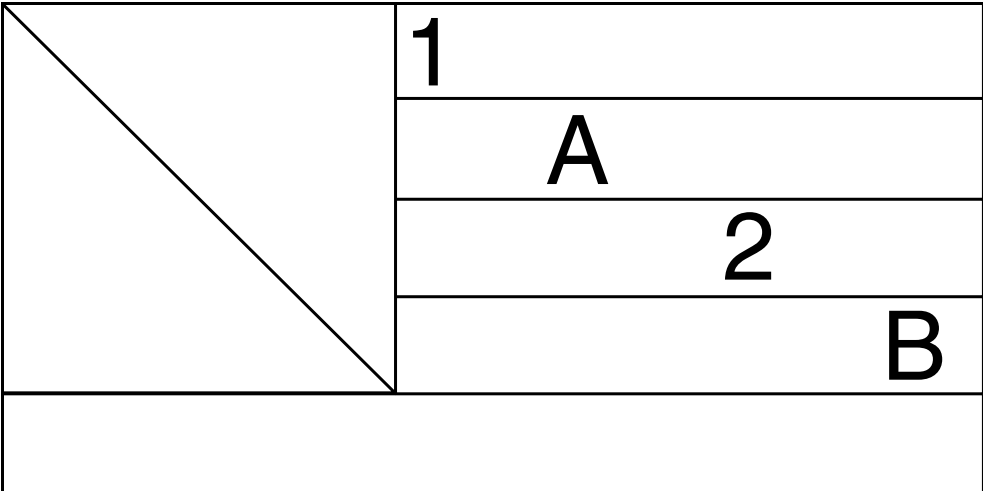


Recalling Boxed Information

Figural Designs

Exercise 10

Have your client study the figure. When she has it memorized, have her cover it and draw it in the space below.

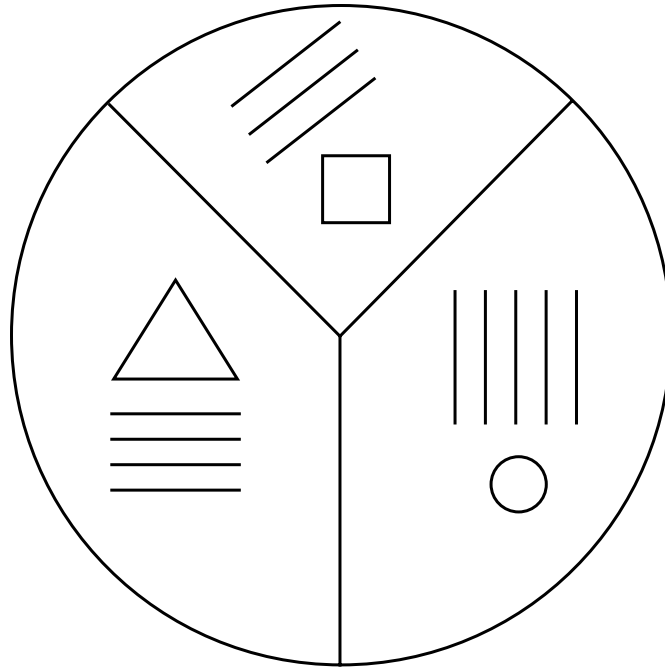


Recalling Boxed Information

Figural Designs

Exercise 11

Have your client study the figure. When she has it memorized, have her cover it and draw it in the space below.



Recalling Boxed Information

Numbers

Exercise 12

Have your client study the numbers in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the numbers and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and write the numbers in their correct positions in the box on the right.

1	8	0	5
	3		

	7	2
4		
	3	8

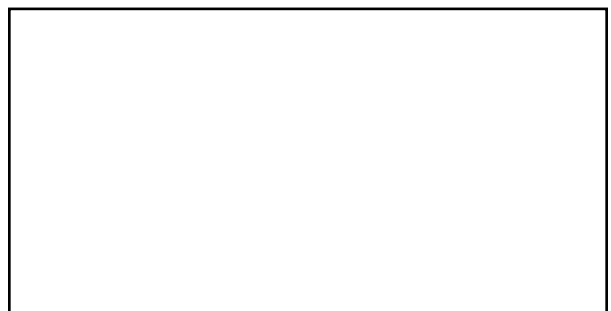
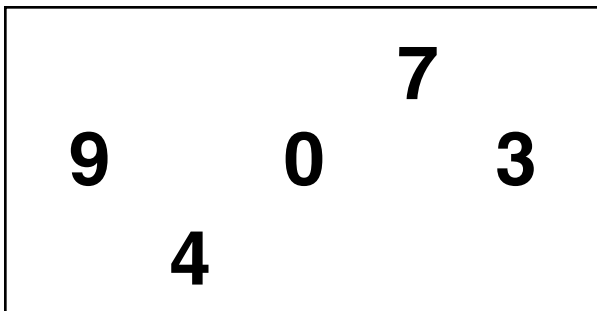
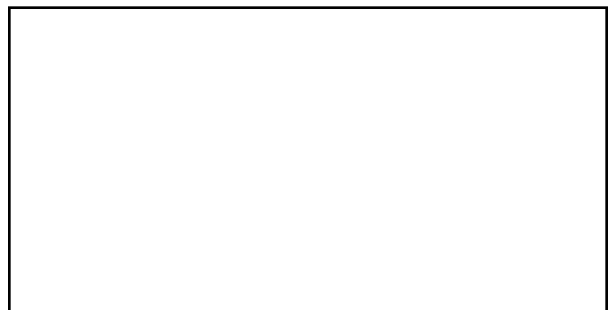
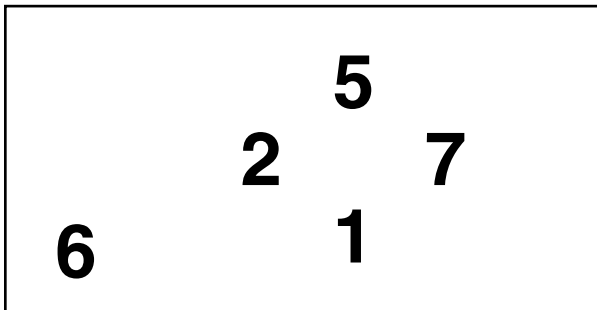
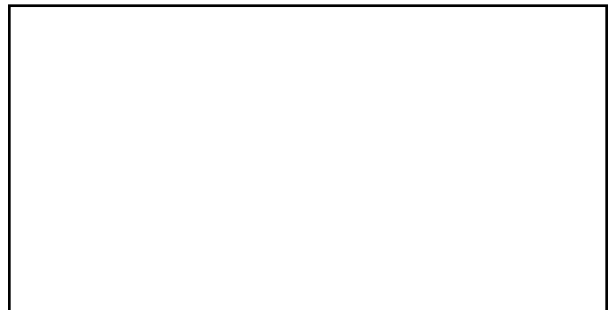
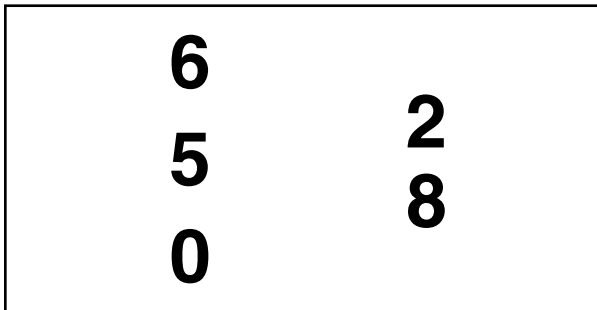
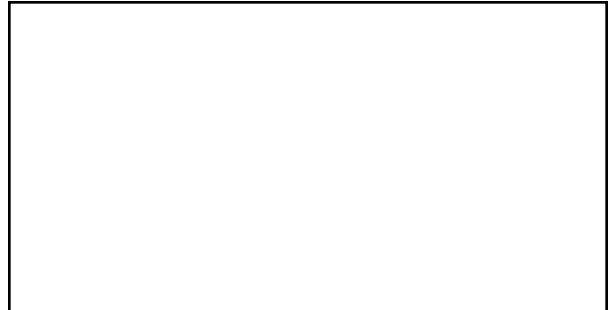
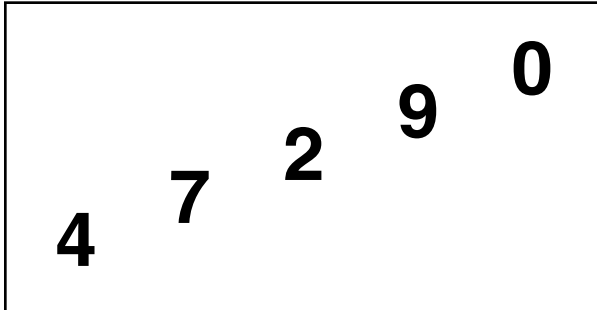
9		1
	3	
6		0

	8	0
5		
	4	9

Recalling Boxed Information Numbers

Exercise 13

Have your client study the numbers in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the numbers and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and write the numbers in their correct positions in the box on the right.



Recalling Boxed Information

Exercise 14

Words

Have your client study the words in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the words and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and write the words in their correct positions in the box on the right.

PAID
OVER **LIVE**
HAIR

FREE
WOOL **STOP**
 WHAT

FIRE **CHIN**
WANT **LAST**

TALL **DOES**
TURN
 HILL


Recalling Boxed Information

Exercise 15

Words

Have your client study the words in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the words and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and write the words in their correct positions in the box on the right.

WALK
CALM
NEAR
SHORE



DUST
BACK
COOL
HOME



TREE
BACK
JOKE
SALT
FOOT



HERE
MAIL
FIVE
MOST



Recalling Boxed Information

Exercise 16

Words

Have your client study the words in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the words and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and write the words in their correct positions in the box on the right.

LEG
COLOR SNOW
PAPER ON

NIGHT TEAM
TWO
MAY HERE

THERE
WATER
LOVE ANT TO

LESS
THE RED SOUND
FORM

Recalling Boxed Information

Exercise 17

Create Your Own

Use this page and the sample directions to create your own practice items.

Have your client study the _____ in the box on the left. Do only one box at a time. Ask your client to take her time and create a strategy to remember the _____ and where they are located in the box. When your client feels she has accurately coded the information, have her cover the box and reproduce the _____ in their correct positions in the box on the right.

First Letter Mnemonics

Introduction

In this section, your client will create a mnemonic using the first letters of words in a word list. This is another method for assisting the brain in reestablishing the use of strategies for associating words and information in a manner that can be linked to pre-existing concepts and content. This will provide your client with another method to use for coding and recalling information. Using mnemonics can help you remember items in grocery lists, To-Do lists, and other lists of multiple items.

Process

Instruct your client to take the first letter of each word in a list of words that need to be memorized and create a new word from those letters. For example, your client may need to memorize grocery items: eggs, milk, tortillas, and sausage. Using the first letters of the items (E, M, T, and S), have your client make the word *stem* to help him remember the items. Then your client can create a new sentence using words that begin with the first letters of the items in the list. For example, using the letters from the grocery list above (E, M, T, and S), your client might create this sentence as a mnemonic: ***Every Morning Tigers Sleep.***

Example

“You want to memorize these towns:

York
Limerick
Flourtown

From their first letters (YLF), you can make the word *fly*. Now make sure you coded the town name to each letter. Cover the town names and see if you can say them aloud.”

First Letter Mnemonics

Exercise 1

Words

To prepare for the exercise on the next page using first letter mnemonics, have your client practice making words using the first letters of the words in each of these groups. Your client may want to underline the first letter of each word.

Example

Yellow

Table = the letters Y T A S = the word *stay*

Arm

Sugar

Group 1

Turnips

Apples = the letters _____ = the word _____

Carrots

Group 2

March

February = the letters _____ = the word _____

October

August

Group 3

Eagle

Robin = the letters _____ = the word _____

Sparrow

Ostrich

First Letter Mnemonics

Exercise 2

Words

Have your client use the first letters of the items in each list to make a word. Then have your client recall the items in the list using the word he made as a reminder.

List 1

eggs
ketchup
coffee
asparagus

Word:

List 3

key chain
aspirin
cards
pencils

Word:

List 5

Hungary
India
Portugal
Scotland
Spain

Word:

List 2

O-rings
paint
pliers
sandpaper

Word:

List 4

tomatoes
squash
onions
rhubarb
eggplant

Word:

List 6

housekeeper
chef
teacher
actor
writer

Word:

First Letter Mnemonics

Sentences

Exercise 3

Instruct your client to find the first letter of the words in each list and write them on the blanks. Then have him create a sentence that uses the letters as the first letter of each word in the sentence. When your client is finished, have him cover the list and recall the words using the sentence as a reminder.

	List	First Letter	Sentence
Example:	<u>D</u> og	D	Doug
	<u>C</u> at	C	caught
	<u>T</u> urtle	T	two
	<u>R</u> abbit	R	robbers.

List 1 Letter Sentence

dog food _____
 water _____
 bones _____

List 4 Letter Sentence

English _____
 math _____
 study hall _____
 gym _____

List 2

lease _____
 deposit _____
 rent _____

List 5

tickets _____
 hotel _____
 pack _____
 fly _____

List 3

floor _____
 carpet _____
 vacuum _____
 linoleum _____

List 6

supermarket _____
 pharmacy _____
 shoe store _____
 gas station _____

First Letter Mnemonics

Sentences

Exercise 4

Instruct your client to find the first letter of the words in each list and write them on the blanks. Then have him create a sentence that uses the letters as the first letter of each word in the sentence. When your client is finished, have him cover the list and recall the words using the sentence as a reminder.

	List	First Letter	Sentence
Example:	<u>D</u> og	D	Doug
	<u>C</u> at	C	caught
	<u>T</u> urtle	T	two
	<u>R</u> abbit	R	robbers
	<u>L</u> ion	L	last
	<u>W</u> alrus	W	week.

List 1 Letter Sentence

milk _____

donuts _____

eggs _____

cake _____

coffee _____

List 3 Letter Sentence

English _____

Spanish _____

math _____

lunch _____

history _____

gym _____

computers _____

List 2 Letter Sentence

pants _____

shirt _____

tie _____

coat _____

shoes _____

belt _____

Create Your Own List

Word List Retention

Introduction

At this point, many different strategies have been practiced that require coding and retrieving information. The focus has been on intentional use of the strategies with very little flexibility in how the information was coded and retrieved. The tasks in this section will continue to use those previously learned strategies but will also include a mental manipulation factor involving inclusion and exclusion. This will give practice utilizing the strategies and becoming more flexible with their usage. Memory skills like this are needed for planning daily and weekly schedules, determining what to cook for dinner based on family members' likes and dislikes, and for any activity requiring the comparison of information.

Process

Read the words in each list to your client and pause while she rehearses them. If you observe that your client is having trouble recalling all the words, ask her if she'd like to have the list repeated. When your client has successfully coded all the words, ask the question. If she is still unsuccessful, repeat the stimulus items for her to reattempt coding. Do not ask her to repeat the stimulus items as she codes them because that encourages rehearsal and coding of incorrect information. If presenting the words auditorily isn't successful, switch to a visual mode and have your client read the items. Keep the stimulus question covered as your client codes the words. After she feels the words are coded, cover them and have her read and answer the question.

Word List Retention

Exercise 1

Category Inclusion

Read the four words in each list to your client or have her read them. Then pause while your client rehearses the words. If she can't recall all the words, say them again or have her read them. Then have your client cover the words and answer the question.

1. dog plant turtle carpet
Which ones are animals?

2. paper pencil table knife
Which ones have a point?

3. kitten cotton cup wall
Which ones are soft?

4. snow peacock rainbow storm cloud
Which ones are colorful?

5. cake dill pickle ice cube candy
Which ones are sweet?

6. cardinal ant airplane cloud
Which ones have wings?

7. dresser bed napkin bench
Which ones are furniture?

8. blinds classes curtains carpet
Which ones cover windows?

9. Europe Montana New York Peru
Which ones are states?

10. radio newspaper book magazine
Which ones are read?

Word List Retention

Category Exclusion

Exercise 2

Read the five words in each list to your client or have her read them. Then pause while your client rehearses the words. If she can't recall all the words, say them again or have her read them. Then have your client cover the words and answer the question.

1. Monday New Year's Day Thanksgiving today June
Which ones are not holidays?

2. feather truck boulder hair leaf
Which ones are not lightweight?

3. dinosaur opossum pony canary dog
Which ones are not usually kept as pets?

4. spoon knife wool scissors box
Which ones are not sharp?

5. dish hamburger star pillow popcorn
Which ones are not food?

6. rock puppy book linoleum cotton ball
Which ones are not soft?

7. track baseball sock hockey glass
Which ones are not sports?

8. sun ice sherbet oven desert
Which ones are not hot?

9. coal snow teeth dollar blood
Which ones are not white?

10. pencil green tie blue onion
Which ones are not colors?

Word List Retention

Exercise 3

Word Placement

Have your client code the words in each list as you read them aloud. Pause to allow your client to rehearse the words. If your client can't recall the words, repeat them. Then ask the question.

1. screwdriver hammer chisel hacksaw
What was the third word?

2. talk speak chatter converse
What was the word before converse?

3. east south north west
What was the second to last word?

4. under over beside next
What was the second word?

5. weekend holiday vacation trip
What was the last word?

6. water waiter walrus writer
What was the first word?

7. strife battle conflict skirmish
What was the third to last word?

8. cardinal ostrich owl hawk
Which words were first and last?

9. rock classical jazz opera
What was the third word?

10. year century eon decade
What was the word before eon?

Word List Retention

Exercise 4

Word Placement

Have your client code the words in each list as you read them aloud. Pause to allow your client to rehearse the words. If your client can't recall the words, repeat them. Then ask the question.

1. purple orange yellow brown green
What was the fourth word?

2. trousers jacket vest sweater shoes
What was the word after vest?

3. defendant judge lawyer jury witness
What was the second to last word?

4. watch necklace bracelet earring brooch
What was the middle word?

5. ball truck balloons doll blocks
What was the third word?

6. pizza spaghetti ravioli lasagna pasta
What was the word after ravioli?

7. cantaloupe lemon plum pear peaches
Which words were first and last?

8. baseball racquetball tennis swimming lacrosse
What was the second word?

9. pretty handsome attractive cute good-looking
What were the first and third words?

10. sheet blanket bedspread quilt comforter
What were the second and fourth words?

Word List Retention

Exercise 5

Recall by Attribute Inclusion

Read the four words in each list aloud. Then pause while your client rehearses the words. If your client can't recall all the words, say them again. Then ask the question.

1. aluminum foil sneakers blanket box
Which is the softest?
2. tree flower bush weeds
Which is the tallest?
3. snow dirt coal ice
Which is the darkest?
4. infant teenager adult adolescent
Which is the oldest?
5. hair knee arm leg
Which is the longest?
6. car bicycle rowboat canoe
Which is the fastest?
7. cake brownie ice cream pudding
Which is the coldest?
8. brass copper glass bronze
Which is the weakest?
9. flute whistle horn siren
Which is the loudest?
10. bracelet ring watch necklace
Which is the smallest?
11. yardstick scissors safety pin button
Which is the straightest?
12. wrench hammer saw screwdriver
Which is the sharpest?

Word List Retention

Exercise 6

Recall by Attribute Inclusion

Read the five words in each list aloud. Then pause while your client rehearses the words. If your client can't recall all the words, say them again. Then ask the question.

1. colt puppy kitten lamb chick
Which one is the largest?
2. car truck bus airplane van
Which one is the heaviest?
3. year century week month decade
Which one is the shortest amount of time?
4. penlight floodlight lamp match flashlight
Which one is the brightest?
5. grapes yogurt bread cheese crackers
Which one is the crispiest?
6. fire water hamburger pudding eggs
Which one is the hottest?
7. plants rocks leaves dirt flowers
Which one is the hardest?
8. corduroy sandpaper road glass gravel
Which one is the smoothest?
9. steel glass aluminum wood cloth
Which one is the strongest?
10. hat car house clothes chair
Which one is the most expensive?
11. door hallway bathroom closet family room
Which one is the widest?
12. fish dog turtle worm snake
Which one is the noisiest?

Associated Visual Pairs

Introduction

These tasks have your client associate two visual items and then recall one of the items by using her coding strategies. This skill aids in coding people's names to their faces, recalling information provided by someone, or when reading and recalling information (e.g., where you park your car).

Process

Instruct your client to study each pair of figures and to devise a strategy to associate the items together. Explain to your client that he will be required to recall the geometric shape on the left when shown the line drawing. Once he has coded one pair, have him move to the next one until all five pairs have been coded. When your client is finished, have him review all five pairs before going to the next page and drawing (or stating the name of) each shape.

The order of recall of the paired shapes will change on the response page. This is done to prevent fixation and to stimulate flexible mental manipulation skills. If a client has been successful with devising effective strategies, the order change will have little effect on recall. It will also help to encourage a client as he will feel a greater sense of success.

Aid your client in creating his own strategies only when necessary. Once he has completed the response page, it will be beneficial for him to verbalize the strategies he used for each pair. This will make him more consciously aware of the strategies he is using. It will also help you understand how your client develops the strategies and will add to your list of possible strategies to provide for other clients when they need assistance.

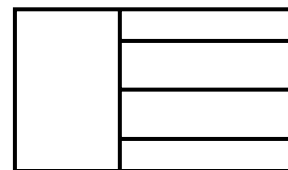
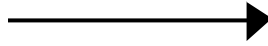
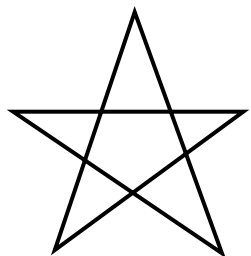
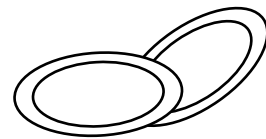
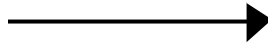
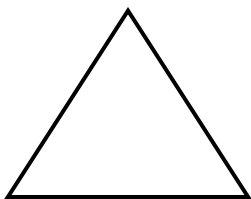
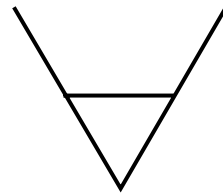
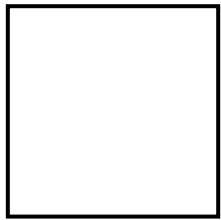
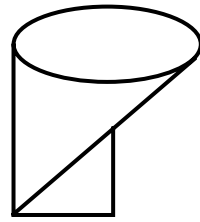
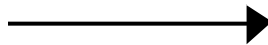
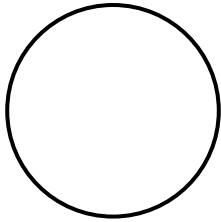
As with all tasks in this book, the level of difficulty can be increased by including a delay or distractor between the coding and retrieval of the information. Distractors could include conversation, another task (not a memory task), or simply a delay.

Associated Visual Pairs

Exercise 1

Have your client study each pair of figures. Encourage him to create a strategy for associating each pair. Then have him go to the next page and draw the geometric figure that is associated with each line drawing. Instruct your client that the order will be changed.

Geometric Figure



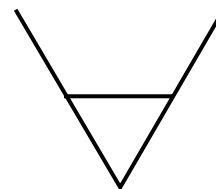
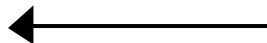
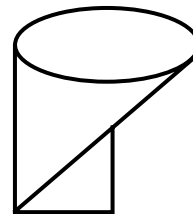
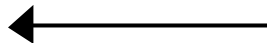
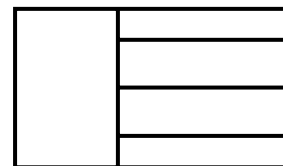
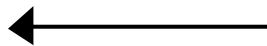
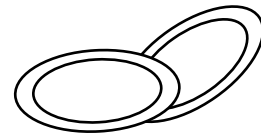
Associated Visual Pairs

Exercise 1, *continued*

Have your client draw the geometric figure from the previous page that goes with each line drawing.

Geometric Figure

Line Drawing



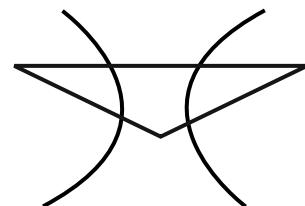
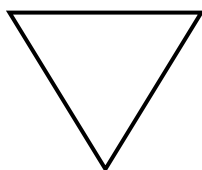
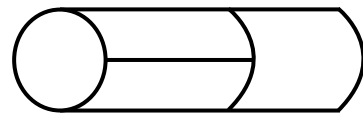
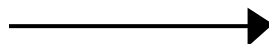
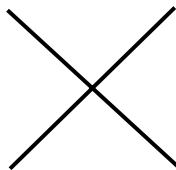
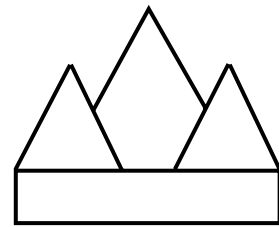
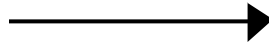
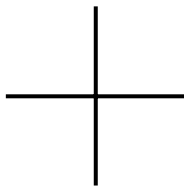
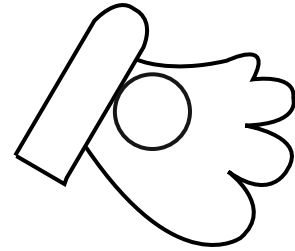
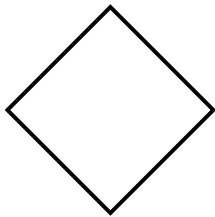
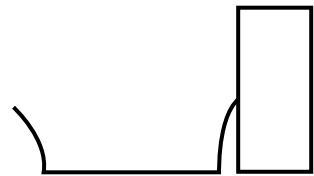
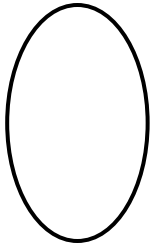
Associated Visual Pairs

Exercise 2

Have your client study each pair of figures. Encourage him to create a strategy for associating each pair. Then have him go to the next page and draw the geometric figure that is associated with each line drawing. Instruct your client that the order will be changed.

Geometric Figure

Line Drawing



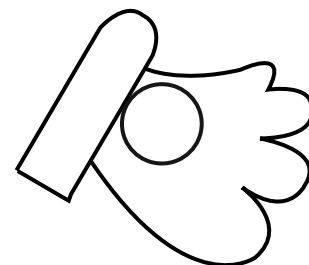
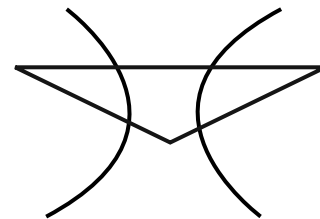
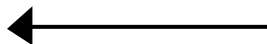
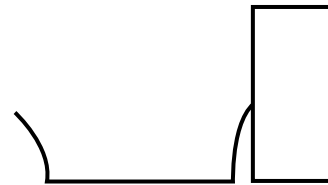
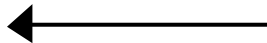
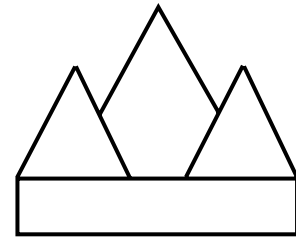
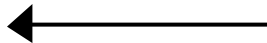
Associated Visual Pairs

Exercise 2, *continued*

Have your client draw the geometric figure from the previous page that goes with each line drawing.

Geometric Figure

Line Drawing



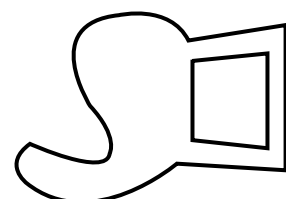
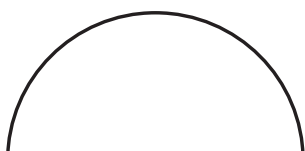
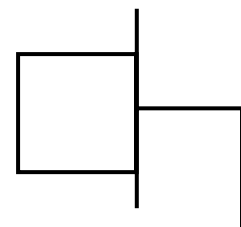
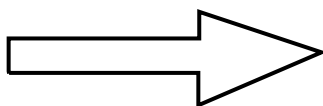
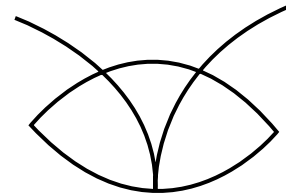
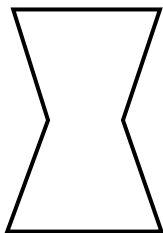
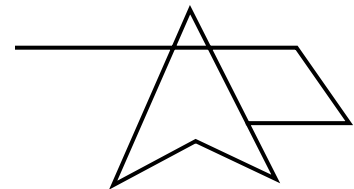
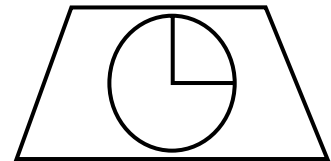
Associated Visual Pairs

Exercise 3

Have your client study each pair of figures. Encourage him to create a strategy for associating each pair. Then have him go to the next page and draw the geometric figure that is associated with each line drawing. Instruct your client that the order will be changed.

Geometric Figure

Line Drawing



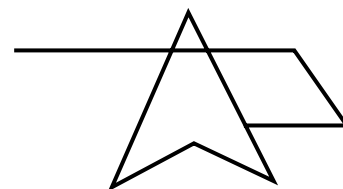
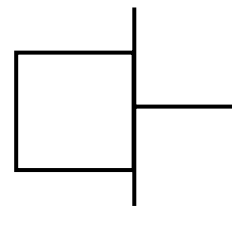
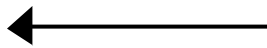
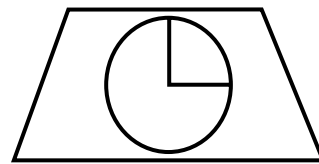
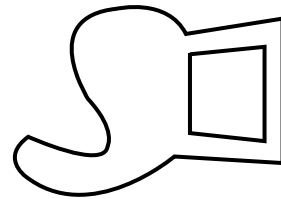
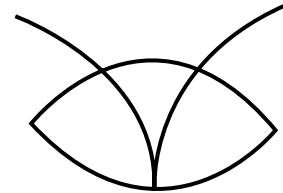
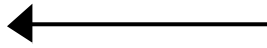
Associated Visual Pairs

Exercise 3, *continued*

Have your client draw the geometric figure from the previous page that goes with each line drawing.

Geometric Figure

Line Drawing



Name-Picture Association

Introduction

In this section, your client will practice coding people's names to their faces. This is obviously a skill your client can use immediately as she meets new people and recalls the names of people she sees on a daily basis.

Process

Have your client code each person's name to his or her face. When your client thinks she has accurately coded all five people's names and faces, have her go to the next page and write each person's name in the appropriate place. The pictures on the second page will be arranged differently than the first page.

Encourage your client to use not only facial features to code the names but also other factors, including clothing, body position, occupation (where applicable), or age. If your client is having trouble accurately coding, aid her with devising a strategy to help her remember. For example, she might make up a short story that links the person's name and appearance, such as "Carl is very proud that he graduated today" for a picture of a man named Carl in a graduation cap and gown.

Name-Picture Association

Exercise 1

Have your client code these people's names to their faces. When your client thinks she has them memorized, have her go to the next page and write their names under their faces. Tell your client the pictures will be arranged differently than they are on this page.



Earl



Jack



Calvin



Pete



Carl

Name-Picture Association

Exercise 1, *continued*

Have your client write the correct name from the previous page under each picture.











Name-Picture Association

Exercise 2

Have your client code these people's names to their faces. When your client thinks she has them memorized, have her go to the next page and write their names under their faces. Tell your client the pictures will be arranged differently than they are on this page.



Tam



Randy



Marcus



Matt



Greg

Name-Picture Association

Exercise 2, *continued*

Have your client write the correct name from the previous page under each picture.



Name-Picture Association

Exercise 3

Have your client code these people's names to their faces. When your client thinks she has them memorized, have her go to the next page and write their names under their faces. Tell your client the pictures will be arranged differently than they are on this page.



Simon



Alex



William



Chuck



Doug

Name-Picture Association

Exercise 3, *continued*

Have your client write the correct name from the previous page under each picture.



Name-Picture Association

Exercise 4

Have your client code these people's names to their faces. When your client thinks she has them memorized, have her go to the next page and write their names under their faces. Tell your client the pictures will be arranged differently than they are on this page.



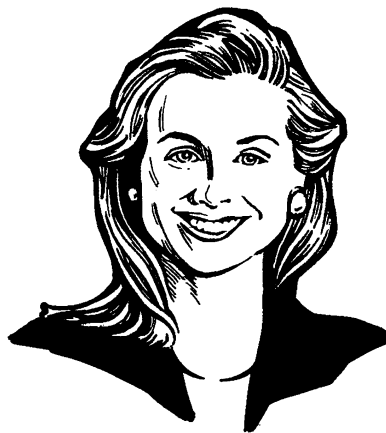
Sherrie



Ellen



Ruth



Marla

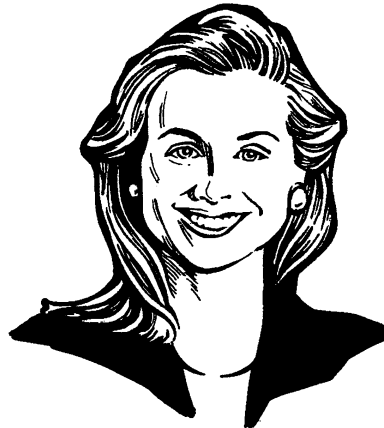


Gina

Name-Picture Association

Exercise 4, *continued*

Have your client write the correct name from the previous page under each picture.



Name-Picture Association

Exercise 5

Have your client code these people's names to their faces. When your client thinks she has them memorized, have her go to the next page and write their names under their faces. Tell your client the pictures will be arranged differently than they are on this page.



John Kuttie



Max Evert



Erik Peppar



Richard Carr



Manfred Stern

Name-Picture Association

Exercise 5, *continued*

Have your client write the correct name from the previous page under each picture.



Name-Picture Association

Exercise 6

Have your client code these people's names to their faces. When your client thinks she has them memorized, have her go to the next page and write their names under their faces. Tell your client the pictures will be arranged differently than they are on this page.



Sharla Eisey



George Martin



David Martinez



Carla Lowell



Marion Conner

Name-Picture Association

Exercise 6, *continued*

Have your client write the correct name from the previous page under each picture.



Name-Picture Association

Exercise 7

Have your client code these people's names to their faces. When your client thinks she has them memorized, have her go to the next page and write their names under their faces. Tell your client the pictures will be arranged differently than they are on this page.



Bob Lawlis



David Cho



Henry Sved



Ben Crayton



Raymond Clark

Name-Picture Association

Exercise 7, *continued*

Have your client write the correct name from the previous page under each picture.



Name-Picture Association

Exercise 8

Have your client code these people's names to their faces. When your client thinks she has them memorized, have her go to the next page and write their names under their faces. Tell your client the pictures will be arranged differently than they are on this page.



Elaine Winter



Janzell Krieg



Marie Morgan



Troelle Free



Barb Berger

Name-Picture Association

Exercise 8, *continued*

Have your client write the correct name from the previous page under each picture.











Memory for Numbers and Sentences

Introduction

In this section, your client will learn and practice strategies for remembering numbers and sentences. The everyday importance of being able to remember telephone numbers and social security numbers is self-evident but your client will also find himself in situations when he needs to remember sentences as well. For example, your client might need to remember sentences any time he's asked to relay a message or when given directions by his doctor.

Process

In Exercise 1, your client will learn and practice a strategy for remembering telephone numbers. This strategy involves converting numbers into words using the letters that correspond to each number on a telephone keypad. Use the top half of the page to introduce the strategy to your client. Then have him practice the strategy by completing the bottom section.

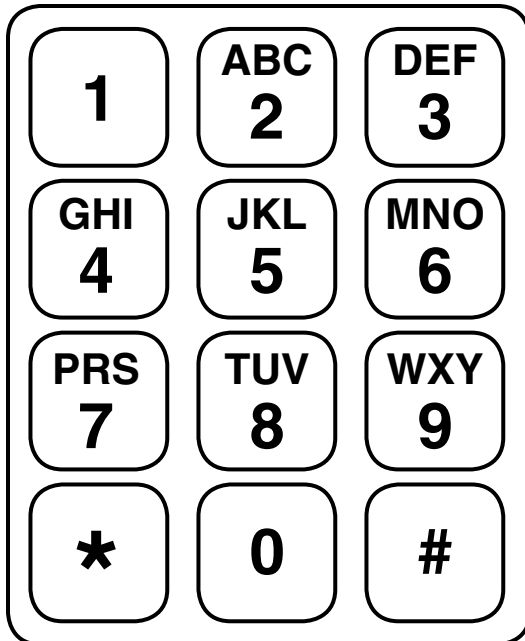
In Exercise 2, present the chunking strategy to the client and then have him work through the rest of the exercise. Provide alternative strategies only if the client is unable to recall the numbers when you request him to do so.

In Exercises 3 and 4, explain the chunking strategy to your client and then have him memorize the sentences by reading them independently or by having you read them aloud. Encourage the client to use the chunking strategy and to pair it with the memory system that works best for him. For example, if his primary system is visual, encourage him to visualize one chunk of a sentence and then another to help him code the information.

Memory for Numbers and Sentences

Exercise 1

Converting Telephone Numbers to Words



Many telephone numbers can be converted into words by using the letters associated with the numbers. For example, 776-4332 could be:

7 7 6 - 4 3 3 2
P R O - I D E A

The Internal Revenue Service uses this system for some of its telephone numbers. For example, the national line for ordering tax forms is:

1-800-829-3676

If you list the possible letters for each number, you'll find you can spell these words:

8 2 9 - 3 6 7 6
T A W C M P **M**
 U B **X** E N **R** N
 V C Y **F O** S O

Have your client write his phone number and others that he calls on a regular basis. Have your client use the system explained above to remember these phone numbers. Instruct your client to cover the page as you ask him to recall the individual numbers. (Remember, there are no letters that correspond to the numbers 1 or 0 so your client will need to come up with a different strategy for remembering those numbers.)

Person or Place

Telephone Number

Word(s)

Memory for Numbers and Sentences

Exercise 2

Chunking Numbers

One good way to remember information is by chunking it into manageable parts. The most commonly used chunking strategy is for remembering telephone numbers. To remember a telephone number, chunk it into groups of three and four digits. Here's an example of a "chunked" telephone number.

7	7	6
---	---	---

 –

4	3	3	2
---	---	---	---

You can remember this telephone number by learning its two parts first, then putting them together when you need to recall the number. List five telephone numbers you call often. Then practice the chunking strategy to remember them.

Person or Place

Number

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

The chunking method can also be used for remembering your social security number. Write it in the boxes and see how it can be chunked into three, two, and four digits.

--

 –

--

 –

--

Now make up a social security number and use the chunking method to remember it.

--

 –

--

 –

--

What other groups of numbers could the chunking method help you remember?

1. _____
2. _____
3. _____
4. _____

Memory for Numbers and Sentences

Chunking Sentences

Exercise 3

The chunking method can also be used to remember information in sentences. Instruct the client to listen for places in a sentence where there is a natural pause (usually after a comma) and to code the information in manageable chunks. Have him read each sentence and code it in chunks or read each sentence to him. He might need to read or hear the sentence several times before accurately coding the chunks. Once he feels he has it memorized, have him say the sentence aloud.

1. It is too late to go to the movie.
2. He was 57 years old on Wednesday.
3. She owned a sheepdog and a cat.
4. Fenton went to a trade school after high school.
5. What happened to your car after you sold it?
6. The plane will depart at 7:12 from Gate 6.
7. When the child became sick, they almost cancelled the trip.
8. After work, he relaxed by taking a long walk.
9. The science teacher asked an unusual question.
10. What did he say about our proposed plans?
11. Do you put margarine or butter on your wheat toast?
12. Joel put the bags of groceries in the trunk of the car.

Memory for Numbers and Sentences

Exercise 4

Chunking Sentences

The chunking method can also be used to remember information in sentences. Instruct the client to listen for places in a sentence where there is a natural pause (usually after a comma) and to code the information in manageable chunks. Have him read each sentence and code it in chunks or read each sentence to him. He might need to read or hear the sentence several times before accurately coding the chunks. Once he feels he has it memorized, have him say the sentence aloud.

1. On Tuesday morning at 10:00, before his mother went to the supermarket to do the weekly shopping, she went to the post office to mail a package.
2. He waited in the front of the clothing store while his wife picked out school clothes, new shoes, and warm jackets for their three children.
3. A cold front will be coming through the area this afternoon bringing cooler temperatures, driving rains, and strong winds.
4. The Grand Canyon in Arizona is said to be extremely breathtaking, and its size brings everything into perspective.
5. For dinner they had chili and onion hamburgers, carrot sticks, several kinds of fruit juices, and apple pie with ice cream for dessert.
6. In the United States, high school often starts in mid-August and lasts until the beginning of June.
7. There was a major traffic problem on the expressway because the cars and trucks were backed up for two and a quarter miles.
8. If you're looking for convenience without a lot of expense, try staying at one of the cheaper hotels along the parkway downtown.
9. In countries other than your own, most foods are very good, although the taste of them can be quite different from what you are used to eating.
10. We were disappointed because the baseball team lost to Atlanta last night after having a ten-game winning streak.

Picture Associations

Introduction

In this section, your client will practice coding associations between different types of pictures. This kind of skill is needed when we choose to remember what to buy at the grocery store by walking up and down the aisles until we see what we need to buy or when we need to remember what we want to take when we go somewhere. The paired pictures address associations between people and objects, people and places, and between two different objects. The different formats are given to provide practice with coding varied relationships.

Process

As your client codes each pair of pictures, encourage her to use any kind of association she can imagine. It might help to use exaggeration. For example, to auditorily code the association between a person fishing and a pocketknife, your client might say to herself, “The person fishing used the pocketknife to cut her line just before she was dragged into the water by a 300-pound catfish.” A client with a predominantly visual system might associate the two pictures by combining them into one picture. When your client closes her eyes, she might see the person fishing with the pocketknife sticking out of her back pocket.

Picture Associations

Exercise 1

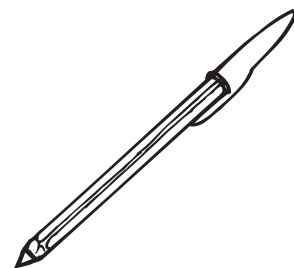
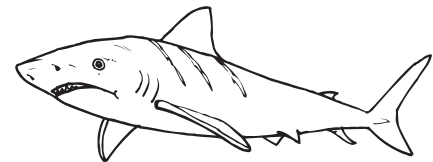
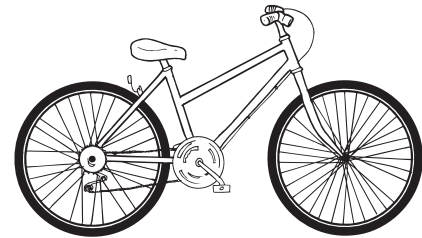
Person to Object

Have your client study each person and the object he or she is associated with so that if your client is shown or told one, she will be able to recall the other. Tell your client that the object may not be commonly associated to the person so she will need to use a strategy to remember the association.

Person



Object



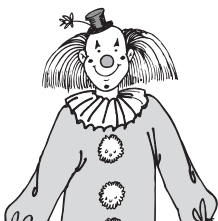
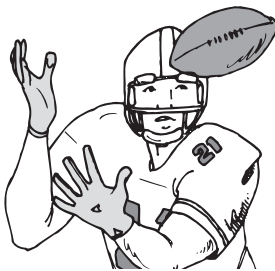
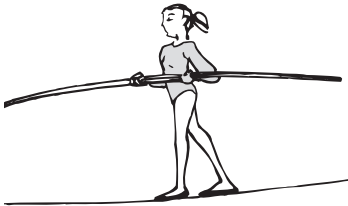
Picture Associations

Exercise 2

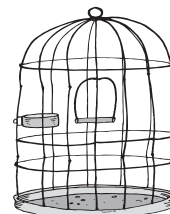
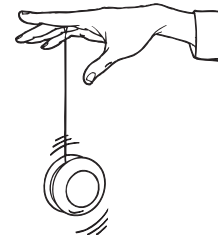
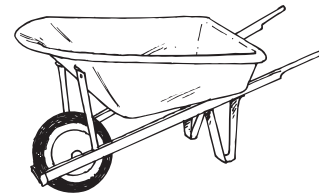
Person to Object

Have your client study each person and the object he or she is associated with so that if your client is shown or told one, she will be able to recall the other. Tell your client that the object may not be commonly associated to the person so she will need to use a strategy to remember the association.

Person



Object



Picture Associations

Exercise 3

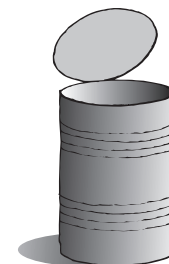
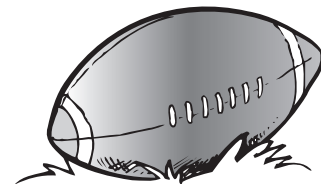
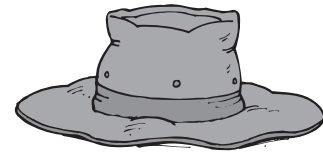
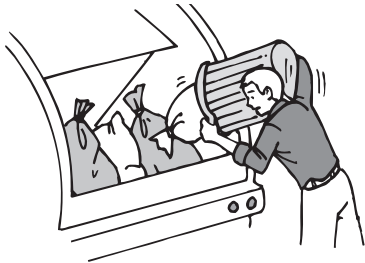
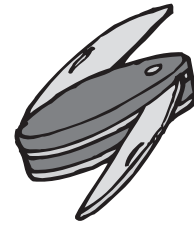
Person to Object

Have your client study each person and the object he or she is associated with so that if your client is shown or told one, she will be able to recall the other. Tell your client that the object may not be commonly associated to the person so she will need to use a strategy to remember the association.

Person



Object



Picture Associations

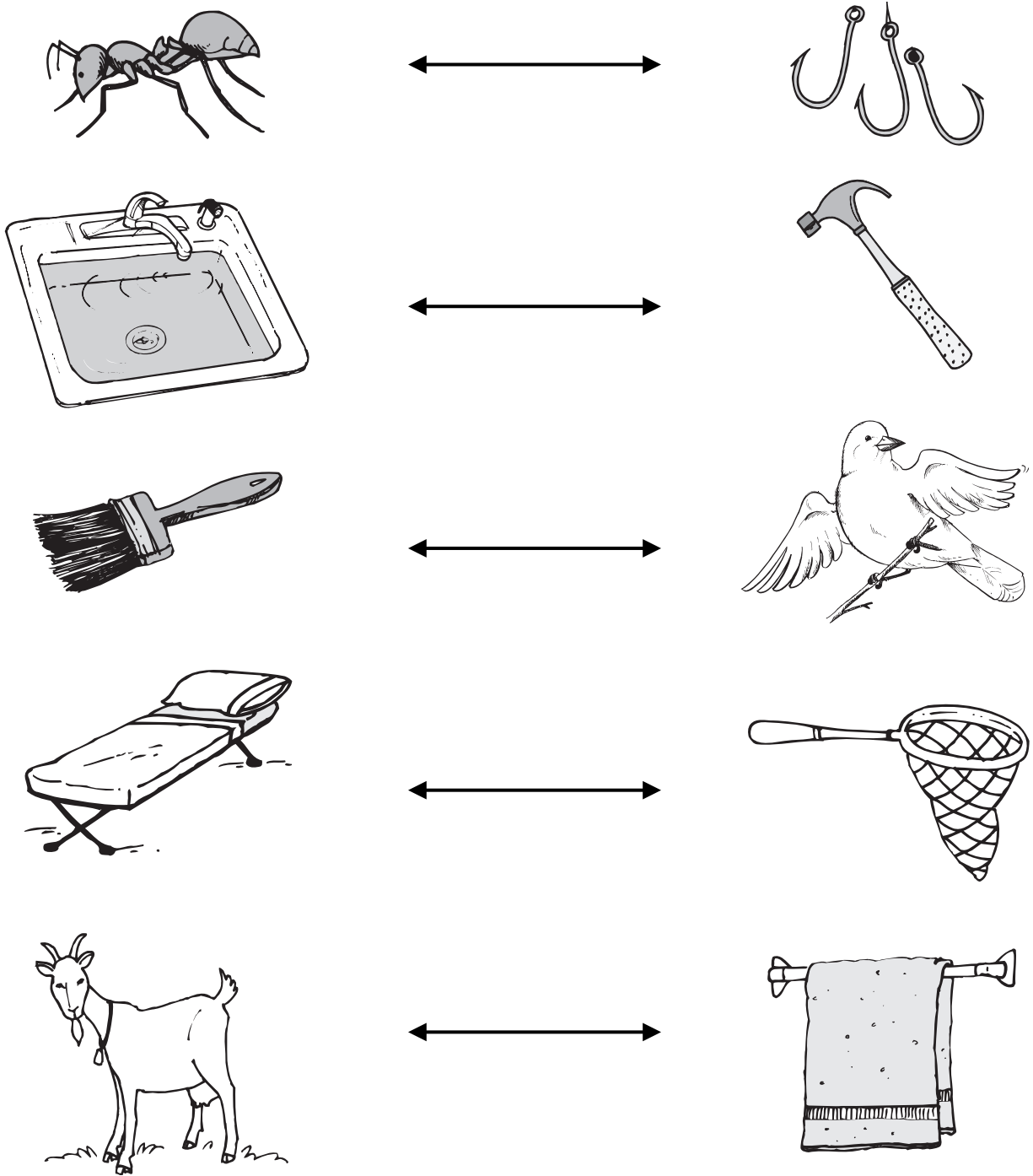
Exercise 4

Object to Object

Have your client study each pair of objects so that if she is shown or told one, she will be able to recall the other. Tell your client that the objects may not be commonly associated so she will need to use a strategy to remember the association.

Object 1

Object 2



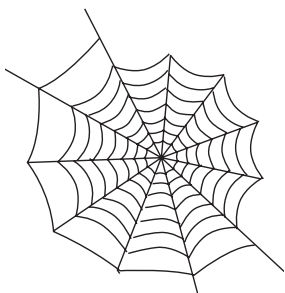
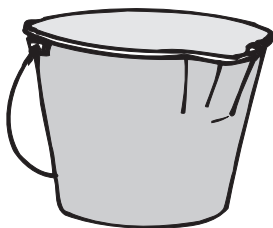
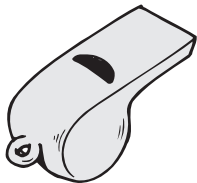
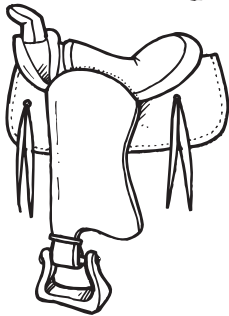
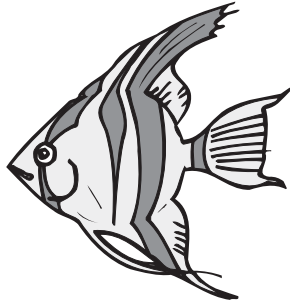
Picture Associations

Object to Object

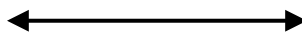
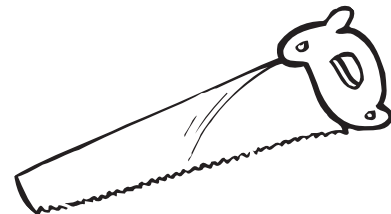
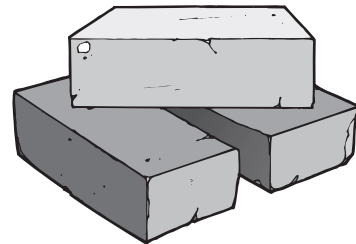
Exercise 5

Have your client study each pair of objects so that if she is shown or told one, she will be able to recall the other. Tell your client that the objects may not be commonly associated so she will need to use a strategy to remember the association.

Object 1



Object 2



Picture Associations

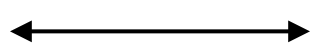
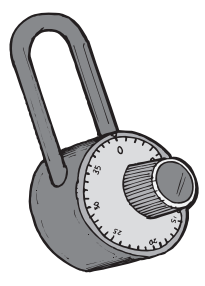
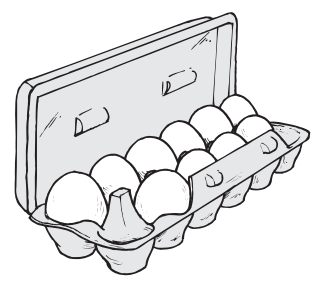
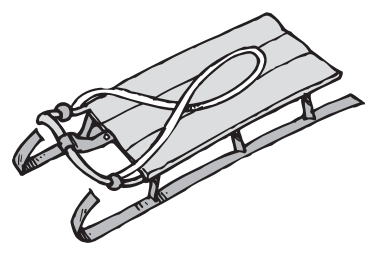
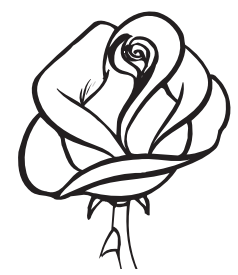
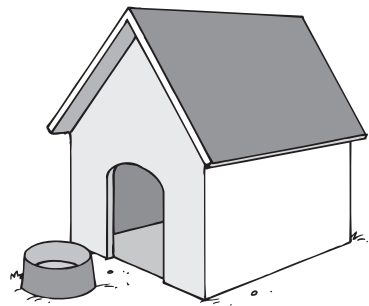
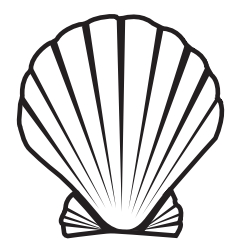
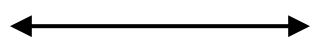
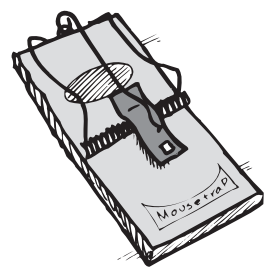
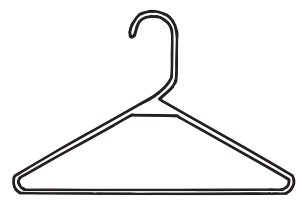
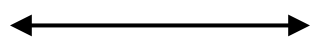
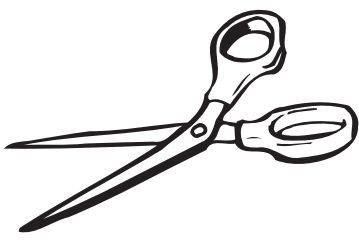
Exercise 6

Object to Object

Have your client study each pair of objects so that if she is shown or told one, she will be able to recall the other. Tell your client that the objects may not be commonly associated so she will need to use a strategy to remember the association.

Object 1

Object 2



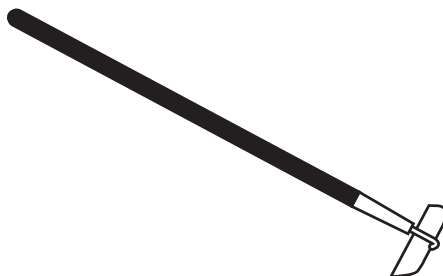
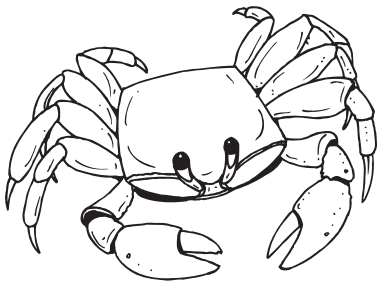
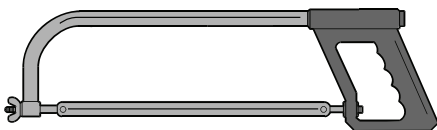
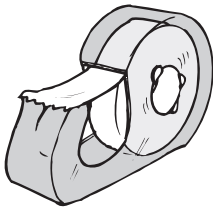
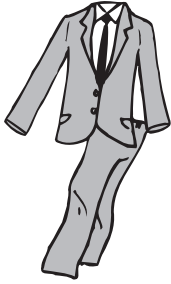
Picture Associations

Object to Object

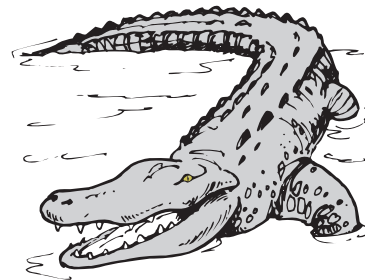
Exercise 7

Have your client study each pair of objects so that if she is shown or told one, she will be able to recall the other. Tell your client that the objects may not be commonly associated so she will need to use a strategy to remember the association.

Object 1



Object 2



Picture Associations

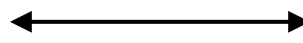
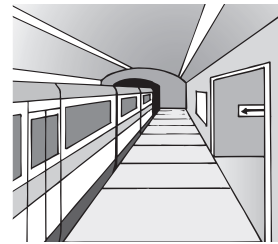
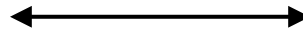
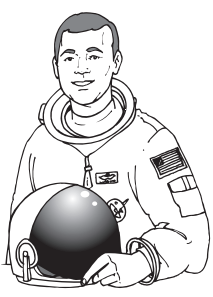
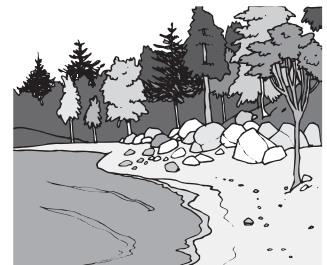
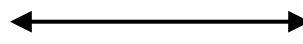
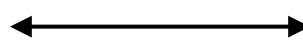
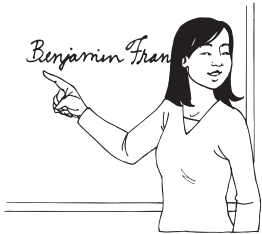
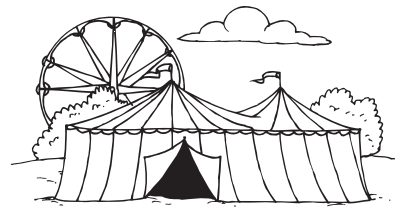
Exercise 8

Person to Place

Have your client study each person and the place he or she is associated with so that if your client is shown or told one, she will be able to recall the other. Tell your client that the people and places may not be commonly associated so she will need to use a strategy to remember the association.

Person

Place



Picture Associations

Exercise 9

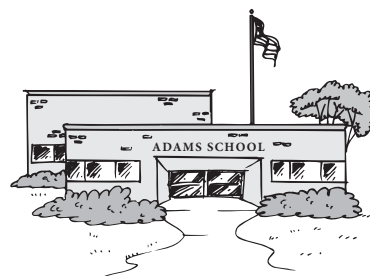
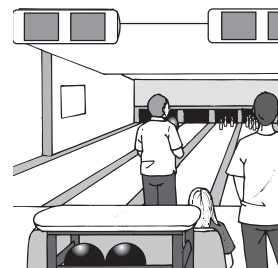
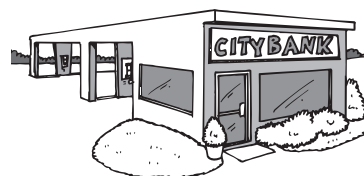
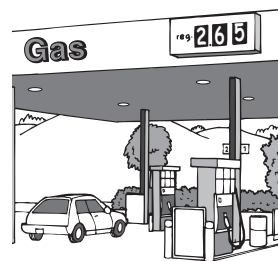
Person to Place

Have your client study each person and the place he or she is associated with so that if your client is shown or told one, she will be able to recall the other. Tell your client that the people and places may not be commonly associated so she will need to use a strategy to remember the association.

Person



Place



Memory for Shapes and Pictures

Introduction

This section provides stimulus items for coding the names of shapes and pictures. The shapes are used to give practice coding without content distractions. This is done to establish the association coding pattern into the client's cognitive processes. The pictures then give practice coding with content. The pictures will naturally stimulate associating content between items, even if the items are unrelated. This set up provides another format for client to practice the strategies they have learned for coding lists of information.

Process

Instruct your client to use his strategies to code or memorize the stimulus items. Encourage him to use various memory strategies, such as associations, chaining, and chunking to recall the shapes and pictures. Aid with the strategies as necessary and help your client in determining which strategy appears to be the most effective.

Following the shapes are exercises that provide stimulus items for coding the names of pictures. Attempt to use various strategies with your client. Associations, chaining, and creating a sentence or short story that involves the picture names are frequently the most effective strategies.

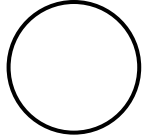
The shape section is introduced by a page which insures that your client knows the names of the shapes used in the exercises. If necessary, make a copy of the page for your client if he has difficulty naming the shapes while he is trying to code them.

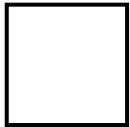
Memory for Shapes and Pictures

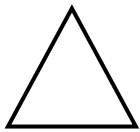
Review of Shape Names

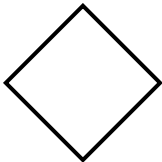
Exercise 1

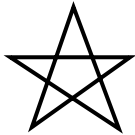
Have your client name these shapes.



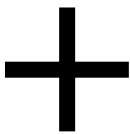
















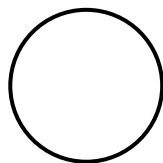
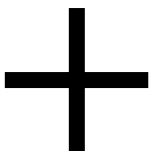
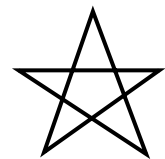
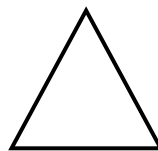
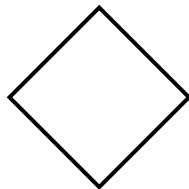
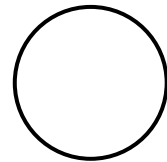
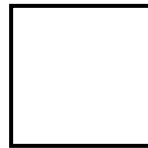
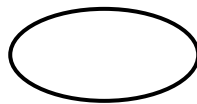
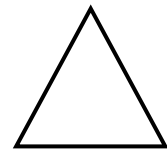
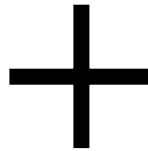
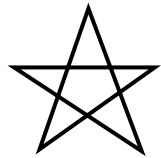
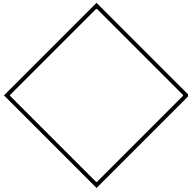
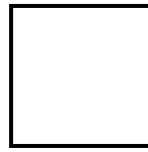
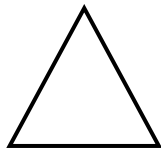
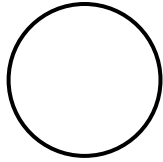


Memory for Shapes and Pictures

Exercise 2

Remembering Shapes – 4 Figures

Have your client study each line of shapes and use a strategy to code it. When your client feels he has the line memorized, have him cover the shapes and name them or draw them on another sheet of paper.

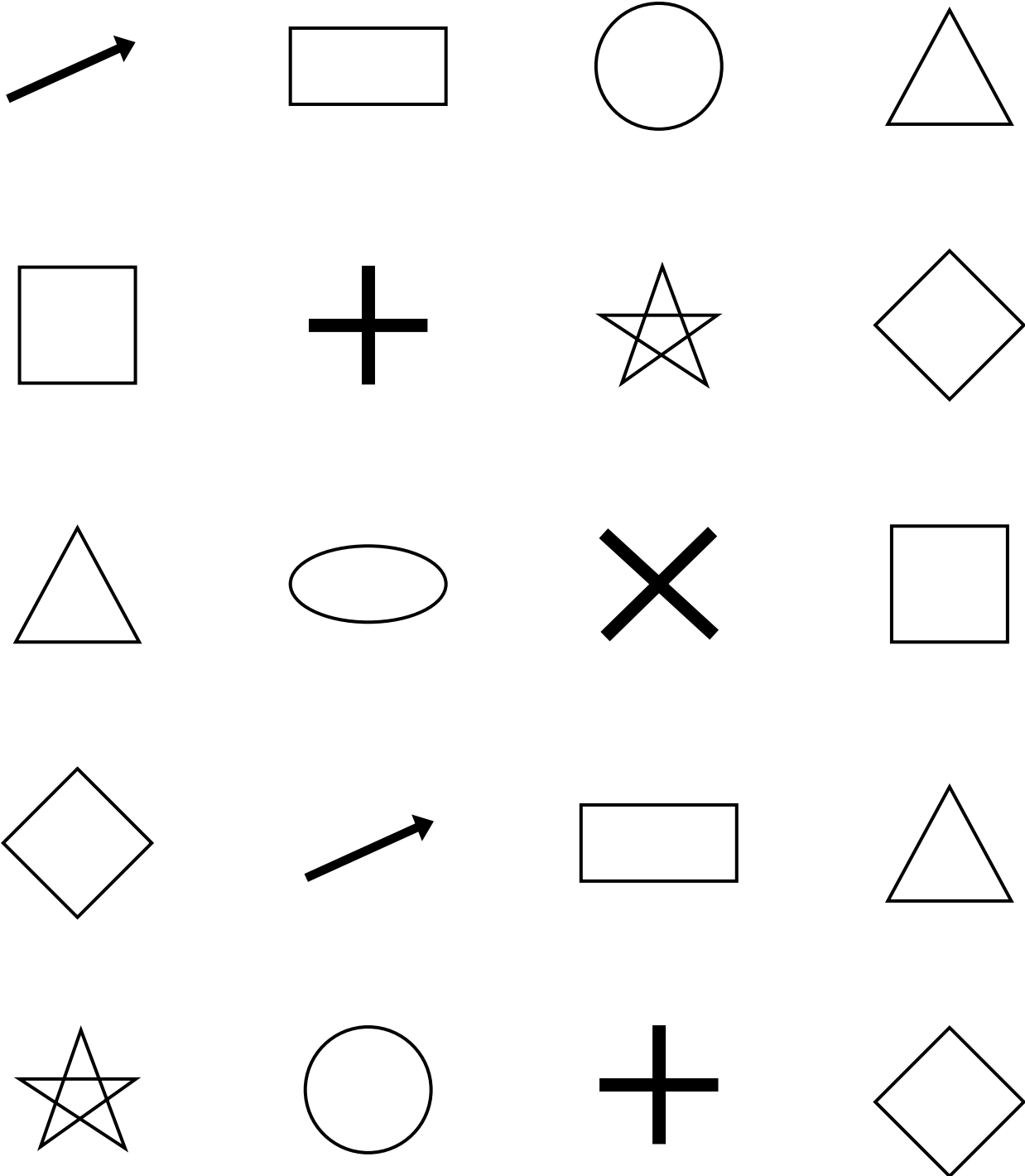


Memory for Shapes and Pictures

Exercise 3

Remembering Shapes – 4 Figures

Have your client study each line of shapes and use a strategy to code it. When your client feels he has the line memorized, have him cover the shapes and name them or draw them on another sheet of paper.

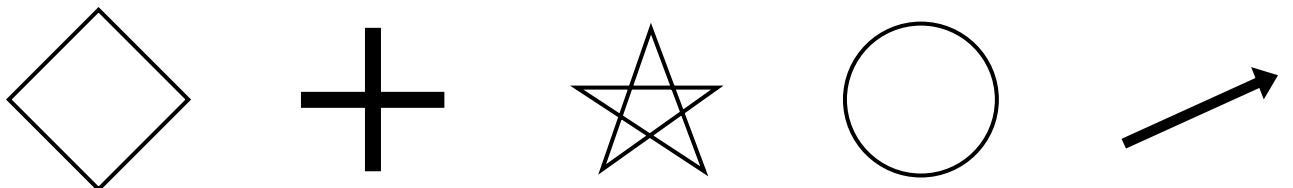
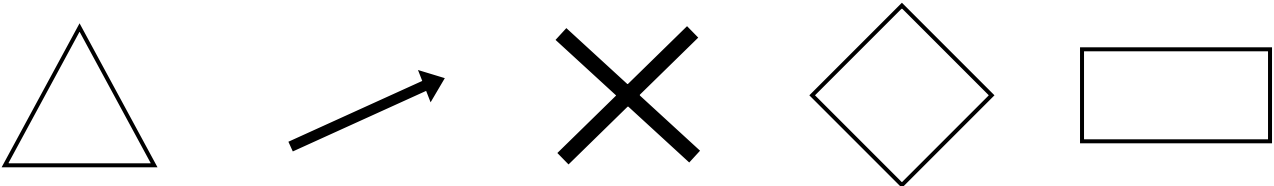
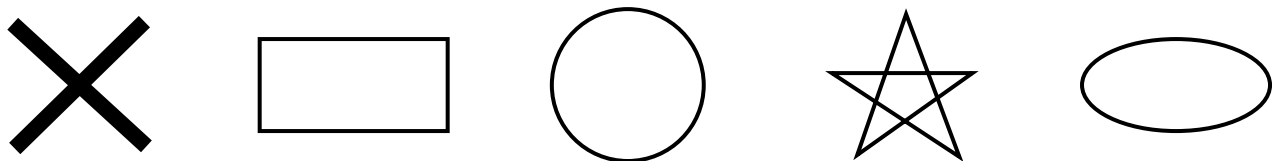
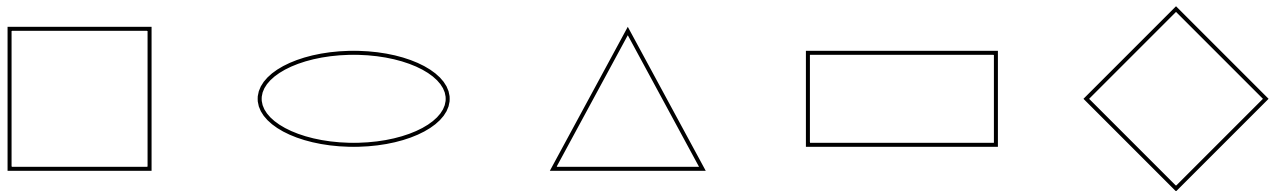
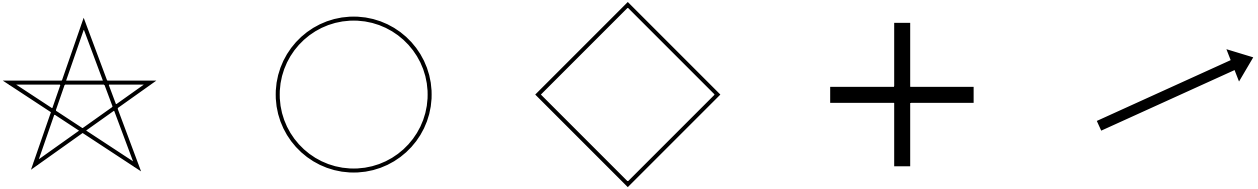


Memory for Shapes and Pictures

Exercise 4

Remembering Shapes – 5 Figures

Have your client study each line of shapes and use a strategy to code it. When your client feels he has the line memorized, have him cover the shapes and name them or draw them on another sheet of paper.

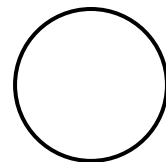
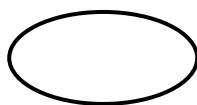
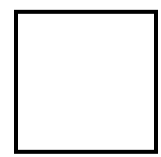
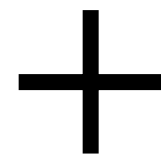
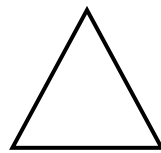
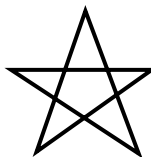
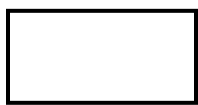
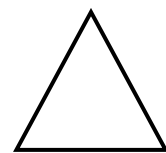
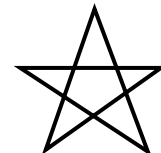
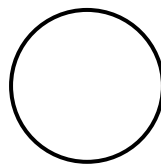
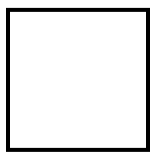
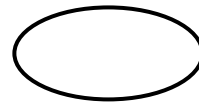
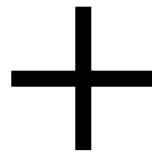
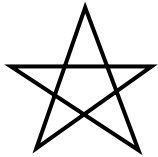
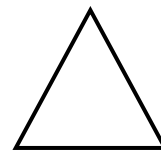
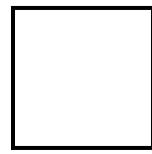
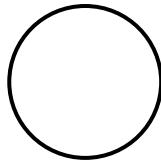


Memory for Shapes and Pictures

Exercise 5

Remembering Shapes – 5 Figures

Have your client study each line of shapes and use a strategy to code it. When your client feels he has the line memorized, have him cover the shapes and name them or draw them on another sheet of paper.

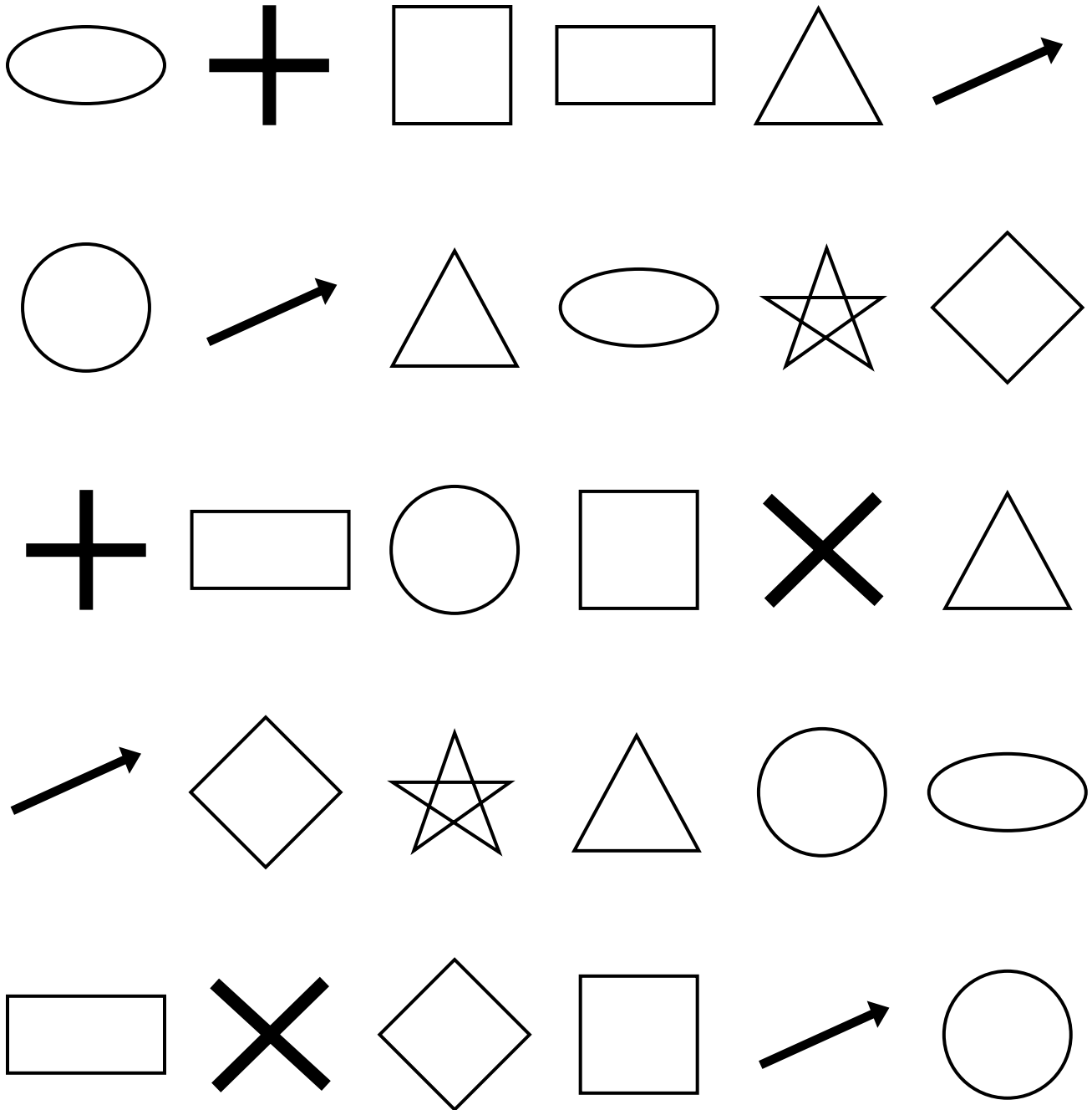


Memory for Shapes and Pictures

Exercise 6

Remembering Shapes – 6 Figures

Have your client study each line of shapes and use a strategy to code it. When your client feels he has the line memorized, have him cover the shapes and name them or draw them on another sheet of paper.

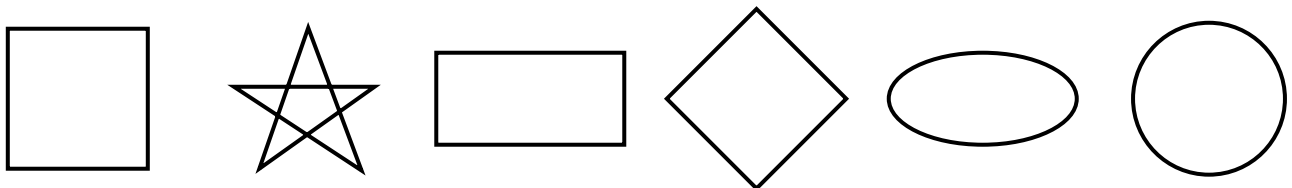
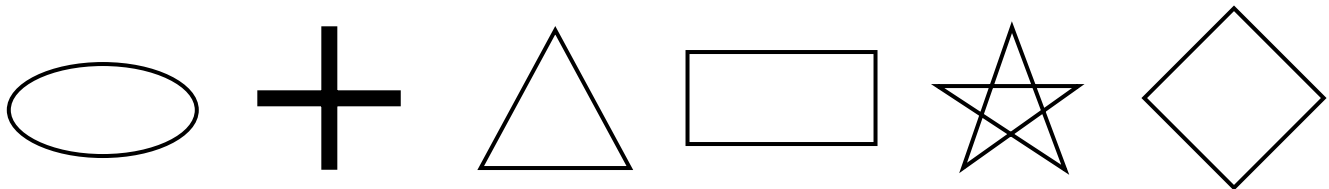
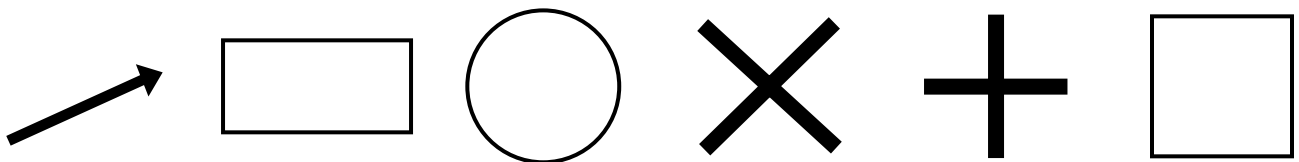
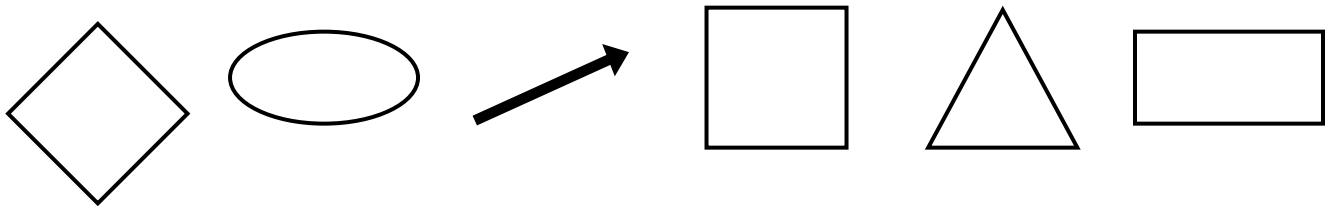
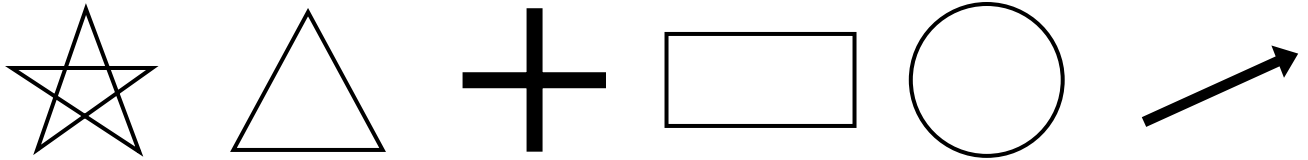


Memory for Shapes and Pictures

Exercise 7

Remembering Shapes – 6 Figures

Have your client study each line of shapes and use a strategy to code it. When your client feels he has the line memorized, have him cover the shapes and name them or draw them on another sheet of paper.

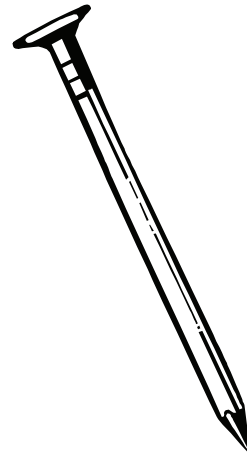
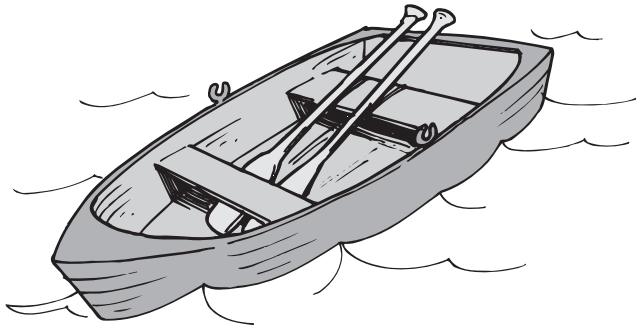


Memory for Shapes and Pictures

Exercise 8

Remembering Pictures – 4 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

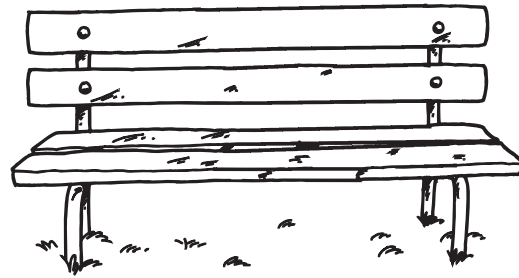
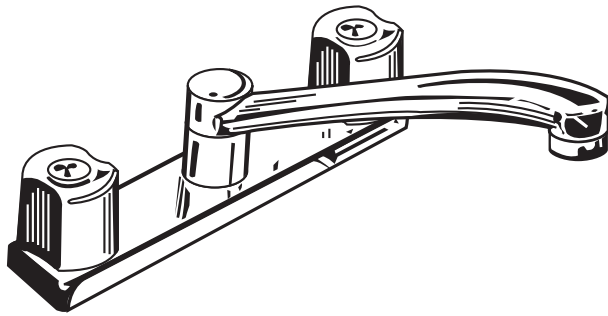


Memory for Shapes and Pictures

Exercise 9

Remembering Pictures – 4 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

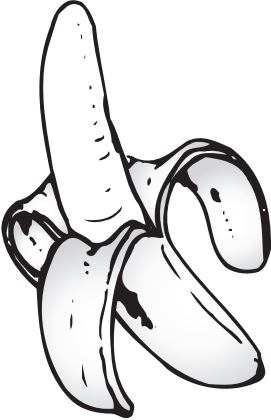
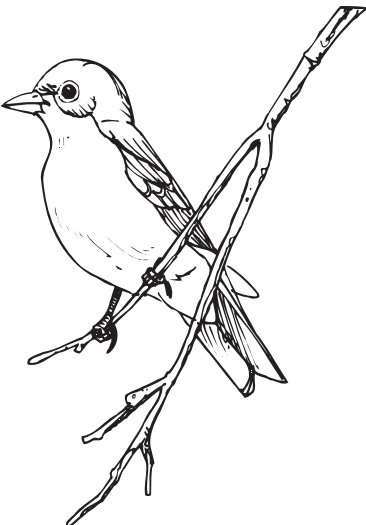
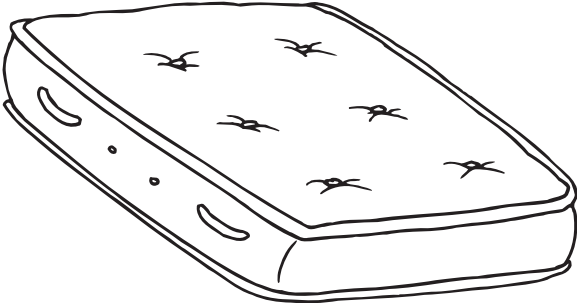
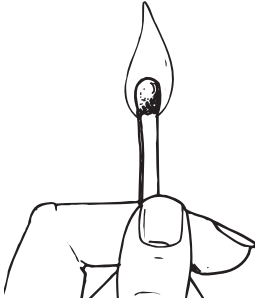


Memory for Shapes and Pictures

Exercise 10

Remembering Pictures – 5 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

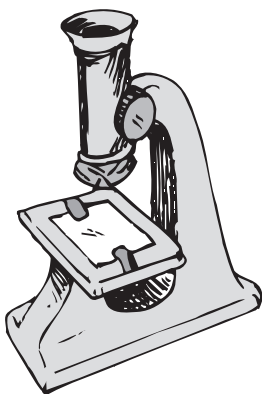


Memory for Shapes and Pictures

Exercise 11

Remembering Pictures – 5 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

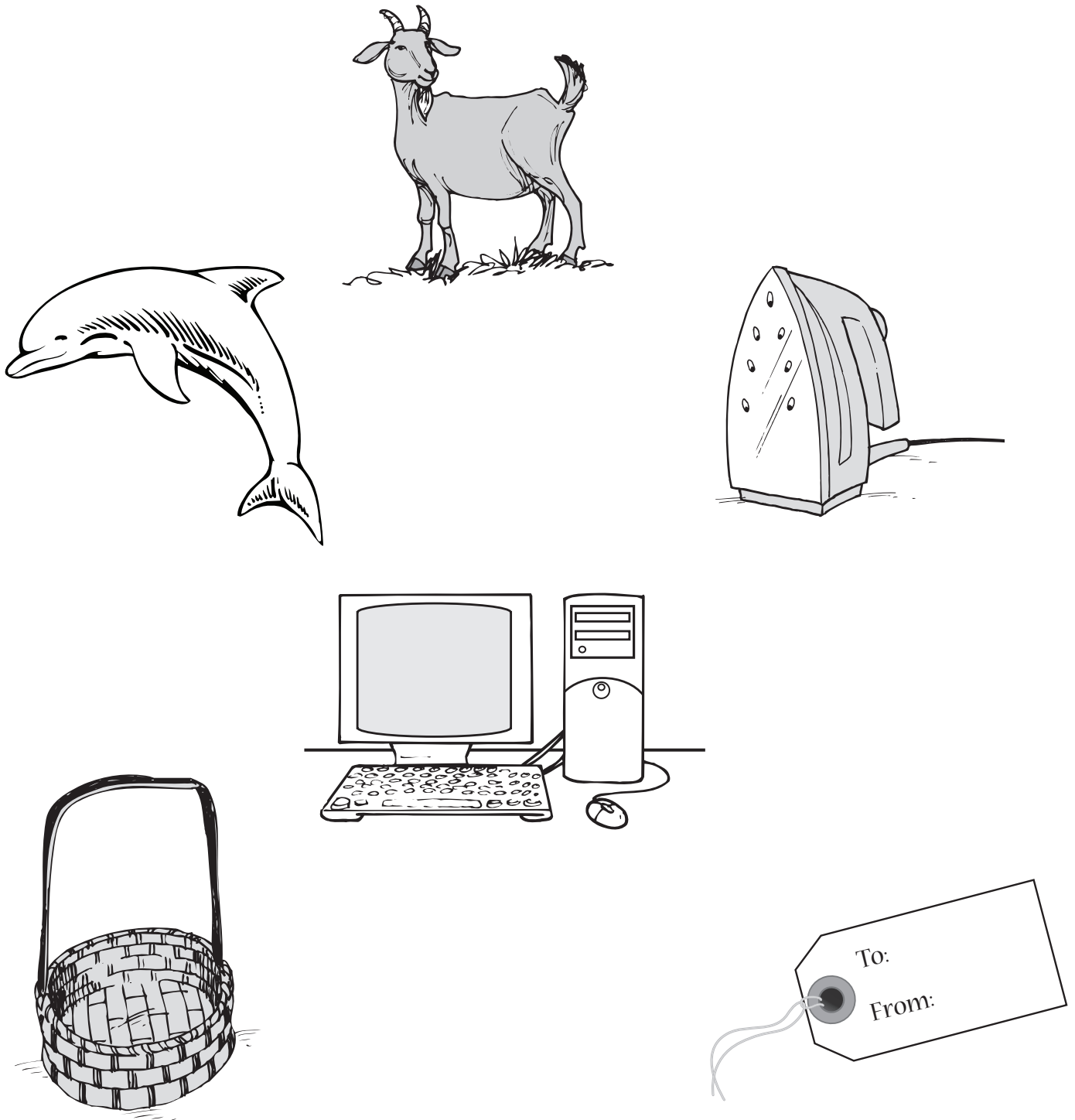


Memory for Shapes and Pictures

Exercise 12

Remembering Pictures – 6 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

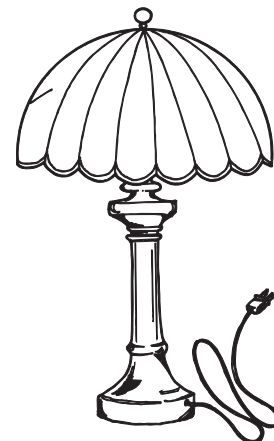
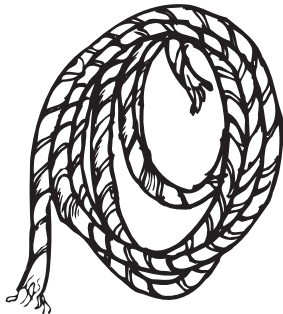
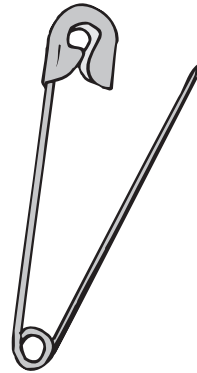
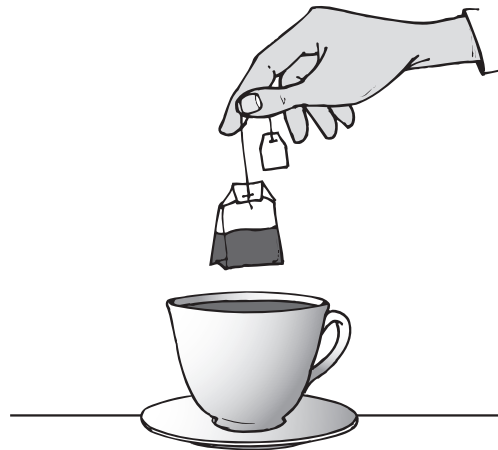
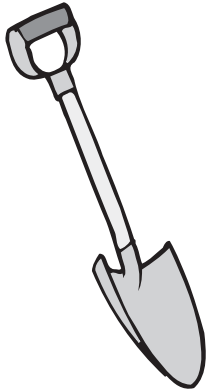


Memory for Shapes and Pictures

Remembering Pictures – 6 Pictures

Exercise 13

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

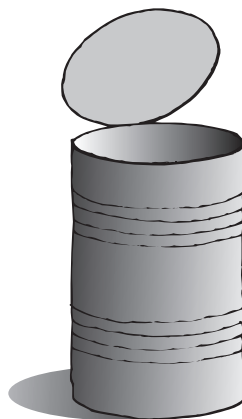
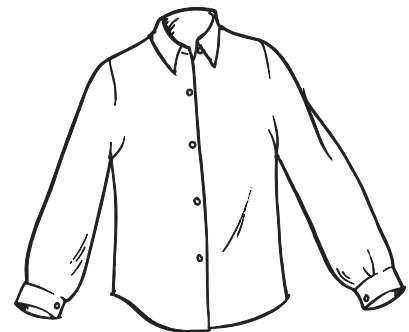
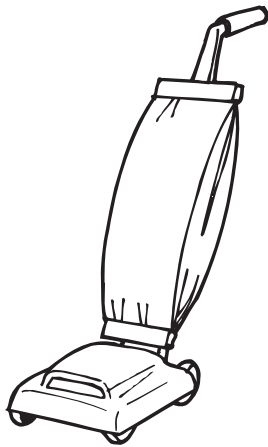
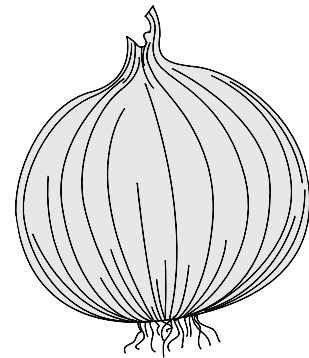


Memory for Shapes and Pictures

Exercise 14

Remembering Pictures – 7 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

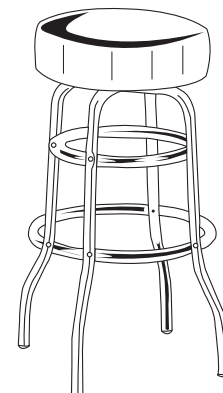
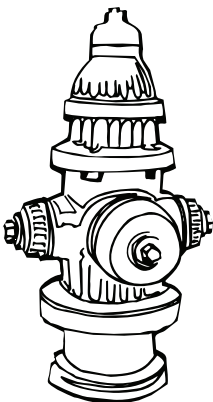
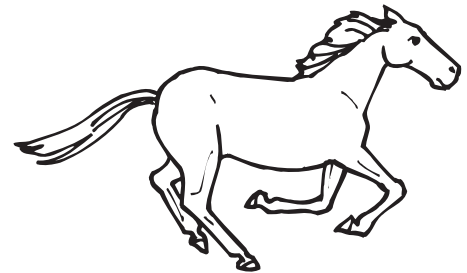
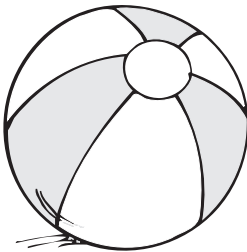
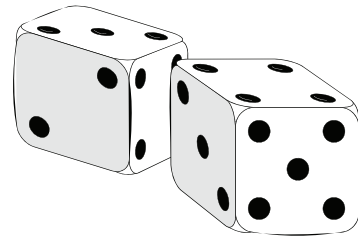
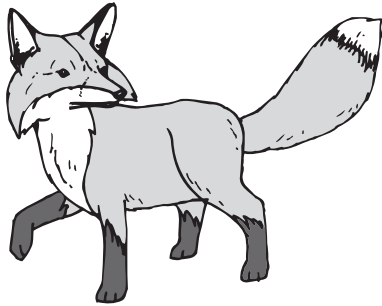


Memory for Shapes and Pictures

Exercise 15

Remembering Pictures – 7 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

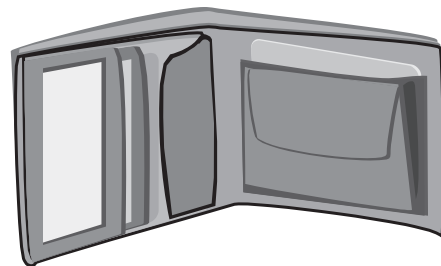
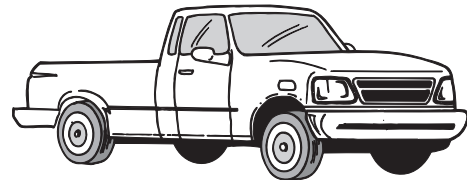
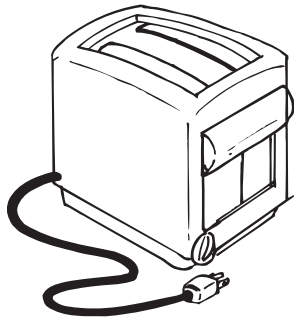
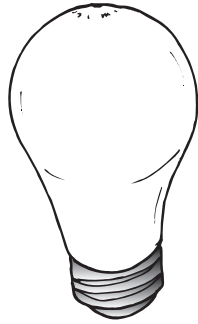


Memory for Shapes and Pictures

Exercise 16

Remembering Pictures – 8 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

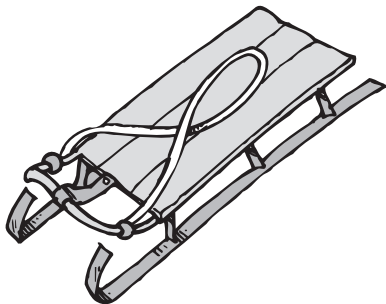
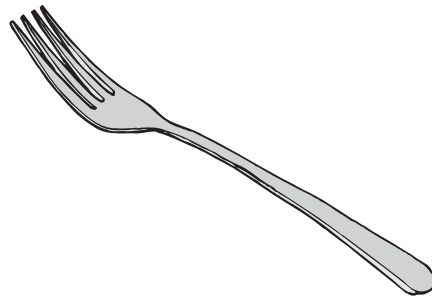
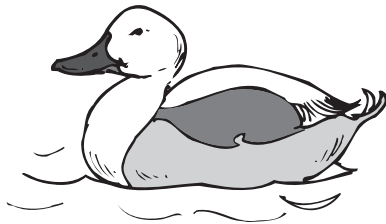
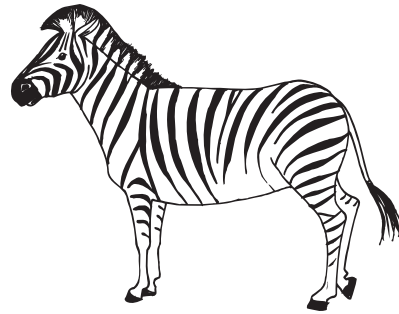
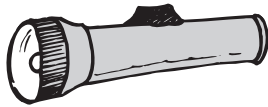


Memory for Shapes and Pictures

Exercise 17

Remembering Pictures – 8 Pictures

Have your client study the pictures and use a strategy to code them. When your client feels he has them memorized, have him cover them and name them.

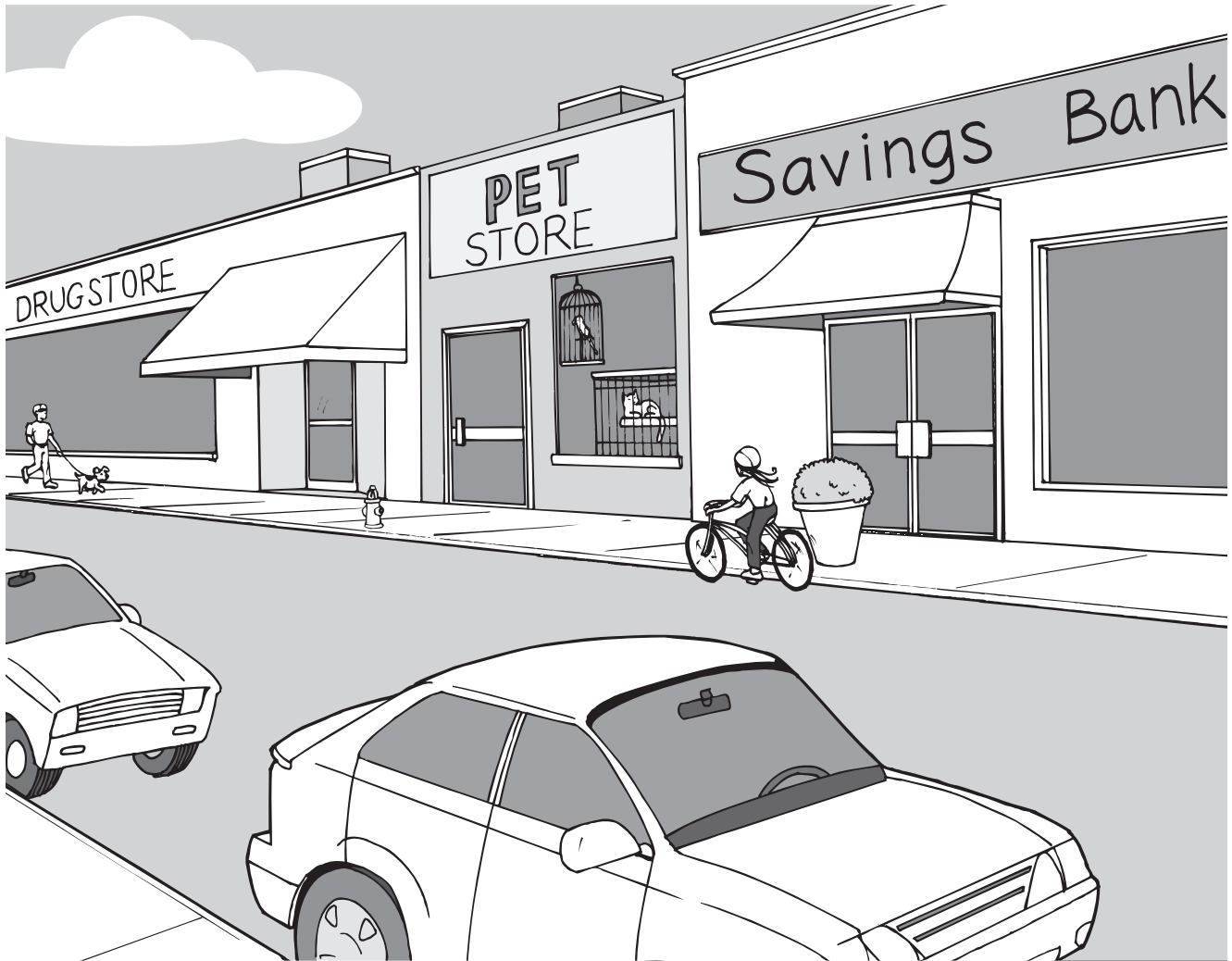


Memory for Shapes and Pictures

Exercise 18

Picture Retention

Have your client study the picture and use a strategy to code its details. Then have him answer the questions on the next page.



Memory for Shapes and Pictures

Picture Retention

Exercise 18, *continued*

Have your client answer these questions about the picture he just studied.

1. How many cars were parked along the road? _____
2. Which store was in the middle? _____
3. Which store was on the left? _____
4. What kind of business was on the right? _____
5. What was the man doing? _____
6. What other means of transportation, besides cars, was shown? _____

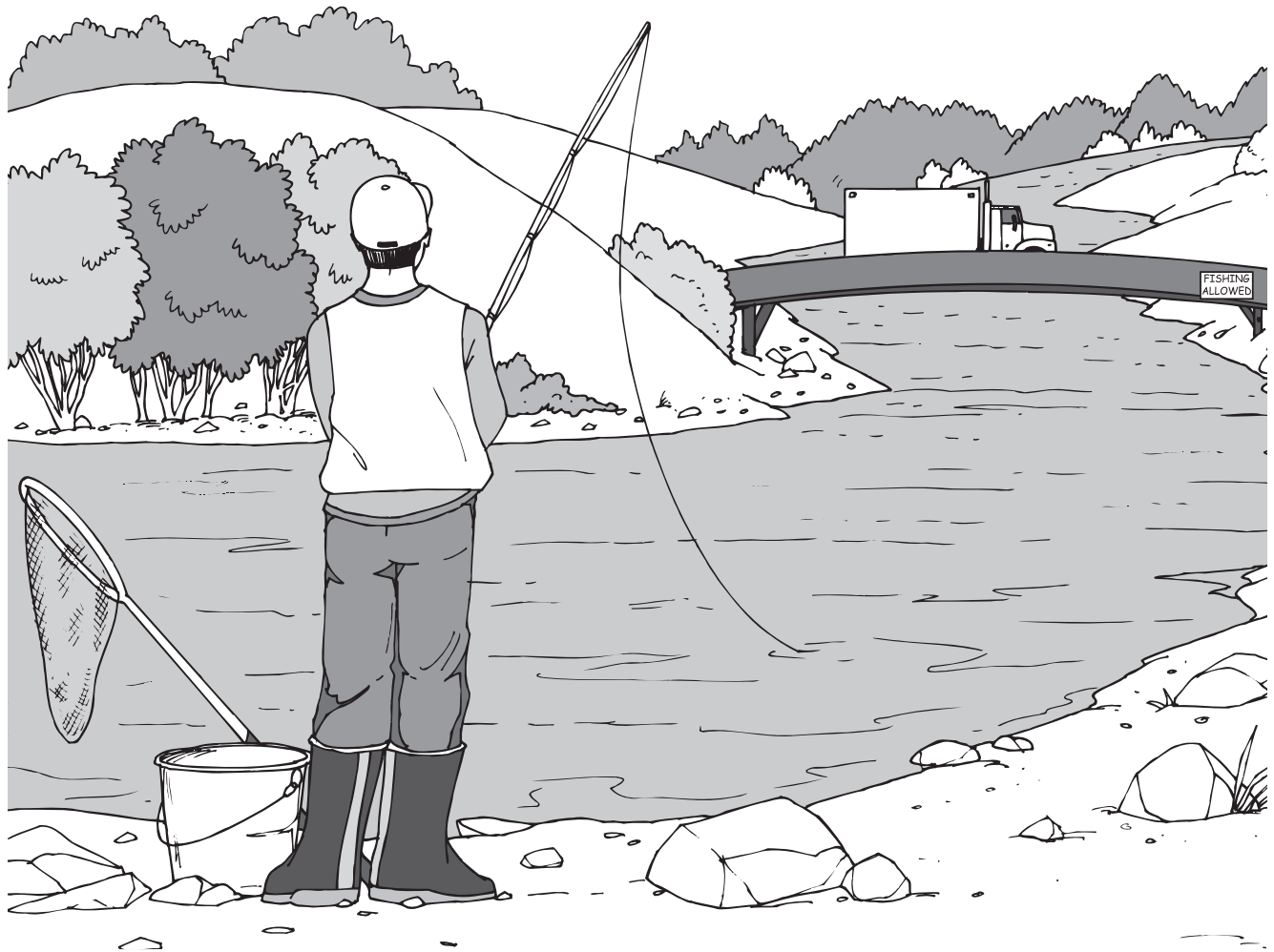
7. How many people were in the picture? _____
8. Was a fire hydrant in the picture? _____
9. Which business had double doors? _____
10. What was in the window of the pet store? _____

Memory for Shapes and Pictures

Exercise 19

Picture Retention

Have your client study the picture and use a strategy to code its details. Then have him answer the questions on the next page.



Memory for Shapes and Pictures

Picture Retention

Exercise 19, *continued*

Have your client answer these questions about the picture he just studied.

1. What was the man doing? _____
2. What was he wearing on his feet? _____
3. What was on the ground beside the man? _____
4. Was the man wearing a cap? _____
5. How many people were in the picture? _____
6. What fishing equipment could you see? _____
7. How many boats were on the river? _____
8. What was going over the bridge? _____
9. What was written on the bridge? _____
10. Was there anything in the picture that told you the man had caught some fish? _____

Memory for Shapes and Pictures

Exercise 20

Picture Retention

Have your client study the picture and use a strategy to code its details. Then have him answer the questions on the next page.



Memory for Shapes and Pictures

Picture Retention

Exercise 20, *continued*

Have your client answer these questions about the picture he just studied.

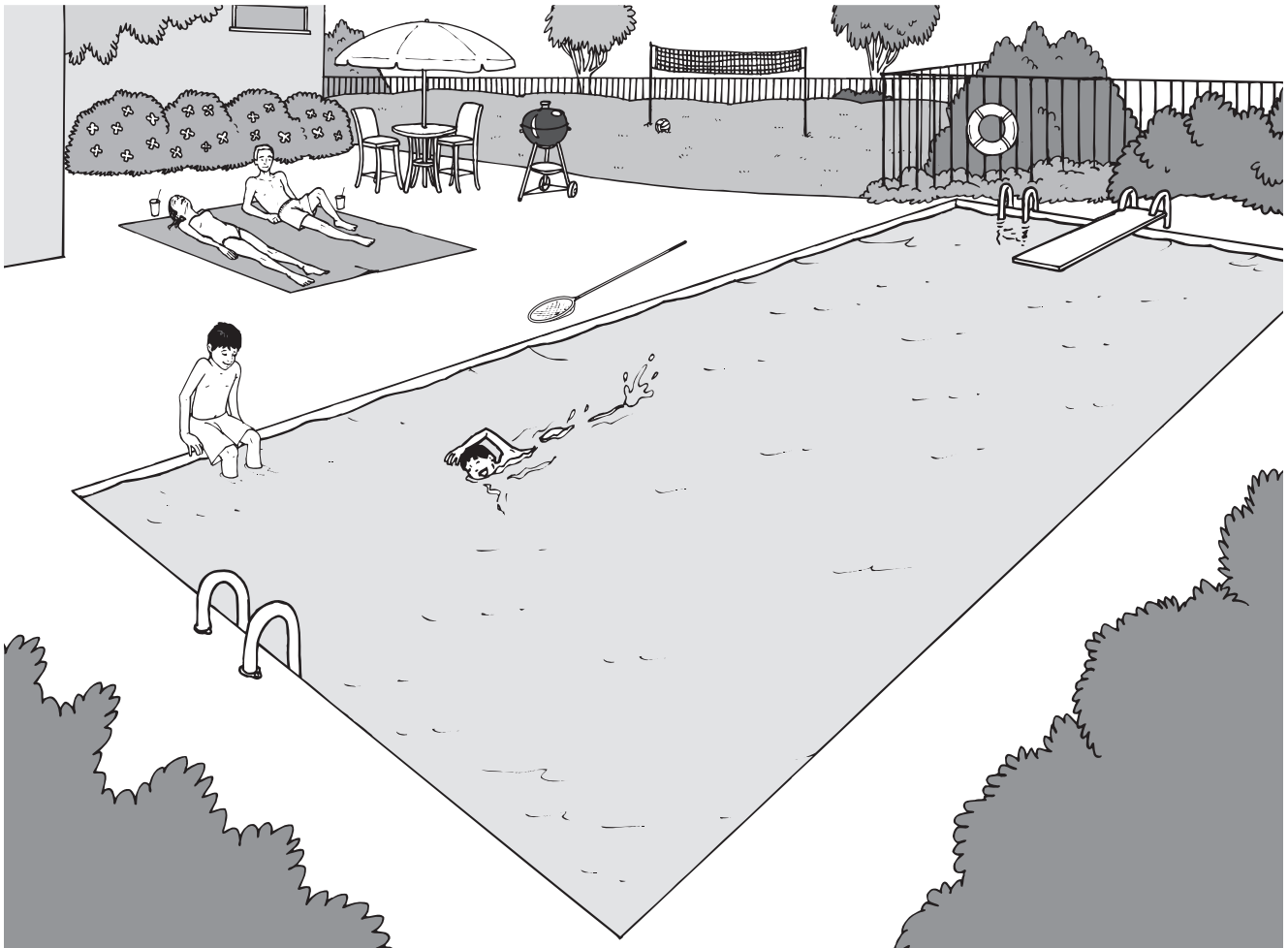
1. What kind of shop was pictured? _____
2. Was a man or a woman coming out of the shop? _____
3. Did the person buy anything? _____
4. What two products were advertised in the window as “fresh”? _____
5. Was the person wearing pants or a dress? _____
6. How many candles were on the cake? _____
7. What was the person carrying? _____
8. What was sticking out of the top of the person’s bag? _____
9. Was bread displayed in the window? _____
10. How many pies were displayed? _____

Memory for Shapes and Pictures

Exercise 21

Picture Retention

Have your client study the picture and use a strategy to code its details. Then have him answer the questions on the next page.



Memory for Shapes and Pictures

Exercise 21, *continued*

Picture Retention

Have your client answer these questions about the picture he just studied.

1. Which end of the pool was the deep end, the right or left? _____
2. How many ladders led into the pool? _____
3. What sport was pictured? _____
4. Was anyone sitting at the table? _____
5. What was over the table? _____
6. Was the barbecue grill open or closed? _____
7. How many people were on the blanket? _____
8. What was hanging on the fence? _____
9. What piece of pool equipment was by the side of the pool?

10. How many people were swimming in the pool? _____

Memory for Shapes and Pictures

Exercise 22

Picture Retention

Have your client study the picture and use a strategy to code its details. Then have him answer the questions on the next page.



Memory for Shapes and Pictures

Picture Retention

Exercise 22, *continued*

Have your client answer these questions about the picture he just studied.

1. What appliance was in the picture? _____
2. How many shelves were above the stove? _____
3. What did the canisters on the top shelf contain? _____

4. How many pots were hanging on the wall? _____
5. What two objects were on the counter? _____
6. Where was the clock? _____
7. What time was shown on the clock? _____
8. How many pots were on the stove? On which burner(s)? _____

9. How many drawers were pictured? _____
10. What was in the open cupboard under the counter? _____

Sorting and Remembering Categories

Introduction

In this section, your client will practice sorting words and pictures into categories, coding them, and then recalling them. Acquiring memory skills in the area of categorization will help your client in her everyday life. For example, remembering a grocery list will be easier if your client is able to break the items into categories like meat, vegetables, and cleaning products.

Process

Show your client each page and have her sort the words or pictures into four categories. Then cover the page and have her write the words or names of the pictures on a separate sheet of paper. If your client is having trouble recalling the words, help her code them by using a chaining strategy for each category. For example, if the words in a category are *oven*, *refrigerator*, *microwave*, and *vacuum cleaner*, have her create a chaining strategy that includes all four.

After I took the turkey out of the refrigerator, I defrosted it in the microwave and cooked it in the oven. When I took it out of the oven, I dropped it on the floor and cleaned it up with the vacuum cleaner.

Sorting and Remembering Categories

Exercise 1

Words

Have your client sort the words in the box into four categories. Then have her study them and code them. When your client thinks she can remember all of the words, have her cover the page and write all 16 words on a separate sheet of paper.

cat	yellow	chair	violet
rocker	monkey	paper	deer
red	scissors	horse	bench
pencil	sofa	gray	envelope

Group 1

Group 2

Group 3

Group 4

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sorting and Remembering Categories

Exercise 2

Words

Have your client sort the words in the box into four categories. Then have her study them and code them. When your client thinks she can remember all of the words, have her cover the page and write all 16 words on a separate sheet of paper.

golf	coffee	living room	baseball
kitchen	track	planets	juice
sun	bedroom	water	stars
soda	moon	tennis	bathroom

Group 1

Group 2

Group 3

Group 4

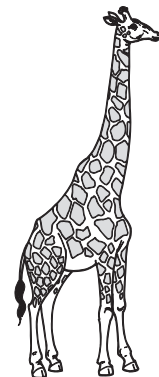
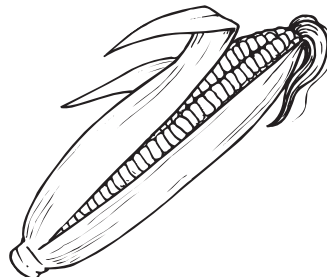
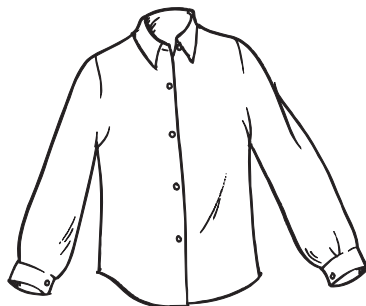
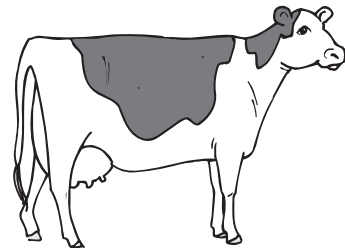
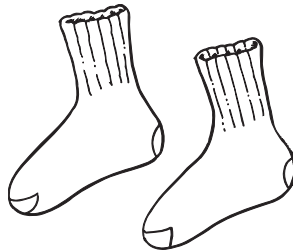
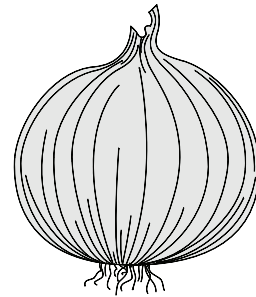
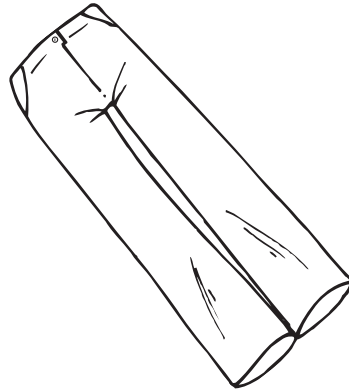
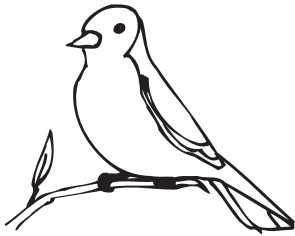
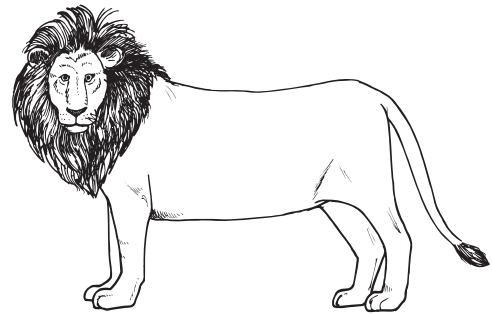
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sorting and Remembering Categories

Exercise 3

Pictures

Have your client sort the pictures into three categories. Then have her study them and code them. When your client thinks she can remember all of the pictures, have her cover the page and write the names of all 12 items on a separate sheet of paper.

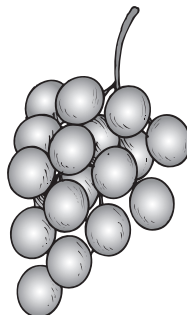
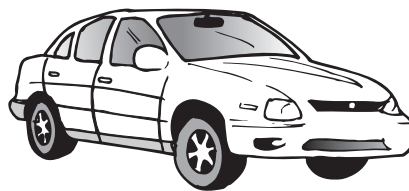
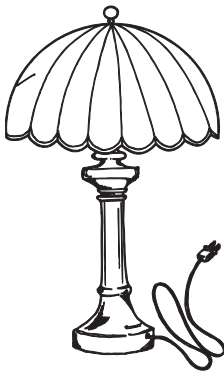
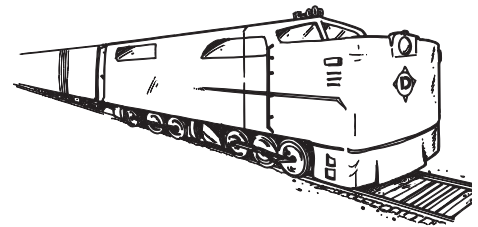
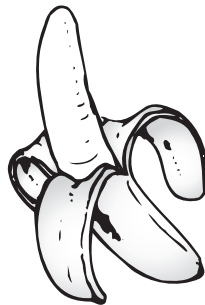
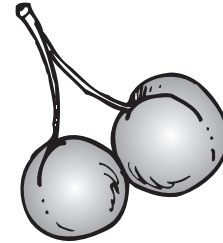
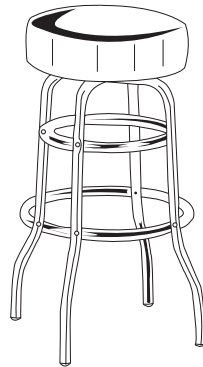
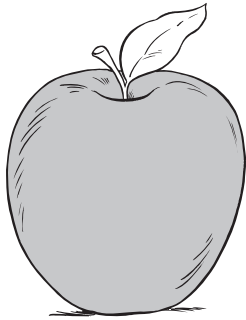


Sorting and Remembering Categories

Exercise 4

Pictures

Have your client sort the pictures into three categories. Then have her study them and code them. When your client thinks she can remember all of the pictures, have her cover the page and write the names of all 12 items on a separate sheet of paper.



Functional Memory Tasks

Introduction

The exercises in this section focus on coding functional information in tasks that are similar to items we encounter in life on a daily basis. They begin with simple messages, and progress to short paragraphs and narrative length materials. Your client will use various strategies to code the information based on what he has successfully learned during previous activities.

Process

Encourage your client to take his time with these exercises. Provide information as much as needed for coding to be successful but guard against some clients' tendencies to want to review the content over and over.

Instruct your client to use the strategies he feels he has always used. For example, if he highlights important information, give him a highlight marker. If he tends to write things down, give him a pencil and paper. Encourage him to study his cues and then let you know when he is ready for the review questions.

If your client claims he will just recall the information by reading it or listening to it, test his theory. If he is successful—that's great. However, if he is unsuccessful, help him develop one of the strategies mentioned above or work together to devise a system that will be effective for him.

Functional Memory Tasks

Exercise 1

Memos

Read the memo to your client or have him read it. If he reads it, encourage him to study it and code it. If you read it aloud, ask your client if he would like it repeated. Be prepared to repeat it as many times as necessary until your client is comfortable that he coded the content. Then cover the memo and have your client answer the questions, either by listening to them or reading them.

MEMO

TO: All Office Staff

RE: The meeting scheduled for 2:00 Tuesday afternoon has been changed to Wednesday at 3:30. It will be held in Conference Room F.

1. Who was the memo for?

To: _____

2. When was the meeting originally scheduled for?

Day: _____ Time: _____

3. When was the meeting rescheduled?

Day: _____ Time: _____

4. Where will the meeting be held?

In: _____

Functional Memory Tasks

Exercise 2

Appointments

Explain to the client that John has appointments with two doctors next week. Have the client read or listen to the information about the appointments and encourage him to code the information. Tell him to reread the information as many times as he needs, or repeat it for him until he feels comfortable that he has learned the details. Then present the questions verbally or have him read and answer them.

Eye doctor appointment with Dr. Akbar
Tuesday, August 17th at 3:00

General checkup with Dr. Payne
Friday, August 20th at 11:00

1. Who is John's eye doctor? _____
2. What day is the eye doctor appointment? _____
3. What date is the eye doctor appointment? _____
4. What time is the eye doctor appointment? _____
5. Which doctor is seeing John on Friday, August 20th? _____
6. Why is John seeing Dr. Payne? _____
7. What time is his appointment on Friday? _____

Functional Memory Tasks

Exercise 3

Directions

Read one set of directions at a time to your client or have him read them. Cue him to code the information. Then ask your client to tell you what he read or heard from memory. Encourage him to reread the directions as many times as necessary, or repeat them for him until he says he has coded the content.

1. Go straight ahead. Halfway down the hallway, the door to the lobby will be on your right.
2. Take I-95 South until you get off at the Annapolis exit. I'll meet you at the gas station at the end of the exit.
3. The office is on the second floor. It's the second door on your left when you get off the elevator.
4. The guest room is upstairs at the end of the hallway on your right.
5. The library is two buildings further down from the police station on Main Street.
6. Go left after you leave the store. Walk two blocks and you will see the car parked in the lot on your left.
7. Take State Street south. At the first light, go right. The mini-market will be on your left in about a half mile.
8. We will walk down East Drive, go left on Chestnut Street, and meet them in front of the bank.
9. Take the escalator down to the ground floor. Walk through the Appliance Department and you'll see the Lawn and Garden Department by the back wall.
10. After getting off the bus at 17th Street, walk toward the river for four blocks. Then go south on Avenue B for six more blocks.

Functional Memory Tasks

Exercise 4

Directions

Read one set of directions at a time to your client or have him read them. Cue him to code the information. Then ask your client to tell you what he read or heard from memory. Encourage him to reread the directions as many times as necessary, or repeat them for him until he says he has coded the content.

1. Take 309 North. After you come to Mac's Diner, take the next left onto Orville Street. Go about two miles along Orville, and at the next light you'll see the pizza place on your right.
2. Walk up Market Street for three blocks to Third Avenue. At Third Avenue, go right and walk four blocks until you reach Maple Avenue. Go right on Maple, and in about two and a half blocks you'll see the drugstore across the street.
3. After leaving this room, go right. When you get to the end of the hall, go left. Pass the elevators on your right and enter the lobby. On your right, you'll see a door that leads to a short hallway. Go through that door, and physical therapy will be the second door on your left.
4. Get on the Turnpike at Valley Forge. Go east on the Turnpike for about 16 miles to the Fort Washington exit. After you pay the toll, stay to the right and get on 202 North. From there you will see the hotel on the left.
5. At 3:00, get on Bus 313 at the Mill Street stop. Transfer to the 454 at Archer Avenue and take that bus to the mall. Use the south entrance and meet me at Barnes Shoes, which is three stores down on the left-hand side.

Functional Memory Tasks

Exercise 5

Paragraphs with 3-4 Elements – Inclusion

Have the client read or listen to each paragraph. Then have him answer the question from memory.

1. After washing and drying his clothes, he put away the detergent and dryer sheets. He hung his shirts and pants in the closet and put his T-shirts in the drawer.

What clothing did he put away? _____

2. Marietta is an animal lover. She has two cats and a German Shepherd. She keeps a fish in a large tank in her living room. It's a good thing she has a large apartment.

What animals does Marietta have? _____

3. Henri reads anything he can get his hands on. He reads any books and magazines he can find. He loves to go to the grocery store and read the labels on the containers. He even reads all the junk mail he receives every day.

What does Henri read? _____

4. On Saturday mornings, Jacquette gets up early and goes to any yard sale she can find. This past Saturday she bought two games, a vacuum cleaner that was missing its cord, and three chipped plates that she thought might be collectors' pieces.

What did Jacquette buy last Saturday? _____

5. Tanya really enjoys living in the city. Yesterday when she went to Central Park, she saw a mime performing for a small crowd, bought a hot dog from a vendor, and sat on a bench to watch the children playing. She thought it was a perfect day.

What did Tanya do and see in the park? _____

Functional Memory Tasks

Exercise 6

Paragraphs with 3-4 Elements – Inclusion

Have the client read or listen to each paragraph. Then have him answer the question from memory.

1. Carlos waited until Saturday to do his chores. First he straightened his workbench in the garage. Then he mowed the lawn and mulched the garden. He felt good when he saw how nice everything looked.

What chores did Carlos do on Saturday? _____

2. Craig likes to watch the home shopping channel. Within the last month, he ordered an embroidered blazer for his daughter, a cooking set to give as a wedding present, and some Super-Duper Car Wax for himself. He likes being able to order things by phone because he doesn't like shopping in stores.

What did Craig order? _____

3. Bette's daughter called her from school. Her daughter said she had forgotten some things and asked Bette to bring her lunch that was packed and in the refrigerator, her math homework that was on her desk, and her gym clothes that were somewhere on her bedroom floor. Bette said, "Okay," hung up, and went to look for the items.

What did Bette's daughter forget to take to school? _____

4. They had decided to get a pet dog so they looked at several breeds of puppies before narrowing the choice to three breeds. The Shetland sheepdog was friendly but seemed very high-strung. The chow chow looked like a little teddy bear but the owner said that the breed was usually a "one-person" dog. The golden retriever, however, seemed perfect in every way. After a short discussion, they decided to get the retriever.

Which breeds did they consider? _____

5. The Saturday schedule for the Shelbys was going to be busy. They planned to go to the nursery and buy some bushes for their front yard. Then they would have to plant the bushes by 1:00 because they were expected at a picnic by 2:00. After the picnic, they planned to go home and watch TV.

What were the Shelby's Saturday plans? _____

Functional Memory Tasks

Exercise 7

Paragraphs with 3-4 Elements – Exclusion

Have the client read or listen to each paragraph. Then have him answer the question from memory.

1. Mindy received many gifts for her birthday. Grandma gave her some clothing. Uncle Bill gave her a doll and a book bag. Aunt Sheryl gave her tickets to the zoo and a basketball.

Which gifts did Mindy get that were not toys? _____

2. Geraldo liked to collect many things. He had a book of rare stamps and a book of foreign coins. He added to his butterfly collection every summer. He wondered what else he could collect.

What did Geraldo collect that was not an insect? _____

3. Beverly welcomed her out-of-town guests warmly. She took them to the park and then to the museum downtown. They bought lunch from a street vendor before going to the fishing pier.

Where did Beverly and her guests go that were not buildings? _____

4. Her son participated in several after-school activities. In the fall, he was a fullback on the football team and an active member of the debate club. In the spring, he ran the 100-meter dash on the track team and participated as a soloist in the spring concert.

Which activities was he involved in that were not sports? _____

Functional Memory Tasks

Exercise 8

Paragraphs with 3-4 Elements – Exclusion

Have the client read or listen to each paragraph. Then have him answer the question from memory.

1. Christine reviewed her telephone bill carefully. She had made an overseas call to France to talk to an old college friend. She had a collect call from her brother in Georgia and two calls that she had made to friends in Texas and Arkansas.

Where did Christine call that was not in the United States? _____

2. She decided to cook a special meal. She baked fresh bread and made a Caesar salad. She prepared broiled flounder stuffed with crab meat and had strawberry cake for dessert.

What did she have that was not fish? _____

3. It was a Saturday night and they were trying to decide what to do. They could go visit friends or treat themselves to a movie. They talked about taking a walk in the park but finally decided to rent a movie and stay home.

Where did they consider going that was not indoors? _____

4. Before Oscar began his Saturday chores of mowing the lawn and washing the car, he ran some errands. First he went to the library and then to the hardware store to buy some wood screws. On the way home, he remembered to stop at the grocery store for milk and bread.

What did Oscar do that did not cost him money? _____

Functional Memory Tasks

Specific Information Retention

Exercise 9

Have the client read or listen to each paragraph. Then have him answer the questions from memory.

1. Maria went to the grocery store and searched up and down the aisles. She selected cereal for the kids to eat for breakfast, some lightbulbs to replace those that had burned out, and she stocked up on meat to store in the freezer and use as needed.

What food items did Maria buy? _____

What non-food item did Maria buy? _____

Who was the cereal for? _____

Why did Maria need the non-food item? _____

Where will Maria store the meat? _____

2. Robert was getting more and more butterflies in his stomach as the time for his presentation approached. He knew he was well-prepared, though. He had researched the topic thoroughly, organized the information carefully, and had even made handouts to give to each person in the audience.

What three things had Robert done to prepare for his presentation? _____

How did Robert feel? (Give two answers.) _____

3. Paula always had difficulty deciding what to get her mother for her birthday. Her mother had more than enough clothing, didn't like to read books or write letters, and complained about having more things to dust if you bought her a knickknack. Paula decided to give her mother a gift certificate to her favorite restaurant.

What was Paula trying to decide? _____

Why didn't Paula buy her mother clothing? _____

Why wouldn't Paula buy her mother stationary? _____

What chore did her mother complain about? _____

What did Paula buy for her mother? _____

Functional Memory Tasks

Specific Information Retention

Exercise 10

Have the client read or listen to each paragraph. Then have him answer the questions from memory.

1. Your meeting time has changed. It will be on Tuesday instead of Wednesday, and it will start at 1:30. Please remember to bring your minutes from the last meeting. It is anticipated that the meeting will last an hour and a half.

What day was your meeting originally scheduled for? _____

What day is it scheduled for now? _____

What time will the meeting start? _____

How long will the meeting last? _____

What should you remember to bring to the meeting? _____

2. Before leaving on vacation, Syndie went to the post office to put in a notice to get her mail held for the one week she'd be away. She also arranged for her parents to watch her dog, and she took her cat to an animal boarding center. Lastly, she called the newspaper office and asked them not to deliver the newspaper while she was away.

Why did Syndie go to the post office? _____

What did she arrange for her dog while she was away? _____

What did she arrange for her cat while she was away? _____

What was the last thing she arranged? _____

How long was she going away? _____

3. Before going to Haiti with a group to build a boys' orphanage, Kathy had to prepare. First she got her passport. Then she arranged to get shots for typhoid, tetanus, and hepatitis. She also had to start taking tablets to prevent malaria. She went to classes to learn about the country and to learn some basic Creole and French. The group leader helped to get the airline tickets and hotel reservations.

What country was Kathy going to? _____

What did she get first? _____

What was one disease she had to get shots for? _____

What were the tablets for? _____

What did she learn in the class? _____

What did the group leader help to get? _____

Functional Memory Tasks

Exercise 11

Paragraph Retention

Have your client listen to or read the paragraph. If he is reading, encourage him to underline or highlight the key information. If he is listening, encourage him to take notes. Then have him answer the questions from memory.

The White House is the home of the President of the United States. It was originally the color gray and was called the President's Palace. In 1814, it was painted white to cover damage and discoloration that was caused by a fire. Since then, it has been called the White House, although it wasn't officially named that until 1902.

1. What was the home of the President of the United States originally called?

2. What was the original color of the President's home? _____

3. When and why was it painted white? _____

4. What officially happened in 1902? _____

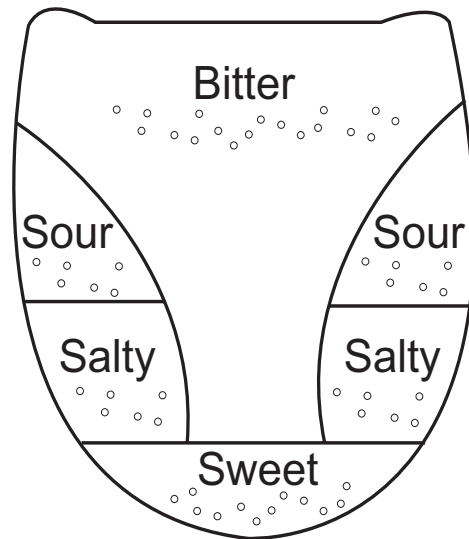
Functional Memory Tasks

Exercise 12

Paragraph Retention

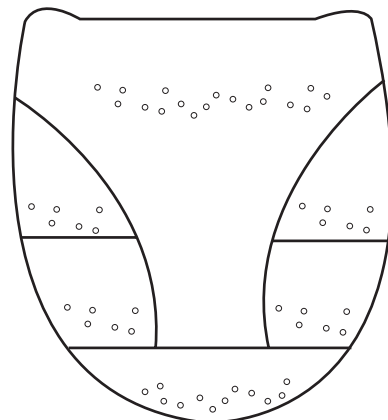
Have your client listen to or read the paragraph. If he is reading, encourage him to underline or highlight the key information. If he is listening, encourage him to take notes. Then have him answer the questions from memory.

Taste buds are small bumps called *papillae* (*pa PILL eye*) that cover your tongue. The food you eat is made wet by the liquids in your mouth. When this mixture comes in contact with your taste buds, a message is sent to your brain. Each taste bud is specific to one flavor – bitter, sour, salty, or sweet. The back of your tongue tastes bitterness, the sides taste sour and salty flavors, and the tip of your tongue tastes sweetness.



1. What is another name for taste buds? _____
2. How does your brain find out how something tastes? _____

3. What four flavors can we taste? _____
4. Describe the location of taste buds on the tongue or fill in the diagram.



Functional Memory Tasks

Exercise 13

Paragraph Retention

Have your client listen to or read the paragraph. If he is reading, encourage him to underline or highlight the key information. If he is listening, encourage him to take notes. Then have him answer the questions from memory.

The Bureau of Engraving and Printing, located in Washington, D.C., prints the United States' paper money. Steel plates are engraved and used in a printing press to make money. There are 32 bills printed on each sheet of special paper. The paper must go through the press three times before it looks like the bills we use. The first time through the press, the back of paper money is printed. The front is printed on the second pass. Finally, before the sheets of paper are cut into separate bills, all the numbers, letters, and words are printed on the money.

1. Who is responsible for printing the United States' money?

2. Where is the Bureau located? _____

3. How many bills are made on each sheet of paper? _____

4. How many times must the paper go through the printing press? _____

5. In what order are the components of a bill printed?

6. What is the last thing done to the sheet of bills so they can be put into circulation?

Narrative Retention

Have your client listen to or read the passage. If he is reading, encourage him to underline or highlight the key information. If he is listening, encourage him to take notes. Then have him answer the questions on the next page from memory.

Selecting a Puppy

Deciding to get a puppy involves many considerations. Make sure you're ready to take on the responsibility for housebreaking, training, feeding, and maintaining the health of the puppy. Take these things into account:

1. How will everyone in your household feel about and deal with a puppy?
2. Which breed will you choose? Choose the breed carefully, considering the size the puppy will grow to be, the temperament of the breed, and any limitations in your environment.
3. Is the person who is providing you with the puppy reliable?
4. Do you want a male or a female puppy?
5. Who will be the main caretaker of the puppy?

Although it's recommended that you don't get a puppy that is younger than six weeks old, waiting until the puppy is eight weeks old will help insure that the puppy is fully weaned from its mother and is strong enough to be on its own.

Look at the puppy carefully and make sure that it's healthy and active. If the puppy has a runny nose or watery eyes, it may be a sign that it is ill, and you should consider selecting a different puppy. Watch the puppy's behavior. Stay away from an overly shy or easily frightened puppy, one that snaps, or one that is overly aggressive.

As soon as possible after bringing your puppy home, take it to a veterinarian for a checkup. The vet will be able to give you advice on how to keep your dog healthy and will be of great assistance in caring for the dog when it's sick. Your vet will advise you on essential vaccinations that will protect your puppy from fatal diseases.

Functional Memory Tasks

Exercise 14, *continued*

Narrative Retention

Have your client answer these questions about the narrative on the previous page. Ask him to first go through the questions and answer as many as he can from memory. For those he can't recall, have him go back and scan the narrative or have him use his notes to locate the answers.

1. What are some responsibilities for taking care of a puppy? _____

2. What are three of the five considerations that one should take into account when selecting a puppy?

3. Why is it advised to wait until a puppy is eight weeks old before bringing it home?

4. What are some possible signs that a puppy is sick?

5. What puppy behaviors should a potential buyer be wary of? _____

6. Why should a veterinarian's services be sought? _____

Narrative Retention

Have your client listen to or read the passage. If he is reading, encourage him to underline or highlight the key information. If he is listening, encourage him to take notes. Then have him answer the questions on the next page from memory.

Flashlight Tips

A flashlight is one of the most useful appliances you could own. To insure that it keeps in the best working order, here are some dos and don'ts:

1. When you insert the batteries, make sure the positive (+) end points forward toward the lightbulb. If you insert the batteries in the wrong direction, there won't be an electrical current flowing to the lightbulb and the flashlight won't work.
2. Cold weather can be very hard on batteries. Don't expect the flashlight to work if you've left it out in the cold all winter. However, heat will frequently bring a battery back to life, so try bringing the flashlight indoors. Don't discard the batteries until you are sure they are unusable.
3. Remember that batteries have short lives so don't expect a flashlight to provide light for a long period of time the way a regular lamp does.

If the light keeps flickering when you turn on the flashlight, it probably has a poor connection. Try opening the flashlight and gently stretching the coiled spring in the cap to improve the connection of the battery with the contacts. If the light becomes faint, it's probably due to weak batteries and it's time to replace them with new ones. There is the possibility that if you leave batteries in a flashlight for too long, they'll begin leaking a brownish, sticky liquid. If this happens, throw away the batteries (be careful not to touch any of the liquid) and clean the inside of the flashlight before installing new batteries.

Functional Memory Tasks

Exercise 15, *continued*

Narrative Retention

Have your client answer these questions about the narrative on the previous page. Ask him to first go through the questions and answer as many as he can from memory. For those he can't recall, have him go back and scan the narrative or have him use his notes to locate the answers.

1. In which direction should you insert batteries in a flashlight? _____

2. What effect can extreme cold have on batteries? _____

3. What is a difference between a flashlight and a regular lamp? _____

4. What does a flickering light indicate, and what is a possible solution for this problem?

5. What should you do if the light from a flashlight becomes faint? _____

6. What might happen if you leave batteries in a flashlight for an extended period of time, and what should you do about it?

Functional Memory Tasks

Exercise 16

Narrative Retention

Have your client listen to or read the passage. If he is reading, encourage him to underline or highlight the key information. If he is listening, encourage him to take notes. Then have him answer the questions on the next page from memory.

Smokey the Bear

During World War II, lumber was a precious resource, and one that needed to be protected for use in the war effort. As a result, the U.S. Forest Service worked with the Wartime Advertising Council to design an ad campaign to educate people about the dangers of forest fires that would damage the lumber supply. Their creation was the now famous cartoon figure Smokey the Bear. In 1950, firefighters found a real-life Smokey the Bear—a four-pound bear cub that was found clinging to a fire-blackened tree in New Mexico’s Lincoln National Forest. Firefighters named him Smokey the Bear, and he was sent to the Smithsonian Institution’s National Zoo where he lived until his death in 1975.

In the 50 years following the creation of the symbol of Smokey the Bear, he has been featured in advertisements, cartoons, billboards, and was even on a postage stamp. Representations of Smokey have participated in Macy’s Thanksgiving Day Parade and in the New Year’s Day Tournament of Roses Parade. In 1994, the Forest Service planned a year of special events commemorating Smokey’s golden anniversary. At that time, the Fernbank Museum of Natural History in Atlanta, Georgia, opened a traveling show focusing on Smokey the Bear’s history and on the characteristics of forest fires and fire prevention.

Functional Memory Tasks

Exercise 16, *continued*

Narrative Retention

Have your client answer these questions about the narrative on the previous page. Ask him to first go through the questions and answer as many as he can from memory. For those he can't recall, have him go back and scan the narrative or have him use his notes to locate the answers.

1. During which war was Smokey the Bear created? _____
2. Which U.S. service was involved in developing the symbolic Smokey the Bear?

3. What were the services concerned about protecting? _____
4. When did firefighters find the real-life Smokey? _____
5. Where did firefighters find Smokey? _____
6. Where did the original Smokey live until he died? _____
7. When did he die? _____
8. In what kinds of things has the symbolic Smokey appeared? _____

9. What did the Forest Service plan in 1994, and why? _____

10. Where is the Fernbank Museum of Natural History? _____
11. What kind of traveling show did the museum open? _____

Memory and Mental Manipulation

Introduction

A higher level of memory coding involves the element of being able to mentally manipulate the information without losing any salient content. In many instances, we need to have this mental flexibility for integrating new information and for making effective decisions based on all the facts. The following tasks present several formats for coding and manipulating information before responding with a specific answer.

Process

Reassure your client that you'll repeat the items as necessary but that you'll always present the stimulus items in their entirety. Many clients will unintentionally attempt to get you to create a chunking system for them by providing the information in chunks as shown in the following exchange.

Clinician: Rearrange these items from smallest to largest: *hat, desk, button, suitcase*.
Client: Please repeat.
Clinician: hat, desk, button, suitcase
Client: Okay, let's see . . . button . . . uh . . . hat . . . what were the other two?
Clinician: I'll give all of them to you again. The four words are *hat, desk, button, suitcase*.
Client: button, hat . . . uh . . . hat and desk . . . suitcase

If your client is unable to do the task auditorily, provide her with the written list. Let her study it and mentally rehearse the answer. Then cover the items and have her provide the answer.

The level of difficulty can be increased by introducing a distractor question. It isn't recommended that you use a silent pause to increase difficulty because the pause will be used by the client for silent rehearsal of the items. Here's an example using a distractor question.

Clinician: Remember these words: *trombone, guitar, piano*.
Client: Okay, I got them.
Clinician: In what month is New Year's Day?
Client: January
Clinician: Okay, now say the words back to me, but put them in reverse order.
Client: piano, guitar . . . ummm . . . trombone. Boy, this is hard.

Memory and Mental Manipulation

Exercise 1

Reverse Order – 3 Words

Read the three words to your client. Have her repeat them to you in reverse order.

1. trombone, guitar, piano
2. laugh, frown, grin
3. flower, bouquet, vase
4. average, middle, center
5. victory, win, conquer
6. realtor, banker, investor
7. urban, rural, suburban
8. sunny, chilly, mild
9. adolescent, infant, child
10. walk, skip, stroll
11. silly, funny, joke
12. window, screen, shutters
13. mosquito, wasp, bee
14. necklace, watch, ring
15. batteries, flash, photograph
16. think, ponder, reflect
17. week, day, month
18. vision, hearing, taste
19. refrigerator, toaster, mixer
20. basement, kitchen, living room

Memory and Mental Manipulation

Exercise 2

Reverse Order – 4 Words

Read the four words to your client. Have her repeat them to you in reverse order.

1. bottle, jug, box, can
2. street, road, avenue, lane
3. gray, blonde, brunette, black
4. burn, char, singe, scorch
5. tin, copper, brass, chrome
6. pamphlet, magazine, book, postcard
7. letters, notes, numbers, symbols
8. prize, award, trophy, reward
9. nickel, quarter, dime, penny
10. cabbage, spinach, lettuce, coleslaw
11. pigeon, sparrow, robin, eagle
12. conquer, win, victory, triumph
13. mischievous, sly, tricky, sneaky
14. remain, endure, survive, last
15. pharmacy, florist, bank, restaurant
16. sweater, shirt, coat, sweatpants
17. important, special, unique, outstanding
18. willow, magnolia, maple, dogwood
19. retriever, poodle, spaniel, schnauzer
20. yesterday, now, tomorrow, today

Memory and Mental Manipulation

Scrambled Sentences – 4 Words

Exercise 3

Read the words to your client. Have her rearrange the words into a sentence and say the sentence aloud.

1. the, open, door, back
2. blue, was, sky, the
3. me, seven, at, call
4. watch, broken, his, was
5. the, cloudy, was, weather
6. hand, give, your, me
7. late, too, was, it
8. fog, thick, the, was
9. road, the, closed, was
10. you, do, how, feel
11. busy, weekend, was, their
12. he, book, a, wrote
13. dishes, the, dirty, were
14. that, trash, up, pick
15. bus, ride, city, the
16. cows, milked, the, were
17. his, late, ride, was
18. dog, have, we, a
19. were, two, missing, numbers
20. the, one, bottom, take

Memory and Mental Manipulation

Scrambled Sentences – 5 Words

Exercise 4

Read the words to your client. Have her rearrange the words into a sentence and say the sentence aloud.

1. was, frying, the, pan, dirty
2. number, is, phone, your, what
3. eight, show, at, the, began
4. need, don't, more, you, any
5. the, could, music, hear, I
6. wake, you, up, to, need
7. the, very, was, soup, hot
8. keys, you, your, did, lose
9. eat, you, when, dinner, can
10. card, he, a, her, sent
11. the, lawn, mowed, front, she
12. state, drove, across, they, the
13. he, a, car, used, bought
14. good, very, movie, was, the
15. five, building, floors, the, had
16. ten, phone, his, rang, times
17. New, in, lives, York, Mary
18. were, sixteen, football, boys, playing
19. fly, eagles, high, can, very
20. tell, your, about, me, day

Memory and Mental Manipulation

Exercise 5

Word Order – 3 Words

Read the three words to your client. Have her repeat them back to you in the order they would occur.

Example: You say, “Tuesday, Wednesday, Monday.”
Client says, “Monday, Tuesday, Wednesday.”

1. October, April, February
2. 16, 19, 17
3. wash, sort, dry
4. eat, leave, order
5. catch, cast, bait
6. Saturday, Monday, Thursday
7. fifth, tenth, first
8. look, buy, choose
9. eat, cook, clean up
10. adult, infant, teenager
11. plant, grow, water
12. sprint, walk, jog
13. pitch, run, hit
14. cocoon, caterpillar, butterfly
15. fall, summer, spring
16. alarm, dress, get up
17. publish, edit, write
18. drive, start, arrive

Memory and Mental Manipulation

Exercise 6

Word Order – 4 Words

Read the four words to your client. Have her repeat them back to you in the order they would occur.

Example: You say, “Tuesday, Friday, Wednesday, Monday.”

Client says, “Monday, Tuesday, Wednesday, Friday.”

1. November, March, August, January
2. junior high, college, elementary, senior high
3. seventh, second, fifth, fourth
4. toddler, infant, adolescent, newborn
5. 8 P.M., noon, 3 A.M., midnight
6. evening, night, afternoon, morning
7. Sunday, Thursday, Wednesday, Saturday
8. Christmas, Labor Day, New Year’s Day, Thanksgiving
9. freshman, senior, junior, sophomore
10. fifties, nineties, twenties, seventies
11. empty, bathe, dry, fill
12. buy, unwrap, give, wrap
13. fly, depart, arrive, board
14. well-done, rare, medium, medium-rare
15. swing, run, pitch, hit
16. serve, buy, eat, prepare
17. propose, date, marry, meet
18. hundred, billion, million, thousand

Memory and Mental Manipulation

Exercise 7

Ranking

Read the four words to your client. Ask her to mentally rehearse the words and to let you know if she coded all of them. If not, repeat the words. Then give her the instruction for each set of words.

1. pot, mug, chair, dime
Repeat the words in order of smallest to largest.
2. lion, mouse, fire alarm, rock
Repeat the words in order of loudest to quietest.
3. flagpole, pencil, cane, hammer
Repeat the words in order of longest to shortest.
4. white, gray, black, cream
Repeat the words in order of darkest to lightest.
5. grandfather, great-grandson, grandson, great-grandfather
Repeat the words in order of oldest to youngest.
6. motorcycle, jet, tricycle, helicopter
Repeat the words in order of fastest to slowest.
7. log, stick, tree trunk, leaf
Repeat the words in order of lightest to heaviest.
8. stone, scissors, razor, butter knife
Repeat the words in order of sharpest to dullest.
9. rock pile, window glass, road surface, sandpaper
Repeat the words in order of smoothest to roughest.
10. sofa, gum, book, diamonds
Repeat the words in order of most expensive to least expensive.

Memory and Mental Manipulation

Exercise 8

Alphabetical Order – 3 Words

Read the three words to your client. Have her repeat them back to you in alphabetical order. Repeat the words as needed.

1. monkey, boot, yellow
2. lion, nickel, acre
3. under, over, beside
4. life, hope, just
5. queen, pen, root
6. more, ink, float
7. dentist, week, item
8. number, round, kid
9. water, near, trunk
10. pants, noon, little
11. hard, mug, joke
12. many, boy, train
13. pass, purchase, effort
14. drip, date, local
15. fire, outside, ocean
16. wood, zoo, wire
17. pump, plow, pillow
18. sharp, send, stay
19. ring, rental, rusty
20. cape, coach, clip

Memory and Mental Manipulation

Alphabetical Order – 4 Words

Exercise 9

Read the four words to your client. Have her repeat them back to you in alphabetical order. Repeat the words as needed.

1. look, dark, eagle, travel
2. king, game, open, clock
3. pint, want, name, rest
4. drink, house, list, finger
5. sky, pour, young, milk
6. rain, paint, train, question
7. gift, drink, boy, frost
8. yellow, liver, queen, oven
9. frost, dust, horse, apple
10. hand, earth, dog, jungle
11. out, truth, vote, rinse
12. upon, angle, inch, ear
13. two, eight, five, nine
14. Wednesday, Monday, Thursday, Sunday
15. September, April, October, January
16. boy, girl, child, baby
17. can, ban, fan, man
18. did, dent, dust, doughnut
19. sang, soap, steam, send
20. read, rust, rink, rat

Memory and Mental Manipulation

Exercise 10

Size – 3-4 Words

Read the words to your client. Have her identify the smallest item on the list.

1. basket, bucket, mug
2. shovel, fork, broom
3. lamp, lightbulb, spotlight
4. shower, bathroom, kitchen
5. needle, scissors, pencil
6. frying pan, plate, teacup
7. mosquito, grasshopper, wasp, roach
8. umbrella, grape, cloud, orange
9. toaster, microwave, can opener, soda can
10. cat, goat, sheep, horse
11. wallet, credit card, grocery bag, suitcase
12. flashlight, tent, sleeping bag, match
13. book, postcard, magazine, letter
14. hammer, handsaw, crowbar, shovel
15. jacket, boot, shoe, raincoat
16. ostrich, robin, eagle, hummingbird
17. airplane, bicycle, train, car
18. pen, ruler, paper clip, pencil
19. box, stamp, paper, envelope
20. grape, pineapple, orange, apple

Resources and References

Evidence-Based Research Articles Regarding Therapy for Memory Disorders

- American Speech-Language-Hearing Association. (2006). *Treatment efficacy summary: Aphasia resulting from left hemisphere stroke*. Retrieved 12/23/06 from www.asha.org.
- American Speech-Language-Hearing Association. (2006). *Treatment efficacy summary: Cognitive-communication disorders resulting from right hemisphere brain damage*. Retrieved 12/23/06 from www.asha.org.
- American Speech-Language-Hearing Association. (2006). *Treatment efficacy summary: Cognitive-communication disorders resulting from traumatic brain injury*. Retrieved 12/23/06 from www.asha.org.
- Carney, N., Chestnut, R., Maynard, H., Mann, N.C., Patterson, P., & Helfand, M. (1999). Effect of cognitive rehabilitation on outcomes for persons with traumatic brain injury: A systematic review. *Journal of Head Trauma Research, 14*(3), 277-307.
- Cicerone, K.D., Dahlberg, C., Kalmar, K., Langenbahn, D.M., Malec, J.F., Bergquist, T.F., et al. (2000). Evidence-based cognitive rehabilitation: Recommendations for clinical practice. *Archives of Physical Medicine and Rehabilitation, 81*(12), 1596-1615.
- Cicerone, K.D., Dahlberg, C., Malec, J., Langenbahn, D.M., Felicetti, T., Kneipp, S., et al. (2005). Evidence-based cognitive rehabilitation: Updated review of the literature from 1998 through 2002. *Archives of Physical Medicine and Rehabilitation, 86*(8), 1681-1692.
- Coelho, C.A., DeRuyter, F., & Stein, M. (1996). Treatment efficacy: Cognitive-communication disorders resulting from traumatic brain injury in adults. *Journal of Speech and Hearing Research, 39*(5), S5-S17.
- Craik, F.I.M., Winocur, G., Palmer, H., Binns, M.A., Edwards, M., Bridges, K., et al. (2007). Cognitive rehabilitation in the elderly: Effects on memory. *Journal of the International Neuropsychological Society, 13*, 132-142.
- Cuesta, G.M. (2003). Cognitive rehabilitation of memory following stroke. Theory, practice, and outcome. *Advances in Neurology, 92*, 415-421.
- Winocur, G., Craik, F.I.M., Levine, B., Robertson, I.H., Binns, M.A., Alexander, M., et al. (2007). Cognitive rehabilitation in the elderly: Overview and future directions. *Journal of the International Neuropsychological Society, 13*, 166-171.

Books on Memory and Memory Disorders

Elbaum, J., Kramer, P., Benson, D., & Dulaski, C. (2002). *Functional memory manual*. Austin, TX: Pro-Ed, Inc.

Helms-Estabrooks, N., & Albert, M.L. (2005). *Manual of aphasia and aphasia therapy*. Austin, TX: Pro-Ed, Inc.

Hillis, A. (2002). *The handbook of adult language disorders*. NY: Psychology Press, an imprint of the Taylor & Francis Group.

Higbee, K. (2001). *Your memory: How it works and how to improve it*. NYC: Marlowe & Company.

Keith, R.L., & Schumacher, J.G. (2001). *Speech and language rehabilitation*. Fourth edition. Austin, TX: Pro-Ed, Inc.

LaPointe, L.L. (2005). *Aphasia and related neurogenic language disorders*. Third edition. NYC: Thieme Publishers.

Sarno, M.T., & Peters, J.F. (Eds). (2004). *The aphasia handbook: A guide for stroke and brain injury survivors and their families*. NYC: National Aphasia Association.

Organizations

American Speech-Language-Hearing Association (ASHA)

Promotes the interests of and provides the highest quality services for professionals in audiology, speech-language pathology, and speech and hearing science; advocates for people with communication disabilities

www.asha.org

800-498-2071 (members)

800-638-8255 (non-members)

Aphasia Hope Foundation

Promotes research into the prevention and cure of aphasia as well as ensuring that all survivors of aphasia and their caregivers are aware of and have access to the best possible treatments available; the largest collaborative online resource for aphasia

www.aphasiahope.org

866-449-5804 (toll free)

Brain Injury Association of America (BIA)

Provides information, education, and support to persons currently living with TBI, their families, and professionals working with individuals who have sustained a TBI

www.biausa.org

800-444-6443

National Aphasia Association (NAA)

Promotes public education, research, rehabilitation, and support services to assist people with aphasia and their families

www.aphasia.org

800-922-4622

National Institute of Neurological Disorders & Stroke (NINDS)

Supports and conducts research on the brain and nervous system; fosters the training of investigators in the basic and clinical neurosciences; and seeks better understanding, diagnosis, treatment, and prevention of neurological disorders

www.ninds.nih.gov

800-352-9424

National Rehabilitation Information Center (NARIC)

Provides information to the disability and rehabilitation community through online publications, searchable databases, and timely reference and referral data

www.naric.com

800-346-2742

National Stroke Association (NSA)

Provides information and resources for stroke survivors, their families, and caregivers

www.stroke.org

800-787-6537 (STROKES)

Websites

www.memory-key.com

About Memory is devoted to “learning about memory for permanent memory improvement;” offers two free newsletters about memory

www.nlpschedule.com and www.holisticonline.com/hol_neurolinguistic.htm

These websites offer complete information on neuro-linguistic programming (NLP), including its history.

References

- American Kennel Club. (2006). *The Complete Dog Book*. (20th ed.) NYC: Ballantine Books, a Random House Publishing Group.
- Bandler, R., & Grinder, J. (1979). *Frogs Into Princes--Neurolinguistic Programming*. Moab, UT: Real People Press.
- Buhr, K. (1997). *An experiment testing the eye movement hypothesis of NLP by presenting visual stimuli and measuring reaction times*. Unpublished master's thesis, University of Bielefeld, Department of Psychology, Bielefeld, Germany.
- McAbee, P., & Nesbit, C. (October 1988-June 1989). *NLP with Ethics*. Workshop for Practitioner Training. Philadelphia Training Institute for Neuro-Linguistic Programming.
- Ravenal, R. (1994). Where There's Smokey, There's Never Any Fire. *Smithsonian Magazine*, 59-61.

23-08-98765432