iPads to Paper and Pencil: Many, Many Ideas and Ready-to-Use Resources for Cognitive Stimulation Programs

Dr. Rob Winningham,
Professor of Psychology & Gerontology
Western Oregon University



Computer Based Cognitive Stimulation Led to Significant Improvements

- Lee et al., (2013) published a paper in PLOS ONE describing the results of an 8 week (24 session) computer training intervention group relative to a waitlist control group. Significant improvements observed in:
 - Immediate memory
 - Attention
 - Visual spatial memory

A Multimodal Approach May Be Best

 Nishiguchi et al. (2015) reported that a 12week program that combined physical and cognitive exercise yielded not only improvements in executive functioning performance (e.g., attention) but also led to more efficient brain activity (in the prefrontal cortex) as measured by fMRI.

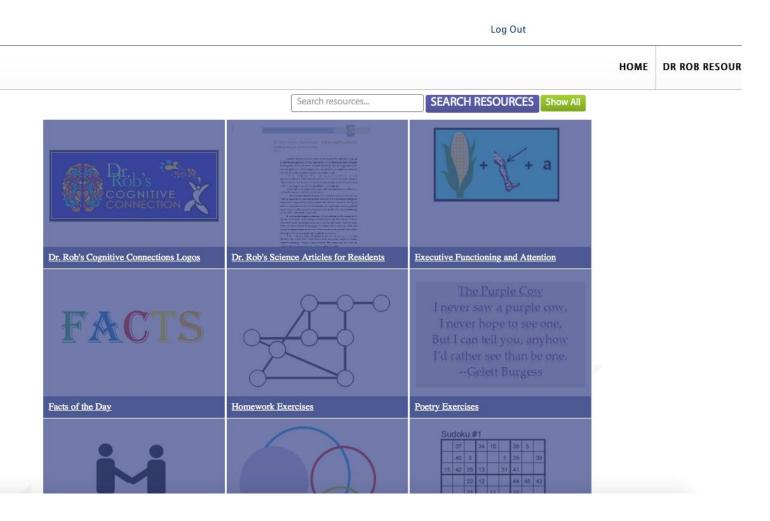
How can a program be implemented?

- Group-based vs. individual
- Paper and pencil
- Computer options
 - Web based
 - Kiosk or large monitor interface (e.g., Linked Senior)
 - Tablet interface

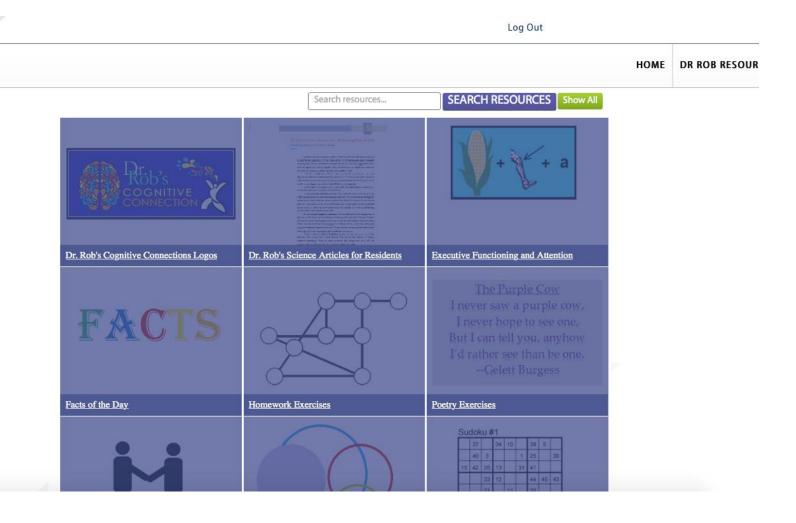
Cognitive Enhancement Activities

- Use a wide variety of activities
- Three to six minutes per activity
- Focus on executive functioning (i.e., attention, concentration and inhibition) in order to maximize generalization to untrained activities and activities of daily living

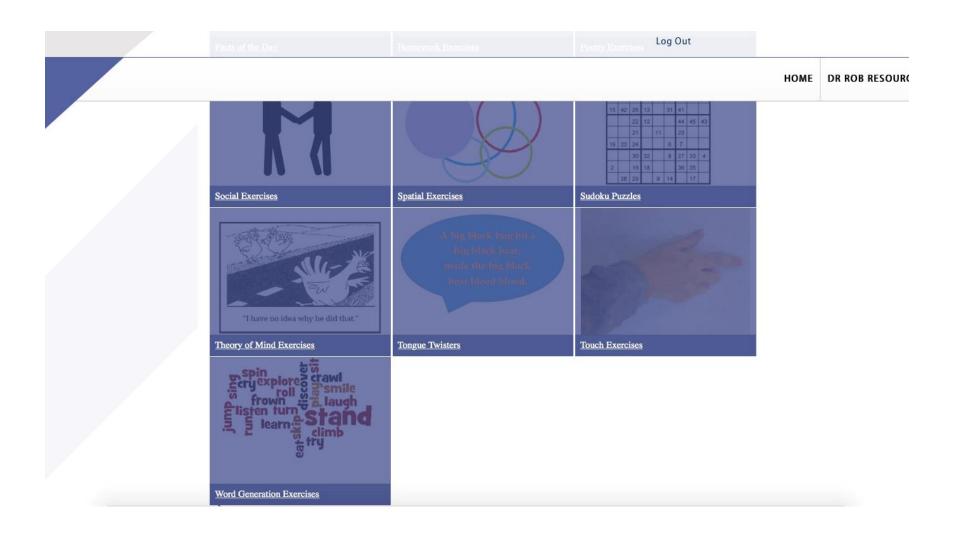
You Have Access to Hundreds of Ready-to-Print Activities



Then Choose Category of Activities



Then Choose Category of Activities



Categories of Resources

- Dr. Rob's Science Articles for Residents
- Executive Functioning and Attention Exercises
- Facts of the Day
- Homework Exercises
- Poetry Exercises
- Social Exercises
- Spatial Exercises
- Sudoku Puzzles
- Theory of Mind Puzzles
- Tongue Twisters
- Touch Exercises
- Word Generation Exercises

Dr. Rob's Science Articles for Residents

HOME DR ROB RESOU Dr. Rob's Cognitive Connections Logos **Executive Functioning and Attention** Issue 1, Maximizing Memory Ability in Older Adulthood Issue 2, Sleep and Memory Issue 3, You Can Get an Excellent Brain Workout with an iPad Issue 4, What is the Difference Between Dementia and Alzheimer's Disease Issue 5, Is Alcohol Good or Bad For Our Brains and Memory Issue 6, Is Dementia on the Rise? Issue 7, Talking to a Friend Each Day May Keep the Doctor Away Issue 8, Why Do We Forget Names? Issue 9, Don't Stress About It

Log Out

Sample Article Layout (they come in .doc format)



Dr. Rob's Science Connection -- Enhancing Brain Health

Is Alcohol Good or Bad for Our Brains and Memory? Issue 5

Is alcohol good or bad for our brains and memory? It depends. It largely depends on how much one drinks, genetics, and maybe even gender. There is evidence that one to two drinks a day can have a protective effect on the brain, in terms of a reduced likelihood of developing dementia or having a stroke (strokes can lead to vascular dementia, which is the second most common type of dementia, after Alzheimer's). In a widely publicized study known as the Rotterdam Study, researchers followed thousands of older adults and found a significant decrease in their chance of getting dementia if they consumed a small amount of alcohol most days relative to people who almost never drink, but the risk of dementia increased for heavier drinkers. In a 2009 study 1, researchers combined the data from many published studies and reported a 25%-28% reduction in dementia relative to abstainers. The beneficial effects of alcohol may come from reducing inflammation, increasing HDL cholesterol, and increases insulin sensitivity. 1, 2 Alcohol, particularly red wine, is also high in antioxidants, which could increase the longevity of our cells.

But, like many drugs, there are always risks that need to be weighed relative to possible benefits. And, it is important to note that currently there isn't compelling evidence that starting to drink after years of abstaining is going to have beneficial effects. Particularly worrisome, is the fact that heavy alcohol consumption can even cause cognitive impairment. For example, Wernicke-

Executive Functioning and Attention

Log Out HOME DR ROB RESOUR Search resources... SEARCH RESOURCES Dr. Rob's Cognitive Connections Logos Dr. Rob's Science Articles for Residents Executive Functioning and Attention Alphabetization Anagrams Buzz Creative Brainstorming Hieroglyphics Letter Symbol Activities Mind Benders Newspaper Activity One-Letter Puzzles Ping Pang Pong Root-o-nyms

Executive Functioning and Attention

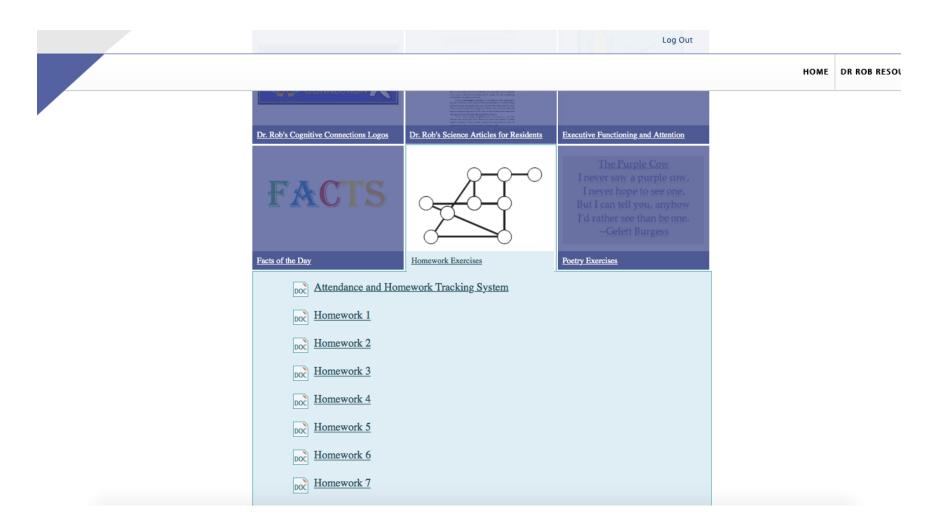
HOMI

- **Hieroglyphics**
- ▶ Letter Symbol Activities
- Mind Benders
- Newspaper Activity
- One-Letter Puzzles
- Ping Pang Pong
- ▶ Root-o-nyms
- > Sentence Inhibition
- Simple Math
- > Split Words
- > State Fun
- **Stroop**
- Trail Making
- Trigger Words

Facts of the Day



36 Homework Assignments



Sample Homework



Homework Assignment #2:

Complete the following sequences:

1. 2, 4, 6, 8, 10, 12, ?	1.	2,	4.	6.	8,	10,	12,	?
--------------------------	----	----	----	----	----	-----	-----	---

a. 13

b. 14

c. 16

d. 15

2. 1, 3, 6, 10, 15?

a. 17

b. 20

c. 21

6. 4, 12, 16, 20, ?, 12, 4

a. 4

b. 12

c. 16

d. 20

7. A, D, G, J?

a. M

b. N

c.O

Poetry

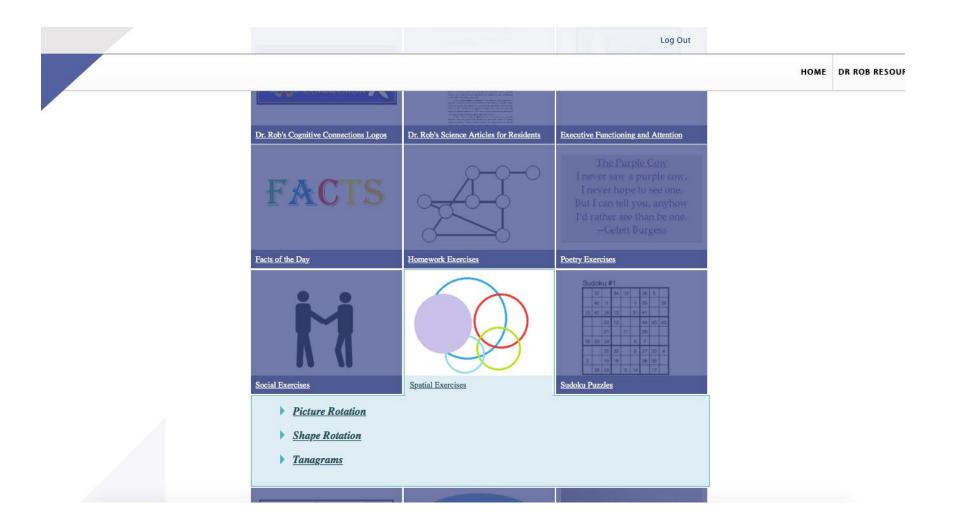
Dr. Rob's Cognitive Connections Logos Dr. Rob's Science Articles for Residents **Executive Functioning and Attention** The Purple Cow I never saw a purple cow, I never hope to see one, But I can tell you, anyhow I'd rather see than be one. --Gelett Burgess Facts of the Day Poetry Exercises Homework Exercises Poetry Activity 1 Sudoku Puzzles Social Exercises **Spatial Exercises**

HOME DR ROB RI

Social Activities



Spatial Exercises

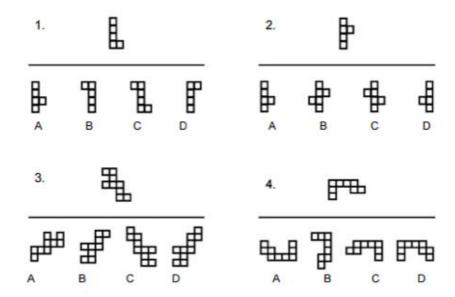


Shape Rotation Example



Shape Rotation Activity #1:

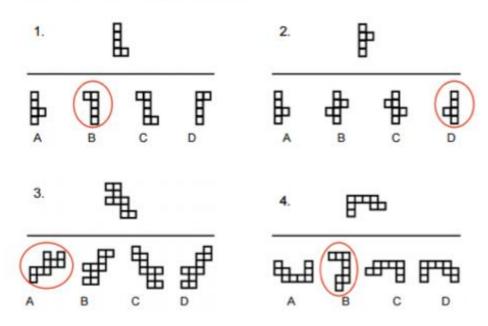
Which of the shapes below the line is a **rotated** image of the shape above the line? Mirrored or similar images do not count. Tip: Try to use the process of elimination to narrow down your options.



Shape Rotation Example



Shape Rotation Activity #1: SOLUTIONS



Sudokus

Log Out

HOME

DR ROE

Dr. Rob's Cognitive Connections Logos Dr. Rob's Science Articles for Residents Executive Functioning and Attention Facts of the Day Homework Exercises Poetry Exercises Sudoku Puzzles Social Exercises Spatial Exercises Difficult Sudoku Easy Sudoku

Mini Sudokus



Sudoku Activity #12:

Fill in the blank squares so that each row, each column and each 2-by-2 block contains all of the digits 1 thru 4.

		2	
	2		4
		4	
1			

		2	
			4
	3		
1	4		

Mini Sudokus



Sudoku Activity #12: SOLUTIONS

4	1	2	3
3	2	1	4
2	3	4	1
1	4	3	2

4	1	2	3
3	2	1	4
2	3	4	1
1	4	3	2

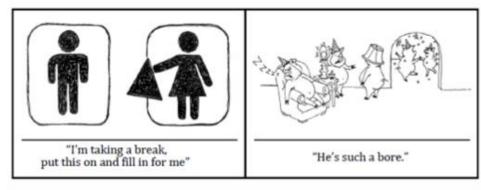
Theory of Mind

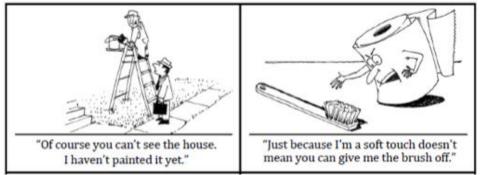
Log Out

Social Exercises Spatial Exercises Sudoku Puzzles "I have no idea why he did that." Theory of Mind Exercises Tongue Twisters Touch Exercises Skit Activity Cartoon Activities

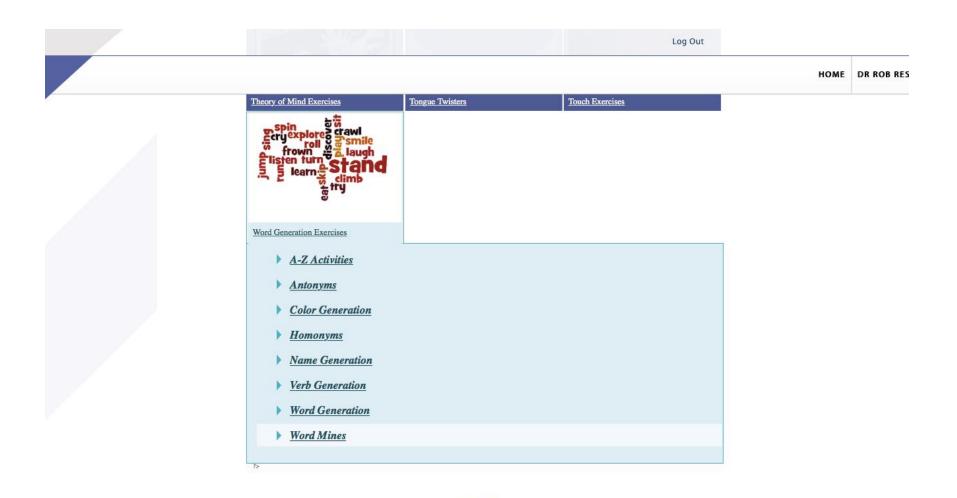
Theory of Mind: Cartoon Captions







Many Word Generation Activities





A-Z Activity 4: Male First Names

Fill in the blank using the	letter provided as the	first letter.	Think of male
first names for each letter	provided.		

A	N
В	0
C	P
D	Q
E	R
F	S
G	T
Н	U
I	v
J	W
K	X
L	Y
M	Z



Antonyms Activity #1

Antonyms are words that are opposite. In this activity participants will try to think of a word (or, in some cases words) that have the opposite meaning. The more difficult ones are challenging for most people and may be appropriate to do in a group setting. Many of the given words have multiple antonyms so there may not be "one correct answer."

Write in the word that is the opposite of the word lis	ted
Example: Big - Small	

Up	
Hot	
Winter	
White	
On	
Over	
Loud	
Easy	
Left -	



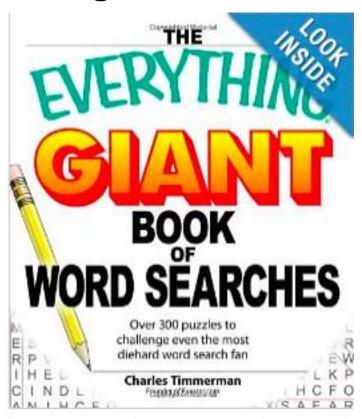
Word Generation Activity #2: Car Types

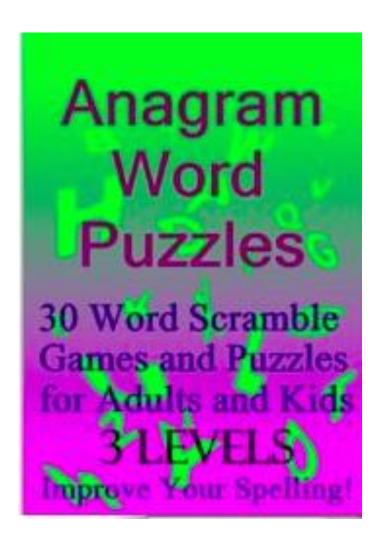
In this activity participants try to think of as many names as they can of a certain class. Encourage them to use a strategy, which will exercise their executive functioning. You may set a time limit of 60 seconds, 90 seconds, or 2 minutes.

Think	of	as	many	car	types	as	you	can:
1.				10.				
2.				11.				
3.				12.				
4.				13.				
5.				14.				
6.				15.				
7				10				

Get these books

- Word searches
- Anagrams





Developing Your Own Geriatric Wellness Program

- Screening?
- Levels?

Using iPads for Cognitive Stimulation



Memory Block

 Some of you might remember this game from the 1970s and 1980s



© 2016, Dr. Rob Winningham All Rights Reserved

Memory Block

- This game exercises the frontal lobe with a focus on attention and working memory.
- Trying to beat your score make it a little more addicting.

WatchThat

- This game also requires attention and concentration.
- It also has more of a visual memory component.



© 2016, Dr. Rob Winningham All Rights Reserved

Word Searches

- Word searches also target executive functioning abilities.
- We can easily find books of wors searches
- But, we can also do them on the iPad



© 2016, Dr. Rob Winningham All Rights Reserved

Chain of Thought

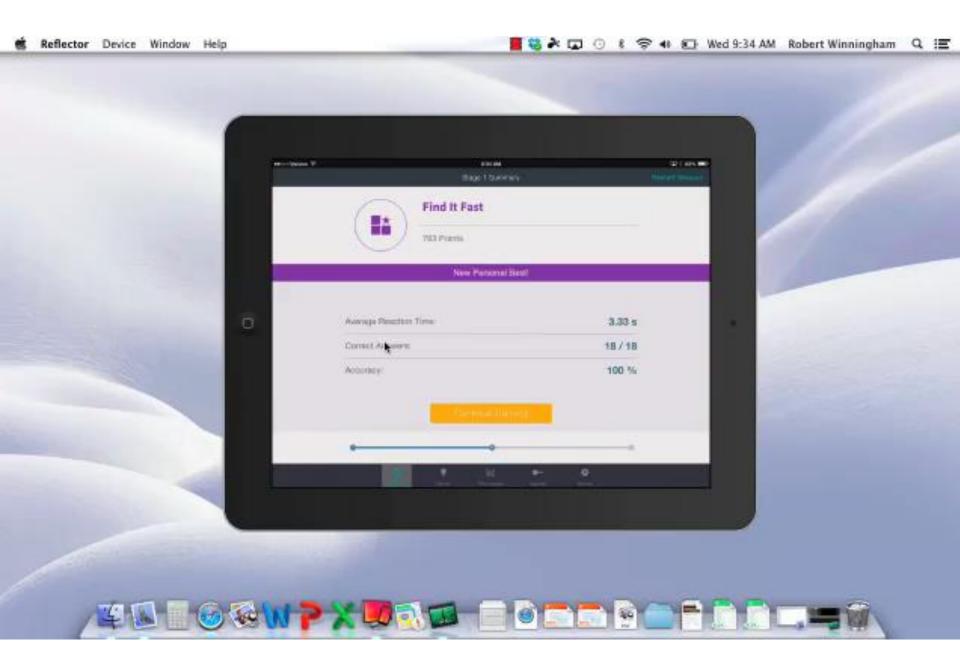
- This is a fun word game
- It probably isn't the best cognitive stimulation activity because the answers come to you without a lot of mental manipulation.
- But it is fun and kind of addicting



© 2016, Dr. Rob Winningham All Rights Reserved

My Favorite

- Fit Brains is an excellent app with many different programs and a testing program.
- They start easy and get harder if you get them correct.
- This one app could give someone a good cognitive stimulation program.
- The next few demo videos show Fit Brain modules but there are many more.



© 2016, Dr. Rob Winningham All Rights Reserved



© 2016, Dr. Rob Winningham All Rights Reserved



© 2016, Dr. Rob Winningham All Rights Reserved



© 2016, Dr. Rob Winningham All Rights Reserved

Recommended Apps for Cognitive Stimulation

- Fit Brains
- Lumosity
- Tetris
- Sudoku2
- Memory Block
- Stroop Effect
- Visual Attention
- Brain Lab

Recommended Apps for Cognitive Stimulation

- Watch That
- Chain of Thought
- Word Jigsaw
- Word Search+
- Mindfulness Trainer
- Do you have other app ideas?
 - Please post them on the website www.robwinningham.com
 - Under the post titled "Apps for Cognitive Stimulation"

How Often Should the Classes Be Offered?

- Independent Older Adults
- Retirement Communities
- Assisted Living
- Skilled Nursing Facilities
- Rehabilitation Hospitals

Bring college students in.

- Contact department chair (e.g., psychology, social sciences, health sciences, occupational therapy, sociology departments).
- Send them a flyer, better yet a stack of flyers to be distributed to faculty boxes
- Have an application and a deadline on the back of the flyer.
- Interview
- Request a two term commitment
- Independent study course credit might be possible

Summary

- Cognitive stimulation can delay the symptoms of dementia
- Cognitive stimulation programs can be done in groups using either paper/pencil or iPads
- Use a wide variety of activities and have a focus on executive functioning (attention, inhibition)



- Cognitive Connection website
- ML Clients will get hundreds of readyto-print cognitive stimulation tools for FREE!
- ML Clients will get access to the Certified Cognitive Stimulation Instructor Program for 50% off normal cost

The Partnership

- Certified Cognitive Stimulation Instructor Program
 - More information at www.robwinningham.com
 - Training is appropriate for just about every staff member



Activity Connection has partnered with Dr.
Rob Winningham, a nationally recognized author and expert on the aging brain, to bring you eight groundbreaking videos that will give staff the tools and knowledge to truly maximize residents' quality of life. View each of the eight instructional videos at your own pace and receive a "Certified Cognitive Stimulation Instructor" diploma!

Video Courses and Descriptions



Vol. 1: Use It or Lose It: Evidence and Ideas for Cognitive Stimulation Programs

In this presentation, you will learn about the latest research on the use it or lose it theory and why cognitive stimulation is associated with improved mental

functioning and a decreased chance of developing dementia. In addition, a holistic approach to brain health is introduced. Many practical suggestions for cognitively stimulating activities are presented.



Vol. 2: Memory: Why Do We Forget, How Does Memory Change as We Age?

In this presentation, you will learn how we make new memories, why we forget, and how memory changes as

we age. There is good news, in that some cognitive abilities remain relatively intact and we'll discuss how to take advantage of those in older adults with memory impairment.



Vol. 3: How the Brain Makes Memories, Controls Behavior, and is Related to Many Common Problem Behaviors

In this presentation, you will learn how the various lobes of the brain help control mental processes. In

particular the role of attention and concentration (i.e., executive functioning) in the lives of aging adults will be discussed. Also, valuable information about enhancing executive functioning in order to maximize quality of life, in people who already have memory impairment, will be discussed.



Vol. 4: Distinguishing Dementia and Delirium

In this presentation, you will learn about the most common types of dementia and how they differ from delirium. Differences in different

types of dementia will be discussed as that knowledge can be used to better help people with dementia. You will also learn basic information about commonly prescribed memory drugs.



Vol. 5: Developing Your Own Cognitive Stimulation Program: The Activities

In this presentation, you will learn how to use many different types of targeted cognitive stimulation

activities. You will learn how to exercise executive functioning, word fluency, spatial memory, and other cognitive abilities. This video lecture will better prepare you how to offer a high quality cognitive stimulation program that can be varied to fit a wide range of cognitive abilities.



Vol. 6: Developing Your Own Cognitive Stimulation Program: Best Practices and Motivating People

In this presentation, you will learn important principles to maximize the efficacy of cognitive stimulation and other activity programs. Essential topics such as

screening potential participants, challenging more capable participants, size of classes, and frequency of classes will be discussed. You will also learn how to motivate participants to engage in cognitive stimulation programs and other activities.range of cognitive abilities.



Vol. 7: Maximizing Quality of Life: Physical Exercise, Nutrition and Sleep Affect Memory Ability Matter

In this presentation, you will learn how physical exercise, nutrition, and better sleep can maximize cognitive

ability and quality of life. You will also learn strategies to motivate people to engage in these positive lifestyle behaviors. Older adults will benefit from your knowledge of these important factors.



Vol. 8: Maximizing Social Support and Social Engagement

In this presentation, you will learn how social support and loneliness are related to mental and physical health

outcomes. You will learn many invaluable strategies to maximize social support and engagement among older adults in a variety of environments. These strategies can dramatically improve quality of life for many older adults.

Reserved

Activity Connection's Website – Thousands of Activities Updated Monthly

You can login to the site free of charge for 30 days by going to:

www.activityconnection.com

- Username: world87
- Password: actcon987

The Partnership

- Certified Cognitive Stimulation Instructor Program
 - ML Clients will have access to these resources and opportunities for 50% of retail prices
 - Available on ML Website



Email <u>rob.winningham@gmail.com</u> if you want any of these Dr. Rob's Cranium Crunches

- 1. A-Z Activity
- 2. Stroop
- 3. Trail Making Adaptations
- 4. Anagrams
- 5. Verb Activity
- 6. Cartoon Caption Activity
- 7. Mental Rotation Activities

Contact Information

Email: rob.winningham@gmail.com

Website: www.robwinningham.com

Additional resources available at:

- www.activityconnection.com
- Username: world87
- Password: actcon987
- 30 day trial password

