

**Tutor Training: What Every Tutor Should Know**

**Presented by:**  
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**READ/San Diego**  
**San Diego Public Library**  
**June 2006**

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**Key**

- TT will appear at the bottom of a slide if that slide has information that the trainer should know.
- TR will appear at the bottom of a slide if that slide contains information that should be shared with tutors.

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## Challenges for tutor trainers

- Time
- Diversity of student needs and abilities
- Money for materials and technology

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## Workshop Objectives

- How the brain learns
- Learning disabilities: Specifically Dyslexia
- Research-based strategies
- Phonemic awareness & Phonics
- Multisensory techniques

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## Our Philosophy

Teaching reading is a science and it needs to be taught as a science. Literacy professionals and tutors need to understand how a person learns to read.

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## The Brain: How Do We Learn to Read?

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### Born to read?

- The brain has evolved to allow humans to learn to read, but it does not happen naturally -- as speaking does.
- Reading is manmade.
- Reading has to be explicitly taught.
- It has to be taught systematically.
- It has to be consistent.

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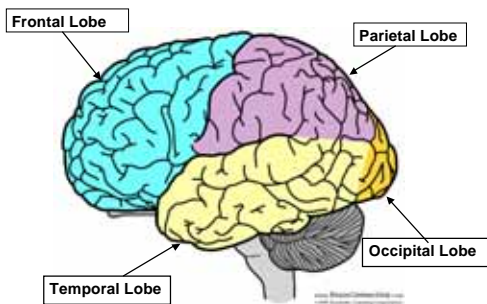
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### Very Basic Brain Anatomy



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## The Lobes: What do they do?

- **Frontal Lobe:** Higher Cognitive Functions  
Problem solving, Spontaneity, Memory, Language, Motivation, Judgment, Impulse control, Social and sexual behavior.
- **Parietal Lobe:**  
The parietal lobe also contains a specialized area called Wernicke's area that is responsible for matching written words with the sound of spoken speech.
- **Occipital:**  
Rear of the brain and controls vision and recognition
- **Temporal Lobe:**  
Emotional Responses, Hearing, Memory, Speech

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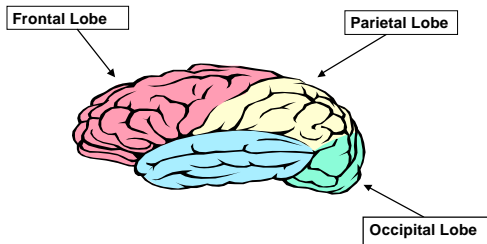
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## Good Readers



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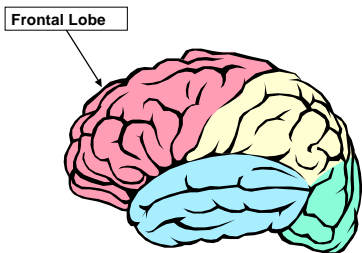
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## Impaired Readers



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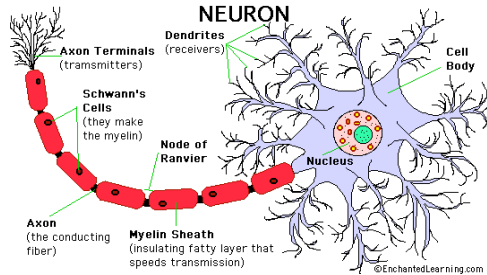
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## What is a neuron?



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## What is a neuron?

- A neuron is a cell that contains a cell body, axon and dendrites.
- The dendrites connect to other neurons and activate neurotransmitters which send signals to other neurons.
- It used to be thought we are born with all the brain cells we will ever have. We now know that is not true.
- Use it or lose it. Pruning.
- ***Learning occurs when two neurons communicate.***

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## Plasticity

- Plasticity is the brain's ability to build new neuronal pathways in response to new experiences.
- Previously, it was believed that plasticity only occurred in children. Brain-imaging studies have shown that it also occurs in the adults of brains, only at a slower pace.

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## Plasticity continued

- Therefore, science has shown, that when adults learn to read for the first time, they are physically changing their brain.
- This also highlights the importance of correct instruction, in order to build effective neuronal pathways.

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## Importance of Repetition

The brain's neural networks respond in a pattern that is established by past experience. The more often a specific pattern is fired in response to a stimulus, the more firm the nerve assembly becomes.

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## How do we know this?

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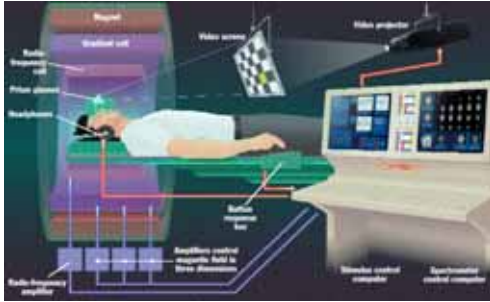
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## fMRI Setup



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fMRI for Dummies



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## Why do tutors need to know about the brain?

- It is important to understand how the learner's brain is physically changing while they are learning to read.
- It demystifies the mystery of learning to read.
- It can decrease frustration of slow learning, because the tutor is informed about the process.
- *Learners also experience less frustration when they are informed about the physical process of learning to read.*

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## Learning Disabilities: Dyslexia

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dyslexia

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What is dyslexia: A Definition

**Dyslexia:**... a specific learning disability that is neurological in origin... It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.

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These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.

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Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

(Adopted by the International Dyslexia Association (IDA) and the National Institute for Child Health and Human Development (NICHD).)

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Dyslexia is NOT:

- Caused by poor eyesight or hearing problems
- A Developmental Disability
- Acquired Alexia, Aphasia or Anomia – these are caused by some type of head injury (ie: stroke)
- A degenerative disease
- Lack of educational opportunity
- The result of a lack of effort or laziness on the part of the student

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## Why do we care?

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It has been estimated that 15-20% of the *general* population has a language-based learning disability. Of those, 85% have dyslexia.



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## Therefore...

- The adult literacy classroom is not a representation of the general population, so the incidence of a learning disability -- such as dyslexia -- will be considerably higher.

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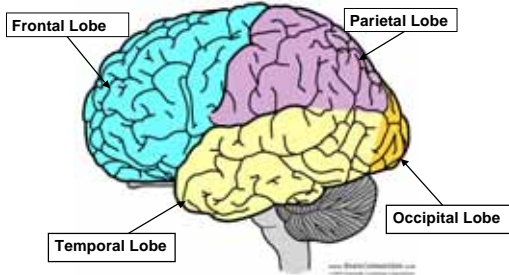
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Remember? Very Basic Brain Anatomy



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Brain function before and after phonologically-based Interventions

- Change of the organization of the neural pathways in the brain.



Orton-Gillingham or Slingerland based programs

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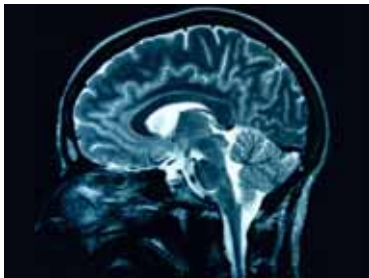
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This is proof that dyslexia is neurobiological.



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## All in the Family

- Researchers at NICHD sites and around the world are researching the chromosomes and genes that may be responsible for reading difficulties.

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## Lifelong Condition

- 74% of poor readers in 3rd grade remain poor readers in the 9th grade. Often they can't read well as adults either.



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## Some Symptoms

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Difficulty learning to read



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Difficulty learning to spell



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Need more time to process new information



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## Phonemic Awareness

- Difficulty with hearing and manipulating sounds in words

Phoneme Segmentation

Phoneme Counting

Phoneme Deletion

Phoneme Substitution

Phoneme Matching

Blending

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## Phonological Awareness

- Difficulty identifying or generating rhyming words, or counting syllables in words

at  
bat  
cat  
fat  
hat  
sat

fantastic  
fantastic

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## Auditory Discrimination

- Difficulty distinguishing different sounds in words

camp      clamp

I wiped my feet on the map.

The windshield factor was thirty  
below zero.

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### Some Symptoms cont...

Misreads or omits common small words

“Stumbles” through longer words

Poor reading comprehension during oral or silent reading

Slow, laborious oral reading

Difficulty in learning the sounds of letters

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### Some Symptoms cont...

Difficulty remembering names and/or shapes of letters

Reverses letters or the order of letters when reading, after the first grade

Difficulty with rapid naming tasks

Difficulty recognizing or picking up patterns

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# Simulation

<http://www.pbs.org/wgbh/misunderstoodminds/reading.html>

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### Decoding Activity: Recognizing Phonemes

When you see	Pronounce as
q	d or t
z	m
p	b
b	p
ys	er
a, as in bat	e, as in pet
e, as in pet	a, as in bat

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### Decode the following:

We begin our qrib eq a faziliar blace, a poqy like yours enq zine.  
Iq conqains a hunqraq qrillion calls qheq work qogaqhys py qasign.  
Enq wiqhinq each one of qhese zany calls, each one qheq hes QNA.  
Qhe QNA coqe is axecqly qhe saze, a zess-broqceq rasuze.  
So qhe coqe in each call is iqanqical, a razarkaple puq veliq claiq.  
Qhis zeans qheq qhe calls are nearby alike, puq noq axecqly qhe saze.  
Qake, for insqence, qhe calls of qhe inqasqines; qheq qhey're viqal is cysqainly blain.  
Now qhinq apouq qhe way you wouq qhinq if qhose calls wyse qhe calls in your prain.

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### Answer to Simulation

We begin our trip at a familiar place, a body like yours and mine.  
It contains a hundred trillion cells that work together by design.  
And within each one of these many cells, each one that has  
DNA,  
The DNA code is exactly the same, a mass-produced resume.  
So the code in each cell is identical, a remarkable but valid claim.  
This means that the cells are nearly alike, but not exactly the  
same.  
Take, for instance, the cells of the intestines; that they're vital is  
certainly plain.  
Now think about the way you would think if those cells were the  
cells in your brain.

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Watch an adult with dyslexia read



Kim.mov



Pat.mov

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## What Research Says Works

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### Phonics Based Programs That Are

- Systematic
- Sequential
- Explicit
- Multisensory

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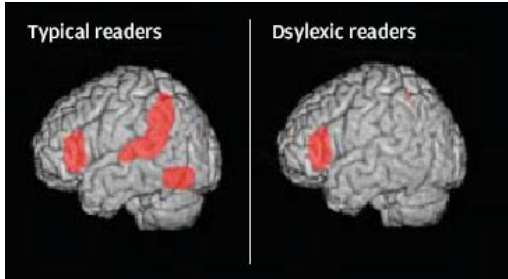
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- Changes the organization of the neural pathways in the brain.



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### Instructors must

- Follow the program step-by-step
- Allow time for processing
- Provide repetition
- Drop the /uh/ when teaching phonemic awareness.

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### We need to teach:

Phonemic Awareness

Phonological Awareness

Phonics Rules

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Tutors and Literacy Professionals need to know the difference between phonemic awareness and phonics.

Tutors and Literacy Professionals need to practice the sounds of the alphabet without the /uh/ attached to them.

For example:  
b says /b/ not /buh/

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## Phonemic Awareness

- Difficulty with hearing and manipulating sounds in words

Phoneme Segmentation

Phoneme Counting

Phoneme Deletion

Phoneme Substitution

Phoneme Matching

Blending

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## Phonological Awareness

- Difficulty identifying or generating rhyming words, or counting syllables in words

at  
bat  
fat  
cat  
hat  
sat

fantastic

fantastic

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# Phonics

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## Sight Word Study Method

- Used for words that do not follow phonetic rules
- Also used for  
High frequency words  
Need to know now words
- Words must be part of the learner's speaking vocabulary
- Self-correcting activity

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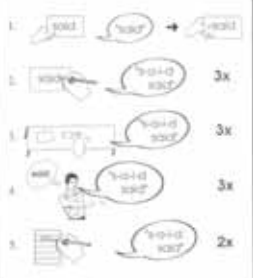
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### How To Memorize Words



From Meg Schofield's Literacy Solutions Materials

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Short Vowel Sound Drills

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Fat **E**d is not **u**p.

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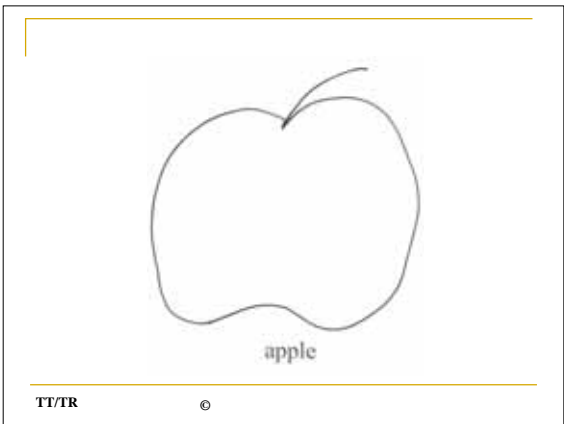
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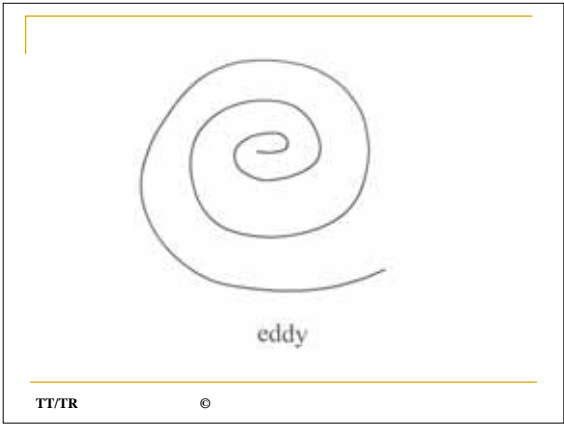
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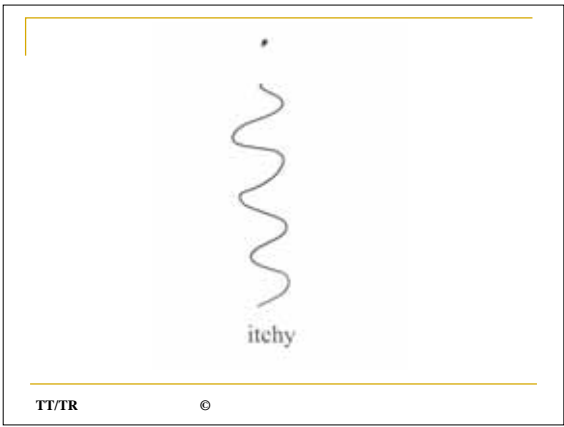
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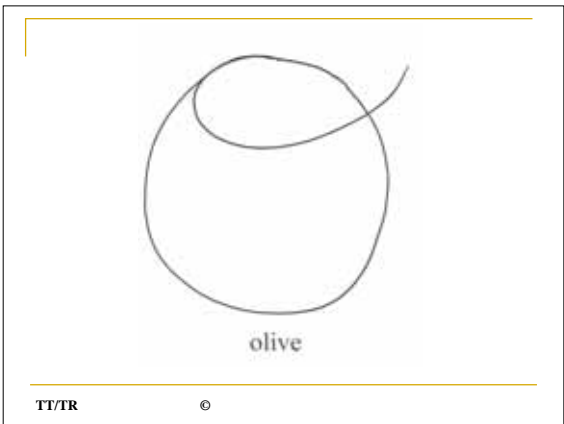
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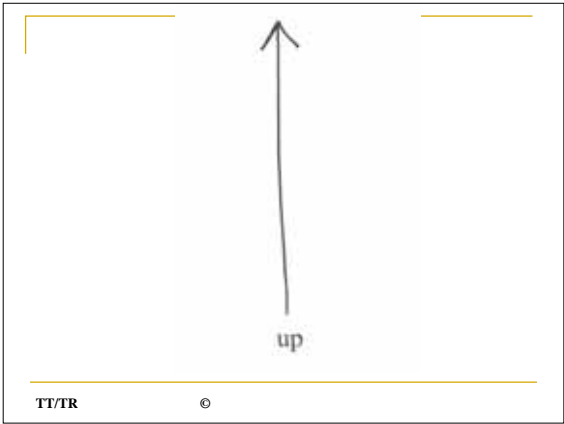
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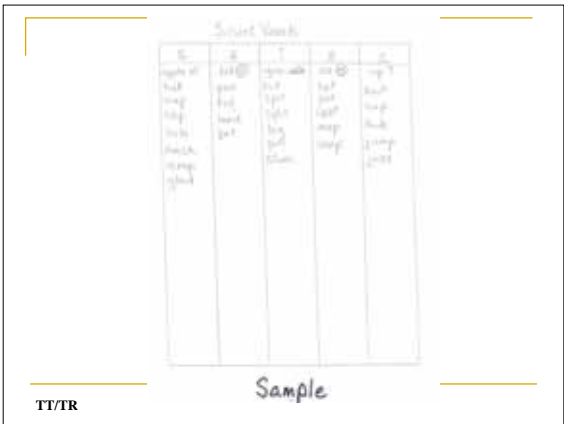
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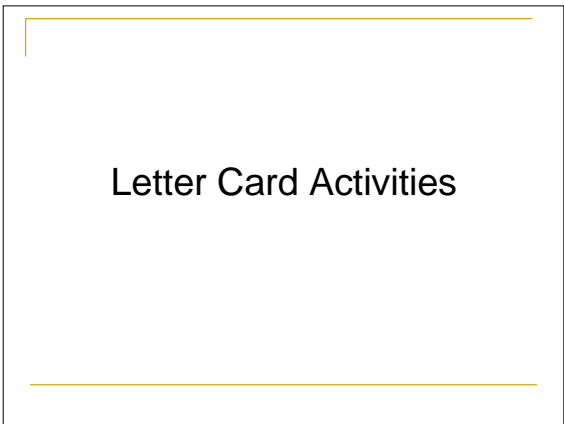
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To Learn to Read a Word

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i	s			
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a	s	l	t	p
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a s l t p

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To Learn to Spell a Word

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a s l t p

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What to do if the student selects the incorrect letter card

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a s l t p  
e  
i s e  
o  
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a s l t p  
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a s l t p  
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i s i p  
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### What Words to Use for Letter Cards

- One syllable words
- Words from your curriculum books
- Words from the Word List for Phonics
- Words your may learner bring in
- Real and nonsense words

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### Why Nonsense Words?

- Shows if the learner is able to recognize the phonemes and apply the phonics rules; or if they have just memorized a particular word
- Nonsense words can be syllables from real words with more than one syllable
  - Once a learner is able to apply the rules they have learned to nonsense words, they have shown that they can decode new words or syllables -- using those rules.

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**Nonreaders without dyslexia**

- If a learner does not have dyslexia -- but they are unable to read-- they will still benefit from the same systematic, explicit, structured program.

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### Suggested Professional Journals, Books and DVDs

- The Journal of Adolescent and Adult Literacy
- Adult Basic Education
- Annals of Dyslexia
- Reading Research Quarterly
- National Reading Conference: Journal of Literacy Research

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### Resources

**Books:** *Overcoming Dyslexia* by Sally Shaywitz  
*The Art of Changing the Brain*, by James Zull

**Video:** *How Difficult Can This Be? The F.A.T. City Workshop* Presented by Richard Lavoie

**Websites:** [www.interdys.org](http://www.interdys.org), [www.lda.org](http://www.lda.org),  
[www.ldonline.org](http://www.ldonline.org), [www.schwablearning.org](http://www.schwablearning.org),  
[www.nifl.gov](http://www.nifl.gov), [www.sfn.org](http://www.sfn.org), [www.dana.org](http://www.dana.org)

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