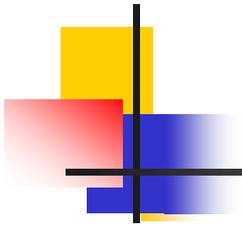


Teaching Students with Dyslexia and Related Language Learning Disabilities

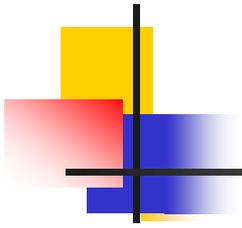
Alicia Roberts Frank, Ed.D.

October 10, 2014



Lower level language
mastery is as essential for
the literacy teacher as
anatomy is for the
physician.

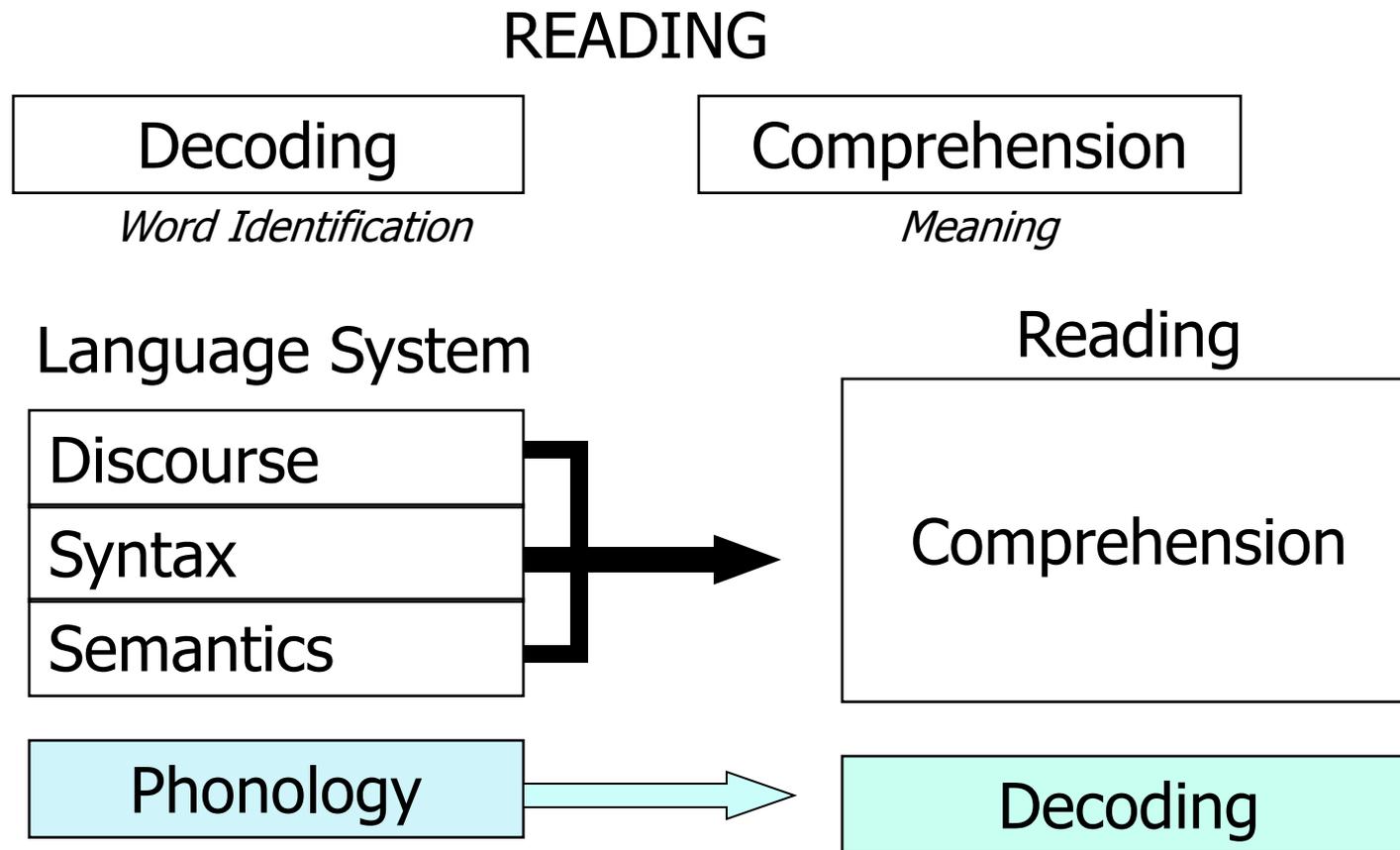
Louisa Cook Moats



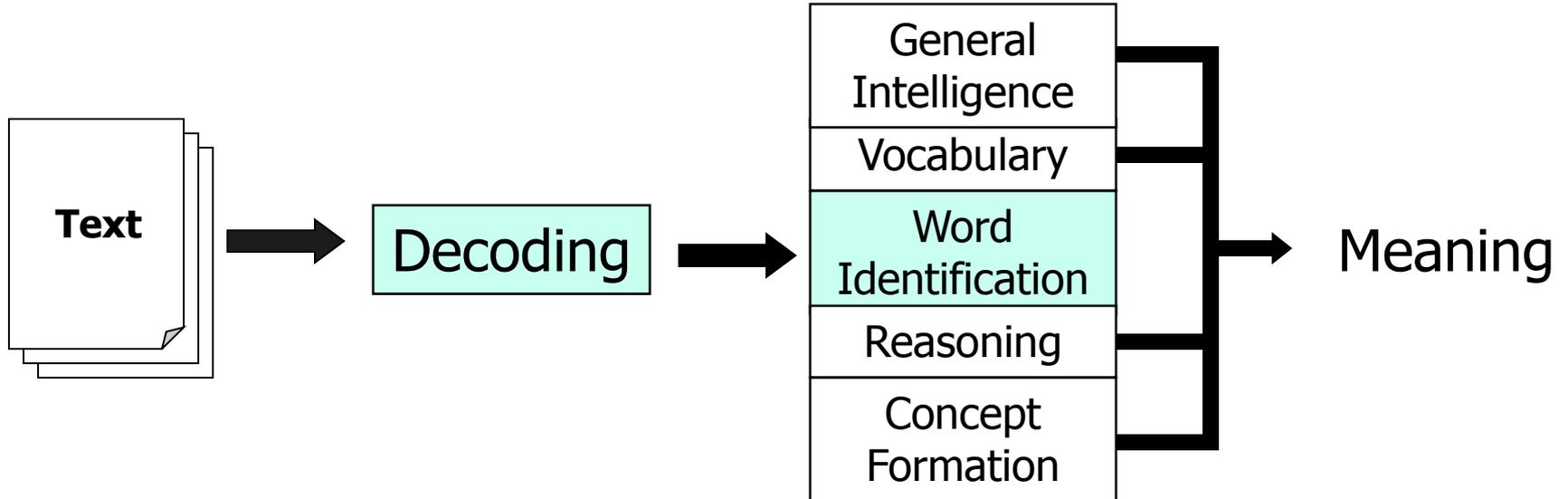
Outline

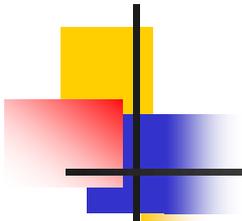
- The Importance of Decoding
- Linguistic Awareness
- Phonology & Phonemic Awareness
- Orthography & Encoding
- Morphology
- Teaching Encoding & Decoding Skills
- Accommodations
- References & Resources

The "Big Picture" of Reading



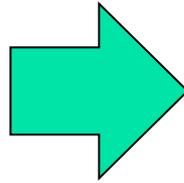
The Importance of Decoding Skills





Progression of Learning to Read

Phoneme Awareness
Letter Recognition
Concepts of Print



Alphabetic Code

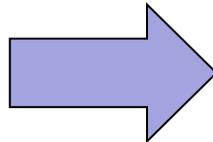
Alphabetic Code

(Plus Morphological Awareness)



Fast, automatic
word recognition

Fast, automatic
word recognition



Reading Fluency

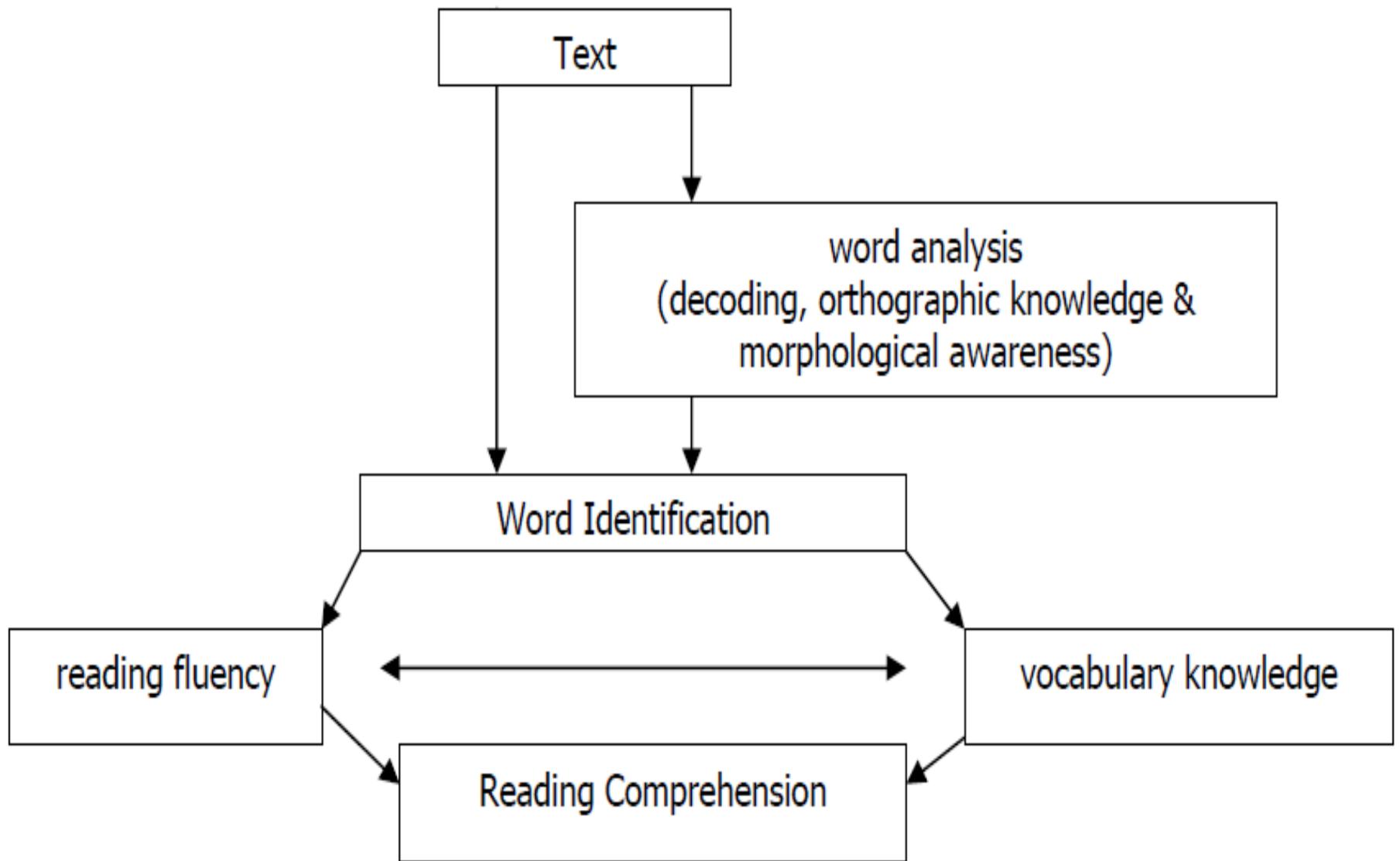
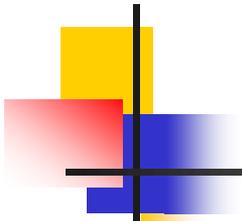


Figure 4. Researcher-designed model of the process of comprehending text.



Teaching Reading Involves:

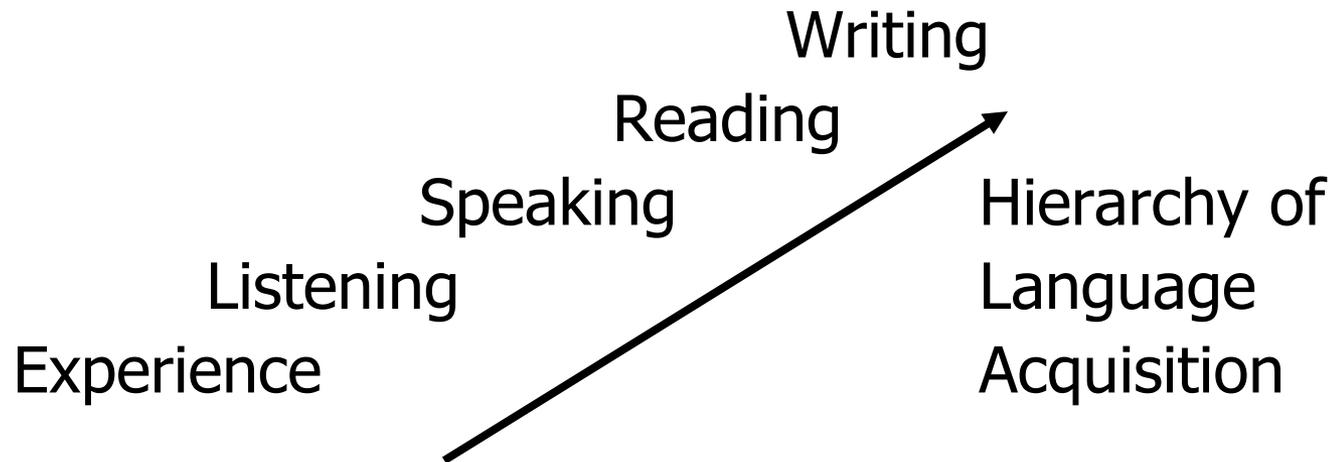
Auditory

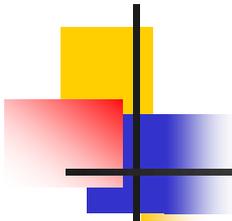
Visual

Kinesthetic



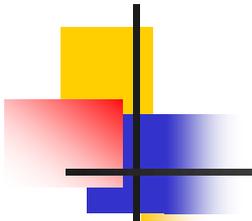
Sensory modalities
involved in language





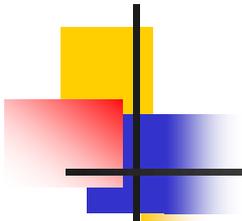
Important Prerequisites for Acquiring Reading Successfully

- The understanding that:
 - speech can be segmented, manipulated and blended (**Phoneme awareness**)
 - segmented units of speech can be represented in print (**Phonics**)
 - written spellings systematically represent the phonemes of spoken words (**Alphabetic principle**)
- Children are not born with these insights.
- Some children discover the alphabetic principle prior to instruction (others must be explicitly taught).



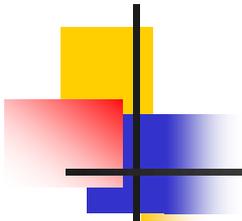
Stages of Reading Development

- Pre-reading/oral language development
 - Some knowledge of print/able to write name/pretend reading
- Decoding/initial reading
 - Grades 1 & 2 – alphabetic principle/sound-symbol relationships
- Confirmation and fluency
 - Grades 2 & 3 – additional strategies/fluency/further decoding
- Reading to learn/learning the new
 - Grades 4-8 – information/vocabulary/genres/experiences
- Multiple viewpoints
 - Grades 9-12 – increasing language/cognitive demands
- Construction and reconstruction
 - College & beyond – information for individual purposes



Linguistic Awareness

- Phonology & Phonemic Awareness
 - Sounds in a language
 - Ability to recognize and manipulate phonemes
- Orthography & Orthographic Awareness
 - Representation of phonemes by graphemes
 - Ability to connect sounds to symbols
- Morphology & Morphological Awareness
 - Meaningful units of words of a language
 - Ability to connect morphemes to their meaning
- Syntax & Syntactical Awareness
 - Ability to combine words in grammatical ways



Progression of Phoneme Awareness Development

Age typically mastered by

Skill

3

Rhyming by pattern alliteration

4

Syllable counting (50% of 4-year olds)

5

Syllable counting (90% of 5-year olds)

Phoneme counting (>50% of 5-year olds)

6

Initial consonant matching

Blending 2-3 phonemes, phoneme counting

Onset-rime division

7

Blending 3 phonemes, phoneme deletion

segmentation of 3-4 phonemes

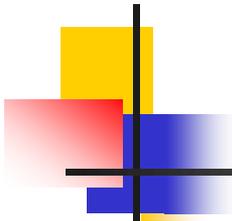
phonetic spelling

8

Consonant cluster segmentation

Deletion within clusters

Continuum of Activities That Lead to Phonemic Awareness



Rhyming songs

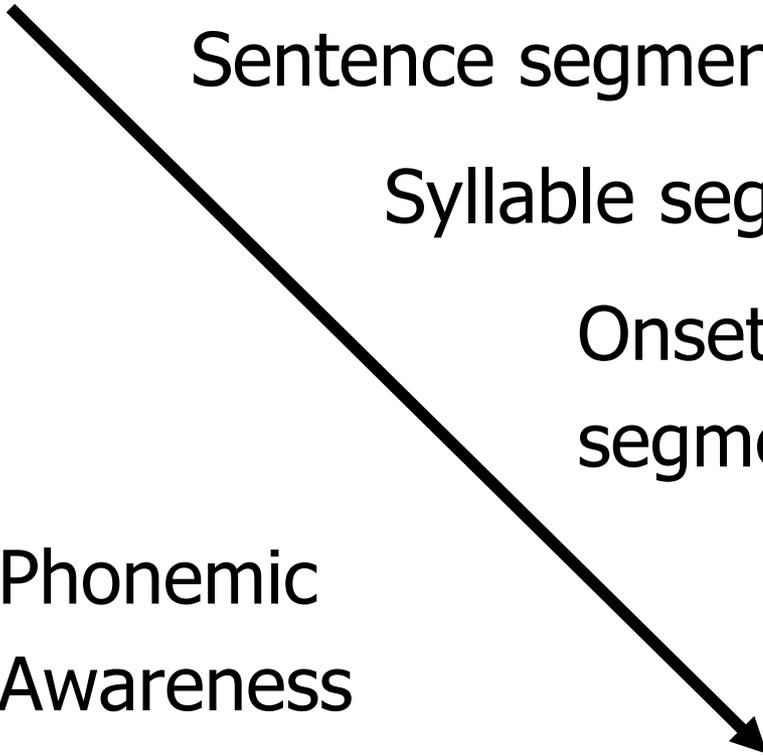
Sentence segmentation

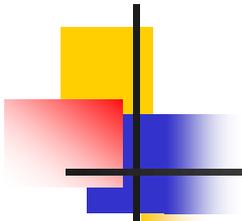
Syllable segmentation and blending

Onset-rime, blending & segmentation

Phonemic
Awareness

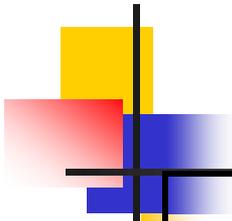
Blending & segmenting
individual phonemes





Orthography & Encoding (Phonics & Beyond)

- Encoding
 - Green-flag words (phonetically regular)
 - Yellow-flag words (more than one spelling for sounds)
 - Red-flag words (sight words)
- “Rules” or Orthographic Patterns
 - FLOSS rule:
 - 1 syllable b.w (cv f, l, s, z) double the f, l, s, or z gruff, spell, dress, fuzz (ex. pal, if, bus, yes)
 - Rules for adding suffixes

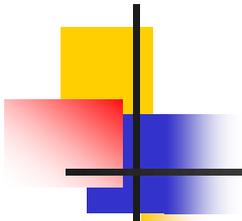


American English Consonants

	lips	lips/ teeth	tongue between teeth	tongue behind teeth	roof of mouth	back of mouth	throat
stop							
nasal							
fricative*							
affricate*							
glide							
liquid							

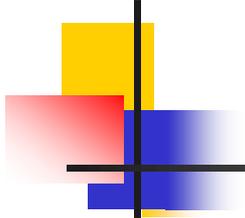
American English Consonants

	lips	lips/ teeth	tongue between teeth	tongue behind teeth	roof of mouth	back of mouth	throat
stop	/p/			/t/		/k/	
	/b/			/d/		/g/	
nasal	/m/			/n/		/ŋg/	
fricative		/f/	/θ/	/s/	/ʃ/		
		/v/	/ð/	/z/	/ʒ/		
affricate					/tʃ/		
					/dʒ/		
glide					/j/	/w/, /w/	/h/
liquid				/l/, /r/			



Consonant Spellings

- Many (12/21) consistent representations of sounds
- Digraphs & trigraphs
- Relatively consistent other patterns
 - Soft c – cent, cinder, cycle
 - Soft g – gem, ginger, gyrate
 - s/se – has, his, rose, nose
- “Silent” letters
 - Most part of digraphs & trigraphs
 - Many others recognizable by word origin



e

see
These
me
eat
key
happy
chief
either

i

sit
been
gym

a

make
rain
play
They
baby
eight
vein
great

e

pet
head
said
says

a

cat
laugh

ə

about
lesson
elect
definition
circus

i

Time
pie
right
rifle

u

cup
cover
flood
fox
Tough
father
among
palm

o

aw

saw
pause
call
water

o

vote
doe
boat
snow
open
old

oo

Took
put
could

oo

moo
Tube
blue
chew
ruby

oi **oy**

boy, oil, (lawyer?)

ou **ow**

cow, out

ûr:

ir
er
ur

sir
her
fur

âr:

ar

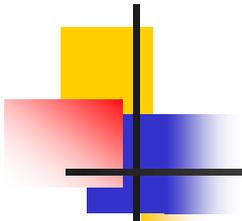
car

ôr:

or

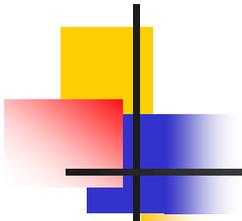
pour, or





The 6 Types of Syllables

- | | | | |
|----|-----------------------|------|---------------------------|
| 1. | closed | vc | <i>ca<u>t</u></i> |
| 2. | open | cv | <i>he<u></u></i> |
| 3. | silent e | vce | <i>sa<u>f</u>e<u></u></i> |
| 4. | r controlled | vr | <i>sta<u>r</u></i> |
| 5. | vowel team | vv | <i>so<u>o</u>n</i> |
| 6. | final stable syllable | [cle | <i>mu<u>z</u>[zle</i> |



Spelling rules for adding affixes

Doubling Rule

b.w. $vc' + v$ suffix run + er = runner

Dropping Rule

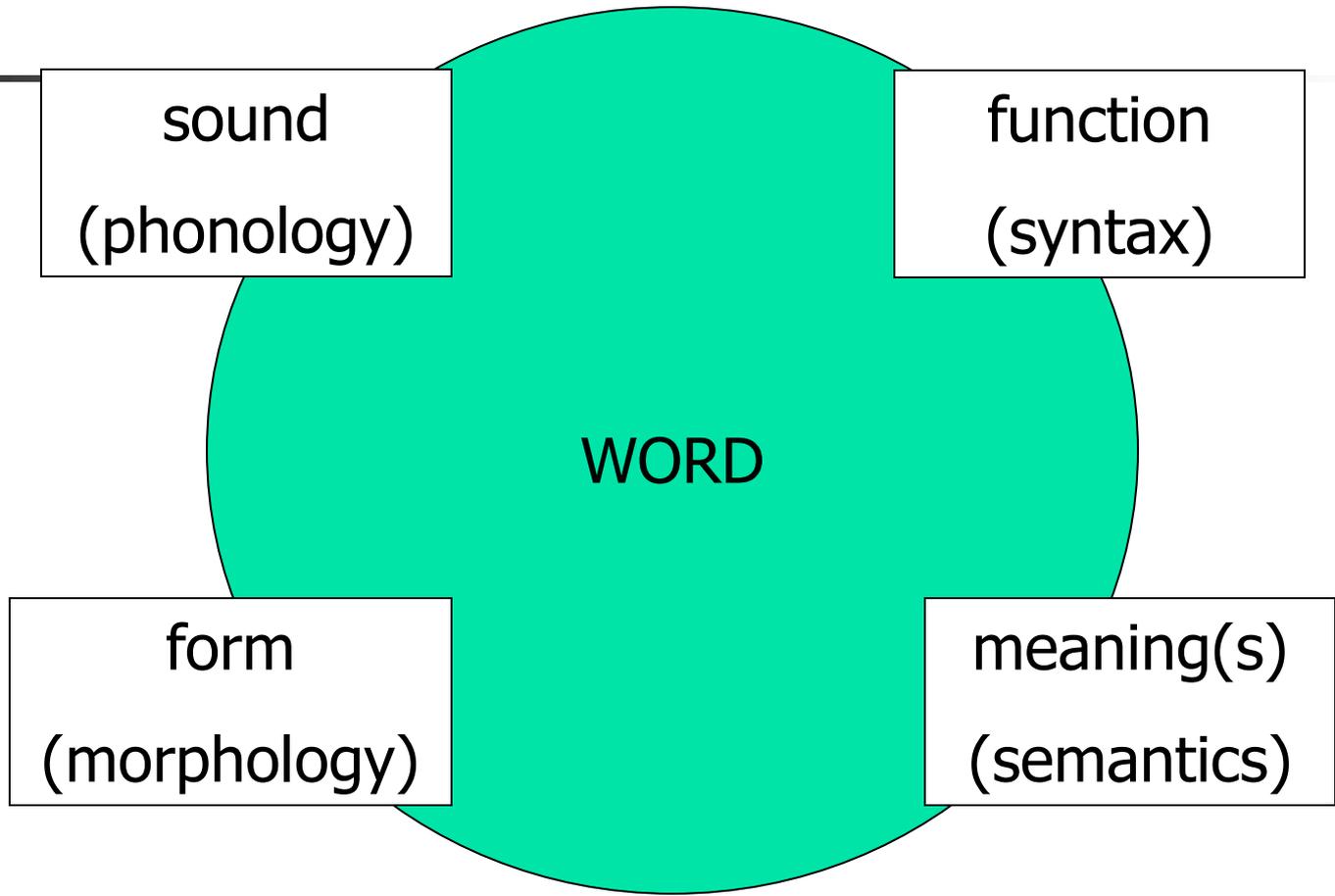
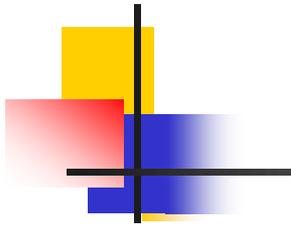
b.w. $e + v$ suffix save + ing = saving

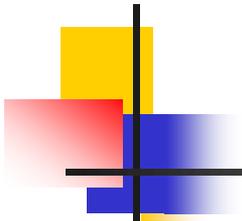
Y-Rule

b.w. $cy + \text{non-}i$ suffix carry + ing = carrying

happy + ness = happiness

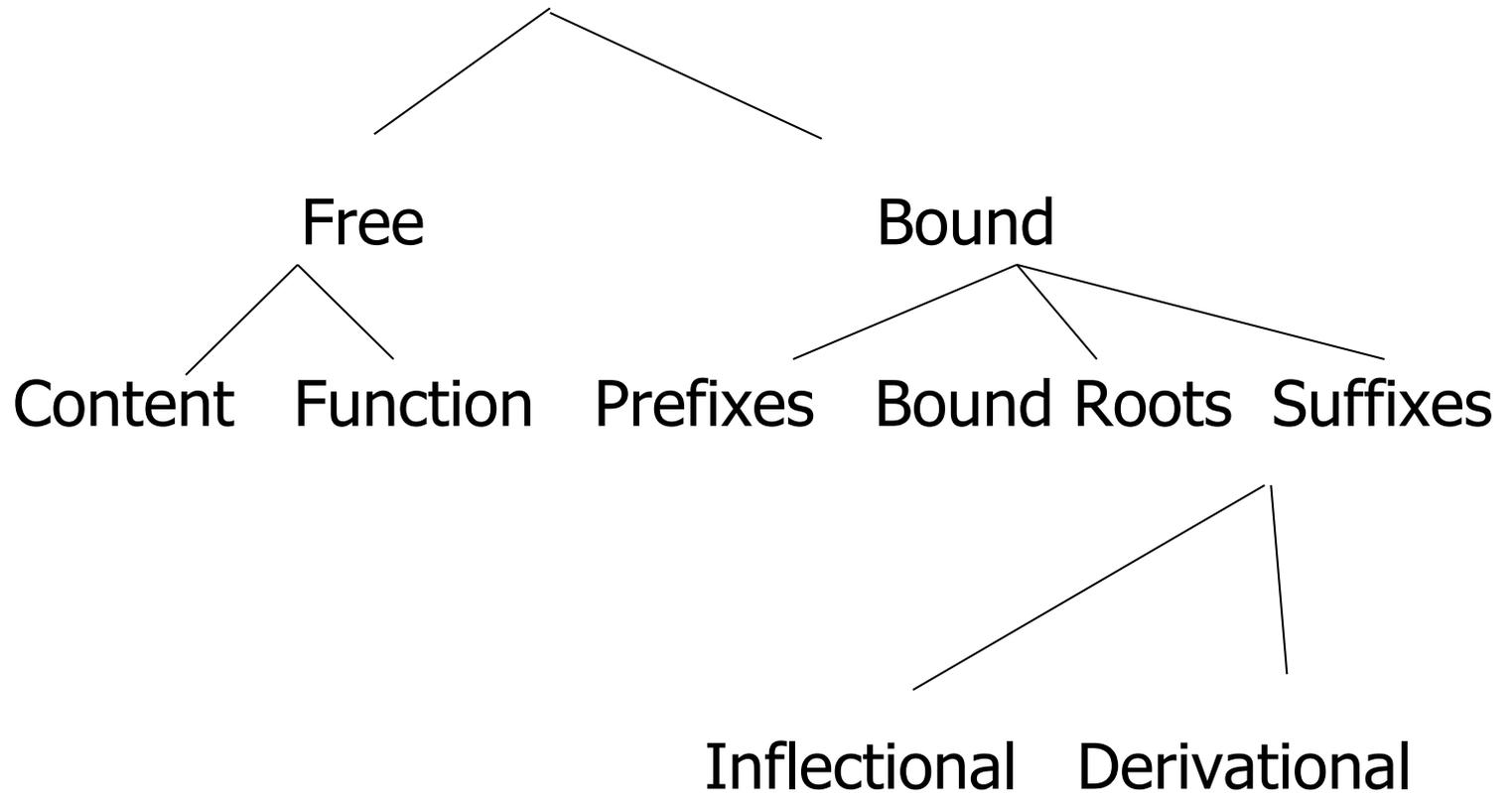
b.w. $vy + \text{any}$ suffix joy + ful = joyful

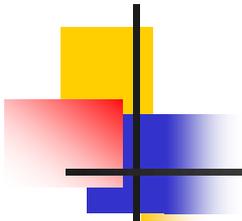




Morphology

Morphemes





Free Morphemes

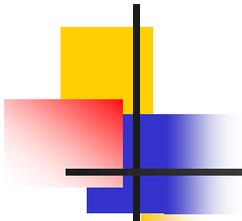
- Content

- Have meaning
- Nouns, verbs, adjectives, adverbs
- Examples?

- Function

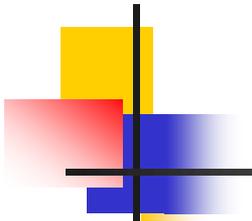
- Grammatical glue of sentences
- Conjunctions, prepositions, articles
- Examples?

May be combined to form compound words (usually of Anglo-Saxon or Greek origin)



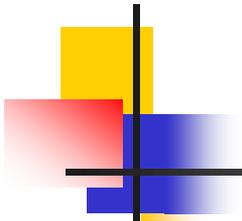
Bound Morphemes

- Prefixes
- Suffixes
 - Inflectional
 - Show number, possession, gender, tense, voice, mood, & comparison
 - Common: s/es, ed, ing, en, er, est
 - Derivational
 - Change the grammatical class of the word
 - Common: ly, er/or, ion, al, ible/able, y, ness, ment
- Roots
 - Most likely Latin
 - Careful of chameleons!



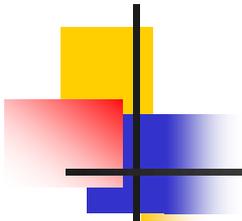
The Importance of Morphology

- In University of Washington treatment and brain imaging studies for children with dyslexia (in grades 4 to 9) in family genetics study, adding morphological awareness of words of Romance origin (French and Latin) to phonological and orthographic awareness was necessary to normalize brain function and obtain behavioral gains. (Richards et al., 2006)
- Morphological awareness has an independent relationship with reading comprehension. (Carlisle & Stone, 2000; Nagy et al., 2003)



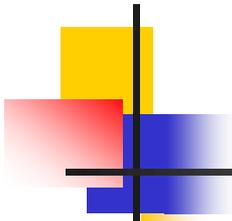
Morpheme Identification Practice

Word	Phonemes	Morphemes	Syntax	Meaning
often	4 or 5	1, 2 syllables	adverb	regularly
gives			verb	
alligator		1, 4 syllables		
drum	4			
peckish				
liposuction				



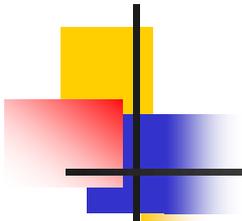
Morpheme Identification Practice

Word	Phonemes	Morphemes	Syntax	Meaning
often	4 or 5	1, 2 syllables	adverb	regularly
gives	4	2, 1 syllable	verb	transfers
alligator	7 or 8	1, 4 syllables	noun	amphibious reptile
drum	4	1, 1 syllable	N or V	musical instrument or to pound
peckish	5	2, 2 syllables	adjective	slightly hungry
liposuction	10	3, 4 syllables	noun	extraction of fat from body tissue



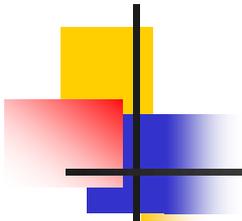
Teaching Encoding & Decoding Skills

- Teach letter & sound, blending, common letter combinations (*vng/vnk, ture, age*) multisyllabic strategies, affixes
- Read and practice
 - first in isolation (flash-cards, auditory written)
 - then in words (reading and spelling)
 - then in connected text (reading and writing)
- Begin with most common, high-frequency items
- Teach one item at a time with intensive practice, then continue cumulative and distributed practice daily



Decoding Procedures

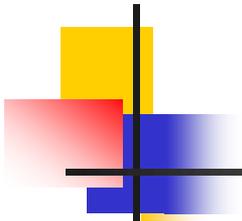
- Identify (box) prefixes & suffixes
- Underline vowels and letter combinations
- Divide between syllables
- Read
 - Vowel sounds first
 - Syllable by syllable to form base word
 - Base word, then add suffixes, then prefixes
- Optional steps
 - Underline digraphs & trigraphs
 - Cross out silent letters
 - Pattern lines for initial learning



Encoding Procedures

Oral only, Oral to paper, or Paper only

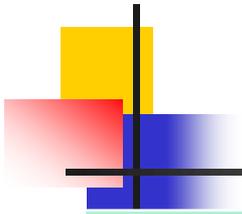
- Vocalize the word, with arm swing
- Identify number of syllables in base word
- Identify first syllable
 - Determine vowel sound & spelling
 - Repeat syllable
 - Identify each sound/spelling in order
- Continue with following syllable(s)
- Add affixes, applying rules as appropriate



Decoding Practice

Decode the following words:

- merchandise
- bamboozle
- pugnacious
- marshmallow
- nincompoop
- immune
- scrumptious
- strengthen
- commercial
- abstraction
- dentistry
- spectroheliograph
- smudge
- judicial



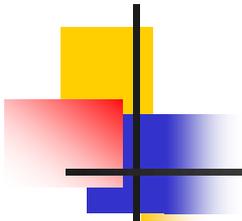
Tying it all together

Learning and Practicing Letter Formation

- Individual Letters & Cursive connections

Auditory	Visual
A. Cards <ul style="list-style-type: none">• Oral• Written B. Encoding C. Spelling D. Dictation	A. Cards B. Decoding C. Preparation for Reading D. Reading from a Book

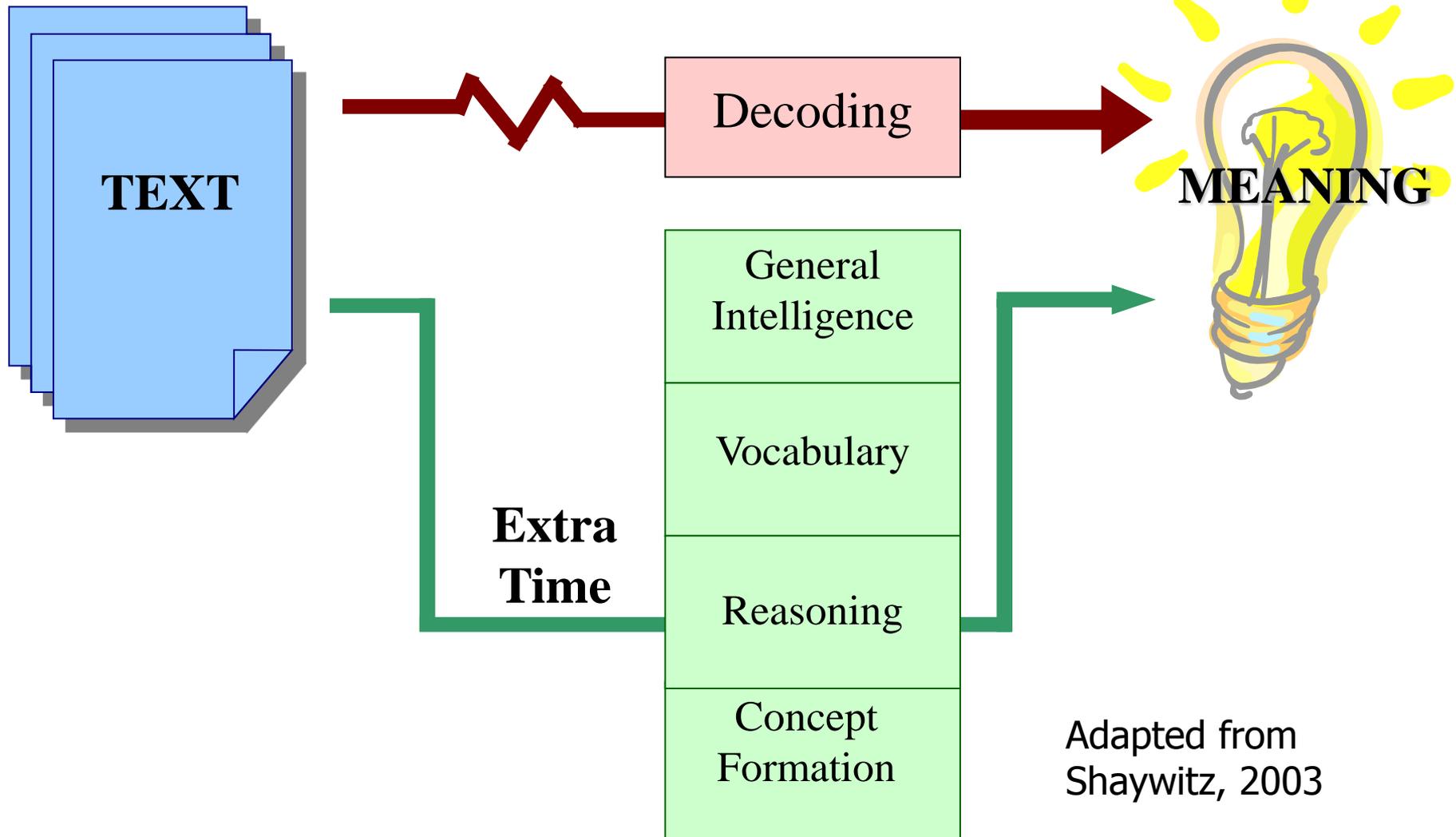
Adapted from Slingerland Lesson Plan

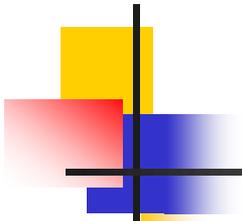


Accommodations

- Audio books
 - Learning Ally (formerly reading for the blind and dyslexic)
- Speech to print software
 - Dragon Speak
 - Write Out Loud
 - Kurtzweil
- Organizing support
 - Inspiration
- Extended time

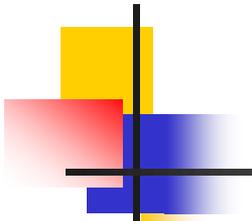
The argument for extra time





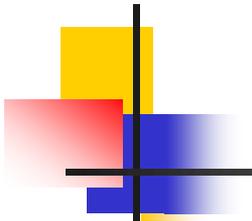
Resources

- International Dyslexia Association
 - <http://www.interdys.org/>
- Decoding Dyslexia Oregon
 - <http://www.decodingdyslexiaor.org/>
- Reading Rockets
 - <http://www.readingrockets.org/>
- What Works Clearinghouse (on Literacy)
 - <http://ies.ed.gov/ncee/wwc/Topic.aspx?sid=8>



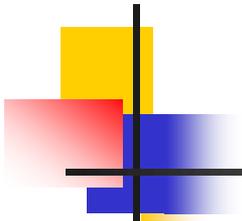
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To learn to read is to
light a fire; every
syllable that is
spelled out is a
spark.

Victor Hugo