Early Literacy
What to Teach and How to Teach It

Wyoming WAVE Summer Symposium

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I CAN…

- I Can identify and explain the big ideas in beginning reading and how the emphasis changes over time
- I Can name specific strategies for teaching Phonological and Phonemic Awareness
- I Can name specific language and language concepts critical for preschool and kindergarten success
- I Can relate educational and brain research to effective instructional practices
- I can explain Explicit instruction and Gradual Release

We Begin with a Question...

Why Is Pre-School and Early Childhood Education so Important?

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Struggling Kids
(Reading)

- Difficulties in decoding and word recognition are at the core of most reading difficulties. (Lyon, 1997) Struggling Reader
- Because our language is alphabetic, decoding is an essential and primary means of recognizing words. There are simply too many words in the English language to rely on memorization as a primary word identification strategy. (Bay Area Reading Task Force, 1996)
- **In a sample of 54 students, Juel found that there was a 88% probability of being a poor reader in fourth grade if you were a poor reader in first grade** (Juel, 1988).
- ***Assuming students will 'catch up' with practice as usual is not wise. Catching up is a low probability occurrence.***
  - ***The bottom 20-25% will require a very different kind of effort in both the short and long run.***

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What We Know

- Pre-school is the foundation
- Pre-school is our first and perhaps BEST opportunity
- Pre-school MUST be highly effective
- We need to focus on standards in pre-school to ensure a proper focus and opportunity for ALL students

Two Considerations for **Effective Instruction**

1.What to Teach

2.How to Teach

Teaching Early Reading

What the Research Says

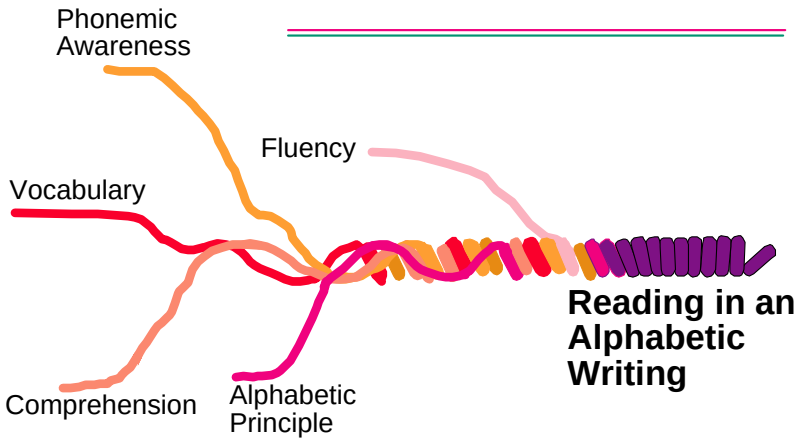
About What to Teach

Goals Aligned With "Big Ideas" in Beginning Reading

1. **Phonemic Awareness**: The ability to hear and manipulate sound in words.
2. **Alphabetic Principle**: The ability to associate sounds with letters and use these sounds to read words.
3. **Accuracy and Fluency with Connected Text**: The effortless, automatic ability to read words in isolation (orthographic coding) and connected text.
4. **Vocabulary Development**: The ability to understand (receptive) and use (expressive) words to acquire and convey meaning.
5. **Comprehension**: The complex cognitive process involving the intentional interaction between reader and text to extract meaning.

Teaching Reading:
A Complex Alphabetic Code

Big Ideas in Beginning Reading



Changing Emphasis of Big Ideas

Pre-K	Oral Language Development	Print/Book Awareness	Phonological and Phonemic Awareness	Sounds and Letters	Vocabulary and Comprehension	Writing	Across the Curriculum
K	Letter Recognition	Print/Book Awareness	Phonological and Phonemic Awareness	Phonics and Fluency	Vocabulary and Comprehension	Inquiry	Language Arts, Writing, and Grammar
1	Letter/Book/Print Awareness	Phonemic Awareness	Phonics	Fluency	Vocabulary and Comprehension	Inquiry	Language Arts, Writing, Grammar, and Spelling
2	Phonics/ Word Structure	Fluency	Vocabulary and Comprehension	Inquiry	Language Arts, Writing, Grammar, and Spelling		
3	Phonics/ Word Structure	Fluency	Vocabulary and Comprehension	Inquiry	Language Arts, Writing, Grammar, and Spelling		
4	Word Structure	Fluency	Vocabulary and Comprehension	Inquiry	Language Arts, Writing, Grammar, and Spelling		
5	Word Structure	Fluency	Vocabulary and Comprehension	Inquiry	Language Arts, Writing, Grammar, and Spelling		
6	Word Structure	Fluency	Vocabulary and Comprehension	Inquiry	Language Arts, Writing, Grammar, and Spelling		

Our Focus Today…

- ✓**Phonological and Phonemic Awareness**
- ✓Sounds and Letters
- ✓Oral Language Development

What We Know

Kindergarten and first grade students who demonstrate a weakness in phonological skills and vocabulary are destined to be poor readers in fourth grade.

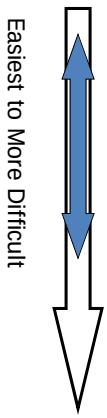
(Torgenson, 2004)

Research on Phonological Awareness

(National Reading Panel, 2000)

- Phonological Awareness is directly related to reading ability
- Phonological Awareness proceeds skilled decoding
- Phonological Awareness is a reliable predictor of later reading ability
- Deficiencies in Phonological Awareness are linked with deficits in reading
- Early intervention is the key to promoting development of phonological awareness

Phonological Awareness Sequence of Instruction Continuum



Concept of Word—comparison and segmentation

Rhyme—recognition and production

Sentence Segmentation

Syllable—blending, segmentation, deletion

Onset / Rime—blending, segmentation

Phoneme—matching, ***blending, segmentation,*** deletion, and manipulation

Level of Awareness	Skill	Example
Word	Segmentation	**The dog is sleeping.** How many words are there in that sentence? (signal.) *Four.*
Syllable	Blending	Listen. **Mail…box.** What is the whole word? (Signal.) *Mailbox.* Listen. **Ba…na…na.** What is the whole word? (Signal.) *Banana.*
	Segmentation	Say the two parts in **mailbox.** (Signal.) *Mail…box.* Say the parts in **banana.** (Signal.) *Ba…na…na.*
	Deletion	Say **mailbox** without **box.** (Signal.) *Mail.*
Onset-Rime	Recognition	Do these words rhyme: **box…ball?** (Signal.) *No.* (Signal.) **Mat…cat?** (Signal.) *Yes.*
	Production	Tell me a word that rhymes with **cat.** (Signal.) *Mat, sat, bat.*
	Blending	What word do these sounds make: **/m/…/an/?** (Signal.) *Man.*
Phoneme	Isolation	What is the first sound you hear in **mat?** (Signal.) */m/* What is the last sound you hear in **mat?** (Signal.) */t/* What is the middle sound you hear in **mat?** (Signal.) */a/*
	Blending	What word am I trying to say: **/s/ /a/ /t/?** (Signal.) *Sat.*
	Segmentation	What sounds do you hear in **sat?** (Signal.) */s/ /a/ /t/.* How many sounds are in **sat?** (Signal.) *Three.*

Word Segmentation

- Clap for each word in a sentence
- Use manipulatives to represent words in a sentence
- Count the number of words in a sentence
- Identify the first, middle, and last words in a sequence
- Substitute specific words in a given sentence

Word Segmentation

Word Segmentation (clap for each word)

I can say a sentence and clap for each word, listen: **we run**

--Try These--

We eat

I see a ball

I see a car

I like eggs

Word Segmentation

Word Segmentation (Identify first, middle, and last words in a sequence)

I can say a sentence and tell you the first word in that sentence – listen, **I like chips**. The first word is **I**

--Try These--

I go fishing

She is playing

We can run

I like eggs

Last word: She likes apples

Substitute: I went Fishing…I went skating

Syllable Blending

- Blend two smaller words to form a compound word

  mail…box = mailbox
  butter…fly = butterfly
  path…way = pathway

- Blend word parts to form a multi-syllable word

  dino saur = dinosaur
  Lolli pop = lollipop
  ele phant = elephant

Syllable Segmentation

- Segment compound words into two smaller words

  meatball = meat…ball
  rainbow = rain…bow
  cupcake = cup…cake

- Segment multi-syllable into word parts (clap and say each syllable)

  pa…per
  ti…ger
  mid…dle
  but…ter

- Count the number of syllables in each word (clap and say each part)

  standing = stand…ing
  eating = eat…ing
  sitting = sit…ing
  porcupine = por…cu…pine

Syllable Deletion

- Delete final syllable from a compound word
  - sunshine = sun (shine is deleted)
  - sailboat = sail
  - raincoat = rain
  - mailman = mail
- Delete initial syllable from a compound word
  - homework = work (home is deleted)
  - lunchroom = room
  - fireplace = place
  - hotdog = dog
- Delete the initial or final syllable from a compound word
  - bathtub (say it without bath)
  - teapot (say it without pot)

Onset – Rime Recognition

- Recognize words that rhyme and repeat simple poems
  - My turn: rain, rain go away
  - Say it with me: rain, rain go away
- Recognize words in a poem that rhyme
  - Hickory, dickory, dock
  - The mouse ran up the clock
  - (have students identify the words that rhyme)
- Recognize words in isolation that rhyme
  - (thumbs up if the words rhyme)
  - {cat, mat, bat, sat} {hat, dog, got, feed}
- Recognize words that rhyme and words that do not rhyme
  - (thumbs up as soon as you hear the word that does not rhyme)
  - red…fed…led…green
  - tell…fell…ran…sell
  - my…sky…bean…why

Onset – Rime Production

- Produce a word that rhymes with a given word
  "our truck is loaded with dogs. Can you tell me more things that rhyme with dogs that could go in our truck?"
- Identify pairs of rhyming words in pictures
  (teacher shows pictures)
  "This is a house, a man, a mouse."
  "which words rhyme?"
- Produce a word that rhymes with a given word by prompting the initial consonant substitution
  "The word is man. Now think of a word that rhymes with man, but starts with /fff/ - yes, fan rhymes with man."

Onset – Rime Blending

- Blend the onset and rime to produce a one-syllable word
  "Let's make some words. I'll give you two parts and you put them together to make a whole word."

My turn: /mmm/….itt = mitt
/mmm/…eat = meat

Phonemic Awareness

- Phonemes are the smallest units of speech

  In the word **man**, there are three phonemes /m/a/n/

- Phonemic Awareness is the ability to Hear, Identify, and Manipulate the individual sounds in spoken words

Phonemic Awareness

- Phonemic Awareness is NOT phonics. Phonics is a method of instruction used to teach the sound-symbol correspondences of our written language.

- Phonological and Phonemic awareness are taught primarily through oral activities, not print.

Phoneme

- Isolate the initial phoneme in a word
  - "what is the first sound you hear in mat?" /m/
  - "what is the first sound you hear in ball?" /b/
- Isolate the final phoneme in a word
  - "what is the last sound you hear in mud?" /d/
- Isolate the medial phoneme in a word
  - "what is the middle sound you hear in mat?" /a/
- Recognize and match the initial phonemes in a word
  - "which two words start with the same sound?"
  - mat, sat, mud

Phoneme Blending

- Blend phonemes to make two phoneme words
  - "what word am I trying to say…
  - /a/ /t/? /a/ /m/?
  - "what is the first sound you hear in ball?" /b/
- Blend phonemes to make two and three phoneme words
  - "what word am I trying to say…
  - /a/ /t/? /s/ /a/ /m/?
- Blend phonemes to make two, three, and four phoneme words
  - "what word am I trying to say…
  - /i/ /t/? /s/ /i/ /t/? /s/ /l/ /i/ /t/?

Phoneme Segementation

- Segment two-phoneme words into individual phonemes
  - "what sound do you hear in at?" /a/ /t/
- Segment two and three phoneme words into individual phonemes
  - "what sound do you hear in bat?" /b/ /a/ /t/
- Segment two, three, and four phoneme words into individual phonemes
  - "what sound do you hear in bats?" /b/ /a/ /t/ /s/
- Count the number of phonemes in a word
  - "how many sounds are in sat?"

Scope and Sequence for teaching phonemic awareness	Instructional Days / Lessons (Kindergarten)
Word Segmentation	1-15
Rhyme Recognition	1-15
Rhyme Production	11-25
Syllable Blending	6-20
Syllable Segmentation	11-25
Syllable Deletion	16-30
Onset-Rime Blending	16-30
Onset-Rime Segmentation	21-35
Phoneme Isolation-Initial	21-65
Phoneme Isolation-Final	26-55
Phoneme Isolation-Medial	36-60
Phoneme Identification	41-75
Phoneme Categorization	46-80
Phoneme Blending	51-110
Phoneme Segmentation	61-110

Phonemic Awareness, SRA, McGraw-Hill

Phonemic Awareness Tips

- Pronounce sounds clearly
- Have a signal or wait time
- Activities are about sounds and not the meaning of words
- Children should be active
- Activities should be fast-paced
- Have fun!

Center Activities for Practice

Florida Center for Reading Research (FCRR) – Student Center Activities:

- Aligned to the 5 Big Ideas in reading, by grade
  - Phonological Awareness
  - Phonics
  - Fluency
  - Vocabulary
  - Comprehension
- Free, ready made center activities that can be downloaded and used in classrooms

Center Activities for Practice

Phonological Awareness

Sentence Segmentation PA.0 5

Sentence Graph

Objective

The student will segment sentences into words.

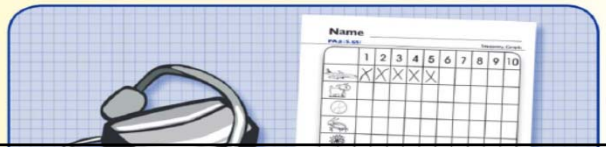
Materials

- Tape player
- Blank tape
- Script (Activity Master (PA.015.AM1a - PA.015.AM1b)
  Record on tape.
- Headphones
- Student sheet (Activity Master PA.015.SS1)
- Pencil

Activity

Students count and graph words while listening to taped sentences.

1. Place the tape player, headphones, and scripted tape at the center. Provide the student with a student sheet.
2. The student puts on the headphones and listens to the directions on the tape.
3. Listens to the sentence. Listens again while marking one box per word. Listens a third time while checking marks.
4. Continues until student sheet is complete.
5. Teacher evaluation



Phonological Awareness

PA.015.AM1a Sentence Graph

Teacher Script

Preparation:
Record each item and allow time for student to answer, or instruct student to pause the tape before listening to the next sentence.
Please note: It is important to say sentences at an even rate; not to emphasize each word.

Teacher begins recording:
On your student sheet you will find 12 pictures. I will say "find a picture." You will put your pencil in the first box next to that picture. I will then say a sentence three times. The first time I will say "listen" and you will listen very carefully. Then I will say "mark" and I will repeat the sentence. You will put one "X" in a box for every word I say. The first "X" goes in the box under number 1, the second "X" goes in the box under number 2, and so on. Then I will say "listen and check." I will say the sentence a third time while you check your marks.

Let's try one.
Find the jet. When you find it, put your pencil in the box next to it.
Listen: The jet was very loud.
Mark: The jet was very loud.
Listen and check: The jet was very loud.
Did you make five "X's"?

Now we will begin.
Find the dog.
Listen: The dog is brown with white spots.
Mark: The dog is brown with white spots.
Listen and check: The dog is brown with white spots.

Find the baseball.
Listen: The team ran to the playground to play baseball.
Mark: The team ran to the playground to play baseball.

Name _____

PA.015.SSI

Sentence Graph

	1	2	3	4	5	6	7	8	9	10

Phonological Awareness

Phonological Awareness

PA.025 Phoneme Matching

One Card Out

Objective

The student will match initial phonemes in words.

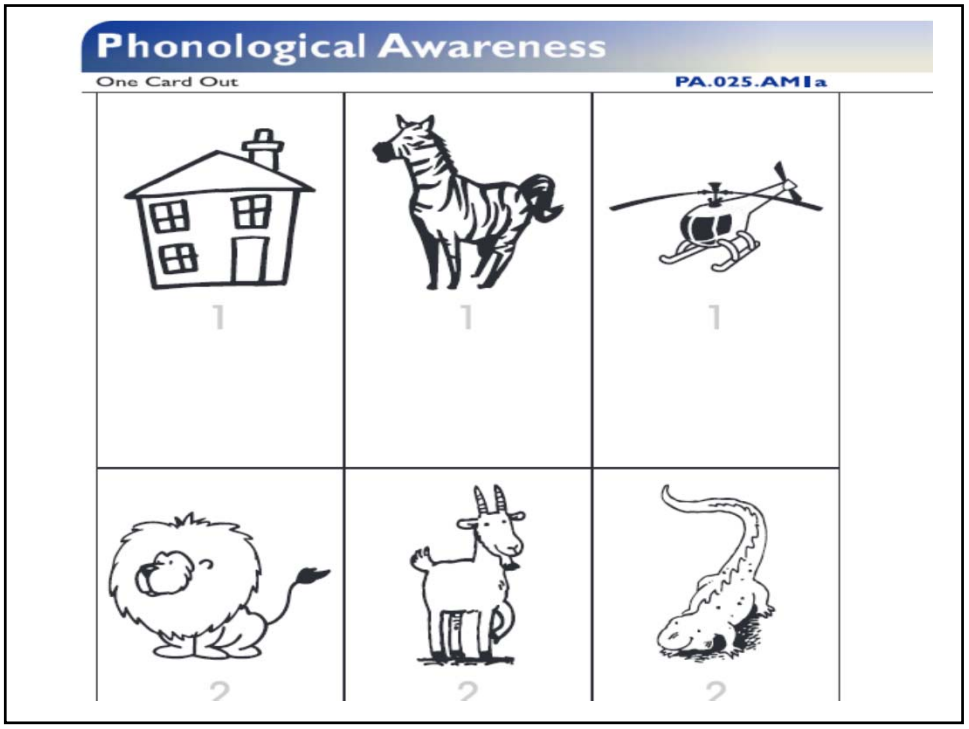
Materials

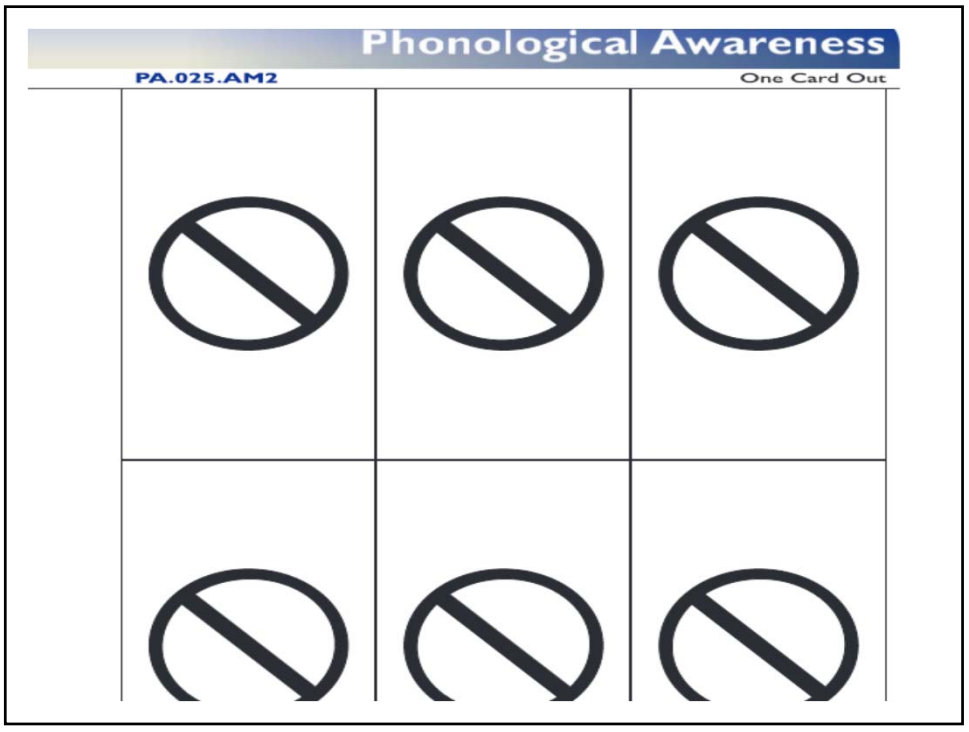
- Initial sound picture cards (Activity Master PA.025.AM1a - PA.025.AM1e)
  ⃠ card (Activity Master PA.025.AM2)
- *Make two copies for a total of 12 cards.*
  Pocket chart

Activity

Students determine which words have the same initial sound and place a ⃠ card over the picture that does not.

1. Place initial sound picture cards with the same numbers in separate rows on the pocket chart. Place the ⃠ cards face up in a stack.
2. Taking turns, students name the pictures in a given row and say each initial sound (e.g., "house /h/, helicopter /h/, zebra /z/").
3. Place the ⃠ card over the picture that does not have the same initial sound as the other two cards (i.e., zebra).
4. Continue until one picture on each row is covered by a ⃠ card.
5. Peer evaluation


Phonological Awareness
One Card Out
PA.025.AM1a
1
1
1
2
2
2


Phonological Awareness
PA.025.AM2
One Card Out

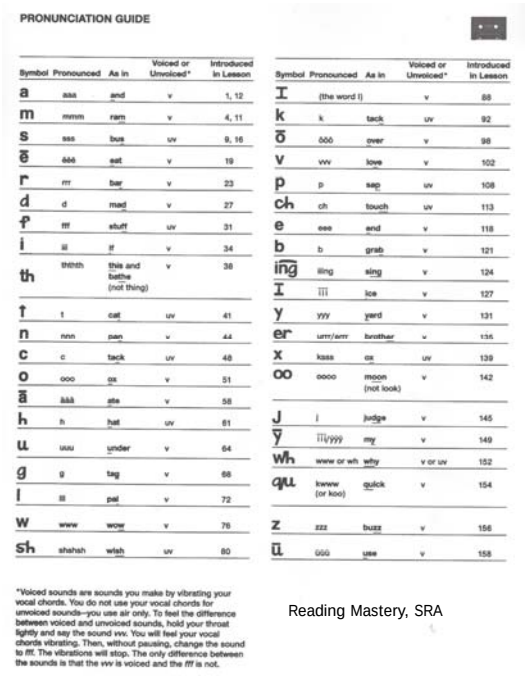
Phonemic Awareness Quiz

Our Focus Today…

- ✓Phonological and Phonemic Awareness
- ✓**Sounds and Letters**
- ✓Oral Language Development

Teaching Sounds and Letters

- Focus on teaching letter sounds
- Letter names are not necessary for reading and can cause unnecessary confusion for beginning readers
- If you are going to teach letter names, pair them simultaneously with the sounds – do not teach letter names in isolation.
- Introduce letter sounds at a rate of one per week and continuously review all previously taught sounds



PRONUNCIATION GUIDE

Symbol	Pronounced	As in	Voiced or Unvoiced*	Introduced in Lesson
a	aaa	and	v	1, 12
m	mmm	ram	v	4, 11
s	sss	bus	uv	9, 16
e	ĕĕĕ	eat	v	19
r	rrr	bar	v	23
d	d	mad	v	27
f	fff	stuff	uv	31
i	ĭĭĭ	if	v	34
th	ththth	this and bathe (not thing)	v	38
t	t	cat	uv	41
n	nnn	pan	v	44
c	c	tack	uv	48
o	ooo	ox	v	51
ā	āāā	ate	v	58
h	h	hat	uv	61
u	uuu	under	v	64
g	g	tag	v	68
l	lll	pal	v	72
w	www	wow	v	76
sh	shshsh	wish	uv	80

Symbol	Pronounced	As in	Voiced or Unvoiced*	Introduced in Lesson
I	(the word I)		v	88
k	k	tack	uv	92
ō	ōōō	over	v	98
v	vvv	love	v	102
p	p	sap	uv	108
ch	ch	touch	uv	113
e	eee	and	v	118
b	b	grab	v	121
ing	iiing	sing	v	124
ī	īīī	ice	v	127
y	yyy	yard	v	131
er	urrr/errr	brother	v	135
x	kaaa	ox	uv	139
oo	oooo	moon (not look)	v	142
j	j	judge	v	145
ȳ	īīīyyy	my	v	149
wh	www or wh	why	v or uv	152
qu	kwww (or koo)	quick	v	154
z	zzz	buzz	v	156
ū	ūūū	use	v	158

*Voiced sounds are sounds you make by vibrating your vocal chords. You do not use your vocal chords for unvoiced sounds—you use air only. To feel the difference between voiced and unvoiced sounds, hold your throat lightly and say the sound vvv. You will feel your vocal chords vibrating. Then, without pausing, change the sound to fff. The vibrations will stop. The only difference between the sounds is that the vvv is voiced and the fff is not.

Reading Mastery, SRA

Scope and Sequence

We Can! Pre-K Curriculum: Skills at a Glance

The chart below details when during the year the ***We Can!*** curriculum introduces each Literacy and Math skill. The curriculum provides the flexibility for teachers to modify the suggested introduction times according to their assessment of children's needs and development.

Month	Phonological Awareness	Pre-Writing	Colors and Color Words	Math: Shapes, Numbers, and Number Words
August	Introduce letters/sounds: o, a	Introduce three strokes: Up & around Touch, pull down Touch, push over	Introduce: red, yellow	Introduce shapes: circle, square
September	Introduce letters/sounds: c, d, g, s, f Review: o, a	Practice three strokes: Up & around Touch, pull down Touch, push over	Introduce: blue	Introduce shapes: heart, star, rectangle
October	Introduce letters/sounds: l, i, t, j, b, k Review: o, a, c, d, g, s, f	Introduce two strokes in Week 4: Slant down to the right Slant left and down	Introduce: orange, black, brown	Introduce shapes: oval, triangle, diamond, octagon
November	Practice letter sounds and names introduced	Practice five strokes Create geometric shapes using strokes	Introduce: green, purple	Introduce: number 1, one Review shapes
	Practice blending letter	Create geometric shapes	Introduce:	Review:

We Can!, Voyager Learning

Scope and Sequence

December	sounds using letters introduced	using strokes	pink, white	number 1, one and shapes
January	Introduce letters/sounds: m, n, r, h, p Review letters introduced	Use strokes to create letters: o, a, c, d, g, s, f	Add black to colors to teach contrast or dark colors	Introduce numbers: 0, zero 2, two Review 0,1,2, and shapes
February	Introduce letters/sounds: u, v, w, x, y Review letters introduced	Use strokes to create letters: o, a, c, d, g, s, f, l, i, t, j, b, k, and draw shapes	Add white to red paint to show light colors	Introduce numbers: 3, three 4, four 5, five 6, six Review 0–6, and shapes
March	Introduce letters/sounds: e, z, q Review all letters	Use strokes to print all letters of alphabet and draw shapes	Add white to all colors to introduce pastels	Introduce numbers: 7, seven 8, eight Review 0–8, and shapes
April	Blend CVC letter sounds (consonant/vowel/ consonant)	Use strokes to print all letters of alphabet and draw shapes. Work on alignment and spacing	Mix three colors to introduce tertiary colors	Introduce numbers: 9, nine 10, ten Review 0–10, and shapes
May	Review Assess	Review Assess	Review Assess	Review Assess

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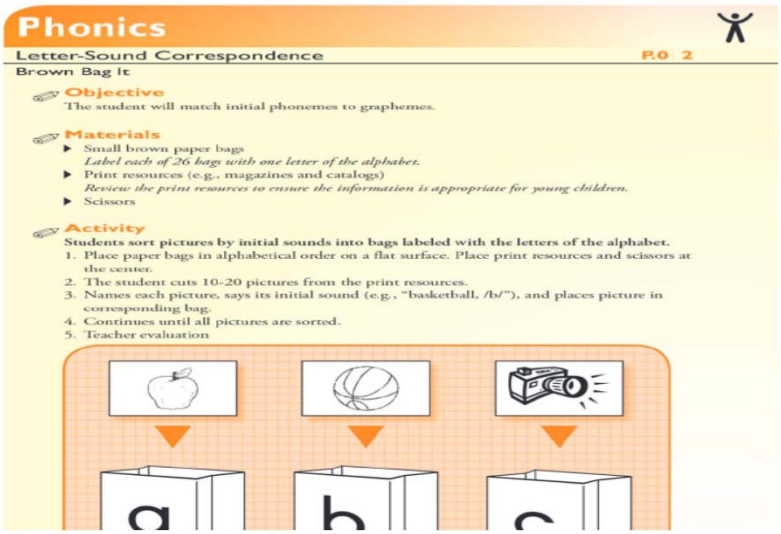
Phonics



Phonics

Letter-Sound Correspondence P.O 2

Brown Bag It

Objective

The student will match initial phonemes to graphemes.

Materials

- Small brown paper bags
  Label each of 26 bags with one letter of the alphabet.
- Print resources (e.g., magazines and catalogs)
  Review the print resources to ensure the information is appropriate for young children.
- Scissors

Activity

Students sort pictures by initial sounds into bags labeled with the letters of the alphabet.

1. Place paper bags in alphabetical order on a flat surface. Place print resources and scissors at the center.
2. The student cuts 10-20 pictures from the print resources.
3. Names each picture, says its initial sound (e.g., "basketball, /b/"), and places picture in corresponding bag.
4. Continues until all pictures are sorted.
5. Teacher evaluation

Our Focus Today…

- ✓Phonological and Phonemic Awareness
- ✓Sounds and Letters
- ✓**Oral Language Development**

For Disadvantaged Preschoolers…

- The single most important thing you can do to improve student's vocabularies is to directly teach them the words they need to communicate and words important for learning, then give lots of opportunities for perfect practice.

Language: The Foundation for School Success

- Children without a solid language foundation often don't understand the meaning of many words their teachers use as they explain things.
- Some children pick up the important language concepts through informal and formal instruction at home and pre-school; others do not.
- If not, these will be the children that have trouble with comprehending what they read in third and fourth grade

What We Recommend for Kindergarten

- Screen all Kindergarteners to identify students at Language Risk
- Provide Minimum 1 to 2 years of Systematic Intervention – 30 to 45 min. per day
- Progress monitor students to ensure the vocabulary gap is closing
- Make sure students enter kindergarten with the necessary language skills for success

Oral Language Development: A Proactive Plan

- Directly teach the words and concepts critical for learning in both pre-school and kindergarten
  - Teach the language of classroom instruction
  - Develop language as a tool for thinking
  - Build vocabulary that allows students to succeed in daily lesson
- Use explicit instruction – Do not promote guessing or “what do you think this word means”

Teach Critical Vocabulary and Concepts

- Actions
  - Beginning Actions ("Everybody stand up")
  - Parts of the body ("I can tmy ouch chin, what am I doing?")
  - Pronouns (I –you, she-her, you-your, he-his)
  - Pictures – Actions (eating, jumping)
  - Actions – Tense (is, was)
  - Tense – Pictures (first, next)

Teach Critical Vocabulary and Concepts

- Descriptions of Objects
  - Object Identification ('this is a dog")
  - Identify Statements ("what is this? A Cat. Yes, now say the whole thing")
  - Common Objects (computer, book, door)
  - Missing Objects ("see if you can tell which object is missing")
  - Plurals (cat, cats)
  - Opposites (big/little, hot/cold)

Teach Critical Vocabulary and Concepts

- Information and Background Knowledge
  - Names
  - School Information
  - Days of the week
  - Months of the year
  - Seasons
  - Part/whole relationships (table/legs)
  - Materials (what things are made of)
  - Common Information (dentist, farm, sky, ocean)
  - Locations (grocery store, forest, airport, library)

Teach Critical Vocabulary and Concepts

- Instructional Words and Problem Solving Concepts:
  - Spatial and Temporal Relations (first, next, last)
  - Before/After
  - Prepositions (on, over, in front of, in back of, under)
  - And ("everybody stand up AND touch your head")
  - Same/Different
  - Some, All, None
  - Or ("I'm going to frown or smile, what am I going to do")
  - Where, who, when, what

Teach Critical Vocabulary and Concepts

- Classification (vehicles, plants, animals)
- Problem Solving Strategies and Applications
  - Concept Application (opportunity for previously learned concepts to be applied to new problems)
  - Absurdities

Kindergarten Common Core Words for Reading and Math

Vocabulary Words
Reading/Language Arts

Grade Level	cc	Word (common core words are bolded)	Definition
K		ABC order	Words put in alphabetical order
K	RF: K.1d	**ABC's**	The alphabet
K	RL: K.10 RI: K.10	**activities**	Things that people spend time doing.
K	RF: K.2f	**added**	To unite or combine
K	SL: K.5	**additional**	more; added
K	L: K.5	**adjective**	A word that describes someone or something. Example: beautiful, green
K	RL: K.9	**adventures**	A trip or activity that is dangerous or exciting.
K	RF: K.1d	**alphabet**	A character set that includes letters and is used to write a language
K	SL: K.4	**animals**	A living creature that is not a plant or a human.
K	RL: K.1,K.4 RI: K.1,K.4 SL: K.3	**answer**	What you say or write after someone asks you a question; a reply.
K	RL: K.1 RI: K.4 SL: K.2,K.3	**ask**	To put a question to someone for information about something.
K	SL: K.6	**audience**	Those reached by means of television, radio, or printed matter.
K	RL: K.6,K.8 RI: K.6 RF: K.4 W: K.7 L: K.5	**author**	A person who writes books, stories, or plays
K	RI: K.5	**back**	The side opposite the front or located behind the front
K	RF: K.2e	**beginning sound**	The first sound you hear in a word
K	RL: K.2 RF: K.2e	**beginning, middle, end**	The first part of something, the central part of something, and the last part of something.
K	RF: K.1c	**between**	The area inside two points or objects.
K	RF: K.2b,K.2c,K.2d	**blend**	To add together so that there no longer seem to be separate parts.

Two Considerations for **Effective Instruction**

1.What to Teach

2.How to Teach

Brain research tells us the things we teach in school fall into the category of COMPLEX skills (i.e., reading), not simple skills. Simple skills can largely be taught through experience and trial and error. NOT so for COMPLEX skills. Think of learning to fly a Boeing 747. Learning through trial and error would be a very bad idea. At the very minimum, it would be inefficient. For most of us, it would be deadly.

Treat complex skill learning like it were life and death. Leave nothing to chance. Teach in the most effective, most efficient way possible. Teaching and Learning research can provide our roadmap identifying what's effective and efficient.

Average effect for each of the major contributors to learning

Contribution	No.	Studies	People	Effects	d	SE	CLE
Student	139	11,101	7,513,406	38,282	0.40	0.044	29%
Home	36	2,211	11,672,658	5,182	0.31	0.058	22%
School	101	4,150	4,416,898	13,348	0.23	0.072	16%
Teacher	31	2,225	402,325	5,559	0.49	0.049	35%
Curricula	144	7,102	6,899,428	29,220	0.45	0.076	32%
Teaching	365	25,860	52,128,719	55,143	0.42	0.071	30%
Average	**816**	**52,649**	**83,033,433**	**146,626**	**0.40**	**0.062**	**28%**

CLE = Common Language Effect

Hattie, 2009

Summary Information from the meta-analyses on the contributions from teaching approaches

	No. metas	No. studies	No. people	No. effects	d	SE	CLE	Rank
Strategies emphasizing learning intentions								
Goals	11	604	41,342	820	0.56	0.057	40%	34
Behavioral organizers/advance organizers	11	577	3,905	1,933	0.41	0.040	29%	61
Concept mapping	6	287	8,471	332	0.57	0.051	40%	33
Learning hierarchies	1	24	—	24	0.19	—	13%	110
Strategies emphasizing success criteria								
Mastery learning	9	377	9,323	296	0.58	0.055	41%	29
Keller's PIS	3	263	—	162	0.53	—	37%	40
Worked examples	1	62	3,324	151	0.57	0.042	40%	30
Strategies emphasizing feedback								
Feedback	23	1,287	67,931	2,050	0.73	0.061	52%	10
Frequency or effects of testing	8	569	135,925	1,749	0.34	0.044	24%	79
Teaching test taking and coaching	10	267	15,772	364	0.22	0.024	16%	103
Providing formative evaluation	2	30	3,835	78	0.90	0.079	64%	3
Questioning	7	211	—	271	0.46	0.068	32%	53
Teacher immediacy	1	16	5,437	16	0.16	—	8%	115
Strategies emphasizing student perspectives in learning								
Time on task	4	100	—	136	0.38	0.101	27%	70
Spaced vs. massed practice	2	63	—	112	0.71	—	—	12
Peer tutoring	14	767	2,676	1,200	0.55	0.103	39%	36
Mentoring	2	74	10,250	74	0.15	0.047	11%	120
Strategies emphasizing student meta-cognitive/self-regulated learning								
Meta-cognitive strategies	2	63	5,028	143	0.69	0.181	49%	13
Study skills	14	668	29,311	2,217	0.59	0.090	41%	25
Self-verbalization/self-questioning	3	113	3,098	1,150	0.64	0.060	45%	18
Student control over learning	2	65	—	38	0.04	0.176	5%	132
Aptitude-treatment interactions	2	61	1,434	340	0.19	0.070	14%	108
Matching style of learning	8	411	29,911	1,218	0.41	0.016	29%	62
Individualized instruction	9	600	9,380	1,146	0.23	0.056	16%	100
Total	155	7,559	386,353	16,020	0.45	0.071	31%	—

Hattie, 2009

Summary Information from the meta-analyses on the contributions from teaching approaches

Strategies	No. metas	No. studies	No. people	No. effects	d	SE	CLE	Rank
Implementations emphasizing teaching strategies								
Teaching strategies	14	5,667	1,491,369	13,572	0.60	0.058	42%	23
Reciprocal teaching	2	38	677	53	0.74	—	52%	9
Direct Instruction	4	304	42,618	597	0.59	0.096	41%	26
Adjunct aids	4	73	9,409	258	0.37	0.043	26%	72
Inductive teaching	2	97	3,595	103	0.33	0.035	23%	83
Inquiry-based teaching	4	205	7,437	420	0.31	0.092	22%	86
Problem-solving teaching	6	221	15,235	719	0.61	0.076	43%	20
Problem-based learning	8	285	38,090	546	0.15	0.085	11%	118
Cooperative learning	10	306	24,025	829	0.41	0.060	29%	63
Cooperative vs. competitive learning	7	1,024	17,000	933	0.54	0.112	39%	37
Cooperative vs. individualistic learning	4	774	—	284	0.59	0.088	42%	24
Competitive vs. individualistic learning	4	831	—	203	0.24	0.232	17%	97
Implementations that emphasize school-wide teaching strategies								
Comprehensive teaching reforms	3	282	41,929,152	1,818	0.22	—	15%	105
Comprehensive interventions for learning disabled students	3	343	56,638	2,654	0.77	0.030	54%	7
Special college programs	2	108	—	108	0.24	0.040	17%	96
Co-teaching/team teaching	2	136	1,617	47	0.19	0.057	13%	111
Implementations using technologies								
Computer-assisted instruction	81	4,875	3,990,028	8,886	0.37	0.059	27%	71
Web-based learning	3	45	22,554	136	0.18	0.124	12%	112
Interactive video methods	6	441	4,800	3,930	0.52	0.076	36%	44
Visual/audio-visual methods	6	359	2,760	231	0.22	0.070	16%	104
Simulations	9	361	6,416	482	0.33	0.092	23%	82
Programmed instruction	7	464	—	362	0.24	0.089	17%	95
Implementations using out of school learning								
Distance education	13	839	4,024,638	1,643	0.09	0.050	6%	126
Home-school programs	1	14	—	14	0.16	—	11%	117
Homework	5	161	105,282	295	0.29	0.027	21%	88
Total	210	17,253	51,742,366	39,123	0.37	0.077	26%	—
Total for all from teaching	365	25,860	52,128,719	55,143	0.42	0.071	30%	—

Hattie, 2009

Conclusions drawn from the meta-analyses on the contributions from teaching approaches

- Based on 365 Meta-Analysis
- Based on 52,649 studies – spanning from 1976-2008
- Based on 52,128,719 Students
- Research complied by John Hattie, presented in Visible Learning, 2009.
- Hattie's work is considered the Holy Grail in education research.

Effect sizes for teacher as activator and teacher as facilitator

Teacher as activator	d	Teacher as facilitator	d
Reciprocal teaching	0.74	Simulations and gaming	0.32
Feedback	0.72	Inquiry-based teaching	0.31
Teaching students self-verbalization	0.67	Smaller class sizes	0.21
Meta-cognition strategies	0.67	Individualized instruction	0.20
Direct Instruction	0.59	Problem-based learning	0.15
Mastery learning	0.57	Different teaching for boys and girls	0.12
Goals – challenging	0.56	Web-based learning	0.09
Frequent/effects of testing	0.46	Whole language – reading	0.06
Behavioral organizers	0.41	Inductive teaching	0.06
Average activator	**0.60**	**Average facilitator**	**0.17**

What Doesn't Work (very well)

(Visible Learning – John Hattie)

– d = 0.4 and larger is Zone of Desired Effects

- Whole Language Programs – d = 0.06
- Student Control over Learning – d = 0.04
- Individual Instruction – d = 0.23
- Inquiry Based Instruction – d = 0.31
- Inductive Teaching – d = 0.33
- Problem Based Learning – d = 0.15
- Web Based Learning – d = 0.18
- Grade Retention – d = - 0.16 (negative)

What Doesn't Work (very well)

(Visible Learning – John Hattie)

– d = 0.4 and larger is Zone of Desired Effects

- Whole Language Programs – d = 0.06
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- Individual Instruction – d = 0.23

Why doesn't this work?

- **Problem Based Learning – d = 0.15**
- Web Based Learning – d = 0.18
- Grade Retention – d = - 0.16 (negative)

Consider the Six Core Characteristics of Problem-Based Learning (Gijbels, 2005)

1. Learning is Student Centered
2. Learning occurs in small groups
3. A tutor is present as facilitator or guide
4. Authentic problems are presented at the beginning of the learning sequence
5. problems encountered are used as tools to achieve the required knowledge and problem solving skills
6. New information is acquired through self-directed learning

How the Brain Learns

Does Practice Make Perfect?

- The adage that "practice makes perfect" is rarely true.
- General practice is often of limited value – consider the examples of cooking, bowling, shooting free throws, etc. etc.

How the Brain Learns

The Role of Explicit Instruction, Guided Practice, Independent Practice and Feedback

- Rule: **Perfect Practice makes Perfect**
- We want to make sure students practice new learning correctly from the **beginning** – use **Explicit Instruction!**
- **Guided Practice** is used to ensure correct practice – thus, teachers provide corrective feedback to help students analyze and improve their practice
- **AVOID independent practice** until students are likely to practice it correctly

Repetition

- When learning new things, memory and recall are strengthened by frequency and recency.
- The more we practice and rehearse something new and the more recently we have practiced, the easier it is for our brain to transmit these experiences efficiently and store them for ready access later.
- This process is called fluency.

How the Brain Learns

- Most memories disappear within minutes – but those that survive the fragile period strengthen with time.
- The way to make long-term memory reliable is to incorporate new information gradually and repeat it in timed intervals.

How the Brain Learns

The Teachers Role

1. Select the smallest amount of material that will have the maximum meaning for the learner
2. Model the application process step-by-step. Studies repeatedly show the brain uses observation as a means for determining the spatial learning needed to master a motor skill (Petrosini, et al., 2003).
3. Insist the practice occur in the teaceher's presence over a short period of time while the student is focused on the learning
4. Watch the practice and provide the students with prompt and specific feedback

Using Brain Research to Guide the Creation of Ideal Learning Conditions

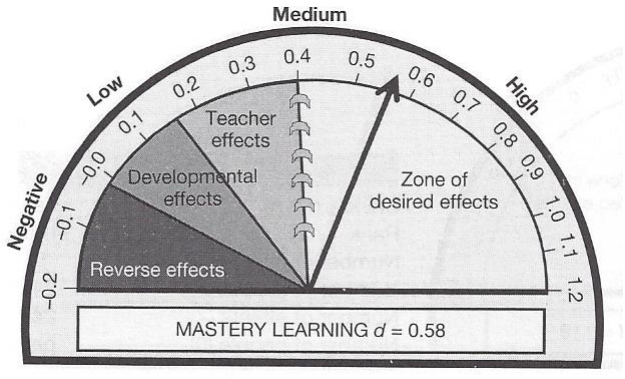
Rule # 1

Memory is not fixed at the moment of learning….repetition provides the fixative!

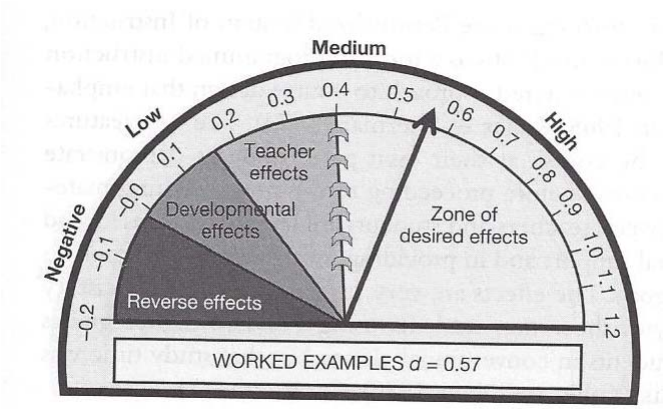
Why is Instruction Problematic for Struggling Learners?

- Too many things being taught
- Violate critical principles regarding learning (repetition, using questioning etc.)
- Confusion followed by Wrong practice
- Insufficient guided practice; corrective feedback too wordy and does not include a clear model

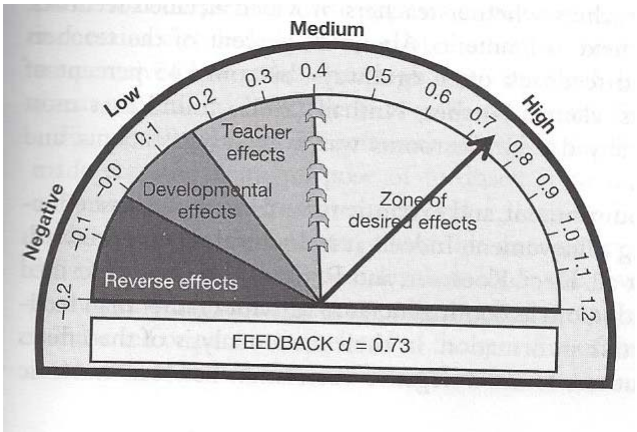
What Does Work Mastery Learning



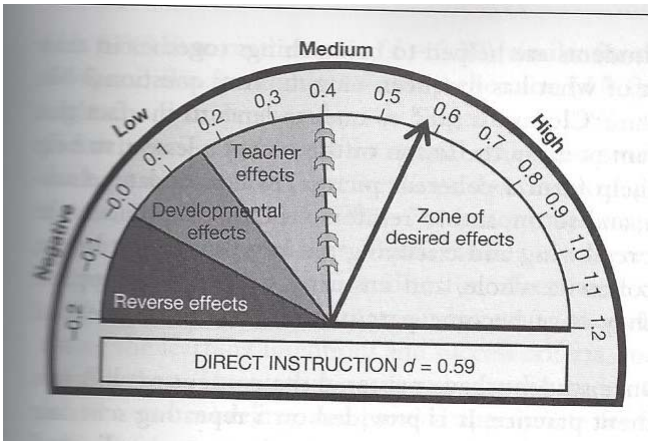
What Does Work
Worked Examples



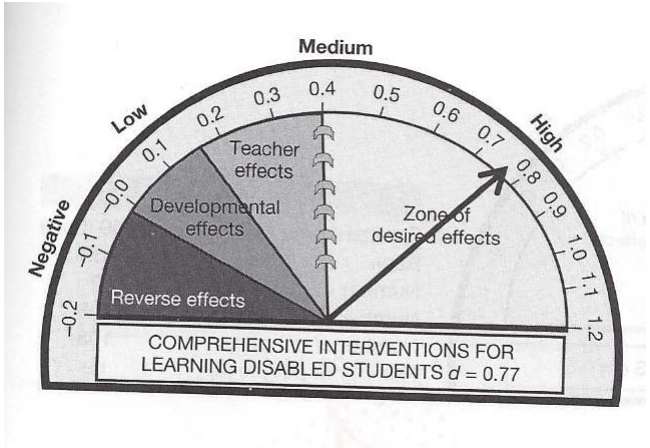
What Does Work
Feedback



What Does Work
Direct Instruction



Comprehensive Interventions for Learning Disabled Students



You Might be Surprised

(Visible Learning – John Hattie)

– d = .4 and larger is Zone of Desired Effects

- Enrichment = .39 vs Acceleration = .88
- Mainstreaming = .28 vs Comp. Interventions = .77
- Individual Instruction = .23 vs SG = .49
- Class Size = .21 vs = School Size .43
- Summer Vac. =-.09 vs Summer School = .23
- Team Teach= .19 vs Comp. Interventions = .77
- Time on Task = .38 vs Spaced Practice = .71
- Homework = .29 vs Classroom Management = .52
- Teach Test Taking = .22 vs. Formative Eval. = .90

Improving Core Instruction

- ✓ Active Engagement/Full Participation
- ✓ Explicit Instruction
- ✓ Instruction that is Differentiated
- ✓ Meaningful and Varied Opportunities to Apply Skills
- ✓ Taught to Mastery!
- ✓ Perfect Practice, Perfect Practice, Perfect Practice

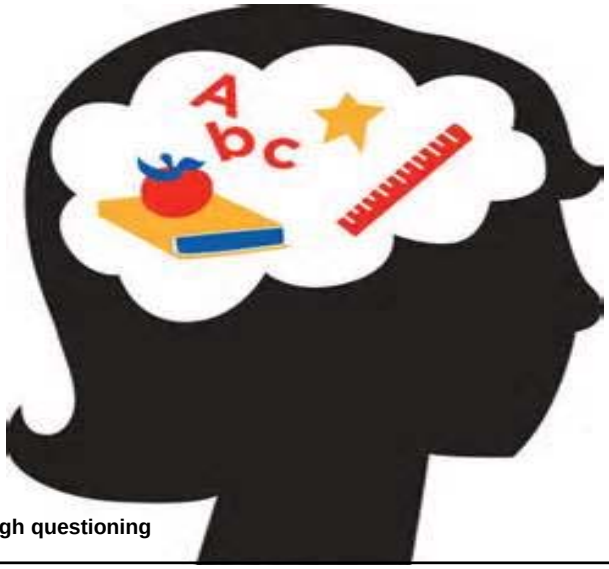
Explicit Instruction Defined

- Explicit instruction is "a structured, systematic, and effective methodology for teaching academic skills…it is an unambiguous and direct approach to teaching that includes both **instructional design** and **delivery procedures**."
- "Explicit instruction is characterized by a series of **supports** or scaffolds, whereby students are guided through the learning process with **clear statements about the purpose and rationale for learning** the new skill, **clear explanations and demonstrations** of the instructional target, and **supported with feedback** until **mastery** has been achieved." A. Archer, 2010

Explicit Instruction: Example and Non Example

- Example: This is the letter s, it makes the /s/ sound. What sound does this letter make? Say it.
- Non Example: This is the letter s, it curves like a snake and hisses - ssss. Have any of you ever seen a snake? They can be scary.

"Who Can Guess What's in My Head" Teaching



Don't teach through questioning

Foundations of Explicit Instruction

- Use clear and concise language
- Provide adequate range of examples and non examples
- Provide guided and supported practice
- Require frequent responses
- Monitor student performance closely
- Provide immediate and affirmative and corrective feedback
- Deliver the lesson at a brisk pace
- Help students organize knowledge
- Provide distributed and cumulative practice

Explicit Instruction

"Opening it up"

Opening of Explicit Lesson

- Preview
  - State the goal of the lesson
  - Discuss the relevance of the target skills (or the larger goal)
  - 3 w's – Why? When? Where?
- Review
  - Review the critical prerequisite skills

Mystery Learning or Mastery Learning???

- **Learning Objectives-stated in student friendly terms—not** standards… "You will increase student achievement by as much as 27% by stating the objective at the start of the lesson."
- Rubrics to match-Can the student tell you what they must master to achieve? "You raise student achievement by as much as 37%-when you give them a rubric to assess their learning."

Explicit Instruction

"Teaching It"

Body of Explicit Lesson

- Modeling (I do it)
  - Show and Tell (demonstrating and describing)
  - 3 c's = Clear, Consistent, Concise
- Involve Students

Explicit Instruction

Body of Explicit Lesson

- Prompted or Guided Practice (We do it)

Prompts:

- Physical prompts
- Verbal prompts
- Visual prompts

Levels of Scaffolding:

- Tell them what to do
- Ask them what to do
- Remind them what to do

Explicit Instruction

Body of Explicit Lesson

- Unprompted Practice (You do it)
  - The release to independent practice varies depending on a student's readiness and ability to practice correctly

Explicit Instruction

"Closing it up"

Closing of Explicit Lesson

- Review critical content
- Preview the content of the next lesson
- Assign independent work - work that can be accurately completed by students

Throughout the lesson….involve students, monitor performance, and provide feedback.

Lesson Structure – Perfect Practice

What	How	Example
I do It	Modeling: Show and describe in clear and concise language – leave nothing to the imagination	"My turn – this is an **s**, it makes the /s/ sound"
We Do It	Prompted or guided practice: Assist students in performing the skill or strategy.	"Lets do it together, everybody, what sound?
You Do It	Unprompted practice: Students perform independently, but with teacher monitoring to ensure perfect practice	"Now it's your turn, what sound does **s** make? Signal

Delivery of Instruction: *Gain and maintain attention*

- Procedures for Maintaining Attention
  - Gain attention
  - Elicit responses from students
  - Maintain a perky pace
  - Maintain close proximity to students
  - Connect with students
    - Eye contact
    - Smile
    - Name
    - Monitor
  - Add delight and humor
  - Teach with enthusiasm

Delivery of Instruction: *Elicit Responses (Choral Responses)*

- **Choral Responses**
  - Students are looking at the teacher
    - Ask a question.
    - Put up your hands to indicate silence.
    - Give thinking time.
    - Lower your hands as you say, "*Everyone.*"
  - Students are looking at a common stimulus
    - Point to the stimulus.
    - Ask a question.
    - Give thinking time.
    - Tap for a response.

A New Era for Instruction

Delivery of Instruction: *Elicit Responses (Choral Responses)*

- **Choral Responses**
  - Students are looking at their own book/paper.
    - Ask a question.
    - Use an auditory signal ("Everyone.").

- **Hints for Choral Responses:**
  - Give adequate thinking time.
  - Have students put up their thumbs OR look at you to indicate enough thinking time.
  - If students don't respond or blurt, repeat.

Delivery of Instruction: *Elicit Responses (Partner Responses)*

- **Use of partners:**

1. Say answer to partner.
2. Retell content of lesson using a graphic organizer.
3. Review content (Tell, Help, Check).
4. Brainstorm (Think, Pair, Share).
5. Explain process, strategy, or algorithm using examples.
6. Read to or with partner.

Delivery of Instruction: *Elicit Responses (Partner Responses)*

- **Other hints for partners**
  - Teach students how to work together. LOOK, LEAN, AND WHISPER.
  - Teach students how to give and receive encouragement and compliments.
  - Teach students that cooperative practice relates to the work place not to friendship.
  - Change the partnerships occasionally (every three to six weeks).
  - Join two partnerships to form cooperative teams. If you plan to use cooperative teams often, give students team numbers 1, 2, 3, and 4. Make 1 and 2 partners and 3 and 4 partners. When requesting responses on partnerships, refer to **evens** and **odds**.

Delivery of Instruction: *Elicit Responses (Individual Responses)*

- **Individual Responses**
- **Option #1**
  - Have students share answers with their partner.
  - Call on a student.
  - Advantages: _____
  - _____
- **Option #2**
  - Ask a question.
  - Raise your hands to indicate silence.
  - Give thinking time.
  - Call on a student.

Delivery of Instruction: *Elicit Responses (Individual Responses)*

- **Less desirable practices**
  1. Teacher asks question. Students raise their hands. Teacher calls on student with raised hand.
     - Disadvantages:_____
     - _____
  2. Student is inattentive. Teacher calls on the student to regain attention.
     - Disadvantages:_____
     - _____

Delivery of Instruction: *Provide Immediate Feedback*

- **Acknowledge/Praise**
- **Encourage/Support**
- **Correct Errors**
  - Correct errors with the individual or the group
  - Correct with a neutral affect.
  - Use: I do it. We do it. You do it.

Individual Turns and Correction Procedure

Input	Question	Response	Monitor	Feedback
Individual Turns: I'll name the different messages and you tell me if each message goes to the brain or from the brain	**Teacher:** "You stub your toe…Toni"	**Toni:** "To the brain"	**Teacher:** listens for accuracy	**Teacher:** "Good"
	"You move hand to pick up a pencil…Jose"	**Jose:** "to the brain"	**Teacher:** Listens for accuracy	**Teacher:** "It would be from the brain – this is an example of a motor nerve" Have student repeat

Explicit

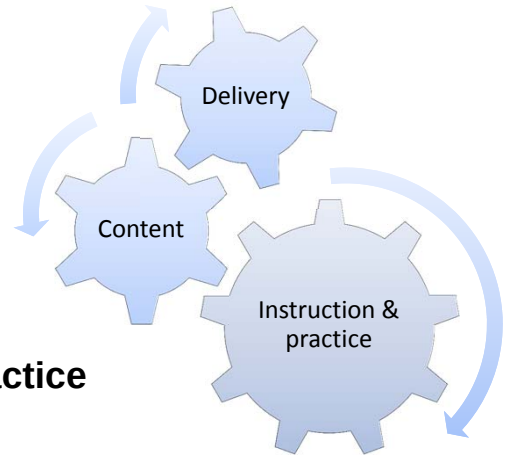
- Routines
- ❖ Point to the Alphabet Sound Card
- ❖ Point to the picture and name it
- ❖ Tell the children to name of the letter and the sound
- ❖ Sing the alliterative verse a few times as the children listen: then have the children join you
- ❖ Repeat the name of the letter and the sound
- ❖ Review the name of the picture on the card, the letter and the sound

Summary: Delivery of Instruction

- Gain and maintain attention
- Be clear and concise when presenting information – no guessing
- Use Modeling extensively
- Elicit responses – don't allow students to be passive
- Maintain a perky pace
- Monitor students' responses
- Provide corrective feedback

Differentiate Core Instruction

Differentiation means changing…



HOW **we teach**
WHAT **we teach**
HOW **students practice**

Differentiate HOW We Teach

1. Explicit/direct teaching
2. Modeling tasks
3. Practice (guided, perfect)
4. Feedback (immediate, specific)
5. Time

1. More Explicit and Direct Teaching

- Teacher makes existing directions more explicit
- Switch student to a more explicit core program or intervention

2. More Modeling

- Show exactly what you want during first teaching and when you correct

  My Turn

  – Blend a word
  – Read a line of practice fast
  – Read a sentence smoothly
  – Read a paragraph or page smoothly
  – Say a complete sentence

3. More Practice

- More turns
  – Saying letter names/sounds
  – Saying sight words fast
  – Blending words
  – Reading complete sentences smoothly
  – Reading complete pages smoothly
  – Answering comprehension questions in complete sentences
  – Hearing and using vocabulary words

4. With More Feedback

- My Turn error correction

Error Correction

Sound/letter naming correction

“My Turn. That letter is d. What letter? Go back.”
“My turn. This sound is /o/. What sound? Go back.”

Error Correction

Blending correction in story reading

For early first grade or intervention phonics groups:

- **“Sound it out.”**
- **(Sound out with them.)**
- **“Go back.”**

For sight words and after blending is firm:

- **“My turn.”**
- **“That word is____. What word?”**
- **“Go back.”**

Error Correction

After blending correction in story reading

For mid first grade or intervention phonics groups past blending:

- **“My turn.”**
- **“That word is____.”**
- **“What word?”**
- **“Go back.”**

Error Correction

Fluency correction for poor expression

- **“My turn.”**
- **(Same section read by teacher with correct expression/rate modeled)**
- **“Go back”**
- **If they don’t go on: “Go on.”**

5. More Time

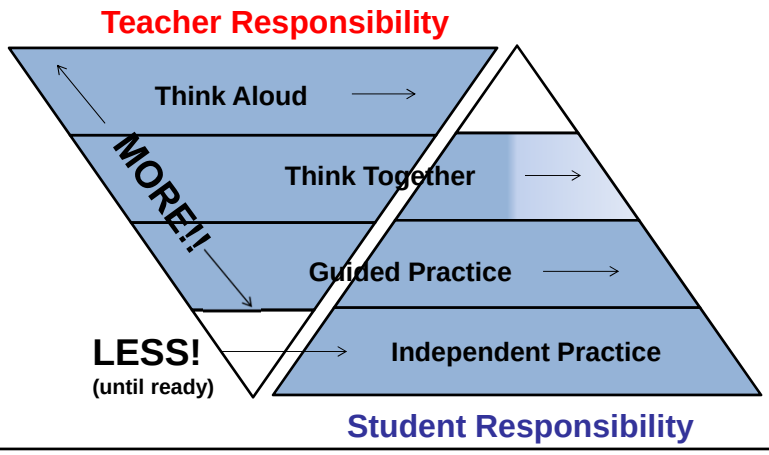
- Full 90 minute block
- Extra intervention block

5 “Mores”

- More explicit/direct instruction
- More modeling
- More practice with...
- More feedback
- More time

Jo Robinson, 2007

Gradual Release

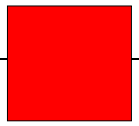


CAN YOU…

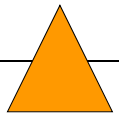
- Identify and explain the big ideas in beginning reading and how the emphasis changes over time
- Name specific strategies for teaching Phonological and Phonemic Awareness
- Name specific language and language concepts critical for preschool and kindergarten success
- Relate educational and brain research to effective instructional practices
- Explain Explicit instruction and Gradual Release

5 Minute Discussion

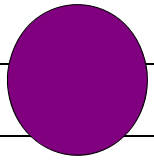
GEOMETRIC REVIEW



What "squared" with what you already knew?



What do you see from a new angle?



What completed a circle of knowledge?

Of what do you now have a more complete understanding?