

"To sit down with a blank piece of paper and write was the most traumatic thing that had ever faced me in life... I had ideas in my head, but I could not get the stuff down. It was a crushing time."

- Charles Schwab



Emotional Consequences of Dysgraphia

“His teacher would let him take his work home, but it would take two or three hours...”

“I told her I wasn't finished, but she just took my paper away...”

“We found he had crumpled up his papers and hidden them at the bottom of his backpack...”

In a chart review in our clinic of 7 year olds with dysgraphia, being gifted increased 3-fold the likelihood that a child had said he or she wanted to die...

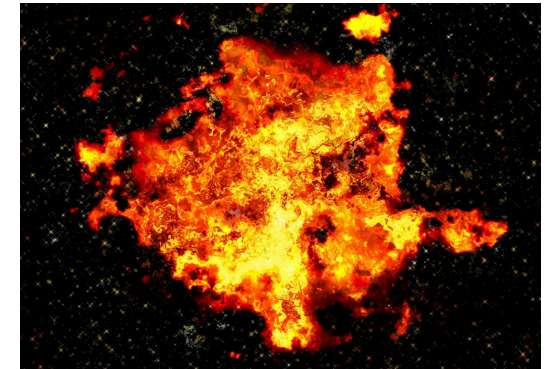
Especially common in SPD kids.

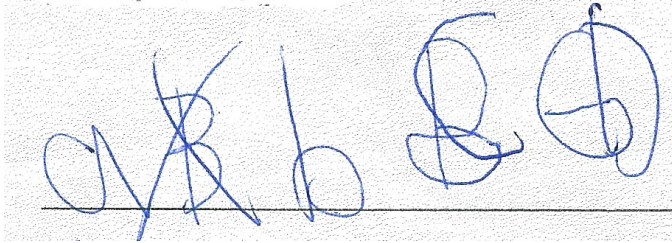
'Explosive'

Behavior

Withdrawal

Depression





- Messy or very slow handwriting
- More common in boys, but occurs in both
- May present as poor work output, incomplete work, school or work avoidance
- Written output much lower than speaking
- Often **EXTREMELY DISTRESSING TO STUDENTS**



Abnormal pencil grips are a SYMPTOM rather than a CAUSE.

Writing and Dyslexia

This is a sample of handwriting from a child with dyslexia.

a b c d e f g h i j k l m n o
p q r s t u v w x y z

a b c d e f g h i j k l m n o p
q r s t u v w x y z

Writing is HARD.

I ~~thought~~ I ~~could~~ ~~climb~~ the ^{mountain} ~~mountain~~

- Sequencing errors
- Irregular sizes and shapes ('Zorro' letters)
- Trouble writing letters with turns and curves
- Spelling mistakes (phonetic & sight words)
- Very slow
- Writing < < Fund of Knowledge
- Trouble with initiation, narrowing, elaborating, cohesion

While Ben was walking down the street,
last night, he saw the brown dog.

Sentence Copy

The boy takes advantage of the
mother as she is washing the dishes
and spilling the water from the sink
on the floor, and the boy is about to
fall

Writing about a Picture

Why is Writing Difficult?

- Impaired motor sequencing
- Finger confusion
- Some may have fine motor problems
- Impaired letter writing automaticity
- Trouble starting
- Problems translating images and feelings into words
- Word finding problems
- Spelling problems
- Grammatical problems
- Too many ideas at once
- Problems sequencing and organizing ideas
- Working memory overload



Written output often 1-2+ grade levels BELOW intelligence. Writing is usually late blooming in dyslexic students. Dyslexic students may eventually excel in writing, but they may prefer to keyboarding to writing by hand.

HOW TO HELP: Dyslexia and Writing



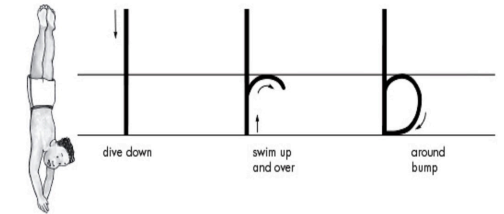
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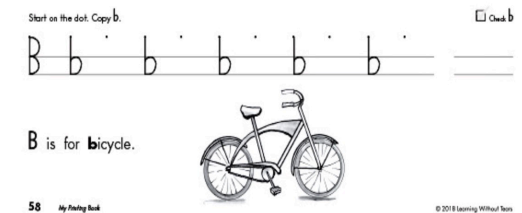
Pediatric Occupational Therapist

- improves fine motor coordination
- strengthens fingers and postural muscles to stabilize writing posture

Handwriting program with visual and verbal cues to help form letter in a proper order



Mutisensory strategies like writing in sand



Handwriting Without Tears program



Dictate!

Keyboard!





“For many dyslexics, language may continue to flow below the surface, words just out of reach, very difficult to access. Ideas may persist as richly *synesthetic* images, blending sound and texture and color, and thinking may be for the dyslexic more than a matter of composing these elements than of arranging words on the page.

Composing, then, involves all the senses, gestures, music and movement, touching and holding objects...” –Helen Pyke, English Professor, dyslexic who only learned to read aloud in the 8th grade



HOW TO HELP: Dyslexia and Writing

IF THEY DON'T KNOW HOW TO START...









Step Up to Writing provides templates for writing as well as model sentences and essays.

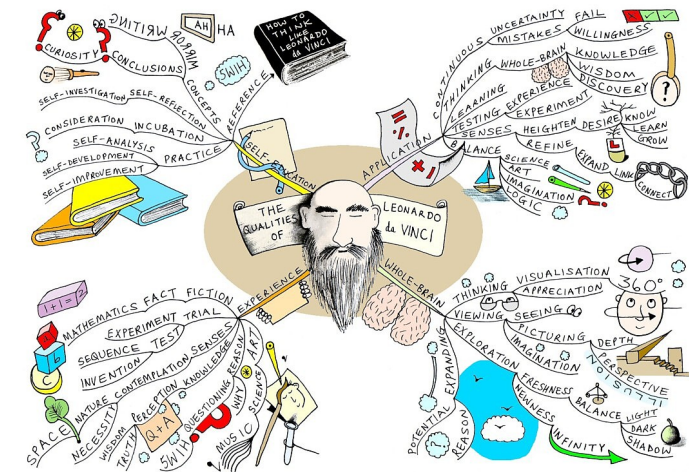
- Model Sentences & Essays
- Template-based writing programs such as Step Up to Writing

- **Trouble starting**
- **Problems translating images and feelings into words**
- **Word finding problems**
- Spelling problems
- Grammatical problems

IF TOO MANY IDEAS OR TROUBLE TRANSLATING PICTURES AND FEELING INTO WORDS

- Talk then Write
- Draw or mind map ideas first
- Powerpoint slide sorter layout to organize images; words are added later

	Topic	
	Reason/fact/detail	 explain
		 explain
	Reason/fact/detail	 explain
		 explain
	Conclusion	





HOW TO HELP: Dyslexia and Writing

STEP UP TO WRITING

WE DO Step Up Paragraph Outline

My favorite kinds of food are Posole, bananas, and ice cream.

The first food that I like is posole.

I like posole because it is a traditional food. It is spicy and it smells like chili chicken.

The second food that I like is bananas.

I like bananas because they are delicious. They are also sweet and easy to eat.

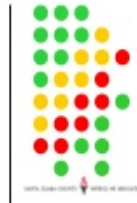
The third food that I like is ice-cream.

I like ice-cream because it is cold on hot days. It is fun to eat and it has many flavors.

I like many different types of food from spicy to sweet everything is good to eat.

Model Sentences

Example from Michelle McQueen



● Topic	
● Reason/fact/detail	● explain
	● explain
● Reason/fact/detail	● explain
	● explain
● Conclusion	



HOW TO HELP: Dyslexia and Writing



Siri, Google Assistant, Alexa (Amazon), and Cortana



Co:Writer®



grammarly.com



Dictate!



Keyboard!



writer



- All devices – phone, iPads or other tablets, laptops, and desktop computers have Speech to Text. **Voice Dream Writer** can read back text to help proofread.
- Paid software like some editions of Dragon have technical vocabulary.
- Children as young as 7 can learn to type.
- Writing software like **Write Outloud** or **Co:Writer** have strong word prediction features. Co:Writer also has special features especially helpful for high school and college students.
- **Ginger** and **Grammarly** have free version and context-specific spell and grammar checkers that catch homophone mistakes
- **Microsoft One Note** also has dictation, read aloud, writing, spellchecking, and grammar checking capabilities and it's free.



HOW TO HELP: Dyslexia and Writing

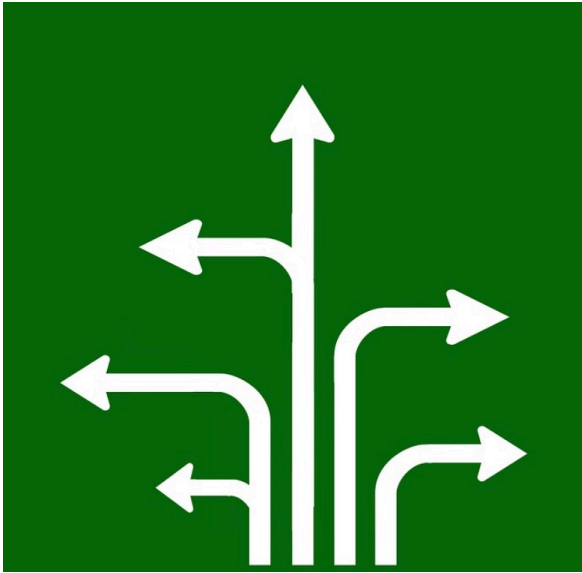


Writing Software is a REMEDIATION, not just an ACCOMMODATION

- Working with word prediction software improves writing of students with dyslexia because more complex words and text gets to the page.
- Students learn to spell words that they know they want to use, but do not know how to use.
- Contextual spellcheckers and grammar checkers also provide feedback on tricky words like homophones (there, their, and they're), sight words like because, and similar sounding words with different uses like then and than.



HOW TO HELP: Dyslexia and Writing



In general, reduce the number of assignments and allow more time for redrafting. Use college writing centers as an example.

- Too many ideas at once
 - Problems sequencing and organizing ideas
 - Working memory overload
1. **Get ideas down on paper** - talk before writing, dictate, mind map, collect photos
 2. **Narrow** – check and re-check the question, remove non-essentials or store in a different file
 3. **Read aloud with a partner** – find gaps in logic, information out of sequence
 4. **Break down writing into smaller steps** over days – do a little at one time
 5. **Provide models** of cohesive writing

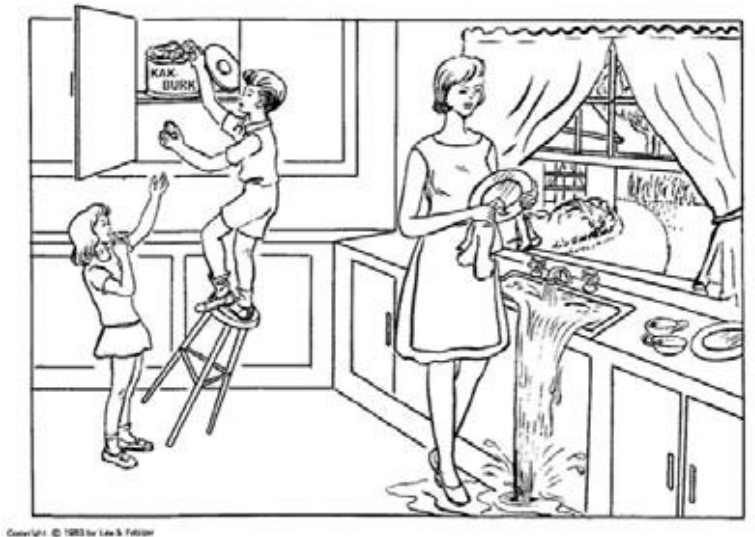
EXAMPLES: Dyslexia and Writing

What grammar and spelling issues does this student need to work on?

the Boy is falling
down the girl is reach
for the cookies and
the mom let the
water fall was in
the disis a veve
a low Becas she
is drink the elen
ones

Math gifted 10 year old girl with dyslexia – Johns Hopkins CTY

Descriptive
writing to
the Cookie
Thief picture



Boston Aphasia Battery

The Boy is falling
 down the girl is reche
 for the cockis and
 the mom let the
 wate fol wasing
 the disis a vere
 a low Becas she
 is dring the clen
 ones

- Erratic sizing and forming of letters – impaired letter writing automaticity
- Does not capitalize at the beginning of a sentence
- The letter 'b' is always written in capital. Is the student doing this to distinguish it from the letter 'd'?
- Run-on sentences
- Phonemic spelling errors: gill for girl, vasing for washing, wate for water, disis for dishes
- Sight word spelling errors: reche for reach, cockis for cookies, fol for fall, avereflow for overflow, becas for because, dring for drying, clen for clean

HOW TO HELP: Dyslexia and Spelling

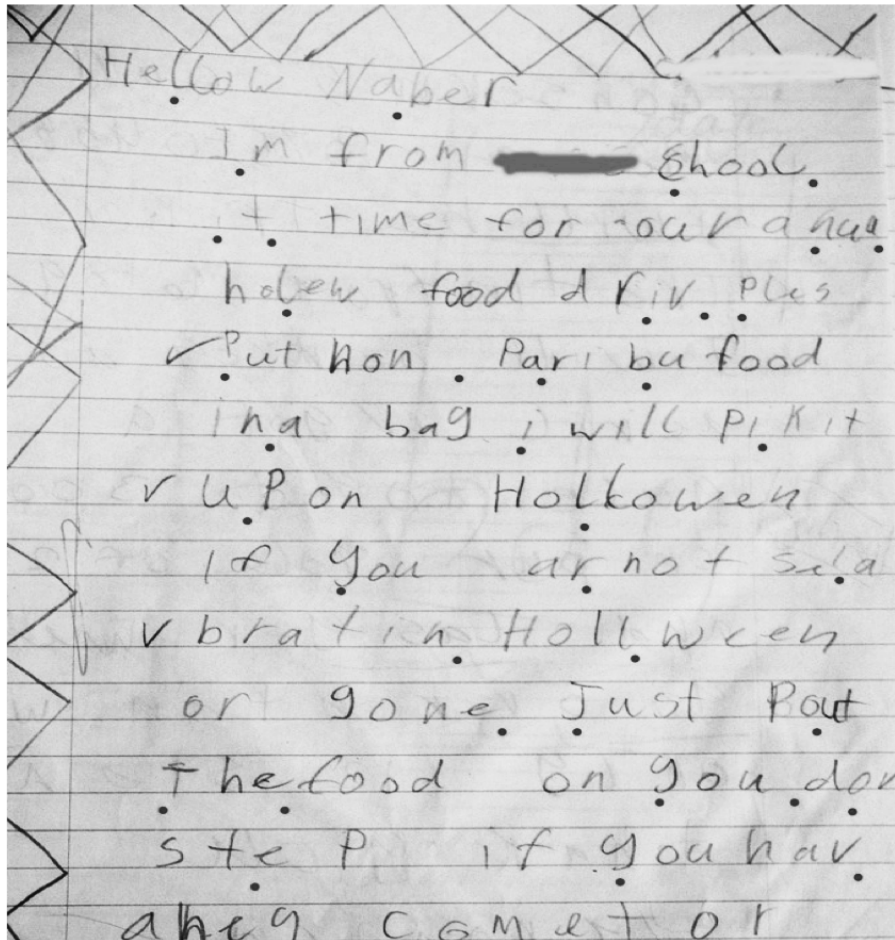
- This student was already working her way through a Structured Literacy program (multisensory, sequential, systematic).
- Writing encouraged – but avoided 'over-correcting' papers
- For error work, student asked to find errors in place of new writing assignments. One type of error at a time was discussed and corrected at a time to avoid working memory overload. An error log of misspelled words was kept.
- Started Phonetic Zoo, a mnemonic spelling program that the student could work on incrementally and independently.



Math gifted 10 year old girl with dyslexia – Johns Hopkins CTY

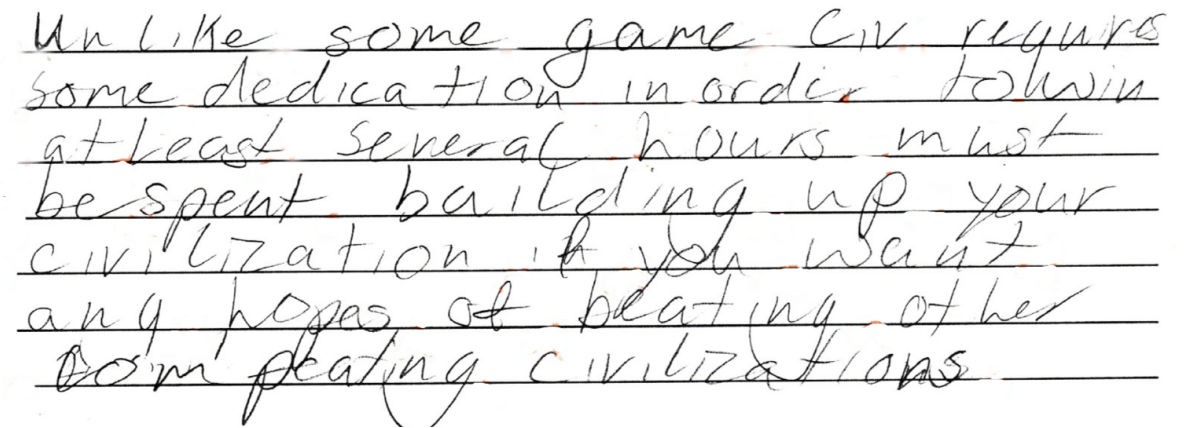
HOW TO HELP: Dyslexia and Spelling

BEFORE INTERVENTION



Hello Naber
 I'm from [redacted] school.
 + time for your name.
 hallow food driv. plus
 ✓ Put Hon. Par. bu food
 ina bag i will pick it
 ✓ u. Pon Holoween
 if you ar not sala
 ✓ b. r. a. t. i. n. Holoween
 or gone. Just Put
 The food on you. don
 ste P if you hav.
 ake9 com et or

4 YEARS LATER



Unlike some game Civ requires
 some dedication in order to win
 at least several hours must
 be spent building up your
 civilization if you want
 any hopes of beating other
 dom. feating civilizations

Still some spelling errors, but much improved
 Letters and spacing more regular
 Few if any phonetic mistakes
 Still missing commas, periods, and occasional letters

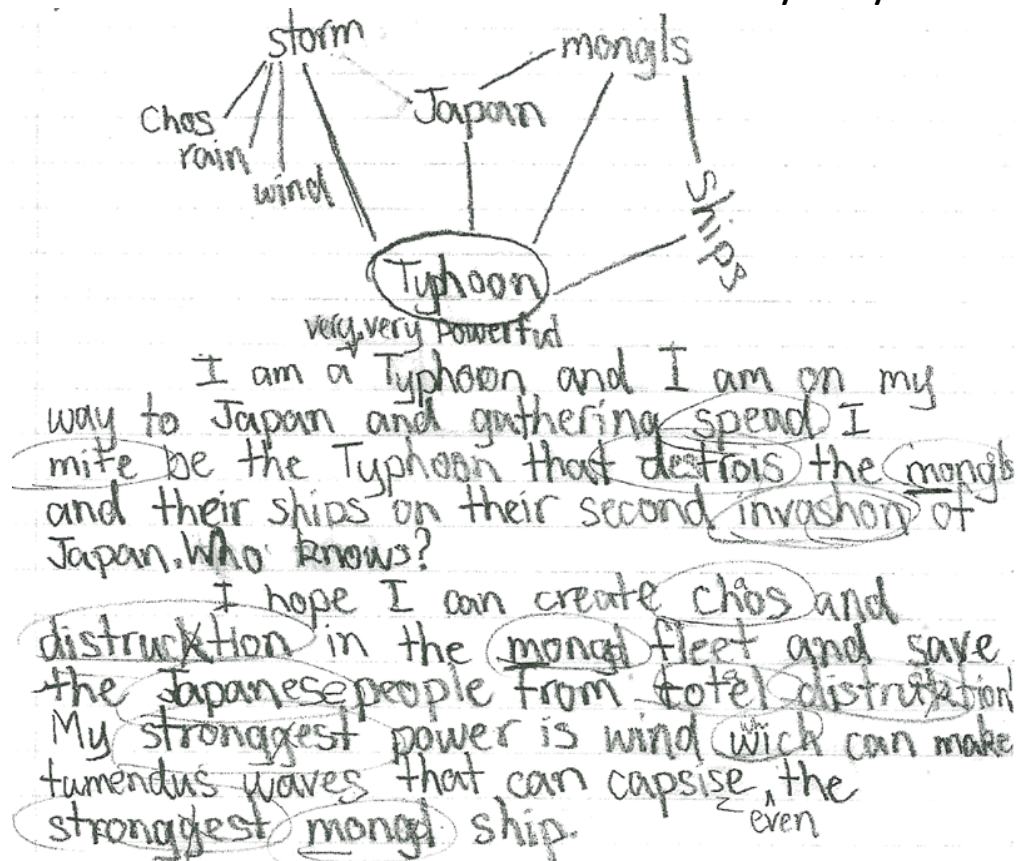
What Patterns Do You See In This Writing Sample?

Write about your favorite game. Include at least 3 reasons why you like it.

~~My~~ ~~Max~~ My favorite game is
~~pick~~ ^{basit ball} this tag becas ~~I am~~ I can jump
~~milli~~ ^{and pick the ball} ~~my~~ ^{max} ~~all~~ was wins at school.
 another reason that I ~~like~~ like ~~Basit~~
 Basit ball is be cas you can shot the
 ball and try to make it thru the hoop.
 when you make it in the hoop you chet
 it to the other person and they catch it
 when the other team hits the rim you have to run
 with the ball to make it. That is why I ~~like~~ like
 basit ball.

BEFORE INTERVENTION

Gifted Dyslexic
Boy 10 years old



"I am a Typhoon and I am on my way to Japan and gathering speed. I mite be the Typhoon that destrois the mongls and their ships on their second invashon of Japan.... My strongest power is wind wich can make trumendus waves that can capsise the strongest mongl ship."

2 YEARS LATER USING WRITE OUTLOUD TYPING SOFTWARE

This small story is about a Beekeeper named Sue Hubbell and her bees. The story starts when Sue receives an exasperated report from a local farmer that her bees are loose in his milking shed. But when Sue arrives she finds that the little black and yellow things flying around are not bees but flies. She comes to this conclusion because the thing that she sees has two wings or a Diptera, bees have four wings or Hymenoptera. The next time

With Constant Feedback, Student
Internalized Spelling Patterns

"How can I look it up in a dictionary if I don't know how to spell it?"

1. Take the multiple choice quiz.
2. Its been said that writing is the most traumatic aspect of dyslexia in school. Why do you think that is? Have you ever had difficulty writing? What do you think might help your students?
3. On slide 18, identify 4 mistakes and explain what they show.
4. Suggest at least 3 strategies that might help this student with writing.