SPECIAL EDUCATION

SPECIALIZED TEACHING & LEARNING / ASSISTIVE TECHNOLOGY

Instructional Strategies to Support Continued Learning

@ccsdspecialize1

Today's Learning Target

Participants will learn easy-to-implement tools to support Reading, Writing, Math, and Technology

Mathematical Tools to Support Learning at Home

APPLICATION & PROBLEM SOLVING

Students use the concepts and skills that they acquire to:

Solve problems with the use of models and explanations.

Solve and analyze performance tasks for deep/rich contextualized problem solving and application of the concepts to new or unique situations.

Apply towards Problem Based Learning where students explore real-world problems and challenges for possible solutions.

Work individually and collaboratively to explain and justify their thinking.

K-12 BALANCED MATHEMATICS INSTRUCTION

The Cobb Teaching and Learning Standards for Mathematics focus on the acquisition of math skills through conceptual instructional strategies. This results in an understanding of math principles to apply towards critical thinking and problem solving.

Students use manipulatives, software, and technology to investigate and discover math concepts.

Students understand concepts through models, simulations and relevant real world examples.

Students represent the mathematics through drawing pictures, graphics, tables, numbers, and symbols.

Students are given purposeful skills and practice to strengthen computation.

Students engage in explanatory writing to justify their thinking.

Students become fluent by applying strategies and procedures efficiently and accurately.

MATHEMATICS FOUNDATIONAL SKILLS

STANDARDS for MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.

2. Reason abstractly and quantitatively.

3. Justify and explain their reasoning and critique the reasoning of others.

4. Model with mathematics, i.e. graphs, drawings, tables, symbols, etc.

5. Use appropriate math tools strategically, i.e. manipulatives, calculators, rulers, etc.

6. Attend to precision, i.e. clear communication, accuracy, measurement, calculations.

7. Look for and make use of patterns and structure.

8. Look for and express regularity in repeated reasoning through rules, properties and shortcuts.

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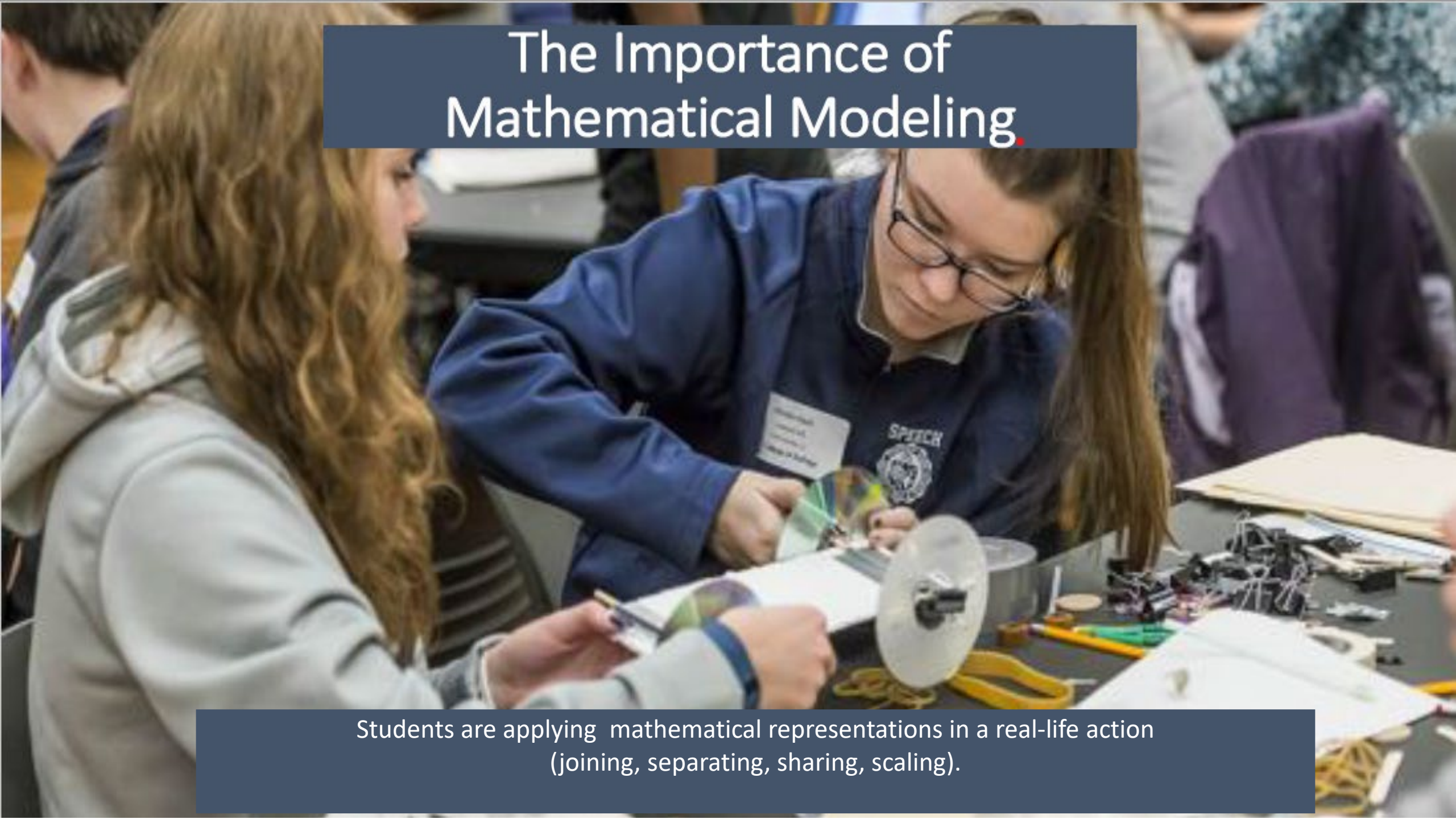
Updated 1.20.16

The Importance of Mathematical Modeling.



Students are applying mathematical representations in a real-life action (joining, separating, sharing, scaling).

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What Do I Need to Solve a Math Problem?

Students must be able to read a word problem, extract the necessary values and determine a method for solving for the unknown.

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Why Can Solving Word Problems be Difficult?

- Mixture of words and numbers
- Multiple steps needed
- Focus and self control is required
- Familiarity with the language of Math
- Reading is required

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Purpose of Numberless Word Problems

Numberless word problems force students to take time to make sense of the problem and the actions. When they understand the actions in the problem, they can begin to think about all the necessary components to answer the question being asked.

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Numberless Word Problems

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Questions to Ponder:

- What do you notice?
- What do you know to be true?
- What do you think to be true?

What are the mathematical phrases here? What does *some* mean? Could be 5, 1,000, 1,000,000.

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Numberless Word Problems

There were some kids eating ice cream. Some of the kids were eating chocolate ice cream.

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Numberless Word Problems

There were 35 kids eating ice cream. Some of the kids were eating chocolate ice cream.

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Numberless Word Problems

There were 35 kids eating ice cream. 14 of the kids were eating chocolate ice cream.

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Numberless Word Problems

There were 35 kids eating ice cream. 14 of the kids were eating chocolate ice cream. The rest of the kids were eating vanilla ice cream.

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Numberless Word Problems

There were 35 kids eating ice cream. 14 of the kids were eating chocolate ice cream. The rest of the kids were eating vanilla ice cream. How many kids were eating vanilla ice cream?

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Mathematical Modeling/Numberless Word Problems

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5 Minutes Question and Answer Session

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Reading Tools to Support Learning at Home

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READING

Engaging students with grade-level text is *central* to ELA/Literacy Instruction.

Students regularly access at or above grade-level texts during direct instruction.
Students closely read and interact with the grade-appropriate text around which instruction is centered.
Students read a variety of nonfiction or informational texts, and fiction or literary texts.
Students acquire and use grade-level vocabulary.

SPEAKING & LISTENING

Students *communicate* about the texts they read with peers and adults.

Students engage in rich and rigorous conversations about texts.
Students use evidence or examples from texts to support their opinions or arguments.
Students demonstrate a command of Standard English grammar when speaking.

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WRITING

Writing occurs as the result of what students *read* and *discuss*.

Students respond to the texts they read through writing.
Students write and use evidence from multiple texts or sources to inform, explain, or make an argument.
Students compose narratives detailing real or imagined experiences.
Students choose topics and compose writing pieces that are appropriate to task, purpose, and audience.
Students demonstrate a command of Standard English grammar when writing in context.

K-12 BALANCED LITERACY INSTRUCTION

The Cobb County Teaching and Learning Standards in English Language Arts provide a rigorous set of required proficiencies in reading, writing, listening, speaking, and language. In balanced literacy instruction, reading, speaking, and writing are connected.

The foundation of language or word study is embedded and ongoing in balanced literacy instruction. In grades K-5, students are learning to become fluent and proficient readers and receive explicit instruction in phonics, spelling, and vocabulary. These foundational skills are reinforced and further developed in grades 6-12.

READING FOUNDATIONAL SKILLS

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Reading-UNWRAP Strategy

Reading Comprehension Checklist	
Underline the title	What do you think the passage will be about?
Number the paragraphs	How many paragraphs are there?
Walk through the questions	Can you identify key words?
Read the passage	Did you understand what you read? Were you able to highlight answers? Read the passage as many times as you need to.
Answer the questions	Which questions were difficult? Re-read, if needed.
Prove your answers	Write the paragraph number next to the answer. Underline the answer. Make sure you can prove your work.

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Example of UNWRAP Strategy

Name:_____ {Fiction Passage}

CURTAIN CALL!

Directions: Read the passage and answer the questions.

1 Joseph had been excited about trying out for the school play ever since he saw the flyers hanging out in the hallway. He just knew that he was the perfect fit for the role of Simba in the production of *The Lion King*. Joseph and his best friend Danny had spent most of the weekend practicing lines and talking about the play.

2 During the tryouts Joseph watched the other kids' tryouts, but his mind kept thinking about what it would be like to be in the middle of the stage and having one of the most important roles! He just knew he would get the part. Towards the end of the afternoon the director called all the kids together to announce who would have each part. Much to his surprise Joseph's name was called for the role of Scar, Simba's uncle. Joseph couldn't help but be a little disappointed. The role of Scar didn't have near the stage time or lines that Simba's role had.

3 In the car on the way home, Joseph began reading over the lines assigned to Scar. He realized that even though he had less lines, he definitely would have a big impact on the play. He would have a lot of fun being the evil character! A smile began to creep across Joseph's face as he thought about the bright lights and curtain call!

1. How did Joseph feel when he didn't get the role of Simba?
Joseph felt disappointed when he didn't get the role of Simba.
2. What is a director of a play?
A director is a person who tells you what to do.
3. Have you ever worked hard for something and not gotten it? Explain.

U- Underline the Title
N- Number the paragraphs
W- Walk through the questions
R- read the article
A- answer questions in a complete sent.
P- Prove your answers

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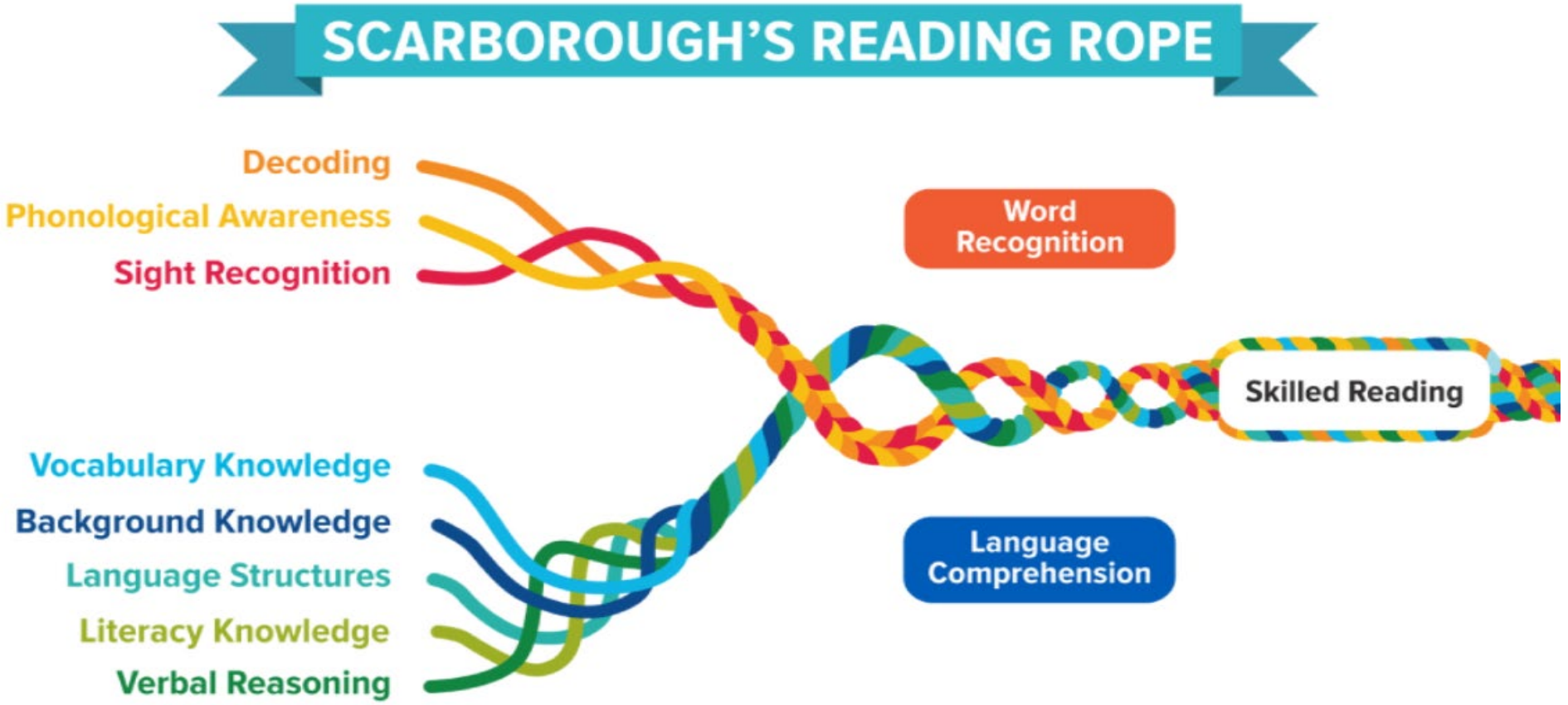
Reading Practice

Have your child read aloud for a few minutes. Let them practice reading.



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Reading

Spot Dot Divide

Spot – I look for the vowels and place a **dot** under each vowel sound.

momentum

Divide – I start at the end of the word and grab the consonant in front of each dot. Place a slash there.

mo/men/tum

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Reading Comprehension & Class Notes

HOW TO HIGHLIGHT

- Do not use one single-color highlighter
- Assign each color a specific purpose
  ~ this creates a color coding system.

Example of a SYSTEM

- Pink: Terms
- Yellow: Definitions
- Orange: Examples of Definitions
- Blue: Dates
- Green: Other things, misc.

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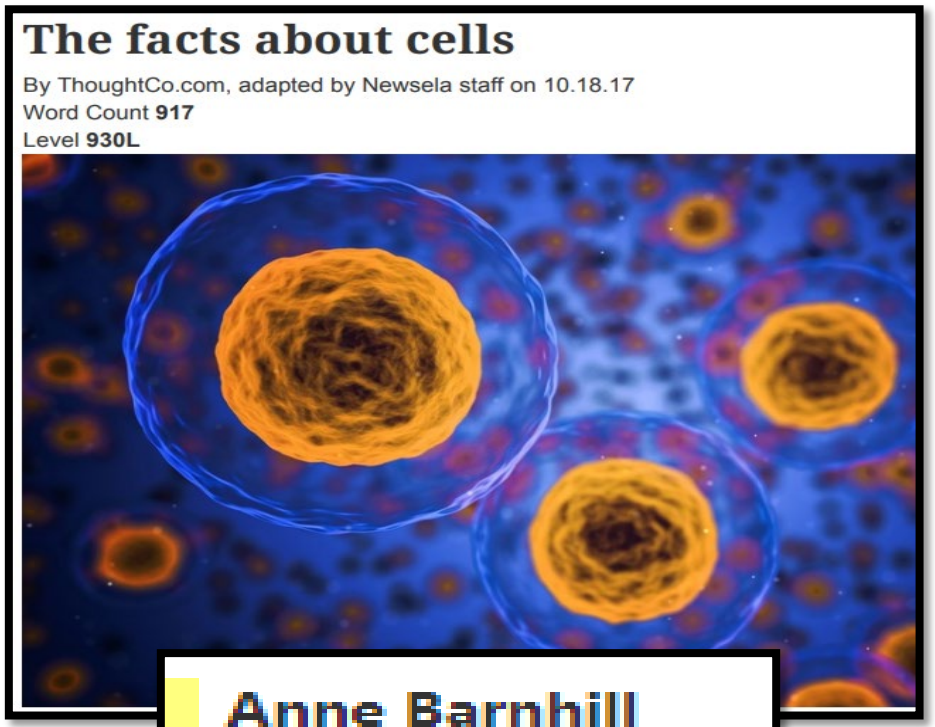
How could you use highlighters at home?



Anne Barnhill
Saved 1:51 PM

KEY:

Pink = Term
Yellow = Definition
Green = Example

Cells are the basic building blocks of life. Some life forms, or organisms, are made out of a single cell, whereas others are made of millions.

Scientists estimate that our bodies contain anywhere from 75 to 100 trillion cells, which come in hundreds of different types. Cells do everything from providing energy to allowing animals to reproduce.

Below are 10 facts about cells, some of which are well-known while others may surprise you.

1. Cells are too small to be seen without magnification.

Cells come in a variety of sizes, ranging from 1 to 100 micrometers across. A micrometer is a millionth of a meter, and there are more than 25,000 micrometers in a single inch.

The study of cells is called cell biology. Because cells are so small, it would have been impossible to study them without the invention of the microscope. Thanks to this technology, cell biologists can study detailed images of even the smallest of cells.

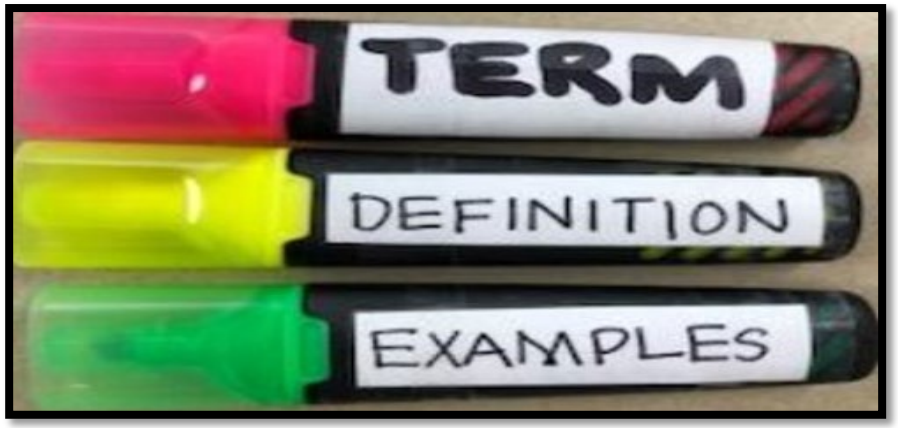
How could you use highlighters at home?

The five themes of geography help organize how we study our planet

By ThoughtCo.com, adapted by Newsela staff on 11.12.19

Word Count **913**

Level **1020L**



As one drives along most major highways, there are mileage signs indicating the distance to the next town or city. This information expresses your current location relative to the upcoming place. For example, say a highway sign states that St. Louis is 96 miles away from Springfield. In this instance, you would know your relative location from St. Louis.

Relative location is also a term that is used to indicate a place's location within a larger context. For example, one could say that Missouri is located in the Midwest of the United States. It is bordered by Illinois, Kentucky, Tennessee, Arkansas, Oklahoma, Kansas, Nebraska and Iowa. That is the relative location of Missouri based on its location within the United States.

Alternatively, you could state that Missouri is south of Iowa and north of Arkansas. This is yet another example of relative location.

Absolute Location: On the other hand, absolute location references a place on the Earth's surface based on specific geographic coordinates, such as latitude and longitude. Based on the previous example of St. Louis, the absolute location of St. Louis is 38°43' North 90°14' West.

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Reading-Supporting with Classroom Notes

Key Ideas	Responses
• Main points of the notes • Supporting details • Informs the student of the depth and breadth of note-taking you expect. **Ways to remember**: • New terms • Ideas most important	• Questions, interpretations, and Connections • What other ideas, events, or texts does this information reminds you of. • Why do you think this information is important/relevant: *who, what, when, where, why, how, etc.*

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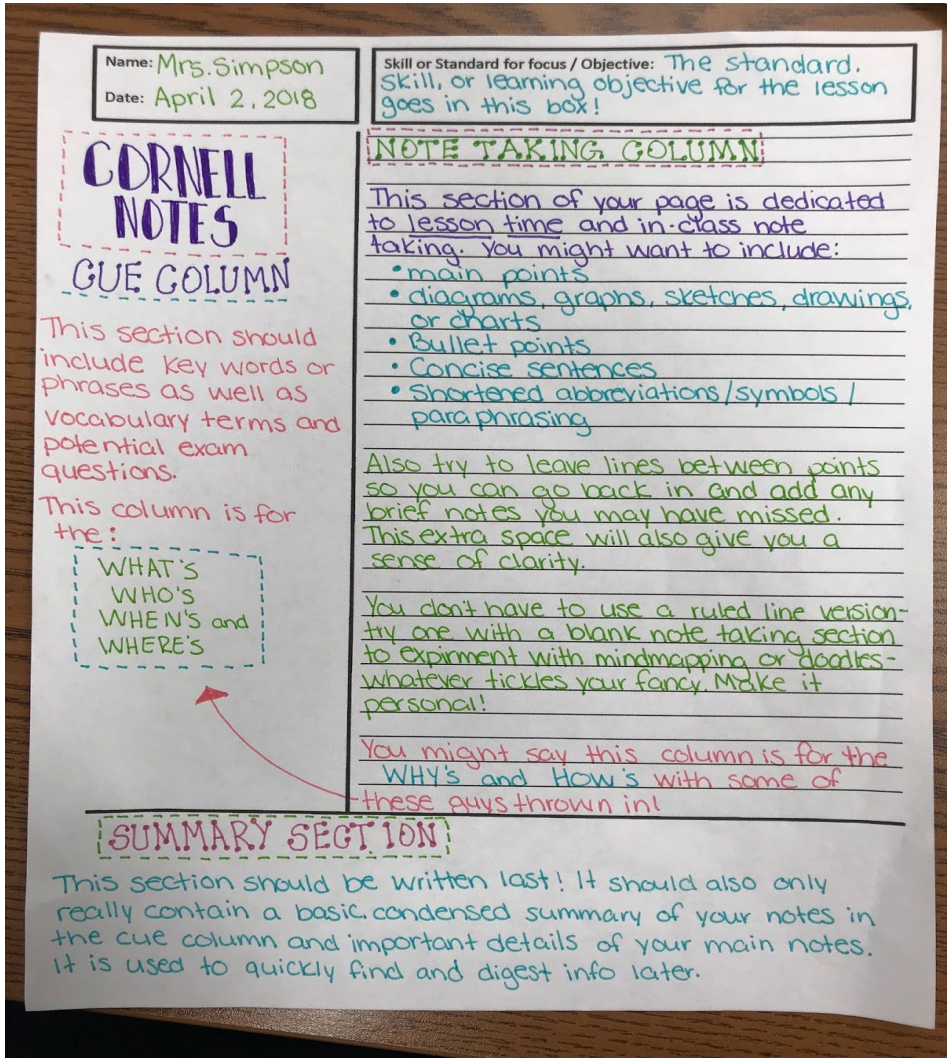
Reading-Supporting with Classroom Notes



Name: Mrs. Simpson
Date: April 2, 2018

Skill or Standard for focus / Objective: The standard, skill, or learning objective for the lesson goes in this box!

CORNELL NOTES

CUE COLUMN

This section should include key words or phrases as well as vocabulary terms and potential exam questions.

This column is for the:

WHAT'S
WHO'S
WHEN'S and
WHERE'S

NOTE TAKING COLUMN

This section of your page is dedicated to lesson time and in-class note taking. You might want to include:

- main points
- diagrams, graphs, sketches, drawings, or charts
- Bullet points
- Concise sentences
- Shortened abbreviations/symbols / paraphrasing

Also try to leave lines between points so you can go back in and add any brief notes you may have missed. This extra space will also give you a sense of clarity.

You don't have to use a ruled line version- try one with a blank note taking section to experiment with mindmapping or doodles- whatever tickles your fancy. Make it personal!

You might say this column is for the WHY's and HOW's with some of these guys thrown in!

SUMMARY SECTION

This section should be written last! It should also only really contain a basic, condensed summary of your notes in the cue column and important details of your main notes. It is used to quickly find and digest info later.

Topic: Graphing Linear Equations	Name: Class: Algebra Period: 4 Date:
Questions/Main Ideas	Notes
Standard form-	$Ax+By=C$ ex. $4x+3y=9$
slope intercept form-	$y=mx+b$ ex $y=2x+1$
slope -	rise = change in y value = y_2-y_1 run change x value x_2-x_1
$2x+4y=20$	
find the slope:	$2x+4y=20$
subtract $2x$	$-2x \quad -2x$
	$4y=-2x+20$ slope = $-\frac{1}{2}$
divide by 4	$\frac{4}{4} \quad \frac{4}{4} \quad \frac{4}{4}$ y-intercept = 5
	$y=\frac{1}{2}-\frac{1}{2}x+5$
How do you graph a slope?	* Graphing 1. Plot y-intercept 2. follow slope 3. connect line.
Find the slope:	(6,4), (3,2)
find slope	$\frac{y_2-y_1}{x_2-x_1}=\frac{2-4}{3-6}=\frac{-2}{-3}=\frac{2}{3}$
	$y=\frac{2}{3}x+b \quad y=\frac{2}{3}x+0$

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Supporting Comprehension with Mnemonics

Mnemonic devices are tools and techniques you can **use** to help boost your ability to remember, retain, or retrieve information quickly. This memory technique allows your brain to encode important information in a unique way that helps you learn it.

Mnemonic		
Please	P	- Parenthesis
Excuse	E	- Exponent
My	M	- Multiplication
Dear	D	- Division
Aunt	A	- Addition
Sally	S	- Subtraction

Kings	Play	Chess	On	Fine	Glass	S
K	P	C	O	F	G	
I	H	L	R	A	E	
N	Y	A	D	M	N	
G	L	S	E	I	U	
D	U	S	R	L	S	
O	M			Y		
M						

King	K	Kilometer
Henry	H	Hectometer
Died	D	Decameter
Magnificently	M	Meter
Drinking	D	Decimeter
Chocolate	C	Centimeter
Milk	M	Millimeter

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Supporting Comprehension with Mnemonics

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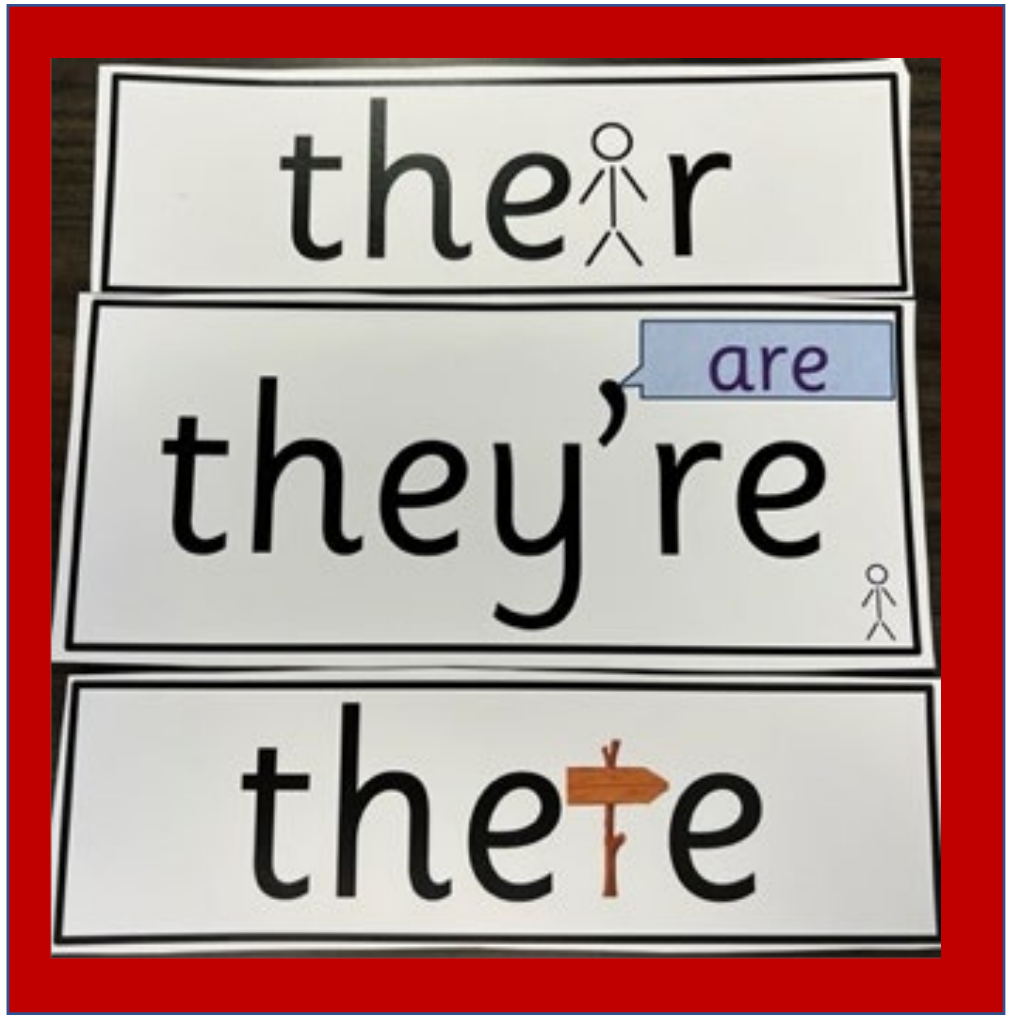
Supporting Comprehension with Mnemonics



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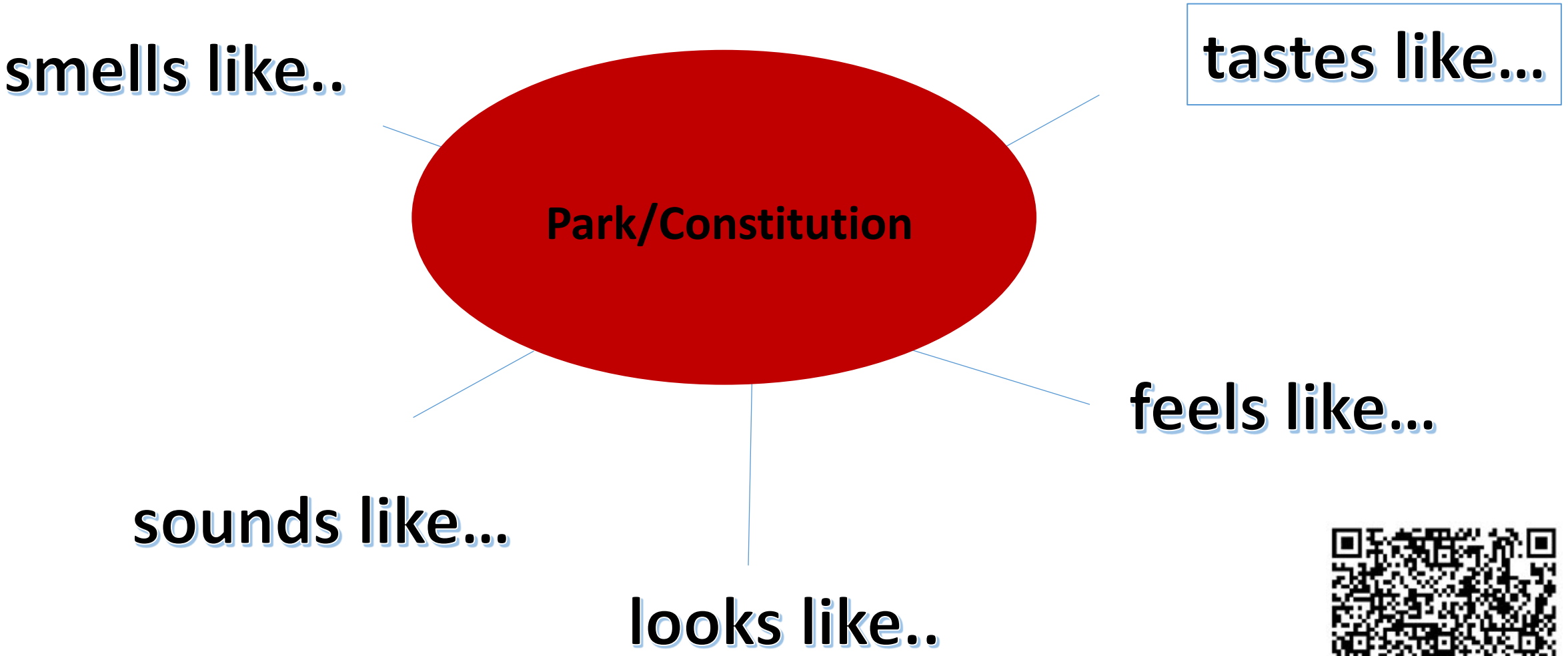
Vocabulary & Comprehension



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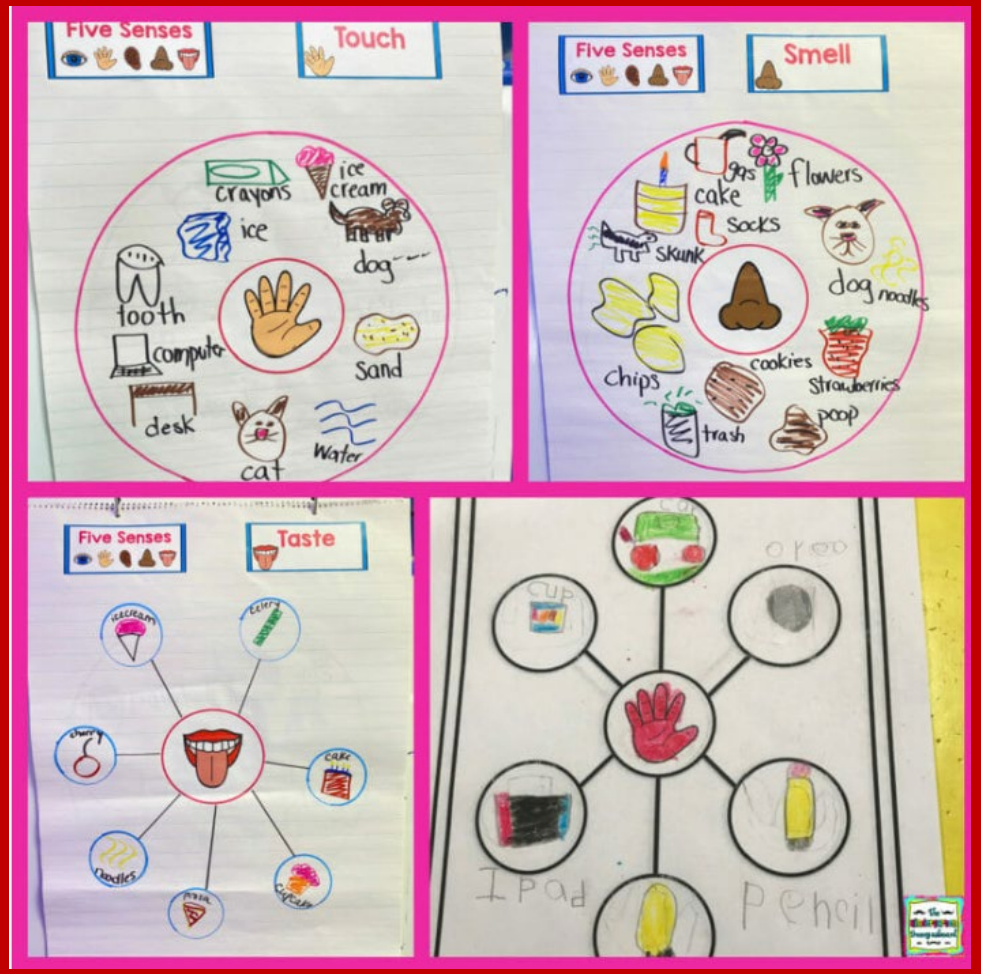
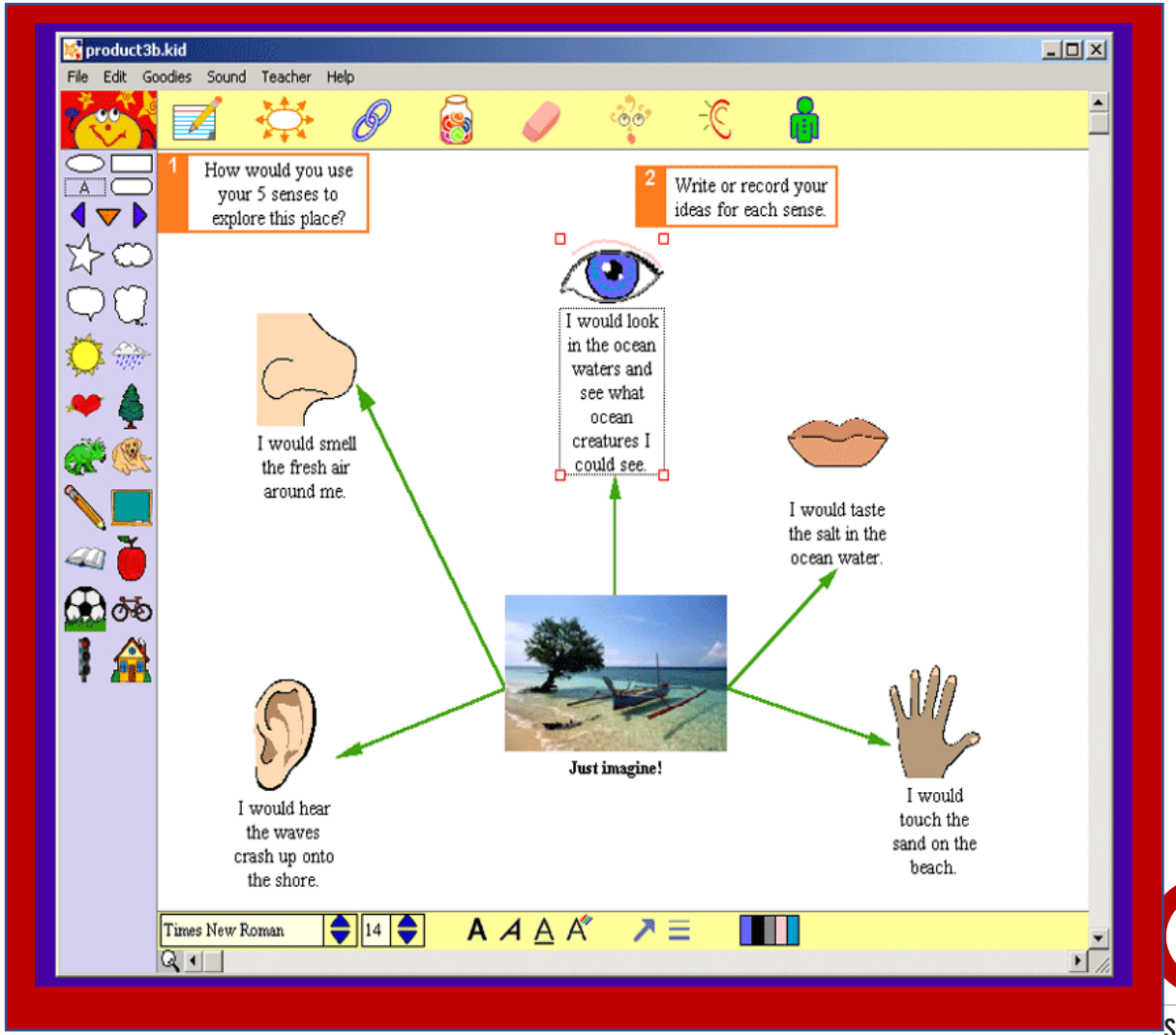
Vocabulary and Comprehension





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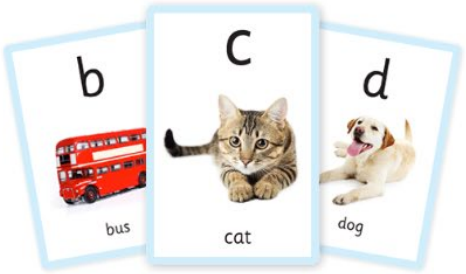
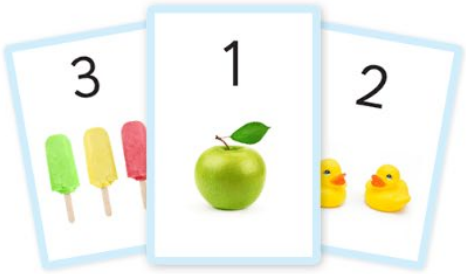
Reading/TotCards

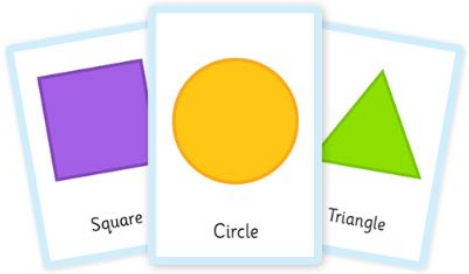
https://www.totcards.com/free-shape-flashcards.html



Alphabet



Numbers



Shapes

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Vocabulary and Writing Tools to Support Learning at Home

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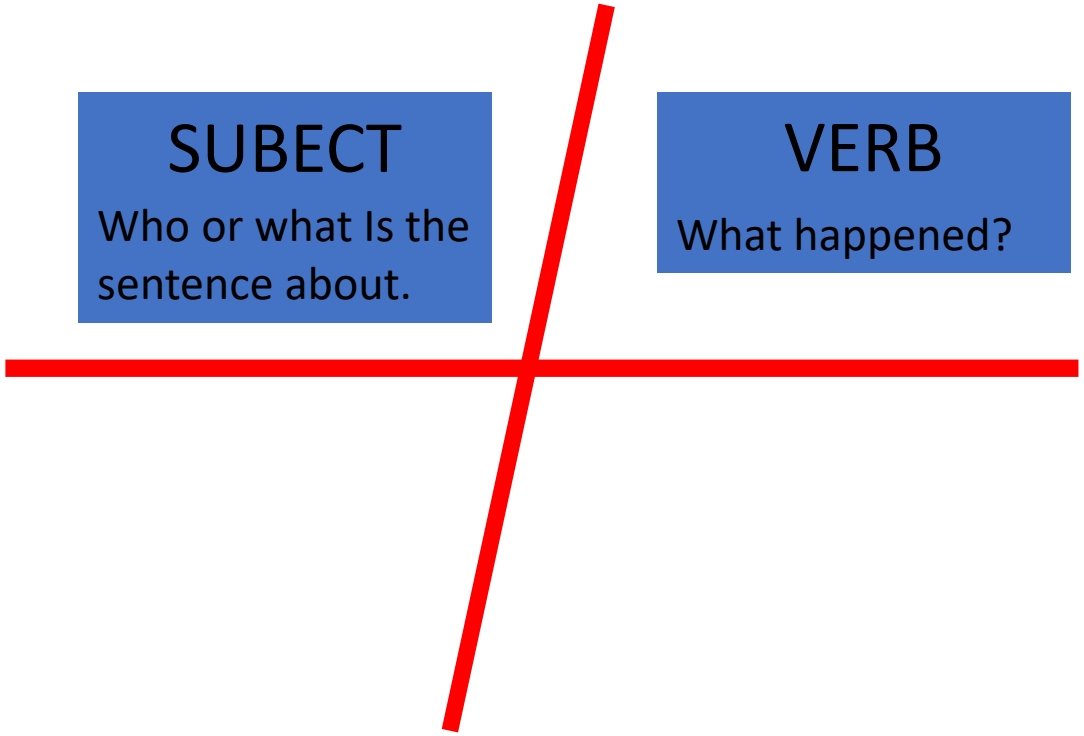
Define It-Vocabulary & Writing

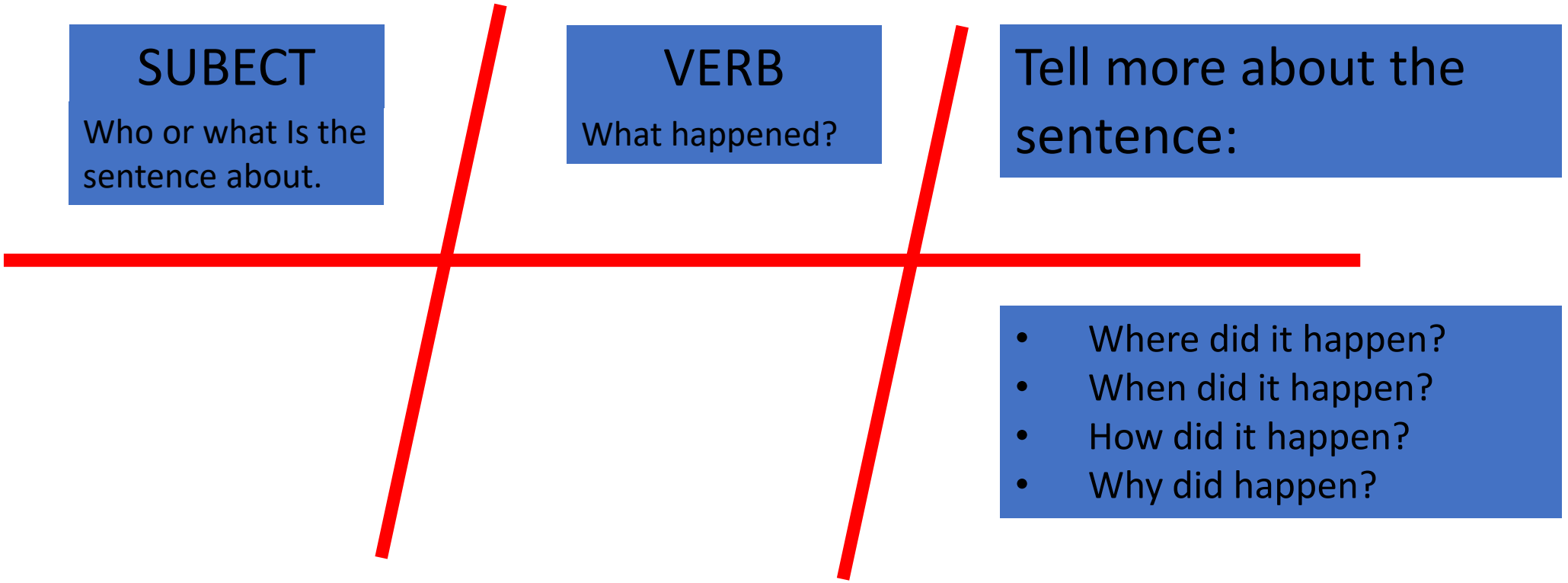
WORD	Category	Attribute
Cat	animal	• Furry • Whiskers • 4 legs

A cat is an animal with four legs, whiskers, and is furry.

Simple Sentence



Developing Sentences



Let’s Practice- Forming Sentences

Subject Who or What is the sentence about	Predicate What happened?

The leaves fell on the ground.

Let's Practice- Forming Sentences

Subject Who or What is the sentence about	Predicate What happened?	Tell more about the sentence: • Where did it happen? • When did it happen? • How did it happen? • Why did it happen?

At school, the **leaves** **fell** on the **wet** ground.

5 Minutes Question and Answer Session

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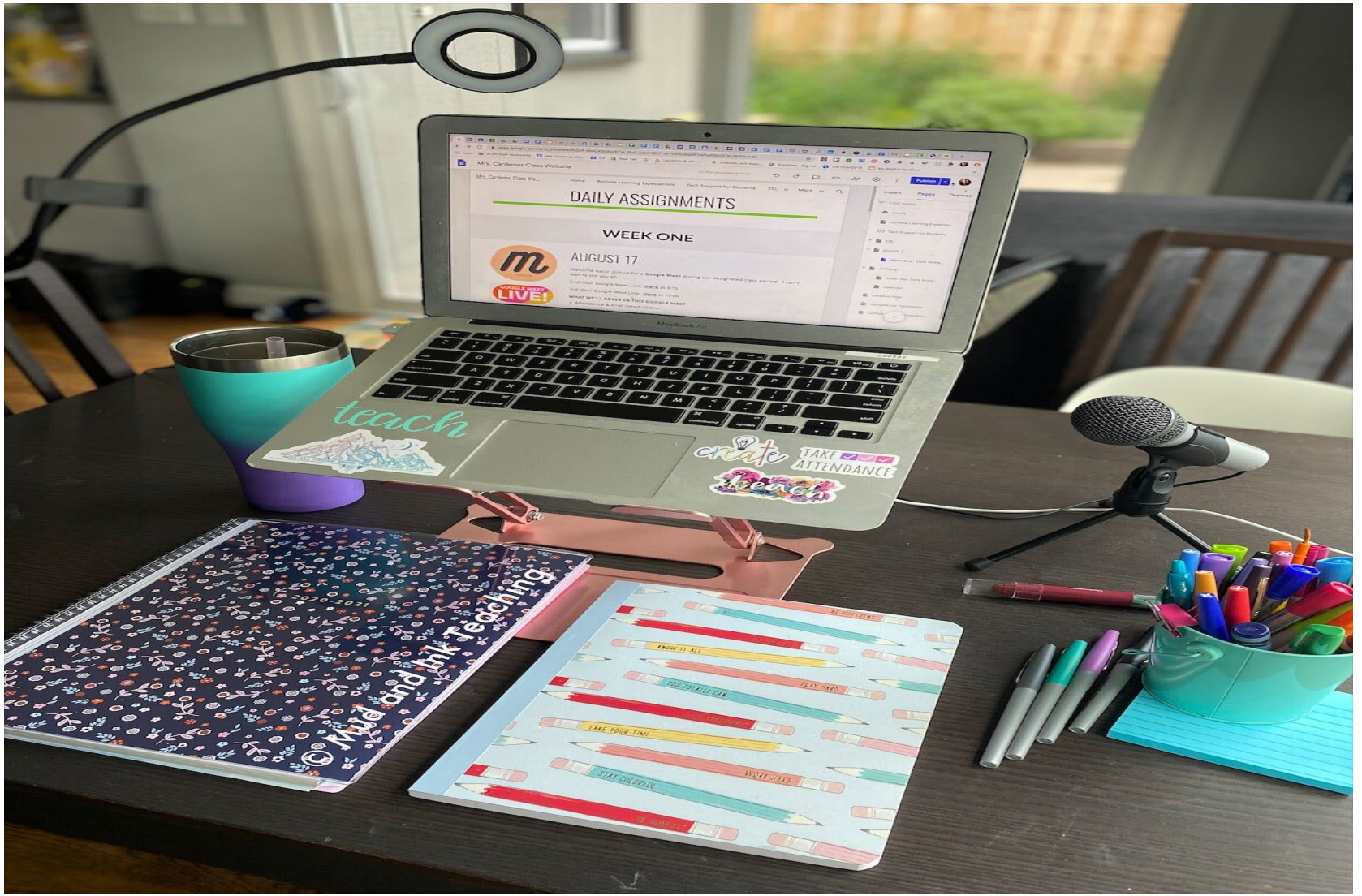
Technology Tools to Support Learning at Home



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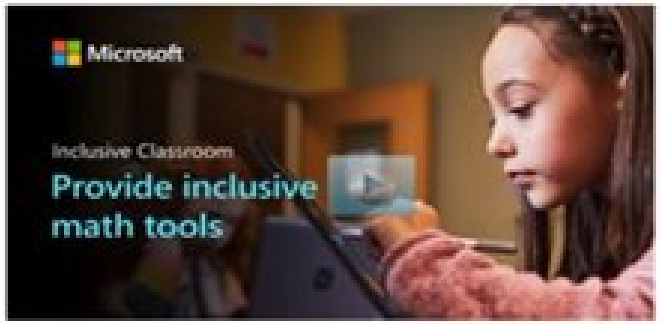
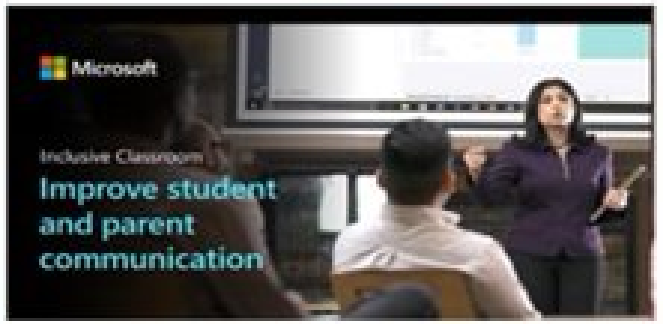
Technology Tools through Office 365

Short and sweet interactive guides

- ✓ Inclusive Reading: https://aka.ms/InclusiveReadingDemo
- ✓ Inclusive Writing: https://aka.ms/InclusiveWritingDemo
- ✓ Inclusive Math: https://aka.ms/InclusiveMathDemo
- ✓ Inclusive Communication: https://aka.ms/InclusiveCommunicationDemo





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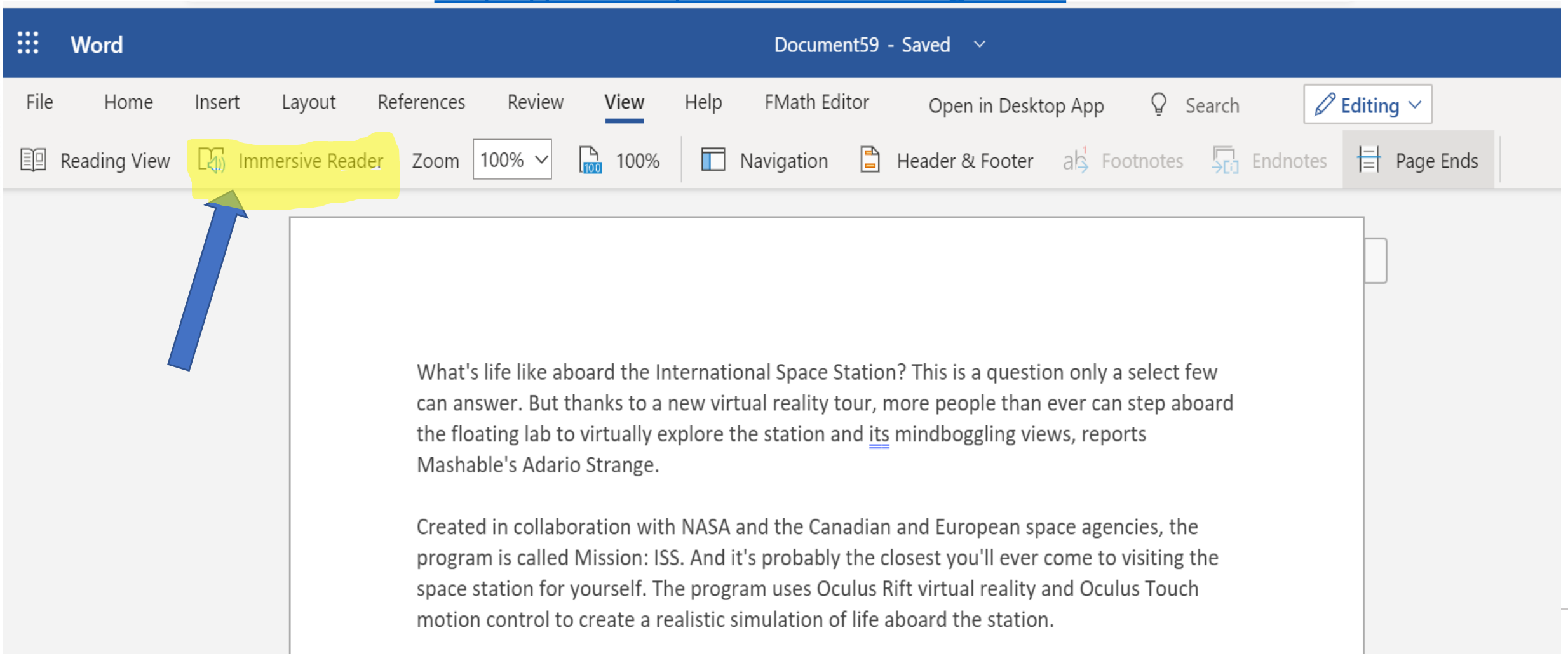
Inclusive Reading

https://aka.ms/InclusiveReadingDemo



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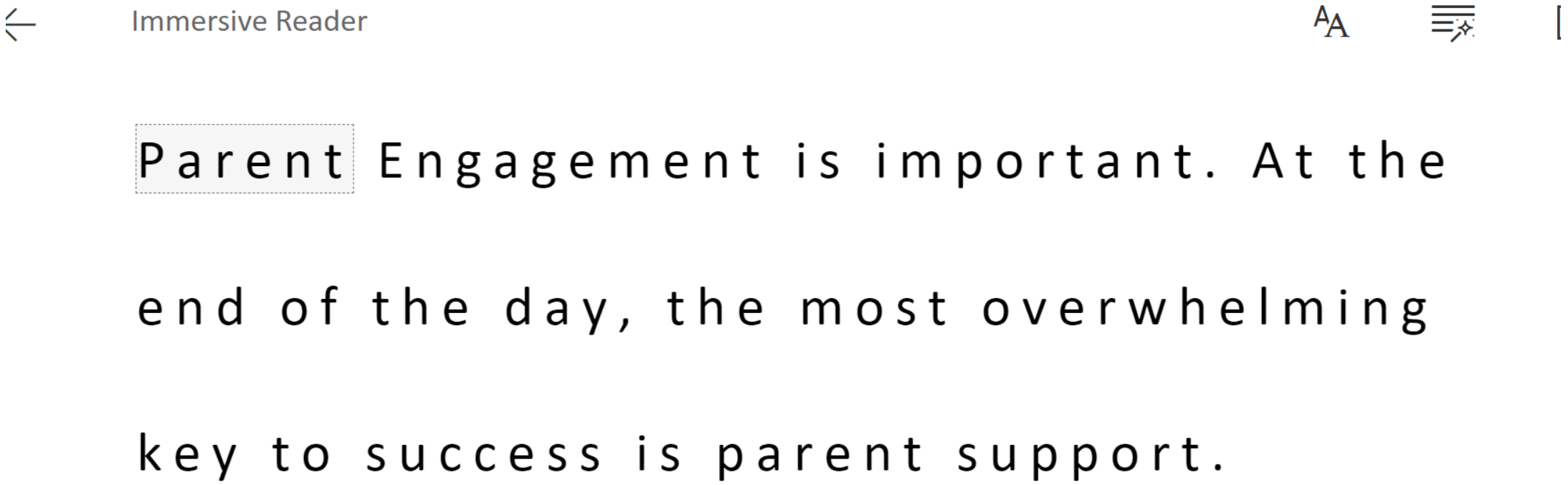
Immersive Reader



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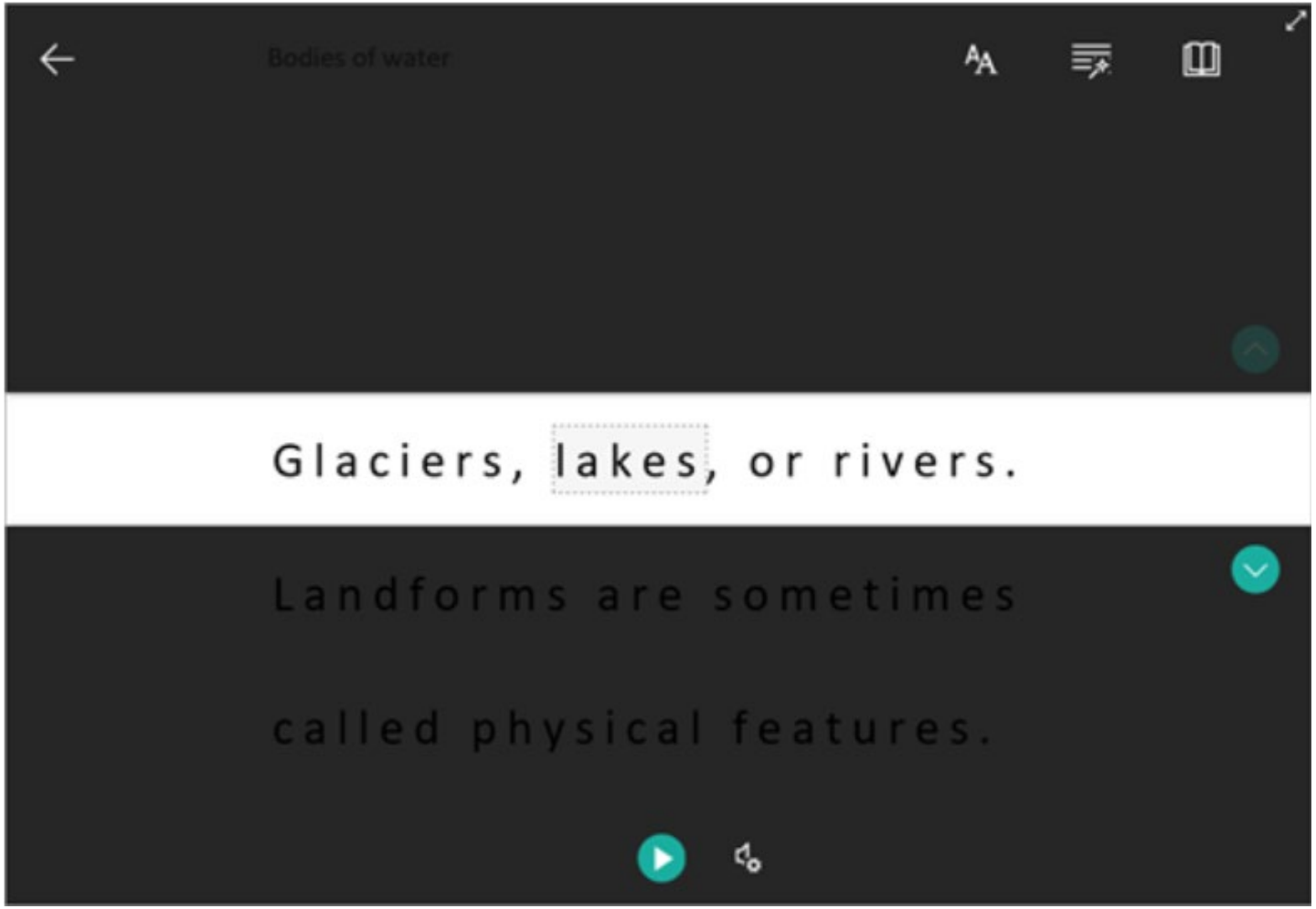
Immersive Reader



Enhanced dictation	Improves authoring text
Line focus	Sustains attention and improves reading speed
Immersive reading	Improves comprehension and sustains attention
Adjustable line and font spacing	Enhances reading speed by addressing "visual crowding"
Parts of speech	Supports grammar instruction and comprehension
Syllabification	Targets word recognition and pronunciation
Comprehension mode	Improves comprehension by an average of 10%

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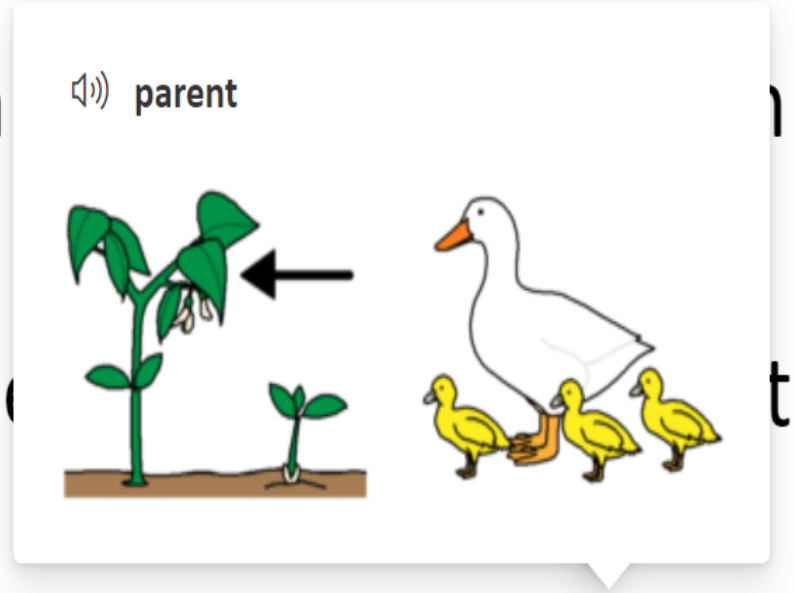
Immersive Reader

Immersive Reader



Parent En portant. At the

end of th t overwhelming

key to success is parent support.

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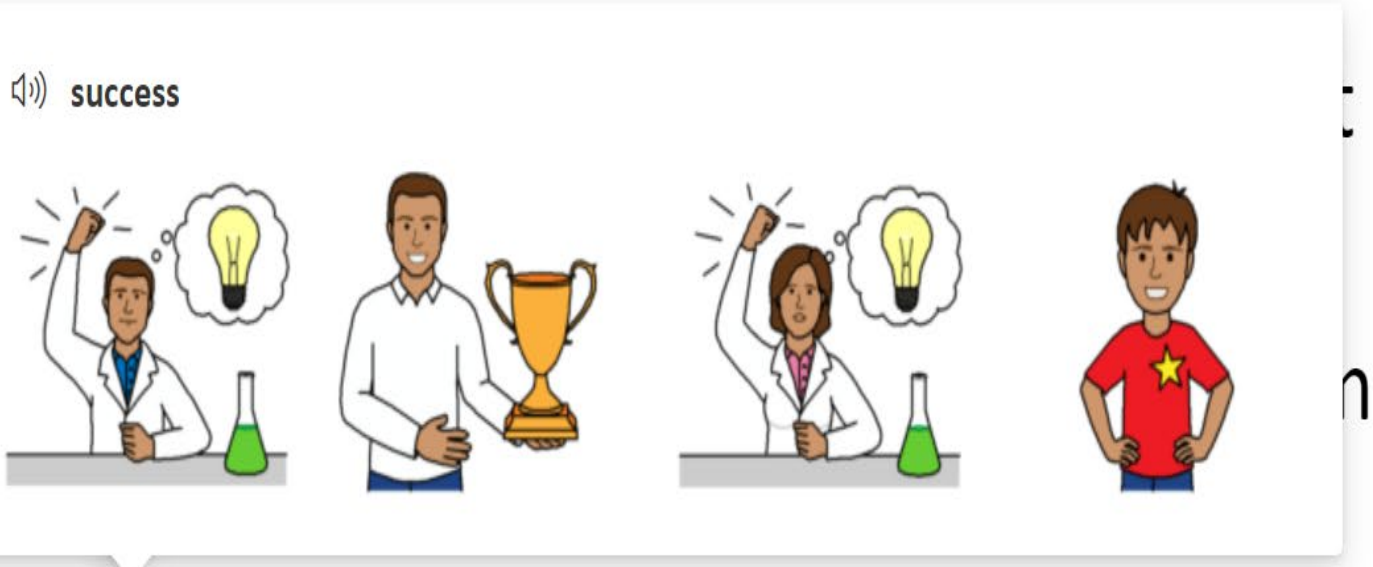
Immersive Reader

Immersive Reader

Parent : the

end of ning

key to success is parent support.



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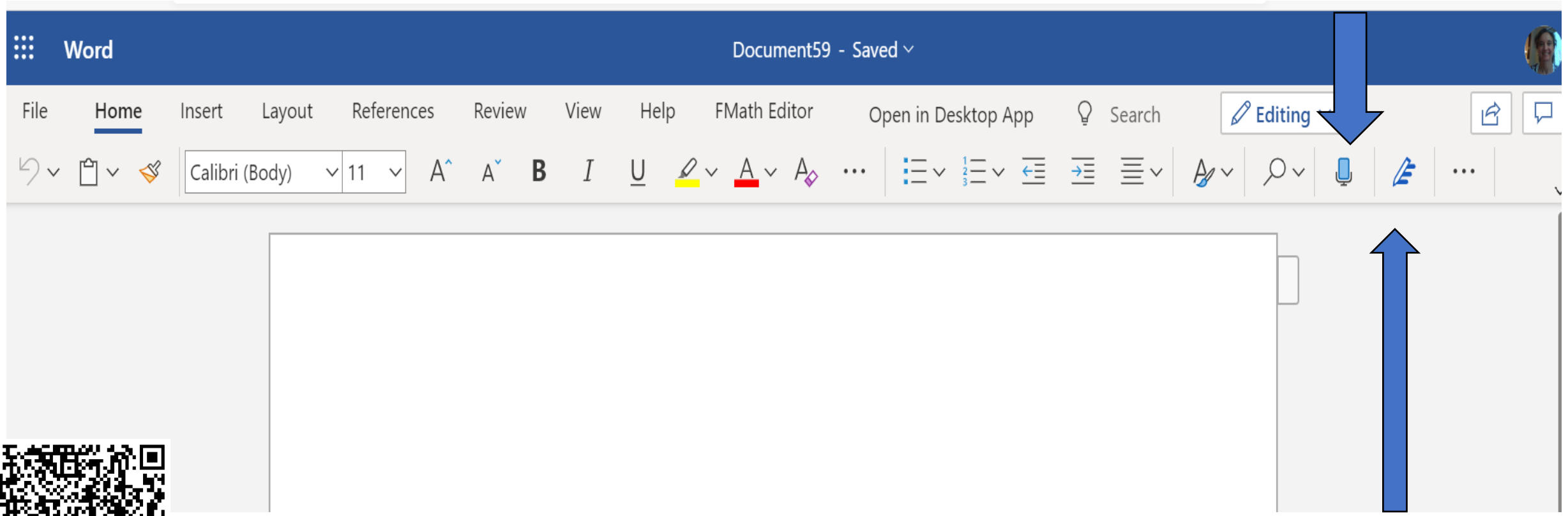
Inclusive Writing

https://aka.ms/InclusiveWritingDemo

Dictate feature



Speech to text is available in Word.... plus the editing tool can be beneficial

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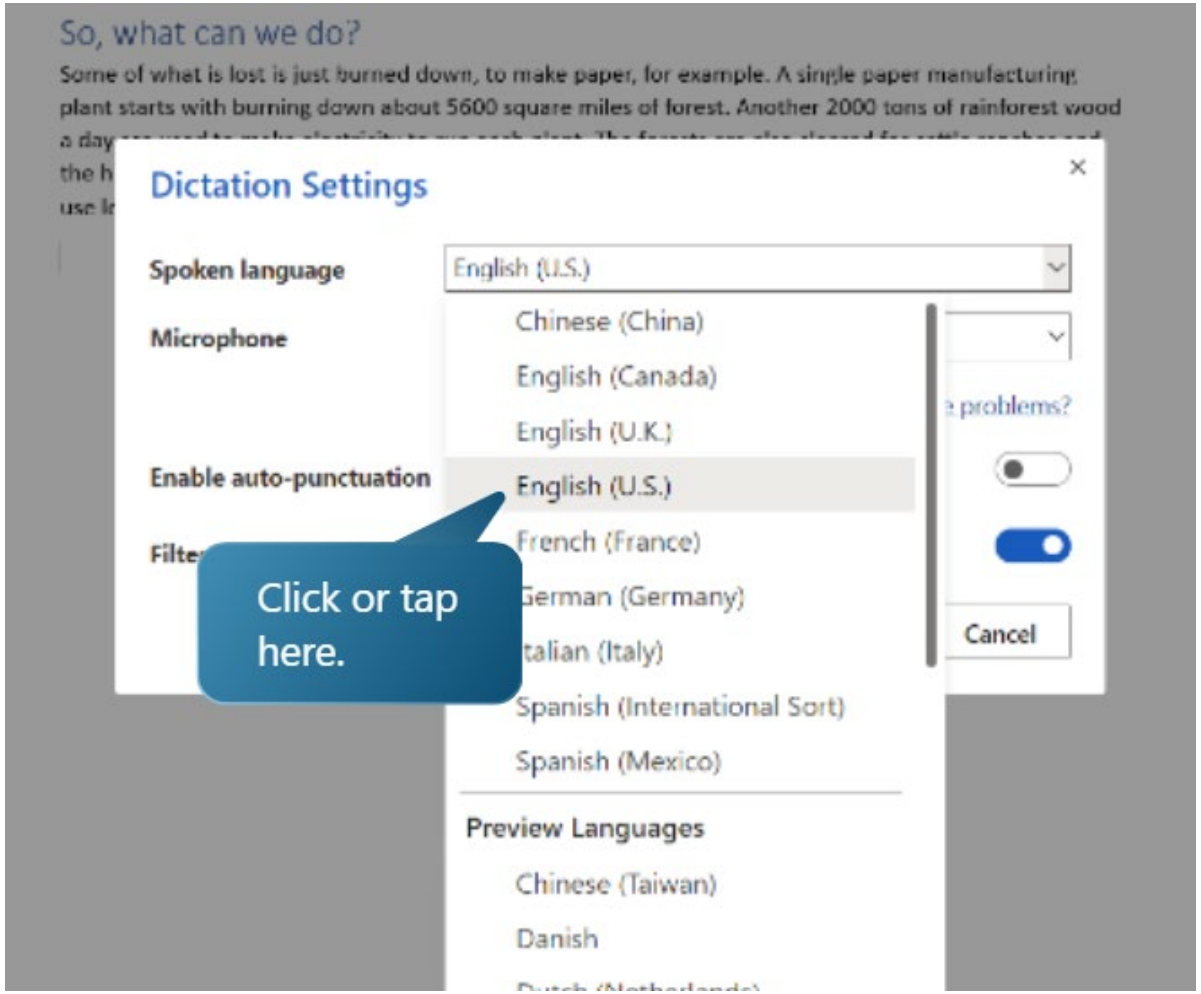
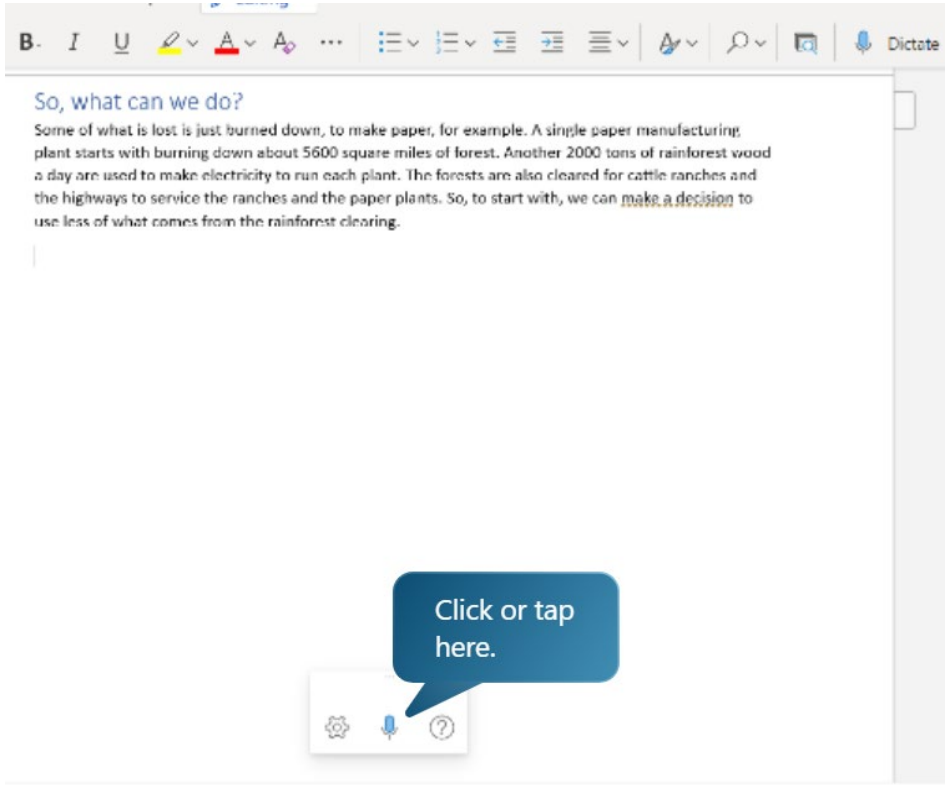
Writing





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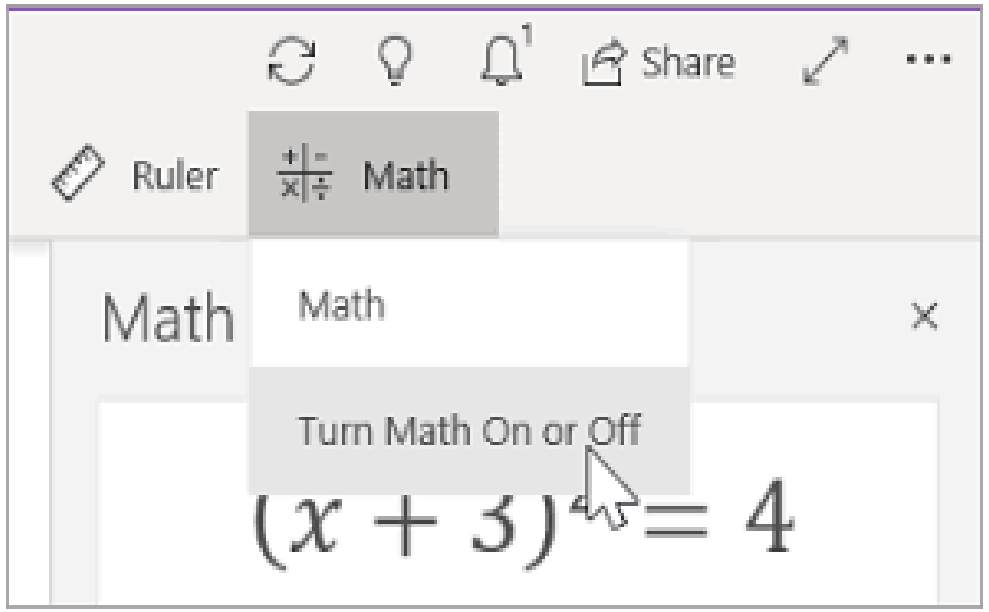
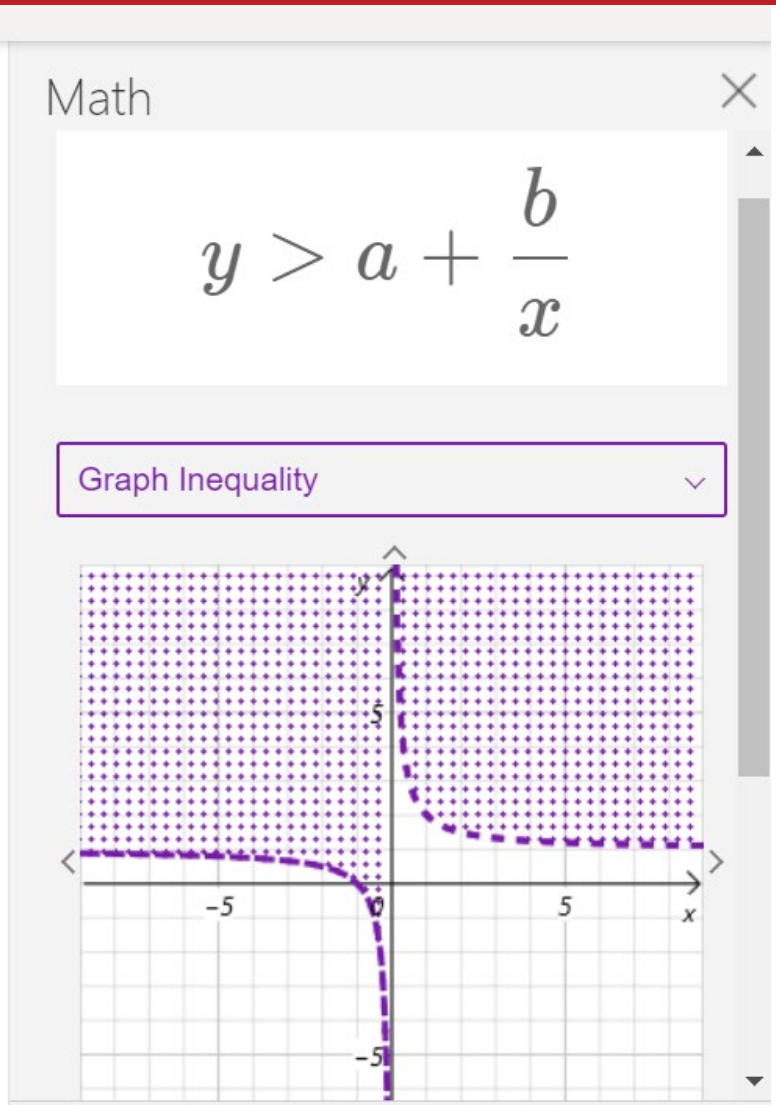
Inclusive Math

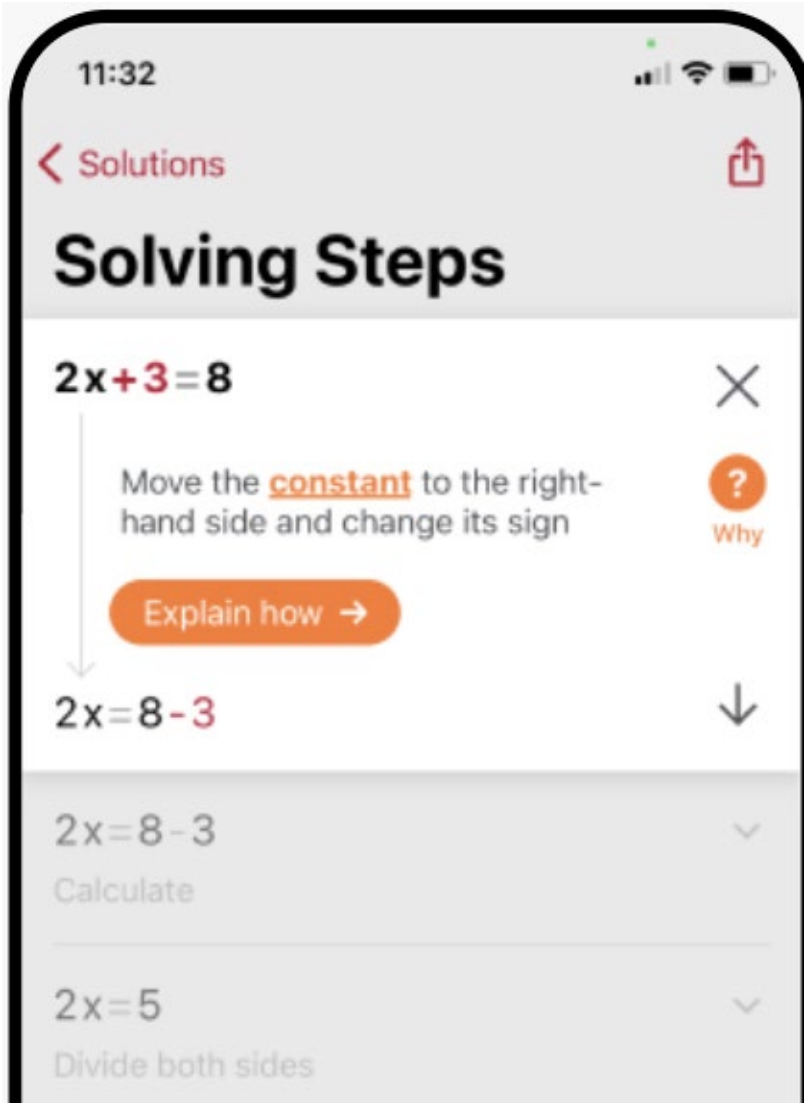
https://aka.ms/InclusiveMathDemo

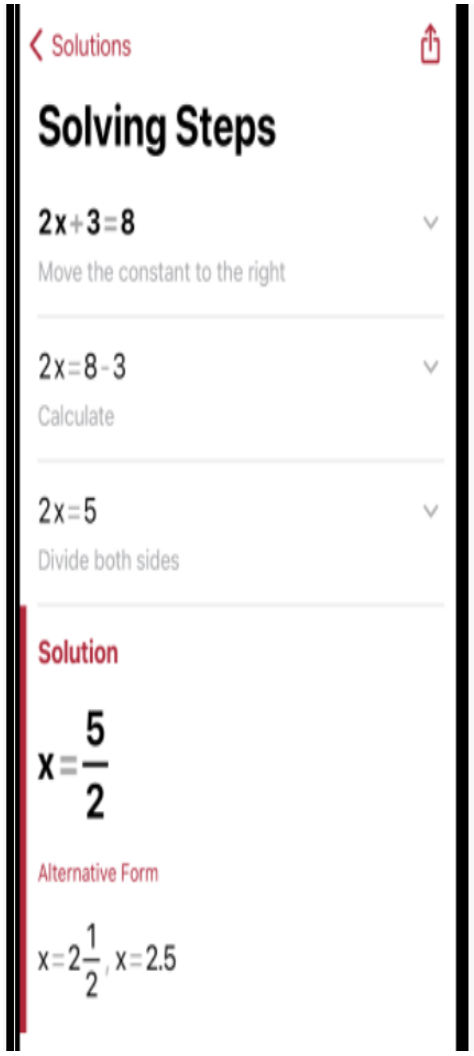




SPECIAL EDUCATION

Photo Math





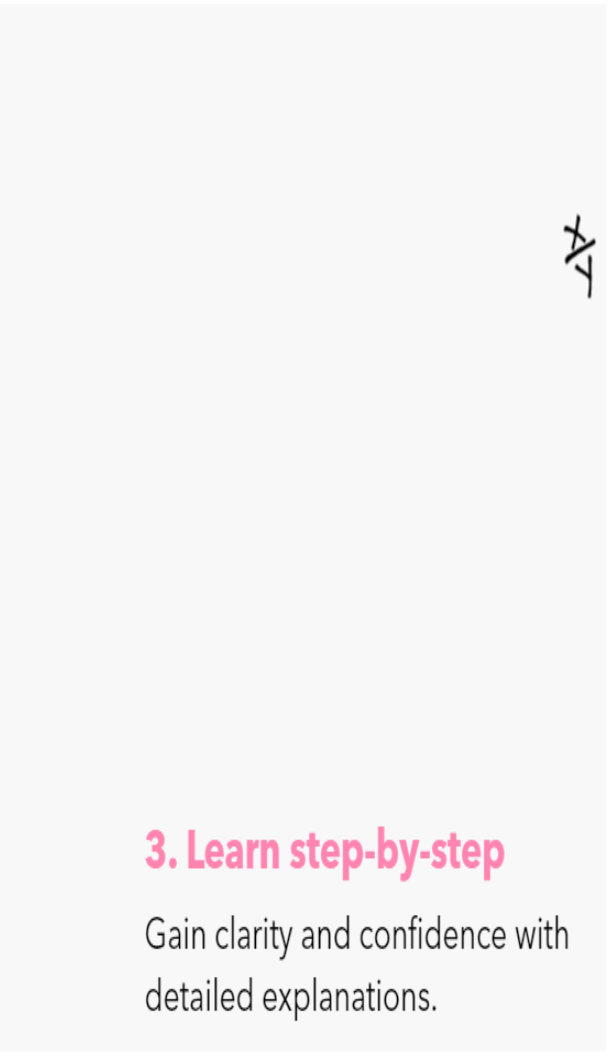


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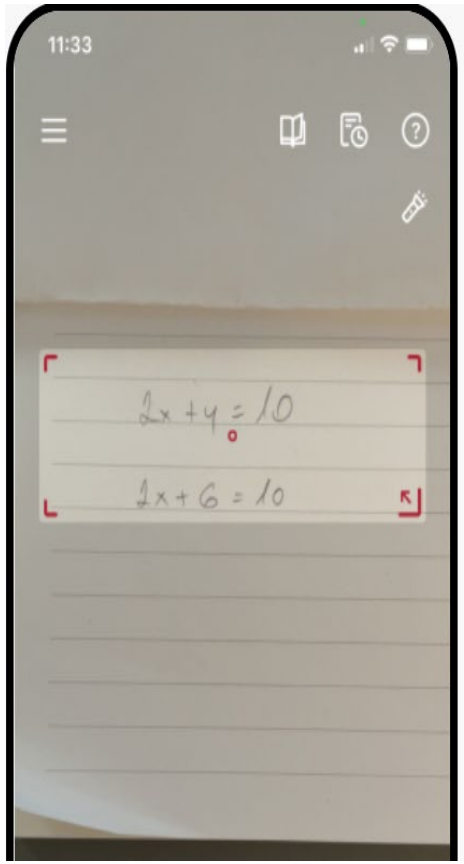
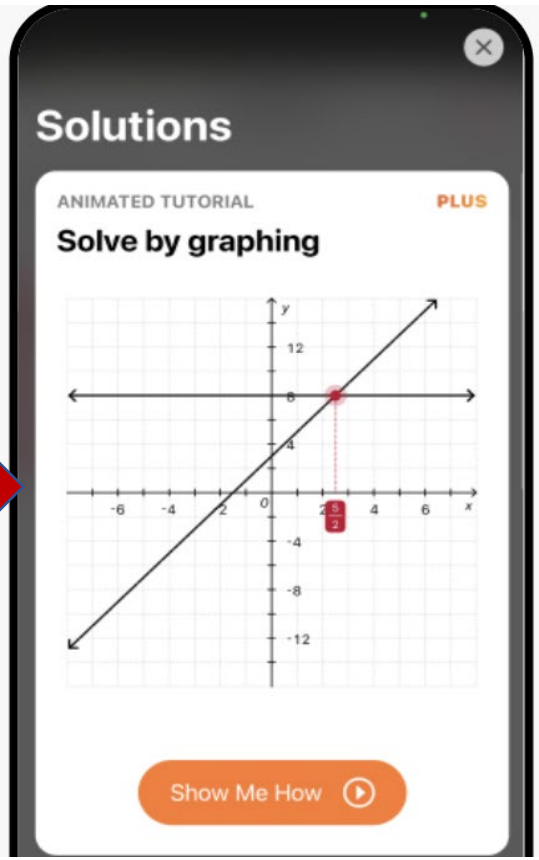
Photo Math



1. Scan your problem

Use the app to snap a photo. Adjust the frame size to capture the whole problem!



2. Find the right method

There's more than one way to solve that problem; choose the approach that makes sense to you.

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Questions?

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