# Training for Teachers, Paras, Teacher Assistants-Anyone who works with struggling students. 

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Macon Piatt Regional Office of Education 39

## Please Read

This training is online, self-paced.
Please make sure you are registered for the training at:
https://www.maconpiattroe.org/ click on sign up for Professional
Development
Please read all slides, view all videos, and answer all the TASK QUESTIONS. They will always be in RED.
Please send all the task answers when you have completed the entire training to prestonb@roe39.org -Example on next page

You can put them into a ppt. or WORD document. Please no google docs because I do not have permission to open them.

## Sending the Task Answers

```
Your name
```

$\qquad$

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Title of the Training: School Improvement
Task one:
Task two:
Task three:
Make sure you send all the tasks together when you complete the training through email prestonb@roe39.org with the title of the training at the top. Include pre/post tests too
After I receive them, I will give you feedback through email on our tasks and mark you completed. You will then receive an email evaluation. When you fill it out and submit, Your hours will come to your email.
```


## Welcome to this training

ParaPros/Teacher Assts. and Teachers
I have worked with districts that ask me to help special education support teams work better together.

What I found out is that time is a problem for working together. So I helped with figuring out what schools needed and then try to make that happen.
This training is filled with ideas and strategies to support anyone that works with students who struggle.

## ENJOY!.

## TASK ONE -Pre/Post School Improvement

## The following statements related to the targets of this training session. <br> Please indicate your comfort level with the following: <br> $4=1$ am confident in my knowledge <br> $3=1 \mathrm{am}$ on the right track <br> $2=1$ am not sure I am doing it right or with the right amount of consistency <br> $1=I$ need more information in this area <br> Copy the pre and post tests and send to me with your tasks.

| ParaPro/Teaching Asst. Statements | Pre | Post |
| :---: | :---: | :---: |
| I understand that relationships are crucial in working with students and teachers. |  |  |
| My input and support includes looking at my own data on students, identify my and the students' needs, determine the most effective strategies, and seek professional learning to support the plan. |  |  |
| I can identify all the parts of a school improvement plan and analyze assessment data to improve my teaching for the students I support. |  |  |
| I realize that using research based, common strategies that have a great effect size on learning is crucial for better achievement for the students I support. |  |  |
| I know how to become a part of a team that works together for the success of all students. I can find my voice within the team so I can be validated on the work that I do or receive feedback to support my efforts. |  |  |
| I can find resources to help me in my para/teacher asst. role. |  |  |

## Task Two -Overview of Special Education -This is to build knowledge for you.

https://www.youtube.com/watch?v=H90Po8tHbOU -10min Overview-please watch these videos to build background knowledge for yourself.
https://www.youtube.com/watch?v=cFtg2xub10E -10min. 14 Disabilities in Special Education Tell me what you learned.
https://www.isbe.net/Pages/Special-Education-Disability-Areas.aspx
The Special Education Disability Areas page includes:

- Autism,
- Deaf-Blindness,
- Deafness,
- Emotional Disturbance,
- Hearing Impairment,
- Intellectual Disability,
- Multiple Disabilities,
- Orthopedic Impairment,
- Other Health Impairment,
- Specific Learning Disability,
- Speech/Language Impairment,
- Traumatic Brain Injury,
- and Visual Impairment.


## Task Three Example of IEP areas in a Middle School Special Education Room

Summary of what all IEP students were having struggles with:

## Reading

- Synonyms/antonyms
- Multiple meaning words
- Figurative language
- Comprehension (read alouds) and independent reading
- Phonics (sounding out) unknown words
- Summarizing
- Citing text evidence
- Listening Comprehension
- Compare / Contrast
- Context Clues
- Locating answers in the text
- Implicit to explicit questions to cite evidence
- Genre recognition for younger students
- Inferring


## Writing

- Organization of a sentence and a paragraph
- Beginnings, Middle, Endings (what goes where)
- Lists, letters, addressing envelopes
- Grammar and Conventions


## Math

- Coin Identification
- Time/Digital and Analog
- Fractions
- Decimals
- Weight/Measurement
- Operations to solve a problem $=-X$ /
- Regrouping

Some students had weaknesses in :

- Multiplication and cross multiplication for fractions
- Place Value
- Ratios
- Long Division
- Identify and compare fractions
- Fractions into Decimals
- Word problems
- Finding Volume on 3D objects
https://www.education.com/exercises/ online exercises you may need

This is an example from a middle school that I observed in where Para/TA's did not know the IEP of the students they were working with .
So I summarized the areas for all students so that Para/TA's could gather information in these areas to help.
Going through IEP Summaries, jotting down skills and standards of weak areas. Above is one example: Why would it be important for Paras and Teaching Assistants to know these areas?

## Decoding and Reading Practice with Decodable Text

- Decoding is the process of reading letters or letter patterns in a word to determine the meaning of the word; for students, it is a strategy for reading unknown words. Once children develop this skill, they can apply it to reading words automatically and effortlessly. (FLUENCY) This allows them to focus on getting meaning from what they read (NRP, 2000; TEA, 2000).
- Students should begin by working with word families, spelling patterns, and onsets and rimes. As they become more sophisticated readers, they will need more advanced decoding strategies that focus on structural analysis: the ability to understand parts of words in order to understand the words as a whole.
These parts of words include:
- Inflectional endings. Meaningful word parts (morphemes) that indicate tense, number, person, or gender when added to base words (-ed, -es).
- Prefixes. Word parts at the beginning of base words (pre-, in-, un-).
- Suffixes. Word parts at the end of base words (-ful, -ly).


## Older Students

## More advanced students can

- Use structural analysis to identify word parts and multisyllabic words. In addition, structural analysis teaches students about letter combinations and derivatives (words with the same root or base words)-knowledge they can use to segment multisyllabic words into decodable parts to determine their meaning (Henry, 1997). Teaching students about affixes in particular helps them learn that some word parts are common across words.
- When teaching structural analysis, teachers should teach meanings along with recognition, and model how to look for word parts. Structural analysis will increase the number of words students can easily decode. Consider the following:
- The most common affixes in the primary grades are re-, un-, con-, -ness, -ful, and -ion;
- The prefixes un-, re-, in-, im-, ir-, il-, and dis- are used in 58 percent of all prefixed words; and
- Three inflectional endings, -s/-es, -ed, and -ing, are found in 65 percent of words that have inflectional endings and suffixes (White, Sowell, \& Yanagihara, 1989).

Task Four -Watch the video in the middle of this link. Tell me why it is important to clearly speak the phonemes. Using a short "I"sound after the phoneme makes it clearer. Never use "uh" after a phoneme.
https://www.readingrockets.org/teaching/reading101-course/toolbox/decoding Decoding Information

- Students first learn about letters (graphemes) and the their relation to sounds (phonemes) in kindergarten and first grade when studying the alphabet.
- Then learn to build on their alphabetic knowledge to be able to decode and sound out simple CVC (consonant-vowel-consonant) words, like cat.
- As students move to higher grade levels, they will be exposed to increasingly complex phonetic patterns and study vowel digraphs like /ow/.
- Students will study silent letter patterns, like /kn/.
- Later, students will be exposed to multisyllabic words and will chunk word parts, like prefixes and suffixes, to decode.
- Throughout K-12 English language arts, students will learn phonetic patterns in order to better sound out words and become fluent readers.
- https://www.spellingcity.com/spelling-games-vocabulary-games.html online games K-? That can help students with phonics.


## Sounding Out Across the Grades

- When a beginning reader comes across an unfamiliar word, they are often told to sound it out.
- Sounding out involves decoding, which is applying knowledge of lettersound correspondence and patterns in order to pronounce words correctly.
- Decoding is a foundational skill needed to build phonics and reading fluency. Kindergarten and first grade students learn to decode words with simple patterns, like CVC words.
- From third grade on, students begin identifying word chunks to decode multisyllabic words. Some words are more difficult to sound out than others, due to irregular phonetic patterns.
- Some assessments will ask students to decode nonsense words-Please refrain from using that term-THESE ARE SYLLABLES OF WORDS.


## A few Academic Words Students Should Know



Pay attention to tests and assessments Make lists of words that students need To know for a state test.

## Level 1 Academic Words bruce D. Taylor chicago

Compare: Examine in order to note likenesses between two things or what they have in common
Contrast: Examine in order to note significant differences between two or more things
Describe: To tell or show with written or spoken words; point out facts or details

Identify: To establish as particular by noting individual features or characteristics in isolation.
Story: The plot or succession of incidents of a novel, poem, drama, etc. Demonstrate: To describe, explain, display or illustrate through examples Determine: To decide or conclude through reasoning or observation.
Explain: To make clear or understandable to others; make plain.
Support: To back up, justify your answer, opinion, or claim (with evidence) Details: Elements that support ideas; smaller elements of structure.

## Level 2 Academic Words

Develop: Expand, elaborate; add details.
Narrative: A sequence of events, experiences, or the like, whether true or fictitious.
Central/Main Idea: The author's most important idea or the cognitive catalyst for the creation of his work. Idea - Any conception existing in the mind as a result of mental understanding, awareness, or activity.
Theme: A unifying or dominant idea or motif. Often the answer to the question, "What did I learn?"
Explicit: Clear, leaving no room for interpretation, leaving nothing merely implied. Infer: To deduce, conclude, to derive by reasoning; to guess, figure out or surmise from evidence. An "inference" is the answer to the question, "Why is that/it there?"
Summarize: (Note: a specific prompt in the PARCC) To state or express in concise form the essential components of something, usually chronologically.
Evidence: That which proves or disproves; that which makes plain or clear. Facts. Structure: Essential elements of something. The relationship or organization of component parts.

## Level 3 Academic Words

Figurative language: Based in figures of speech, especially metaphorical; not literal; expand meaning.
Analyze: To break down into its constituents parts and examine them; determine meaning from.
Context: The parts of a written or spoken statement that precede or follow a specific word or passage, usually influencing its meaning or effect: e.g. "You have misinterpreted my remark because you took it out of context. " The set of circumstances or facts that surround a particular event, situation, etc.
Cite: To quote specifically, recall.
Evaluate: To make a judgment, to set a value on.
Assess: To measure, to determine the amount of.
Argument: A process of reasoning, a discussion involving different points of view, a set of reasons why something is true.
https://www.isbe.net/Documents/Illinois-Priority-Learning-Standards-2020-21.pdf List of Priority Standards for IL 2020-21 These can help you see what a progression looks like for $\mathrm{K}-12^{\text {th }}$ grades that school is to follow and help students master these in each grade level. They may give you some good ideas on where to start if a student is in a certain level in reading or math. In science and social studies, you can begin to see if students even have the basics of K-3 before moving into more complex areas.

- ELA starts on page 32 for a list of them grade by grade
- Math starts on pg. 75
- Science starts on pg. 138
- Social studies on pg. 153

On pg 146 of the Priority Standards in Science there is an experiment kids could do. Measure out a $1 / 4$ cup of ice in a take home or Styrofoam cup and a regular glass cup from home and a plastic cup. Then they hypothesize to see which one they think will melt fastest and why. They write it down. Then they time the ice melt -how long in the plastic cup, how long in the Styrofoam, how long in the glass cup. This brings in measurement, time, and vocabulary word hypothesis. This can be done on camera with you or they can do their own experiments in a lesson on line or in class. Give them a heads up on what they will need beforehand.

## ELA-Explicit and Systematic Planning

Page 32 of the Priority Standards can be the BENCHMARK for each of your students.

1. Take one student with an IEP in Reading and go down the list of pg. 32-59 (depending on their level Pre-K to HS) -

- See where they are in each of the standards according to what the IEP says.
- Make a list of the things they have mastered and the things they have not mastered.
- Then begin to make lessons that highlight the areas of weakness. Work on it for 3 weeks and again see if they have mastered the areas you worked on. If not, try something different with the same standards.
This is the only way we can support these students in mastering skills that will move them forward.


## Example: Some students have this in their IEP and this is a Priority Standards for PRE-K

## With teacher assistance, begin to use knowledge of letters and sounds to spell words phonetically.

- If a student has a weakness in this area, you begin by finding out what letters and sounds they do not know.
- Then you explicitly teach those sounds and letters to them.
- After that, you bring words to them to blend and build on that.
- When they have mastered this and begin to move to larger words, begin with words they can sound out by word families that are in context, (in a story, in a quote, in a word problem, in a paragraph, in a sentence etc., )
- Review, review, review with different words and then move into irregular words.
https://www.enchantedlearning.com/rhymes/wordfamilies/


## Then move to Irregular Words

- https://www.phonicshero.com/teach-tricky-words/ This shows you how to teach irregular words
- https://iolly2.s3.amazonaws.com/Resources/Tricky\ Word\ Chec klistNEW.pdf list of tricky words for lower ELA students


## 1. Ghost Game

In this game have lots of 'tricky words' in a bag or box. A group of children sit in a circle. You would, for example, have five words in the bag, and about three laminated flashcards of each one. You also have one flashcards that has the picture of a ghost on it. The children take it in turns to pick a card out of the bag. They try to read it (e.g. 'go'). Then they pass the bag to the next child, who picks one out and reads it. When someone picks out the ghost they shout 'Boo!' and they are the winner. Everyone else has to put their cards back in the bag, and you start again. This can get a bit rowdy, but is great for nervous anticipation and heightening focus!


## Beat the clock round the circle!

- You say something like 'Can we pass all of these words around the circle in two minutes?' Then you let the children get on with it and have a go. Speed challenges are great for many children, as they introduce competition and engagement. (You may have to pass them in front of the camera)


## Tricky word racetrack

- Create a racetrack on a large piece of paper, or card. It will have a track that is broken into square, each one with a tricky word on. It is best at least twenty squares from start to finish.
- A small group of children each have a counter. The counters start on the start-line. Then they take turns to roll the dice and then jump that number of squares up the track. Whatever word you land on you say the word. The winner is the player that gets to the finish line first. (This could be shared on camera if the students had the counter. They are easy to make. Name at the top and they just keep a tally mark on the paper.


## Tricky word bingo

- This is a very popular game, that I see a lot in schools. In this game a group of up to about six children each have a bingo board with tricky words on. There is then a pot of 'tricky' word flashcards in the middle of the table. They take it in turns to pick a flashcard out of the pot, try to read it and then see if they have it on their board. If they do, then they place it on the word. If not, they put it back. The winner is the first person to fill their board. (Making the boards and cards can be a lesson before you play the game. Writing the words correctly is a lesson on its own)


## Jump the lily pads Outside game

- This is just one of many great 'tricky' word games that you can play outside. Have hoops on the ground with 'tricky' words written in chalk inside them. There are many games you can play. You can play a game like the 'racetrack' game described before. Roll a big dice and then jump down the hoops until you get to the correct pad and say the word. The winner is the first person to get to the end.
https://www.education.com/games/word-patterns/ Lots of games online here


## Task Six -Let's Take A Look for younger studentsPick one of these that you like and tell me how you can use it.

- https://www.readinga-z.com/ This is a place to start. Lots of everything that is needed for ELA
- https://www.readingrockets.org/teaching/reading101course/toolbox/resources Resources galore
- https://cdn.education.ne.gov/wp-content/uploads/2019/03/Foundational-Skills-to-Support-Reading-Recommendation-3.pdf Teaching chunking parts of a word


## Task Seven -Older students and sounding out chunks. Which one of these would be helpful and why?

- https://www.readingrockets.org/teaching/reading101-course/modules/phonics/phonics-practice\#second Ideas for older students and chunking words
- https://www.readingrockets.org/teaching/reading101-course/modules/phonics/phonics-practice\#adapting Adapting for different learners

The students will gain automaticity in reading unfamiliar words.

- Materials: For each student:
- Manila file folder, with the letters of the alphabet written on the inside in rows and columns (Word Folder),
- misread words written in the corresponding letter square
- A pen or pencil
- A set of index cards ( $3 \times 5$ inches) with words misread during instructional reading
- A zipper bag Lesson: Tell students they will be reviewing previously misread words.
- 1. Ask students to take their words out of the bag. Each student will read through his or her set of word cards.
- 2. Place a check mark on the back of all word cards that the student reads successfully without your help.
- 3. When a card has five check marks, the student places a small stamp or sticker next to the word in the word folder.
- After a word has a stamp placed next to it, hold the student accountable for reading that word correctly whenever it appears again.


# Graphic Organizer to Use with Students for Comprehension and Writing 

Story Elements in Fiction need to be understood and mastered starting in Kindergarten. Students can Draw them, cut out pictures, or write them in the squares. All they have to do is fold a piece of paper into 4's.

Objective: The students will have a thorough understanding of the text that they have read.

- Materials:

Reading material at the students' instructional reading level Lesson: Have the students read through the story.
Discuss the students' reaction to the story. Did they enjoy it?

1. Who were the characters in the story?
2. When did the story happen?
3. Where did the story take place?
4. What problem occurred in the story?
5. Why did the problem occur?
6. What was the resolution of the problem/how did the problem get solved?
7. What would you do in a similar situation?

Even small children can draw or find pictures to show a summary using the story elements.


Students could use a 4 square folded like this for Opinion Writing about a book, article, poem etc.,.

$1^{\text {st }} \& 2^{\text {nd }}$ Grade Opinion Graphic Organizer

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Name the book or topic:
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State Opinion:

Support Opinion:

## Science - Social Studies - Math

Make sure you use science and social studies as reading pieces in your reading blocks. This will build background knowledge for the content in upper grades.

This is a way of getting nonfiction in and reading skills at the same time.

Word Problems and using annotations to figure out the operations is important and it takes READING SKILLS TO DO THIS.

## In Science- use these in your lessons that

 include math- Measure liquids,
- finding volume in a 3D object,
- measure lengths,
- multiply, divide, add, subtract with experiments or projects
- Organize a chart of an experiment or a science project
- Use words in science and show them how to break the large words into smaller chunks to understand them. https://www.enchantedlearning.com/w ordlist/science.shtml


## You can even go deeper with this with older students.

Generating Questions to Investigate after exploring phenomena, students ask questions to investigate in their teams.

- Students begin by brainstorming a list of questions. Why did one cup keep the ice longer? Etc.,
- The students collaboratively select essential questions.


## Making Sense of Initial Thoughts

- Students create initial models explaining the how and why of the phenomenon of temperature changes in the cups. Students are asked to represent their initial thinking by writing, drawing, and sharing their own initial models.

Gathering Evidence to Answer Questions Using students' questions and initial models, students plan and carry out investigations to gather more evidence regarding the phenomena.

- Students design and evaluate different cup designs to test the effects of specific features when compared to the control cups.


## In Social Studies:

Civic and Political Institutions SS.CS.1.1: Explain how all people, not just official leaders, play important roles in a community Civics Process, Rules, and Laws

SS.CV.2.1: Identify and explain how rules function in various settings, inside and outside of school

Civic and Political Institutions SS.CV.2.3: Explain how groups of people make rules to create responsibilities and protect freedoms Civic and Political Institutions

SS.CV.1.4: Distinguish the responsibilities and powers of government officials at the local, state, and national levels Civic and Political Institutions

SS.CV.2.5: Examine the origins and purposes of rules, laws, and key U.S. Constitutional provisions.
****You might even introduce them to the Constitution and just look at the $1^{\text {st }}$ Amendment. Helping with the words and how to chunk them and find out what they mean by looking at the roots and prefix/suffixes.

## MENTOR TEXTS THAT CAN HELP YOU TEACH CONTENT AREA




Healthy and delicious recipes for wherever the journey takes you.


## Find out Important things that regular ed teachers are using in their classrooms.




## Roots and Affixes that are common .....

```
ROOTS AND AFFIXES LIST
http://www.readwritethink.org/files/resources/printouts/content-area-roots.pdf
http://www.readwritethink.org/files/resources/lesson images/lesson880/match.pdf game to play
```



A simple way to introduce the terms prefix, affix, and root word/base word is to list some words that share a common prefix or suffix and asking students what they notice. (With younger students, you can write the affix in a different color.) Students should see that adding an affix to a word changes its meaning.


## Task Eight -Reading and Language Videos

 Choose one to watch and tell me how you will use with students.- https://www.youtube.com/watch?v=bBWm3-mxL1U 4 min video on synonyms and antonyms
- https://www.youtube.com/watch?v=9l-snjiESmc video music about synonyms and antonyms
- https://jenniferfindley.com/figurative-language-videos/ 2 min personification video
- https://jenniferfindley.com/figurative-language-videos/ 3 min similes and metaphors video
- https://jenniferfindley.com/figurative-language-videos/ 3 min metaphors
- Hyperbole is also on this website as the ones above Jennifer Findley
- https://www.readingrockets.org/strategies/summarizing teaching summarizing


## Math Practices -Standards are trying to get students to understand these things:

- MP. 1 Make sense of problems and persevere in solving them.
- MP. 2 Reason abstractly and quantitatively.
- MP. 3 Construct viable arguments and critique the reasoning of others.
- MP. 4 Model with mathematics.
- MP. 5 Use appropriate tools strategically.

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These Practices are
for K-12 students and
are the goal of the
Math Standards,
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- MP. 6 Attend to precision.
- MP. 7 Look for and make use of structure.
- MP. 8 Look for and express regularity in repeated reasoning.


## Math Anchor Charts




Mufipplication straneghes


## Properties of <br> Multiplication

There are four properties of multiplication. Understanding these properties are rules that will make solving multiplication problems easier.

| Commutative Property | Associative Property |
| :---: | :---: |
| You can switch the order of the factors, and it won't change the onswer. $\begin{aligned} & 3 \times 6=18 \\ & 6 \times 3=18 \end{aligned}$ | You can change the placement of the parenthesis but it won't change the onswer. $\begin{gathered} (3 \times 2) \times 4=24 \\ 6 \times 4=24 \\ 3 \times(2 \times 4)-24 \\ 3 \times 8=24 \end{gathered}$ |
| Distributive Property | Identify Property |
| A multipication fact can broken into (distribuled) a sum of two other multiplication focts. $\begin{gathered} 24 \times 3=? \\ (20+4) \times 3=? \\ (20 \times 33)+(4 \times 3)=? \\ (80)+(12)=92 \end{gathered}$ | The product of any number and $I$ is always that number. $\begin{gathered} 4 \times 1=4 \\ 32 \times 1=32 \end{gathered}$ <br> The product of any number and 0 is 0 . $\begin{gathered} 4 \times 0=0 \\ 32 \times 0=0 \end{gathered}$ |

## MULTIPLY A FRACTION BY A WHOLE NUMBER

$$
5 \times \frac{1}{4}=\square
$$

$2 \times \frac{3}{4}=$ $\square$

| draw an area model | USE A Number line |
| :---: | :---: |
| - ■■■■ | - |
| one whole and | 2 jumps of $\frac{3}{4}=1 \frac{2}{4}$ |
| $5 \times \frac{1}{4}=\frac{5}{4}=1 \frac{1}{4}$ | $2 \times \frac{3}{4}=1 \frac{2}{4}$ |



## Games to use in Math for younger students

## - Guess the weight

- Children love playing guessing games, and when it comes to whether something is heavy or light, there can certainly be a few surprises in store for them.
- Gather several items and spread them across a table. One at a time, ask students to guess the weight of each item and write their predictions in one column on a page (you can create a simple template for this too). Using kitchen scales, invite individual students to weigh each item and record the correct answers in a second column. You can also add a column in between and pass each item around the class, so students can guess the weight after holding each in their hand.


## Fraction Game

## - Pizza fractions

- Fractions can be tricky, so this activity can really help students to visualize key concepts. Create an instruction sheet with five different fractions on each (you can create several so different students get a different set). Students should create a pizza (using construction paper, or even the inside of an empty pizza box) and decorate the toppings to represent each fraction.
- For example, if they had a quarter (fourth), they should cover onequarter of the pizza with a specific ingredient (e.g. mushrooms or pepperoni).


## Measuring

- 'Lengthy' scavenger hunt
- Divide students into groups and give each group a list of measurements and a measuring tool (e.g. a ruler, tape, trundle wheel). Instruct students to find items that are exactly the length of what they have listed. For younger students who haven't yet been introduced to measurement, draw various lines on their sheet and ask them to find items that are exactly the same length.
- Make sure you prepare items beforehand and place them in a safe and visible spot. This activity can be done outside or in the classroom.


## 1. Roll the dice to count and move.

- Get practice with low number counting and addition using action dice. Write activities like jump, clap, or stomp on a small wooden block, then roll it along with a pair of dice. Kids add up them up (you could do this with subtraction too) and complete the activity the number of times shown.



## Fact Work



Tape a series of flashcards to the floor and challenge kids to see who can correctly make their way from start to finish the fastest. They can call out the answers or write them down, but they have to get it right before they move on. Kids can race side by side, or work independently to beat their own best time.

## Draw a Giant Clock-



Draw a giant clock face with hours and minutes on the playground with sidewalk chalk. Choose two students to be the hour and minute hands, then call out a time and send them out to become the clock. Add more complicated elements by having them add to or subtract from the initial time too. ("Now it's 23 minutes later!")

## Graph and Plot Line



Create a map of your school, playground, or other area using graph paper (or even better - have kids help you do it). Then choose plot points for them to visit to find notes or small prizes. They'll feel like real treasure hunters!


Kids who love "Dance Dance Revolution" will get into this one. Make a number mat for each student like the ones shown. Flash an equation with an answer between 10 and 99 on the screen. Kids figure out the answer and jump to put their left foot on the correct tens place, right foot on the ones. They'll be dancing and spinning as they learn!

## Dance with Angles

Teach kids about
transversals and the angles they create with some fun dance moves! Get the details for "Dance Dance Transversal" at the link below.

10. Measure the height of a tree (no ladder needed).

https://fromabcstoacts.com/outdoor-stem-measure-treeheight/ Information here but estimation is so important for kids to grasp.

## Shape Hunts-Take a Picture of Your Finds



## Math Fact Garden

It's amazing how many math games you can play with sidewalk chalk! For this one, kids draw a basic flower with 10 numbered petals as shown. Then they write a number to multiply (or add or subtract) by in the middle, and fill in the petals with the correct answers.


## Darts and Math

Pick up a set of Sticky Darts and draw two dartboards side by side. You can label the rings with any numbers you like. Kids throw the darts and then add, subtract, multiply, or divide the numbers - your choice!


## Put Math and Science Recycling Together

Math games using recycled materials are economical and good for the environment. Set up empty plastic bottles labeled one through 10 , then roll the ball to see how many you can knock down. Add up the numbers of the knocked-over bottles to get your score.


## Putt Putt Math

Pick up a few dollar store supplies and make your own putt putt course. This can be a simple game where kids simply shoot for the highest (or lowest) number. But you can also drive up the complexity by putting equations on the cups that kids have to solve first to determine which is the
 best cup to aim for.

## New Twist on Twister

| Give new life |
| :--- |
| to your |
| Twister mat |
| by adding |
| numbers! For |
| more |
| advanced |
| players, |
| instead of |
| saying "Right |
| hand 5," try |
| saying "Right |
| hand 14 - 9" |
| to make |
| them think. |



## Task Nine- After looking at all the Math Ideas from slide $35-56$ tell me 3 that you will use with students.

- Just go back through the slides and pick 3 and tell me how you will use them with students.
- If you do not help with math, choose 3 anyway that you liked. Tell me why.



## The next slide

The next slide has many videos that can be used for supporting math students.

Pick a few and watch them.

Some are for younger students, but sometimes a song or acronym can help an older student too.

## MATH VIDEOS AND LESSONS

https://www.youtube.com/watch?v=MbtmucV-U2c coin song for value of coins https://www.youtube.com/watch?v=a4FXI4zb3E4 place value song and video https://www.youtube.com/watch?v=ZnZYK83utu0 3D shapes AFTER THIS ONE THEY COULD FIND EXAMPLES IN THEIR HOME FOR EACH ONE OF THE SHAPES and show them on camera to you
https://www.youtube.com/watch?v=sAYiUZSRmkO Telling time analog and digital video
https://www.youtube.com/watch?v=DMmI9PoTE8E Liquid Measurement song video
https://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-measuring-
length/v/measuring-lengths-with-different-units measurement with Kahn Academy $3^{\text {rd }}-8^{\text {th }}$ grade
https://www.youtube.com/watch?v=P9sYvDCnIOg Video on inch, foot, yard
https://study.com/academy/lesson/standard-units-of-measure.html All types of measurement
https://www.youtube.com/watch?v=iTtPj2ijT74 Time, months, years, days Video
https://www.youtube.com/watch?v=rgYaXUzopKM Intro to Ratios Video
https://www.youtube.com/watch?v=SZaXtOHNh6s Fractions on a number line
https://www.youtube.com/watch?v=nOFZhQ GkKw Fractions Video
https://www.youtube.com/watch?v=AtBUQH8Tkqc Reducing Fractions Video
https://www.youtube.com/watch?v=HyXBqA9vwuo Video for you to watch on the BUCK system of solving word problems.
https://www.youtube.com/watch?v=WV5VY76Pf5U fractions into decimals video and song

## SCIENCE PRIORITY STANDARDS -K-2 grades

Overarching Standards

- K-PS2: Motion and Stability: Forces \& Interactions
- K-PS3: Energy
- K-LS1: From Molecules to Organisms: Structures \& Processes
- K-ESS2: Earth's Systems
- K-ESS3: Earth and Human Activity

Overarching Standards

- 1-PS4: Waves and their Applications in Technologies for Information Transfer
- 1-LS1: From Molecules to Organisms: Structures \& Processes
- 1-LS3: Heredity: Inheritance and Variation of Traits 1-ESS1: Earth's Place in the Universe Overarching Standards
- 2-PS1: Matter and its Interactions
- 2-LS2: Ecosystems: Interactions, Energy, and Dynamics
- 2-LS4: Biological Evolution: Unity Diversity
- 2-ESS1: Earth's Place in the Universe 2-ESS2: Earth's Systems


## SCIENCE PRIORITY STANDARDS 3-4 grades

## Overarching Standards

- 3-PS2: Motion and Stability: Forces and Interactions
- 3-LS1: From Molecules to Organisms: Structure and Processes
- 3-LS2: Ecosystems: Interactions, Energy, and Dynamics
- 3-LS3: Heredity: Inheritance and Variation of Traits
- 3-LS4: Biological Evolution: Unity and Diversity
- 3-ESS2: Earth's Systems 3-ESS3: Earth and Human Activity

Overarching Standards

- 4-PS3: Energy
- 4-PS4: Waves and their Applications in Technologies for Information Transfer
- 4-LS1: From Molecules to Organisms: Structures and Processes
- 4-ESS1: Earth's Place in the Universe
- 4-ESS2: Earth's Systems
- 4-ESS3: Earth and Human Activity


## Science Priority Standards $5^{\text {th }}$ grade

Overarching Standards

- 5-PS1: Matter and its Interactions
- 5-PS2: Motion and Stability: Forces and Interactions
- 5-PS3: Energy
- 5-LS1: From Molecules to Organisms: Structures and Processes
- 5-LS2: Ecosystems: Interactions, Energy, and Dynamics
- 5-ESS1: Earth's Place in the Universe
- 5-ESS2: Earth's Systems 5-ESS3: Earth and Human Activity


## Priority Standards Science Middle School

Overarching Standards

- MS-PS1: Matter and Its Interactions
- MS-PS2: Motion and Stability: Forces and Interactions
- MS-PS3: Energy MS-PS4: W

Overarching Standards

- MS-LS1: From Molecules to Organisms: Structures and Processes
- MS-LS2: Ecosystems: Interactions, Energy, and Dynamics
- MS-LS3: Heredity: Inheritance and Variation of Traits
- MS-LS4: Biological Evolution: Unity and Diversity and their Applications in Technologies for Information Transfer
Overarching Standards
- MS-ESS1: Earth's Place in the Universe
- MS-ESS2: Earth's Systems
- MS-ESS3: Earth and Human Activity


## Task Ten Resources for Science 3-8-Pick one and look at the link. Tell me how you would use it.

- https://www.generationgenius.com/trial-

B/?gclid=EAlaIQobChMIxZaJt7TB7AIVxsDACh3K3QTJEAAYASAAEgLGtv
D BwE Video and fun activities for Science Scroll to see all of them

- https://www.education.com/activity/third-grade/science/
- https://www.ecosystemforkids.com/3rd-grade-science-games.html online games
- https://www.education.com/activity/science/ Lots of activities
- https://www.acs.org/content/acs/en/education/resources/k-8/science-activities.html Chemical Reactions


FORCE

- Mechanical energy = energy from movement
- Force $=a$ push or pull acting on matter; causes movement
- Friction = a force that moves against the moving force slowing it down.






## 6-8 Social Studies -Check out the standards because some of the themes have changed.

- SS.H.2.6-8.LC: Explain how and why perspectives of people have changed over time.
- SS.H.4.6-8.LC: Explain multiple causes and effects of historical events.
- SS.H.1.6-8.MdC: Analyze connections among events and developments in broader historical contexts.
- SS.H.2.6-8.MdC: Analyze multiple factors that influenced the perspectives of people during different historical eras.
- SS.H.2.6-8.MC: Analyze how people's perspectives influenced what information is available in the historical sources they created
- SS.H.4.6-8.MC: Organize applicable evidence into a coherent argument about the past.


Anchor charts for Social Studies



## Summary Charts



## Writing a Summary

## Summarizing

- Retells the main evente in a fiction slory n a shorter version
- Demonstrates a reader's understanding of the mainidea and detals



## The Retelling Hand

1. Thumb $\quad$ Nein charecter ( 3 )

2. 1 If finger

- Setting where cod uhen the story tolkes plocie

3. Midde firgere

- Problen: the problem in the stery

4. Ring finger

- Events rame of last three
$\qquad$

Sentence Frames Students Can Use


Building a STARR Persuasive
Argument Argument

Read - Think - WRITE


## Text Structure Students Need to know.

Non-Fiction Text Structures

| Text Structure | Signal Words | Visual |
| :---: | :---: | :---: |
| Description | Aor sasmples. <br> for instane. charwteristiss includs, uperiftralls, in addition |  |
| Sequence \& Order | Jefores, in the beginniog, to rtart, finst, next, doring. ofter, then, finolly lent, is the middle, in the end | $1$ $3$ |
| Compare \& Contrast | pimler, aliks, same, pue Ahe. both, different, selise, in centrowt, of the other hend |  |
| Cause \& Effect | nince, becourie, if, due ta, er a renult of, ras then, leadr tos sonrepwently | $\begin{aligned} & \rightarrow \square \\ & >\square \end{aligned}$ |
| Problem \& Solution | problem, inowe, cooses, mince, convequently, therefiere, at a rewalt, becouse of, leadit to, due to, solv, ne, then |  |


| Structure | Definition | Visual | Clues |
| :---: | :---: | :---: | :---: |
| Description | the author provides several detais of something to give the reader a mental picture | $\sigma$ | many adjectives, characteristics, or examples |
| Compare \& Contrast | the outhor discusses similanties and differences between people, things, concepts, or ideas |  | likenesses and differences are discussed; also, both, in contrast, etc |
| Order \& Sequence | the author provides readers with chronological events or a list of steps in a procedure |  | events in order of occurrence, instructions given step-by-step, order words first, next, etc. |
| Problem \& Solution | the outhor gives information about a problem and explans one or more solutions | $\text { ? } \rightarrow \theta$ | a problem is solved or needs solving; problem, solution, solve |
| Cause \& Effect | the author describes an event or several events (cause) and the events that follow (effect) | $\sum_{2}^{M} s$ | cause, because <br> effect, as a result of, due to, reason |

## Text Features All Students Need to Know

Nonfiction Text Features Chart

| Iext Feature | Purpose | Example |
| :---: | :---: | :---: |
| Title | Identifios the topic of the text/tollo what tho toxt will bo about , |  |
| Title Page | Tells a book's title, author, illustrator, and publisher - |  |
| Table of Contents | Tells the names of chapters and what can be found |  |
| Index | Tells what pages the reader can find certain topics |  |
| Elossary | Tells the definitions of some of the words found in a toxt |  |
| Heading | Divides the text into sections and explains what the section be about |  |

Nonfiction Text Features Chart

| Text Feature | Purpose | Example |
| :---: | :---: | :---: |
| Shows what |  |  |
| Something looks like |  |  |
| (taken with a |  |  |
| camera) |  |  |

Students could find their own text features for a homework project. Use a magazine, newspaper, ad, etc., or look up a nonfiction article that has these for them and they can look at it and identify text features.

## Story Elements for Fiction-Need to Know



Story Elements

| Eilustrator | Oraws the pictures. | $8$ |
| :---: | :---: | :---: |
| Title | The neme of |  |
| Author | Writes the story- |  |
| Poet | Writes the poem |  |
| Sefting | Where the story tokes place. | tasm |
| Problem | Causes trouble for the characters. | -63 |
| Solution | How the problem is | 2 |
| Characters | The prople or animals in the stor 4 |  |
| Plot | The events of the | H0, |

## Task Eleven

Tell me why this training was helpful.

Thank you for taking the time to learn.

## We have come to the end of the training

## OVERWHELMED????

1. Go Slow-find things that you need right now
2. Go Slow-try some things out and see if they work
3. Go Slow to Go Fast-We are all learning to be our best selves. It takes being kind to ourselves and being persistent.
4. Pat yourself and your students on the back when one of these ideas actually supports them.
