



Academic Engagement for Secondary Students

Dr. Cindy Koss, Deputy Superintendent for Academic Affairs
Ms. Desarae Witmer, Executive Director for School Turnaround
Oklahoma State Department of Education

cindy.koss@sde.ok.gov

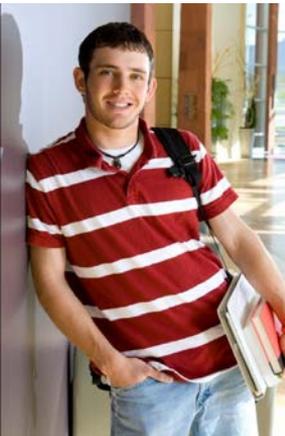
(405) 522-6369



Engaging Students in Learning Academic Achievement Classes

Interventions

LEARNING GOAL: HOW DO WE ENGAGE STUDENTS AND SUPPORT LEARNING NEEDS?



**Identify Interventions to Support
Student Learning Needs
Identify a Variety of Critical Thinking Strategies**

Anticipation Guide – Effective Interventions – Struggling Students

Read each statement and check whether you think it is true or false.



Statement	True	False	Reason
1. Repeat the same content of the core class.			
2. Develop a schedule that breaks content into small “chunks”.			
3. Provide frequent data checks to determine standards-based interventions.			
4. Provide challenging content.			
5. Identify interventions for students that varies depending upon students who “can’t do” or students who “won’t do”.			
6. Provide learning strategies that actively engage students in content.			
7. Use strategies that the teacher believes works best.			
8. Provide learning strategies at a slower pace.			
9. Teach skills differently to meet specific student learning needs.			
10. Use teaching strategies that are research-based.			
11. Allow students to partner to process and discuss learning.			

Academic Achievement Class Purpose

- **What?**

Secondary School Students are not proficient in reading and math and have significant learning gaps.

- **So What?**

We have a responsibility to provide the time and opportunity to learn with meaningful, engaging lessons.

- **Now What?**

Establish a schedule with effective interventions

+ / Δ



Pluses (Celebrations)

Identify the things that are working in your schools

Deltas (*consider opportunities for improvement*)

Deltas should be action oriented and begin with a verb

Deltas should be specific

Deltas should be within the realm of possibility

Deltas should be reviewed/acted upon timely

What do we want students to know and be able to do in Intervention classes?



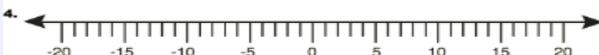
Reading Academic Achievement

- Specific, targeted reading instruction
- Focused on strategies to develop reading skills:
 - Fluency
 - Comprehension
 - Academic Vocabulary



Mathematics Academic Achievement

- Support the learning in the core classes and fill the gaps.
- Active student engagement – not just worksheets
- **Number Line Project**
- Your job is to create a real number line in a group. Be creative and your number line needs to include the following:
 - Integers between -10 and 10
 - At least 5 fractions
 - At least 6 decimals
 - At least 2 square roots
 - At least 2 mixed fractions
 - At least 1 improper fraction

Name	Date
1.	
2.	
3.	
4.	
5.	
6.	
7.	

SCHEDULING OF ACADEMIC ACHIEVEMENT CLASS

Please complete the schedule your class/team follows including the progress monitoring and intervention weekly schedule.

Reading Components

Academic Vocabulary 2-3 Times a Week

Comprehension Practice 3-4 Times a Week

Anticipation Guides

Article of the Week

PEEC Paragraph

Repeated Readings

Fluency Checks 3-4 Times a Week

Fluency Chart

Student Scale

Progress Monitoring

Formative

Easy CBM – weekly, every two weeks, monthly

Math Components

Computation Practice 3-4 Times a week

Math Minute – Math Fluency

Math Vocabulary 2-3 Times a week

Concept/Application Progress Monitoring

Problem of the Day

Find Someone Who – Computation/Concept Building

Math Problem Solving

Progress Monitoring

Formative

Easy CBM – weekly, every two weeks, monthly



	Monday	Tuesday	Wednesday	Thursday	Friday
15 minutes					
15 minutes					
15 minutes					

PROGRESS MONITORING

**How Will We Know That
Students Have Learned?**



READING PROGRESS MONITORING

Fluency progress monitoring at the beginning of the year.

Next steps include comprehension progress monitoring in addition to, fluency progress monitoring.

My Fluency Progress Tracker

Name _____ Beginning Fluency Score: _____ Final Goal and Date: _____

Words Correct Per Minute	180								
	160								
	140								
	120								
	100								
	80								
	60								
	40								
	20								
	0								
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9

	1	2	3	4	5	6	7	8	9
M									
T									
W									
Th									
F									

Student Rating Scale - Fluency



I can read with fluency. I put my words together so my reading sounds right and makes sense. This means that I am paying attention to my phrasing.

PHRASING:

1	2	3	4
<p>I read <u>word-by-word</u>, or one word at a time, like a robot.</p>	<p>I am trying to read the way the author wrote the words. Sometimes I read 2 or 3 words at a time. Sometimes I read word by word, like a robot.</p>	<p>I am really close to reading the words the way the author wrote them. I usually read in 3 or 4 word groups.</p>	<p>I put the words together the way the author wrote them. I put the words together so that it makes sense.</p>



I can read with fluency. I read at the correct rate. Not too quickly, and not too slowly. My reading sounds right and makes sense.

RATE:

1	2	3	4
<p>I am really slow and have to figure out each word on the page. I read so slowly that it really does not make sense.</p>	<p>I can be slow because I have to read word-by-word when I don't know the words. I take breaks, pause too much, and repeat words when I read.</p>	<p>I try to read like I talk. Sometimes I go too fast, or too slow. I might slow down when I am trying to figure out a tricky word. Sometimes I pause or stop when it doesn't make sense.</p>	<p>I read like I talk. I only slow down, stop, or repeat words when it make sense and sounds right.</p>

FREQUENT ASSESSMENTS

Math Minutes

Problem of the Day

Formative Assessments

<p>Grouping Symbols (Parentheses)</p> $6 + (9 - 4)$ $6 + 5$ 11 <p>Give another example.</p> <p>_____</p>	<p>Exponents</p> $7 + 4^2$ $7 + 16$ 23 <p>Give another example.</p> <p>_____</p>
<p>Give another example.</p> <p>_____</p>	<p>Give another example.</p> <p>_____</p>
<p>Add & Subtract</p> <p>Left to Right</p> $16 - 7 + 2$ $9 + 2$ 11	<p>Multiply & Divide</p> <p>Left to Right</p> $36 \cdot 4g^3$ $9g^3$ 27

FOLDABLE

Problem of the Day

It is your responsibility to begin working on these problems as soon as the tardy bell rings. It is also your responsibility to make-up any PODs that you miss due to an absence. For each POD, make sure you not only give an answer, but also explain/justify your response.

Name: _____ Block: _____

<p>M</p> <p>Date: 8/18/14</p> <p>POD#: 6</p>	<p>Jim divided -2 by an integer and his result was between -1 and 0.</p> <p>Which integer could have been the divisor?</p> <p>A. -4 B. -1 C. 1 D. 4</p>
<p>T</p> <p>Date: 8/19/14</p> <p>POD#: 7</p>	<p>The weights, in ounces, of three different packages of cookies are listed below.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> $7.7, 7\frac{1}{7}, 7.25$ </div> <p>Which list shows these weights in order from least to greatest?</p> <p>A. $7.25, 7\frac{1}{7}, 7.7$ B. $7\frac{1}{7}, 7.25, 7.7$ C. $7.25, 7.7, 7\frac{1}{7}$ D. $7\frac{1}{7}, 7.7, 7.25$</p>

PROGRESS MONITORING

Math

MATH MINUTE

Online Assessment

Once a Week

Math Minutes

Formative Assessment:

$19 + 10 =$ $8 - 0 =$ $6 \times 7 =$ $88 + 11 =$ $13 + 10 =$

$40 \div 10 =$ $20 - 13 =$ $18 + 10 =$ $14 + 13 =$ $1 \times 5 =$

$28 \div 7 =$ $9 + 2 =$ $3 \times 11 =$ $40 \div 8 =$ $11 \times 12 =$

$11 \times 7 =$ $10 - 7 =$ $36 \div 6 =$ $7 + 10 =$ $6 + 3 =$

$8 \times 3 =$ $15 \div 3 =$ $2 \times 3 =$ $10 - 7 =$ $36 \div 3 =$

$90 \div 10 =$ $13 - 11 =$ $99 \div 11 =$ $15 + 16 =$ $6 + 1 =$

$8 \times 0 =$ $11 \times 2 =$ $56 \div 7 =$ $0 - 0 =$ $0 \times 1 =$

Progress Monitoring

Many tools are available to progress monitor your students, as well as teacher created short, focused checks for understanding of student learning.

The important idea is to use focused, consistent, ongoing progress monitoring!

Intensive	RED	Weekly
Strategic	YELLOW	Every Two weeks
On Level/Above Level	GREEN	Monthly



What will we do if they don't learn? Research-based learning strategies

Targeted Intervention – High School Language Arts Example

Students Who Struggle With Simple Ideas	Students Who Need Practice With Complex Ideas	Students Who Need Enrichment
Gary, Jade, Joan, Ian	Patrick, Shelly, Martin, Laura	Kyle, Ava, Mary, John
Targeted Interventions	Targeted Interventions	Targeted Interventions
<p>Students did not identify main argument & supporting details.</p> <p>Discuss evidence of each argument; why makes sense; strategies to tease out argument.</p>	<p>Students identified the claim, but need help in supporting why an effective/ineffective argument.</p> <p>Decide claim of article.</p> <p>List evidence.</p> <p>List parts of argument that are convincing/weak.</p>	<p>Students effectively identified the argument & evaluated its effectiveness.</p> <p>Write opposite argument.</p> <p>Write an editorial for a newspaper and really send it (after revisions/edits).</p>

Targeted Intervention – 8th Grade Science

Learning Goal: I can understand the relationship between the different types of atoms and bonds. I can balance chemical equations. I know the laws of conservation of matter and energy. I can identify different chemical reactions.

Students Who Struggle With Balancing Chemical Equations

Joshua, Zeke, Lily, Emma

Targeted Interventions

Students will focus on reading & using the periodic table & identifying each element's atomic number, protons, & neutrons.

I will have students:

Play cards to practice reading & using periodic table.

Analyze their mistakes in balancing chemical equations & explain what they did wrong and what to do differently.

Students Who Understand Balancing Chemical Equations

Amanda, Chloe, Sam, Jose

Targeted Interventions

Students will compare & contrast balancing a chemical equation (science) with solving an equation (math). Students will solve three math equations & balance three chemical equations.

Write the steps involved in solving & balancing.

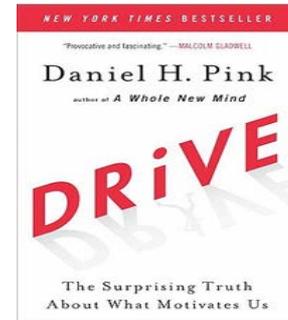
Produce something for other students to use to practice or understand each of these concepts.

Research on Motivation & Engagement

Daniel Pink, author of *DRIVE: The Surprising Truth About What Motivates Us*, explains research indicating that we are motivated by:

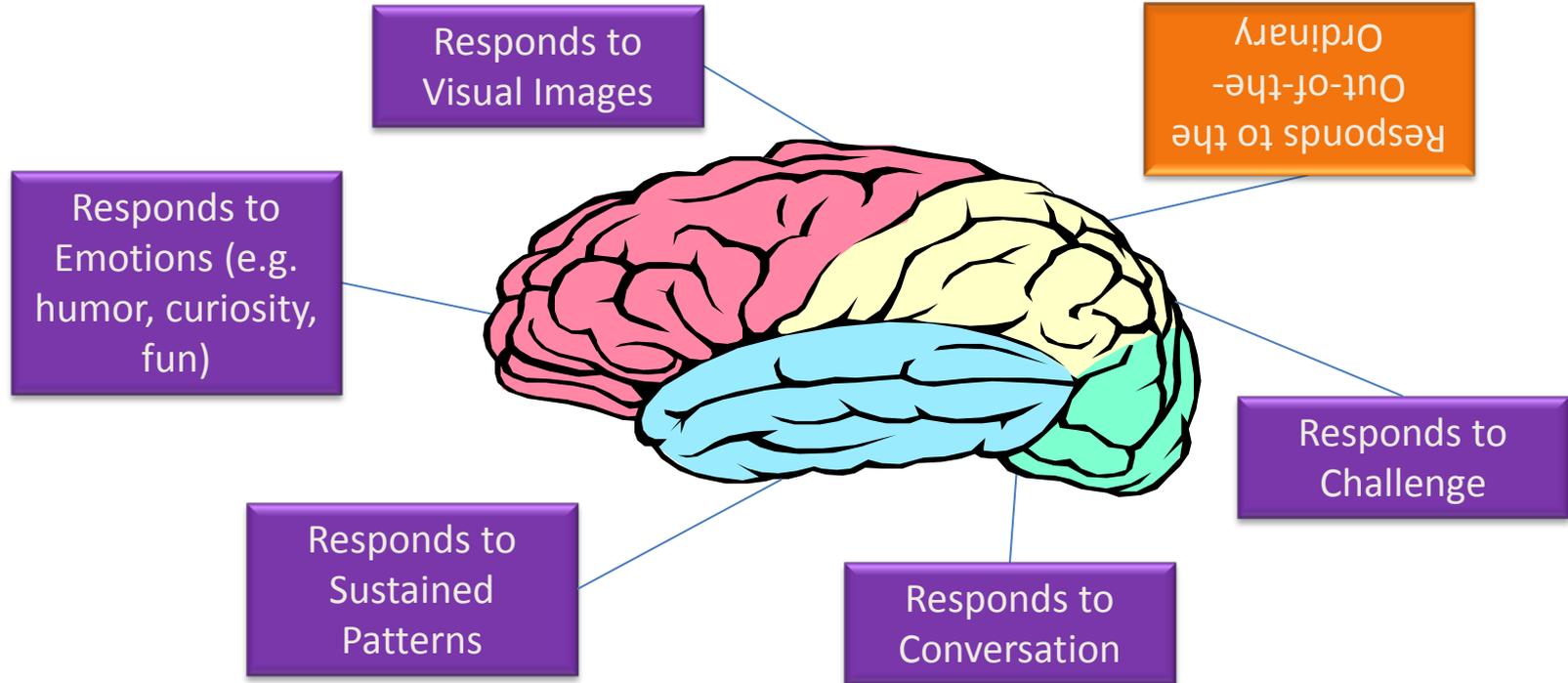
- ✓ Purpose
- ✓ Mastery
- ✓ Autonomy

From <http://www.danpink.com/>



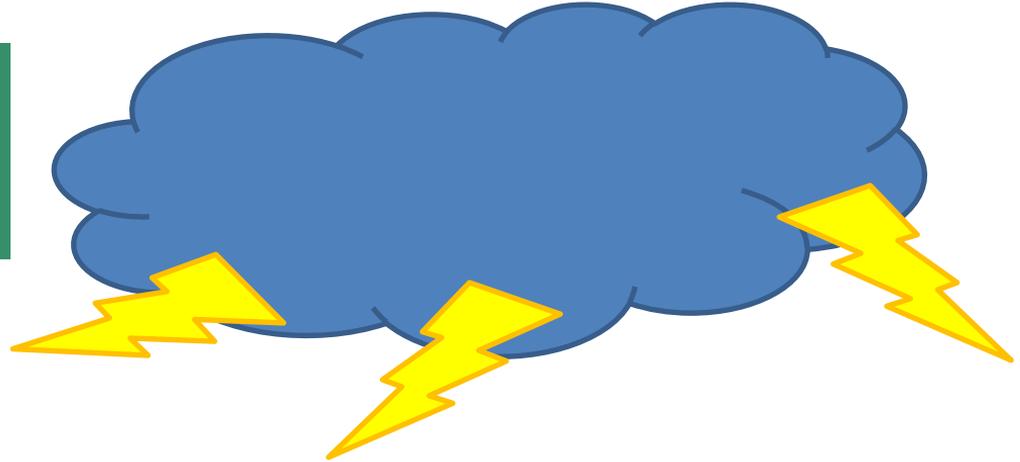
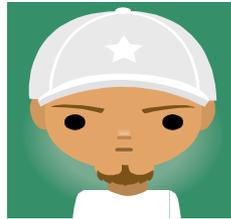
Research on Motivation & Engagement

Based on brain research conducted by the video gaming industry.



Brainstorm – Solo Thinking

- List all of the activities in which you have seen children and teenagers become engaged.



Research on Motivation and Engagement

- What causes a student to want to know something?
 - If it is something **relevant** to their lives
 - If it is information needed to solve a problem
 - If they will get to “show off” their knowledge
 - If they have been **engaged** long enough to see the value in sticking with it longer



Communicate the Learning

Middle School Reading Academic Achievement Lesson Plan

Week: 2 (August 18- August 22, 2014)		Course: Reading Academic Achievement	Teacher:		
Monday	1. <i>What do we want students to learn?</i>	Academic Standard: Vocabulary 1.1- Words in context, 1.3- Idioms and comparisons, Fluency 2.1 read regularly in independent- level materials, Fluency 2.3 increase reading speed and comprehension	How will you teach today's standard(s)?		
		Learning/Language Goal: <ul style="list-style-type: none"> - I can increase my reading fluency by practicing with my classmates - I can build my vocabulary by using visuals and context clues 	I Do – Teacher Guided	We Do – Teacher/Student Guided	You Do – Student Guided
		Warm-up: <ul style="list-style-type: none"> - OCCT Released items Closure: <ul style="list-style-type: none"> - What's your goal for your next repeated readings? 	- Review the routine of repeated readings After repeated readings, I will model the BAV template again using the topic assumption/assume	- I will model repeated readings with two of my strongest readers We fill in part of the template together	- Students will do repeated readings in groups - Students will make a goal for their next repeated readings on Wednesday Students finish template individually and put in binder or journal
2. <i>How will we know if they have learned?</i>	Assessment/Product (Formative/Summative of the objective taught)				
Tuesday	1. <i>What do we want students to learn?</i>	Academic Standard: 3.1- Literal Understanding, 3.3- Summary and Generalization	Standard(s)?		
		Learning/Language Goal: <ul style="list-style-type: none"> - I can read and write analytically and provide evidence to support 	I Do – Teacher Guided	We Do – Teacher/Student Guided	You Do – Student Guided
			- I model asking questions as I read	- We read the next paragraph of the text	- Students read the rest of the text and write questions in

Communicating the learning goal provides purpose to a lesson.



Frog Tongues Anticipation Guide

Directions before reading: Make a hypothesis. Label the following statements as true or false. Remember, it's just an educated guess.

1. Frogs can't lift anything heavy with their tongues. Why?	True False
2. Frogs move their tongues quickly. Why?	True False
3. Frogs eat all the time. Why?	True False
4. Frogs are like Post-It notes. Why?	True False
5. Horned frogs move a lot. Why?	True False
6. Scientists are done studying frogs. Why?	True False

Directions after reading: Are your answers correct? Change them if necessary. Explain why your answer is correct by using evidence from the text.

Anticipation Guide

Validates students' prior knowledge.

Encourages students to read for detail.

All opinions must be supported by evidence.

Students will debate various perspectives

Students write their response.

engageok

SUMMER EDUCATION EVENT

OSDE

PEEC Paragraph



Name _____

PEEC Paragraph

1-POINT: What is the main point of this paragraph? What do you want your reader to know?

Title & Author's Name:

2-EVIDENCE: Find facts, quotes, statistics, and other expert opinions to support your main point. Remember to cite correctly. You need the author's last name and the page or paragraph numbers. Example: (Rawls 17-18)

3-EXPLANATION: What supporting explanations can you give for your point?

4-CONCLUSION: Provide a closing to your paragraph. Remember to link it to your point.

Reading Strategies

Repeated Reading

Students in groups of 3-4.

Create these groups with **varied reading levels**. It is not effective to have homogenous reading levels. The goal is for each of the readers to be a role model for the next person in the group.

Teacher will use a timer in **one minute increments**.

All students will have the same passage.

The **first student** (strongest in the group) will read the passage out loud to the other students in the group. This student will mark how far they read in one minute.

The **next student** will read the passage out loud to the other students in group and mark how he/she has read in one minute. This process continues until all members of the group have read the passage out loud.

This **process repeats** with the students using the process one more time & trying to improve how far they read the first time.

The goal is to **improve the number of words read correctly per minute**.

Develop a system so **students can track their own data**.

Important note: students are not competing against each other. They are competing against themselves to improve.

Paired Reading

Quick Overview of the Lesson

Explain and model use of the skill for Paired Reading

Partners decide on roles of **teller and listener**, and decide on amount of text to read.

Partners perform silent reading, **mentally paraphrasing**. (Books closed) **Teller recalls** as much as possible while listener listens.

(Books closed) **Listener then adds** more information if possible.

Both open book, scan for missed detail and discuss.

Partners swap roles for next segment, continuing through passages until finished, swapping with each new portion read.

Reflection activity- writing, debate, discussion, etc.

MAX Teaching with Reading and Writing Mark A. Forget, Ph.D.

FIND SOMEONE WHO...

Scientific Notation Find someone who can....

Circulate around the room and find classmates who can work each problem. Each person should not complete more than one problem on one sheet. Each problem will need to be worked out and the name of the person who completed the problem should be written in the space provided.

1. Write the following number in Standard Form. 3.26×10^9	2. Write the following number in Scientific Notation. 64,000,000
Name: _____	Name: _____
3. Write the following number in Scientific Notation. .00000015	4. Write the following number in Standard Form. 15,000,000
Name: _____	Name: _____
5. Write the following number in Standard Form. 4×10^{-5}	6. Write the following number in Scientific Notation. 8,250,000
Name: _____	Name: _____
7. Write the following number in Standard Form. 4×10^{-5}	8. Write the following number in Scientific Notation. 003
Name: _____	Name: _____

**FOCUS ON STANDARDS
REINFORCE CONCEPTUAL UNDERSTANDING
ACTIVE LEARNING PEER INTERACTION**

Math Learning Poster

Figure Me Out

My age $365 \times 30 + 1,860$	My shoe size $4 + 1\frac{1}{2}$	My house number $3 \overline{)93}$
My birth date $30 - 1$	This is Me! 	The number of students in my class $(5 \times 3) + 2$
The number of people in my family $50 \div 10$	My classroom number $200 + 1$	The number of letters in my name 2×3
The number of pets I own $32 \div 8$	How long I've been married $\frac{1}{4} + \frac{1}{4} + \frac{1}{2} + \frac{6}{12}$	

shutthedoorandteach.blogspot.com

MATH ACTIVITY - FRACTIONS

Fraction: Part of a _____ that is divided into _____.

Equivalent: Two numbers that have the _____ (“Equi” means _____ “valent” is like _____)

You can determine that TWO fractions are EQUIVALENT if you can show that they are the SAME portion of the whole.

EXAMPLE: If you have 2 Hershey’s chocolate bars, you can show that one half of a chocolate bar is EQUIVALENT to (the same as) two fourths of a chocolate bar. Each member of the group must divide their chocolate into equal parts BEFORE starting the activity.

Member A: Divide your chocolate into 4 equal parts.

Member B: Divide your chocolate into 3 equal parts.

Member C: Divide your chocolate into 6 equal parts.

Member D: Divide your chocolate into 12 equal parts.

Member A: Put two parts of your chocolate $\frac{2}{4}$ on your plate.

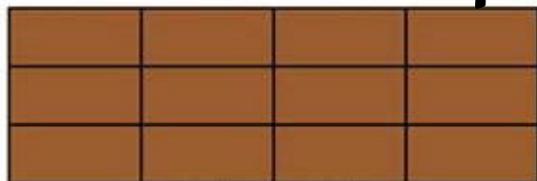
Member C: Put the part of your chocolate that is equivalent on the plate. What fraction is it?

Member D: Put the part of your chocolate that is equivalent. What fraction is it?

Member B: Can you put an equivalent part of your chocolate on the plate? Explain why or why not?

RULE: You may help a member of your group but you may NOT cut his/her chocolate.

CHOCOLATE	CHOCOLATE	CHOCOLATE	CHOCOLATE
CHOCOLATE	CHOCOLATE	CHOCOLATE	CHOCOLATE
CHOCOLATE	CHOCOLATE	CHOCOLATE	CHOCOLATE



ACTIVE LEARNING

Vote With Your Feet

- Students can easily memorize lyrics to songs, become skilled at video games, and learn new athletic maneuvers because those things are easier and less abstract than school work.
-

Strongly Disagree

Disagree

Agree

Strongly Agree

Graphic Organizers – Cornell Notes



Jennifer's Content Class Notes

Graphing Quadratics

*How does the vertex affect the entire graph?

1. In order, to graph quadratics (parabolas), we have to know how to find the (vertex)

-Finding the vertex depends on the (equation form)

How can finding the vertex using vertex form be easier than with standard form?

2 Standard Form	Vertex Form
$f(x) = ax^2 + bx + c$	$y = a(x-h)^2 + k$
vertex is at $x = -\frac{b}{2a}$	vertex = (h, k)

"k" - vertical translation
"h" - horizontal translation

How else can you solve for the equation if it is not a perfect square?

3. • The completing the square can be used to solve when the quadratic is a perfect square

- Step 1 - Find $\frac{1}{2}$ of b , the coefficient of x
- Step 2 - Square the result in #1
- Step 3 - Add the rest of #2 to $x^2 + b$

Supports students in making connections, developing questions, focusing and monitoring reading and analyzing what students have learned.

Thinking Cube - Mathematics



Cubing is a thinking and/or a writing activity that permits students to look at a subject from six different perspectives.

Evaluate – Another direction word.

One focus in this class is to build **mathematical vocabulary**. It is very important that you take time to really help the students understand.

Use the “cubing” strategy.

Describe – What is the description of the word evaluate?

Compare – How is it different than simplify or the same? Explain how it is the same or different.

Associate – What does evaluate make you think of?

Analyze – How does it function?

Apply – What do we use it for or what is the purpose of evaluate?

Argue for or against it – Take a stand and have a reason why you are for or against it.

Vocabulary & Reading Comprehension

Children's academic background knowledge and family occupation

Hart & Risley research

Family Status	Estimate of words heard per hour	Observed Cumulative Vocabulary for children age three
Welfare	616 words	500 words
Working Class	1,251	750 words
Professional	2,153	1100 words

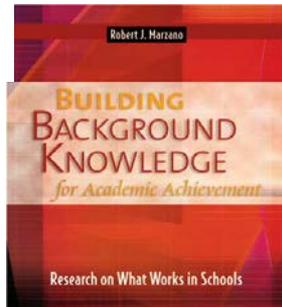
Academic Notebooks - Writing to Learn

Research confirms that higher levels of learning develop when students commit to a written response or analysis of their reading.

Categories:
Class Notes and Learning Strategies for Learning Academic Vocabulary

Vocabulary Word Box

Definition or Synonym	Antonym or <u>Nonexample</u>
Vocabulary Word	
Use it in a sentence.	Draw a graphic representation.



Talk among yourselves



To what extent are you implementing one or more of these strategies?

(Least extent) 1 2 3 4 5 (Greatest extent)

To what extent do you think your students would find these engaging?

(Least extent) 1 2 3 4 5 (Greatest extent)

Rate each question on a scale of 1-5.

What will we do if they know it?

At a scheduled data review meeting, a student may be reviewed for dismissal once s/he has **met identified Academic Achievement Goals** and is demonstrating academic progress in Tier I class.

Placement back into an elective class may only be done at the end/beginning of a 9 weeks period.





EXIT TICKET

3-2-1



3 New strategies you plan to use

2 Aha's to engage students in learning

1 Idea to share