

# Reaching At Risk Students in Algebra 1 or Math 1

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# Agenda

1. Why Is This Important?
2. What Does “At Risk” Look Like?
3. Common Core Mathematical Practices
4. Setting Up Units
5. Strategies for Success
  - A. Relationships
  - B. Student engagement
  - C. Academic Vocabulary
  - D. Formative Assessments
  - E. Progress monitoring
6. Reflection and Implementation Plan

# Why Is This Important?



# What Does “At Risk” Look Like?



# Activity

List the obstacles your students face in their lives and in the classroom.

# Common Core

Algebra 1, Geometry, Algebra 2

OR

Math 1, Math 2, Math 3

# Mathematical Practices

Make sense of problems and persevere in solving them (check solutions by using a different method to solve).

13. Write an expression that can be simplified by using the distributive property. Simplify two different ways and show the answers are equivalent.

$$2(4+5)$$

$$2(9)$$

$$\boxed{18}$$

$$2(4+5)$$

$$2(4) + 2(5)$$

$$8 + 10 = \boxed{18}$$

# Sample Unit Plan



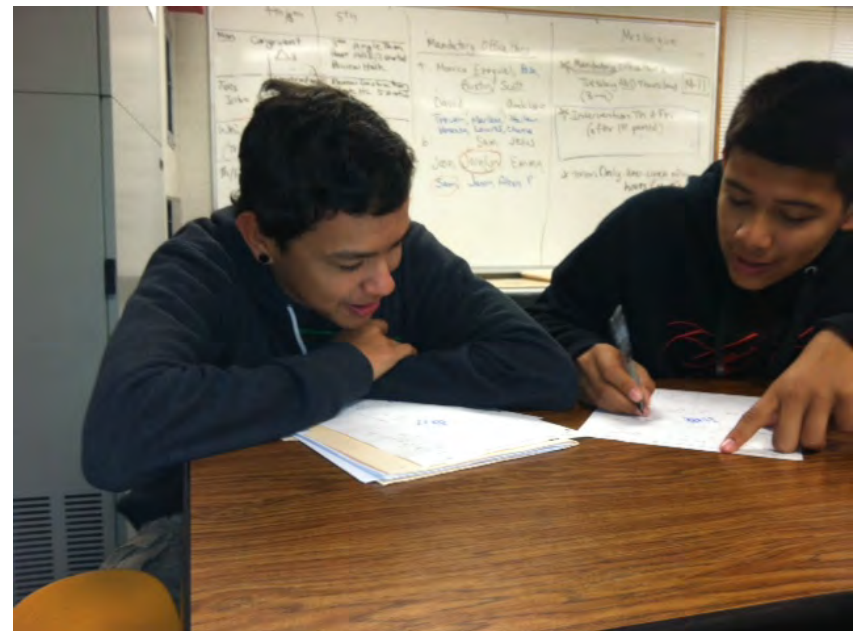


# Set Students Up for Success

Believe in the students...

...and let them know  
you believe in them...

... over and over again!



# Strategies for Success

1. Establish Relationships
2. Student Engagement
3. Academic Vocabulary
4. Daily Formative Assessments
5. Progress Monitoring

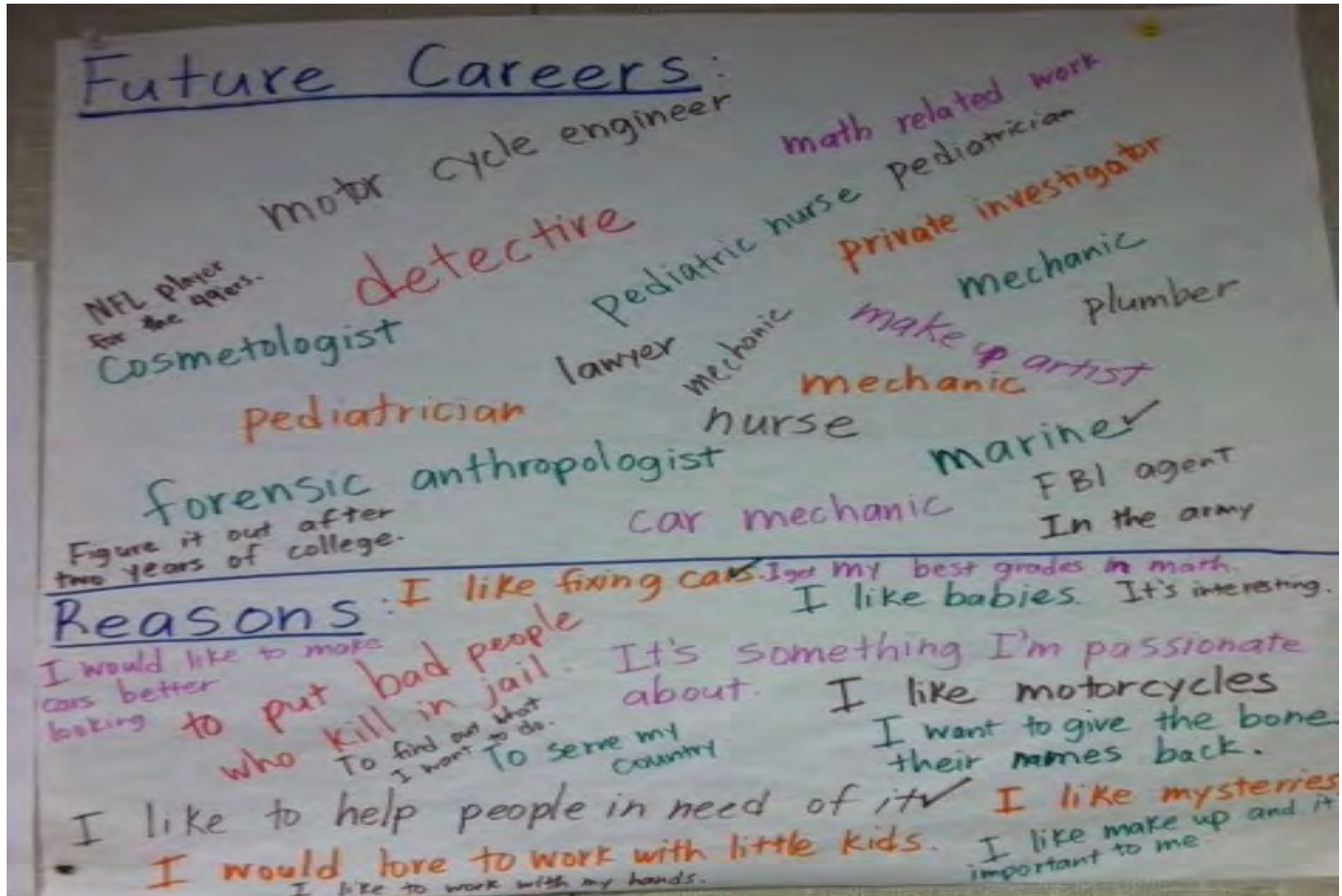


# Establish Relationships

In the first few weeks of school, get to know your students:

1. What do they do in their free time?
2. What do they want to do in their futures?
3. How do they feel about math? What are their past experiences?

# Establish Relationships



# Student Engagement

## “No Opt Out”

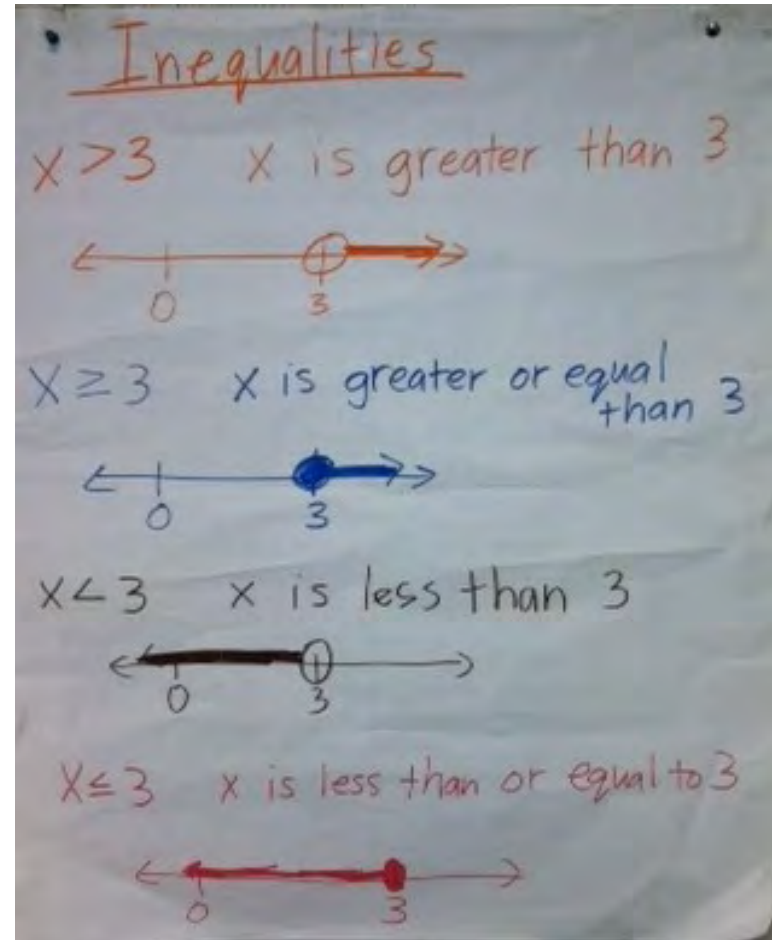
1. Small details matter – all students participate in all parts of the class.
2. Make it easy for students to “Opt In”:
  - Guide those who need help getting started.
  - Let them talk to each other before giving an answer.
  - Let them decide which problem to solve or which part of a problem to explain.

# Student Engagement

- A question is posed or a direction is given.
- Students have time on their own to work on it.
- Students work with a partner.
- A student or students are called on at random to share with their thinking with the class.

# Academic Vocabulary

1. Vocabulary matters – allow students to “rehearse” with each other.
2. Post charts in room to give clues to students who haven’t completely mastered the vocabulary.



# Academic Vocabulary

- Daily Practice! Have students read the learning outcome and discuss any words they don't know.
- English Language Learners:
  - Partner with a bilingual student. Give partners time to explain what they are learning to each other.



# Activity- Reading the Learning Outcomes

1. Given a linear function and a set of domains, find the outputs.
2. Determine if a function is arithmetic or not and if it is, model it with a table, a graph and an explicit function and use the explicit function to determine a given value for the sequence.

# Daily Formative Assessments

On a Daily Basis:

- Guided Practice
- White Boards
- Think, pair, share
- Exit Tickets



***Call on students at random to keep them engaged and accountable!***

# Activity

What daily formative assessments do you use in your classroom?

# Progress Monitoring

1. Get the Integers Down!
2. Homework Record
3. Assessment Check Off Sheet
4. Grade Reflection

# Time Tests - Get the Integers Down!

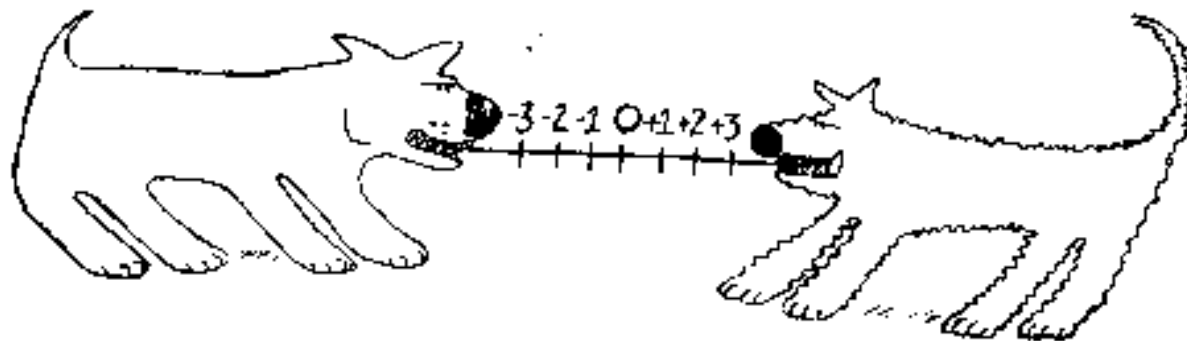
Napa High Data – Percent of Students Proficient

Algebra One Time Tests Goal: 90%

Aug. 16	Sept. 6	Sept. 27	Oct. 18	Nov. 8	Dec. 6
18%	37%	50%	63%		

# Get the Integers Down!

- Students take an integer time test at least once a week the first semester. Teachers report the number of students proficient every three weeks.
- 48/50 is considered proficient.
- Students who need help with adding and subtracting are given a number line to use.



# Get the Integers Down!

- Before taking a new time test:
  - Students chart their own progress.
  - Students correct and finish their last test.
  - Extra work on the back for students who finish early.
  - Work with the students who still need instruction at this time.



# Which Student Needs More Instruction?

Student A scores 14/50 on the time test:

- Attempts to answer 14 addition/subtraction problems and gets them all correct.

Student B scores 35/50 on the time test:

- Attempts all 50 problems.
- Gets all 25 multiplication/division problems correct.
- Gets 10/25 addition/subtraction problems correct.



# Get the Integers Down!

- The top two scores for the semester are recorded in the grade book.
- Students who earn 100% twice take a more challenging time test the next time. Students who earn 100% on a higher level earn extra points in the gradebook.



# Progress Monitoring - Homework

- Homework completion is not optional! Be creative for students who don't complete homework –require students to stay after school, call home, talk to coaches, etc...

P Algebra 1		Functions Homework List	
Date	Learning Outcome	Homework	Score
Wed. Oct. 16	Identify domain and range from mapping and ordered pairs.	Worksheet - Mapping and Ordered Pairs	3/3
Th./Fri. Oct. 17/18	Identify domain and range from tables and graphs.	Worksheet - Tables and Graphs	3/3
Mon. Oct. 21	Given a relation, determine if it is a function or not.	Worksheet - Determining Functions	3/3
Tues. Oct. 22	Given a relation, determine if it is a function or not.	Review Worksheet	/3
Wed. Oct. 23	Given a function, write it in function notation.	Worksheet - Function Notation	/3
Th./Fri. Oct. 24/25	Analyze a linear or quadratic graph.	Worksheet - Domain, Range, Intercepts, Points	/3
Mon. Oct. 28	Review	Worksheet - Functions #1 Review	/3
Tues. Oct. 29	Review	Worksheet - Practice 3.1A	/3
Wed. Oct. 30	Review	Worksheet - Functions #2 Review	/3
		Extra Credit	
		Total	/27

The Functions Assessment will be on Thursday/Friday October 31/November 1.

# Progress Monitoring – Assessment Mastery Chart



# Progress Monitoring – Grade Reflection

Students reflect on their grade:

- Did they improve?
- Are they happy with their grade?
- What can they do to keep their grade or improve their grade?

Type	Grade	Points	Max	Perc
Units and Expressions	10 %	173.50	216	80.32
One Variable Equations	15 %	232.00	275	84.36
Scatter Plots	10 %	0.00	0	0.00
Functions	10 %	0.00	0	0.00
Two Variable Equations	15 %	0.00	0	0.00
Systems of Equations	15 %	0.00	0	0.00
Fall Final	25 %	0.00	0	0.00
<b>Total**</b>				<b>82.74</b>

\*Assignments are not counted until graded. \*\* Total based upon Weighted Assignment Types  
Totals based upon Assignments 1 - 999

B

- My grade stay the same.  
- I stay the same because I did my Homework And Study.  
- My goal in this class is to get An A+. This is a good goal!  
- I can reach this goal by Practicing for the test And try to get better in everything.

# What Students Say

- Understand our struggle.
- Push us academically.
- Realize the possibilities and our potential and never give up on “us.”
- Make us reflect on our actions.
- Say out loud over and over: “I believe in you.”



# Activity

Pick two strategies. How do you plan to implement them?