The 4-step Problem Solving Process

2nd Annual Culture Climate Conference

Session 2

1-2:45pm

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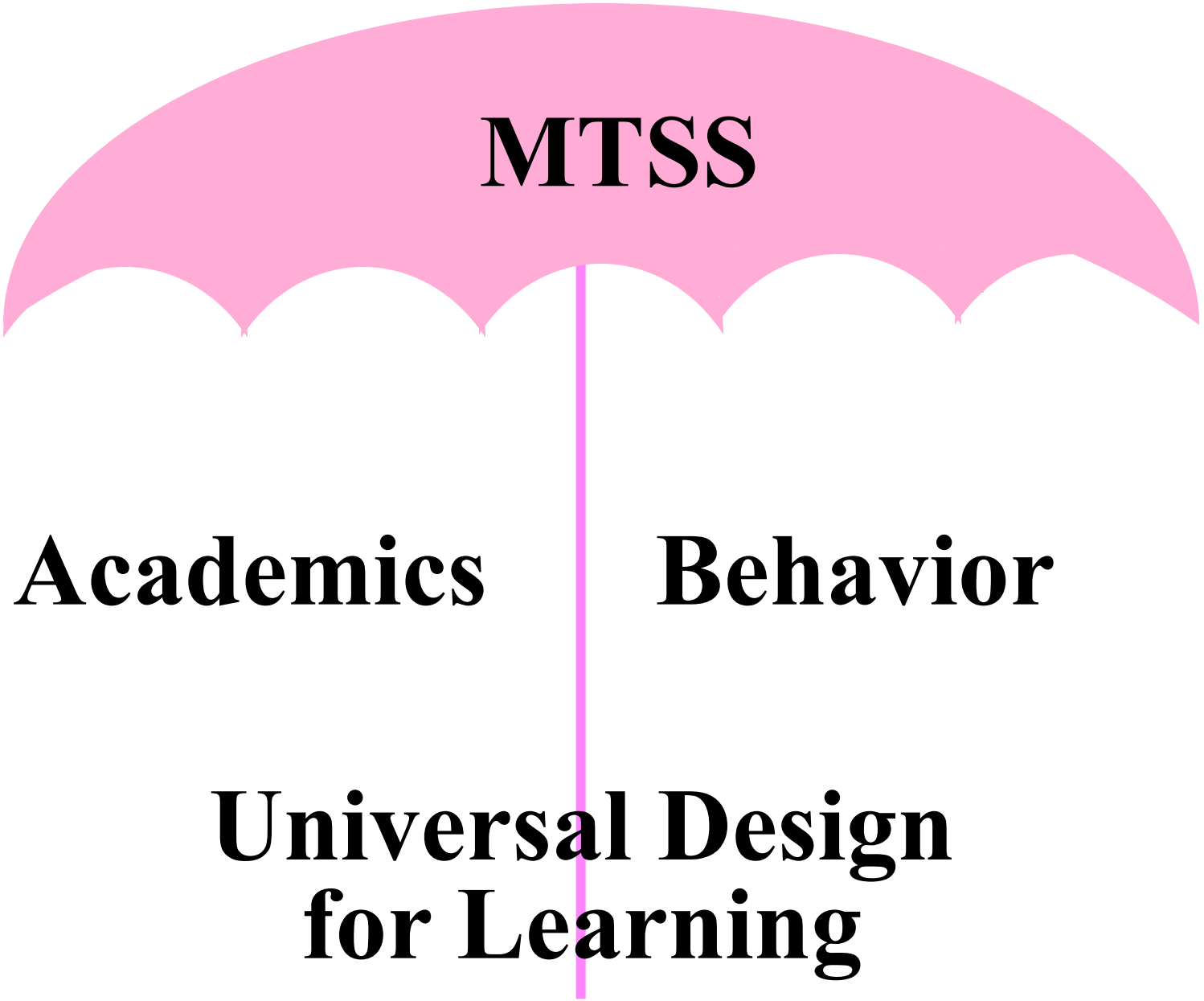
- Continue the development of a common language, common understanding of MTSS
- Quick review of the three tiered model
- 4-Step Problem Solving Process
- Our sense of urgency: Just Fix It!


MTSS
Academics
Behavior
Universal Design
for Learning

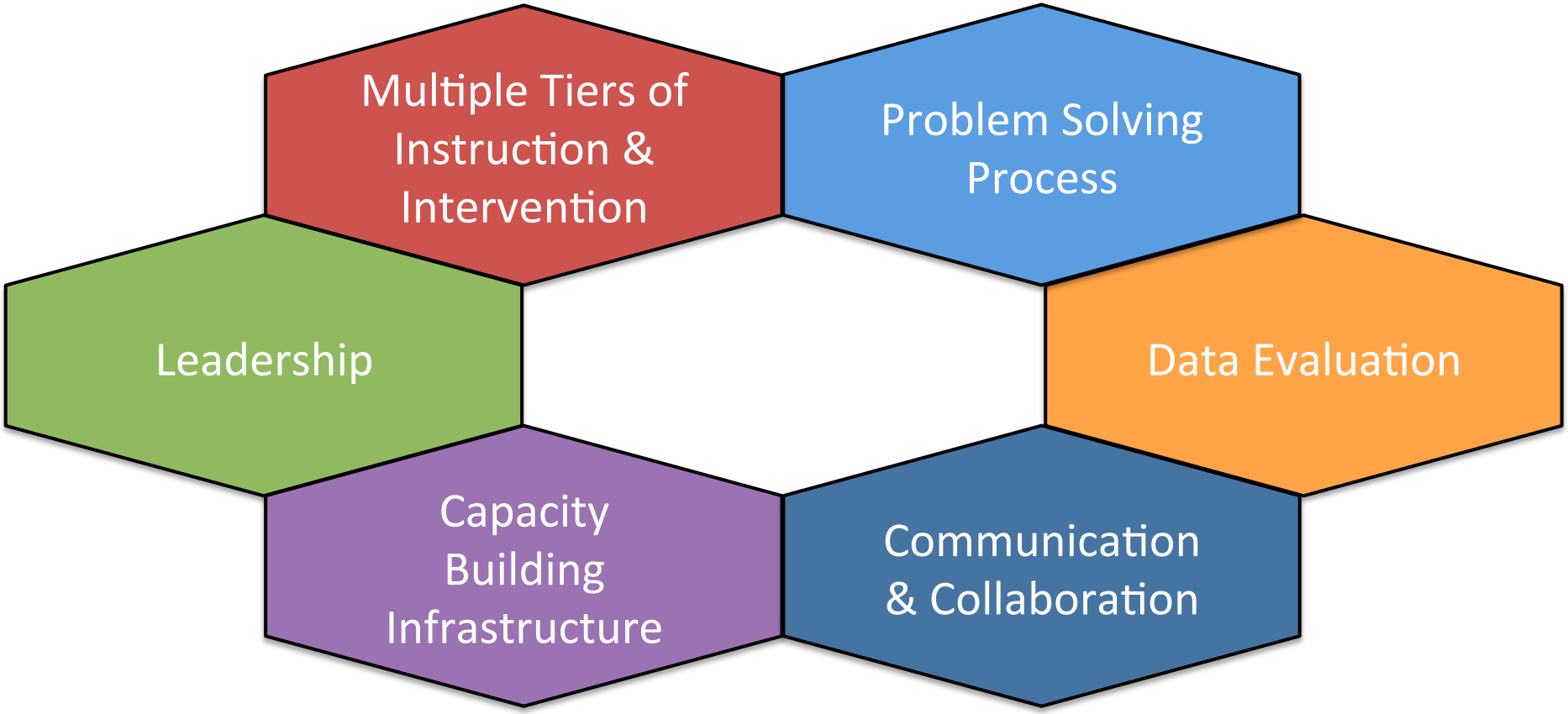
Multi-Tiered System of Supports

- Evidenced-based model of schooling
  - uses **data-based problem-solving**
  - **integrates academic and behavioral instruction and intervention**

- Integrated instruction and intervention
  - delivered to students **in varying intensities (multiple tiers) based on student need**

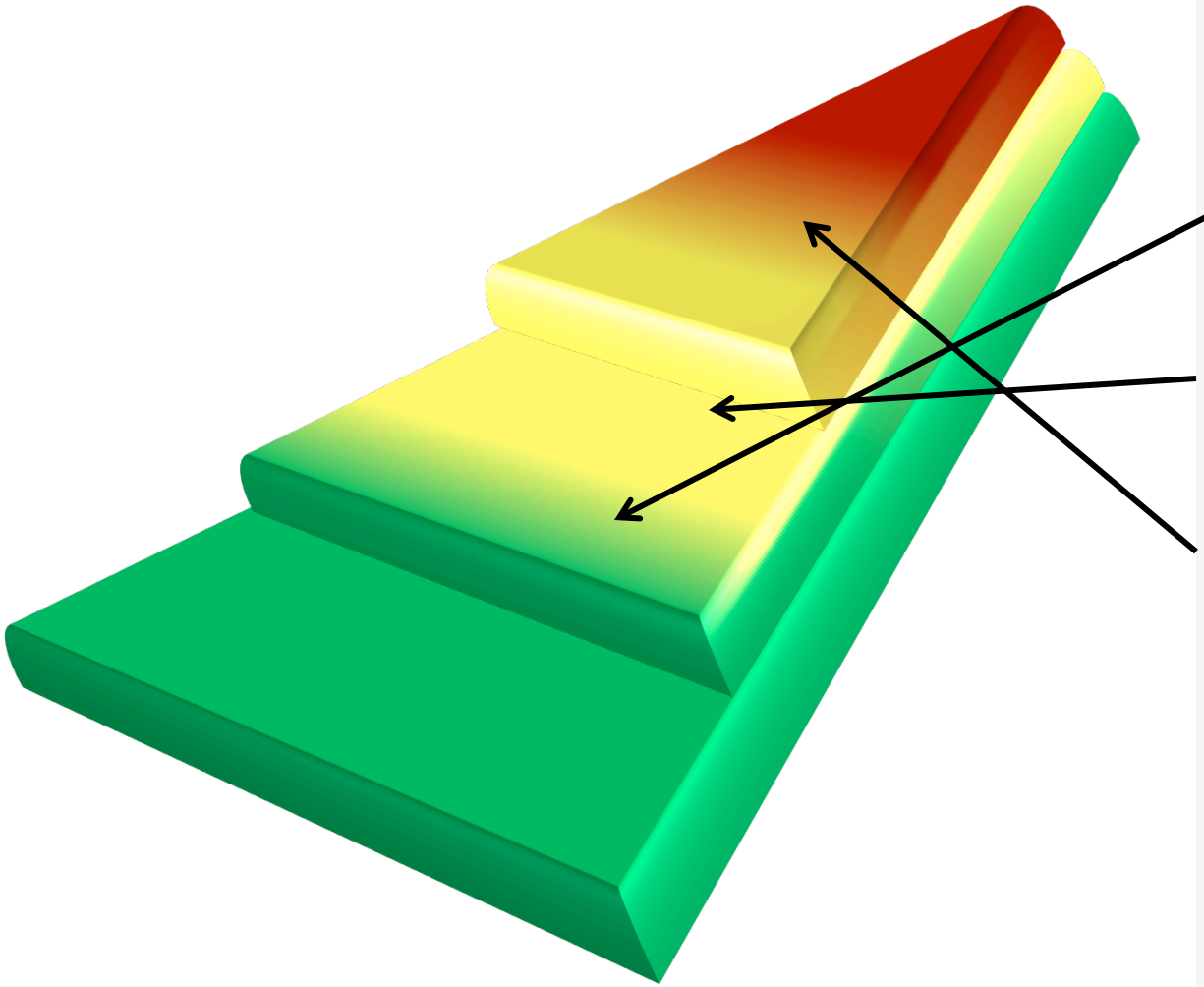
- Decision-making is **"need-driven"**
  - seeks to ensure that district resources reach the appropriate students (schools) at the appropriate levels to **accelerate the performance of all students** to achieve and/or exceed proficiency

Critical Components of MTSS



MTSS is a framework to ensure successful education outcomes for ALL students by using a data-based problem solving process to provide, and evaluate the effectiveness of multiple tiers of integrated academic, behavior, and social-emotional instruction/intervention supports matched to student need in alignment with educational standards.

Tiers as Resources



Tier 3
For Approx 5% of Students

Tier 1 Core

+

Supplemental

+

Intensive Individual Instruction

…to pass benchmark assessments.

Tier 3 Effective if there is progress (i.e., gap closing).

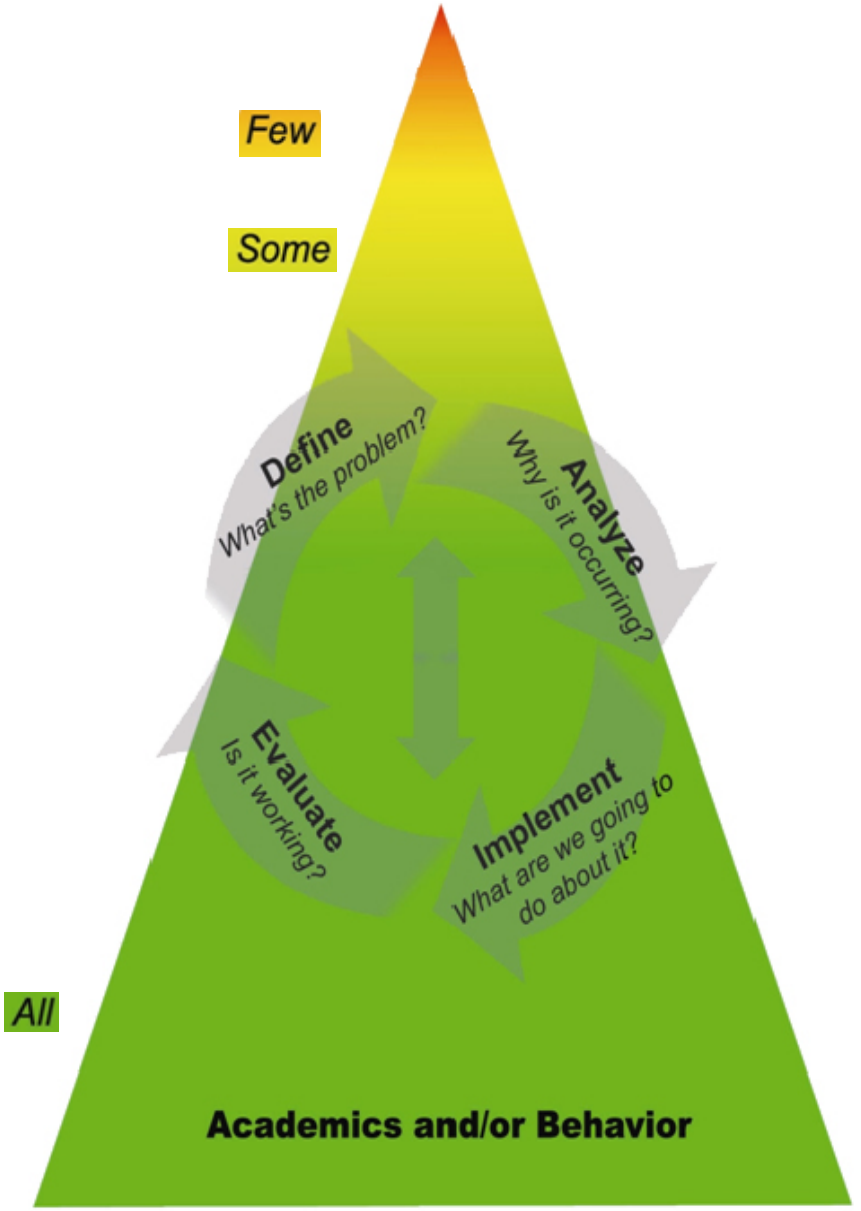
MTSS/RtI & the Problem-Solving Process

Academic and Behavior Systems

Tier 3: Intensive, Individualized Interventions & Supports.
The most intense (increased time, narrowed focus, reduced group size) instruction and intervention based upon individual student need provided in addition to and aligned with Tier 1 & 2 academic and behavior instruction and supports.

Tier 2: Targeted, Supplemental Interventions & Supports.
More targeted instruction/intervention and supplemental support in addition to and aligned with the core academic and behavior curriculum.

Tier 1: Core, Universal Instruction & Supports.
General academic and behavior instruction and support provided to all students in all settings.



So what do we know about early warning system (EWS) indicators?

The relationship between academic and behavior variables and the importance of that relationship in predicting positive and negative student outcomes

Characteristic	# Students	% Dropout	% Graduated	% Enrolled in Post-Secondary	Avg Post-Secondary Terms Completed
0 Suspensions	133,044	16	75	58	4
1 Suspension	25,812	32	52	39	1.9
2 Suspension	11,693	42	38	31	1.2
3 Suspension	5,833	49	30	26	.9
4 Suspension	5,506	53	23	23	.7
Attendance ≥ 95%	101,296	11	81	62	4.3
90-94	34,601	25	63	47	2.7
85-89	16,210	39	44	35	1.6
80-84	7,307	47	31	26	1,1
F grades: 0	93,626	8	85	67	4.9
1	18,500	23	66	44	2.3
2	14,909	29	56	40	2.0
3	7,482	38	45	31	1.2
4+	27,865	51	26	25	.9

Hip High School
What do we know?

- As of April, Hip High School had 48 students not on track to graduate.
- Uh oh!
- Where do we begin to problem solve this urgent issue?

The Data Journey Begins…

- What are the academic/behavior profiles of each off track 12th grade student, by face and name?
- What are our Early Warning System indicators?

Early Warning Systems and Student Engagement
Hip High School

EW Indicator	Criteria
Attendance	Below 90%
Suspension	1 or more – ISS or out of school
Conduct Referrals	1 or more
Fs	1 In ELA and/or Math
MCAS	NI in ELA and/or Math

Then what…

- Look at each 12th grade student by face and name
- Identify all interventions to improve academic performance and engagement in school
- Identify all instructional practices to improve academic performance and engagement in school
- Divide and conquer across staff. All hands on deck!

The Data Journey Continues…

- Just for kicks and giggles – what do the current off track 9th graders academic/ behavior profiles look like?

- Off track 10th grade? 11th grade?

Then what…

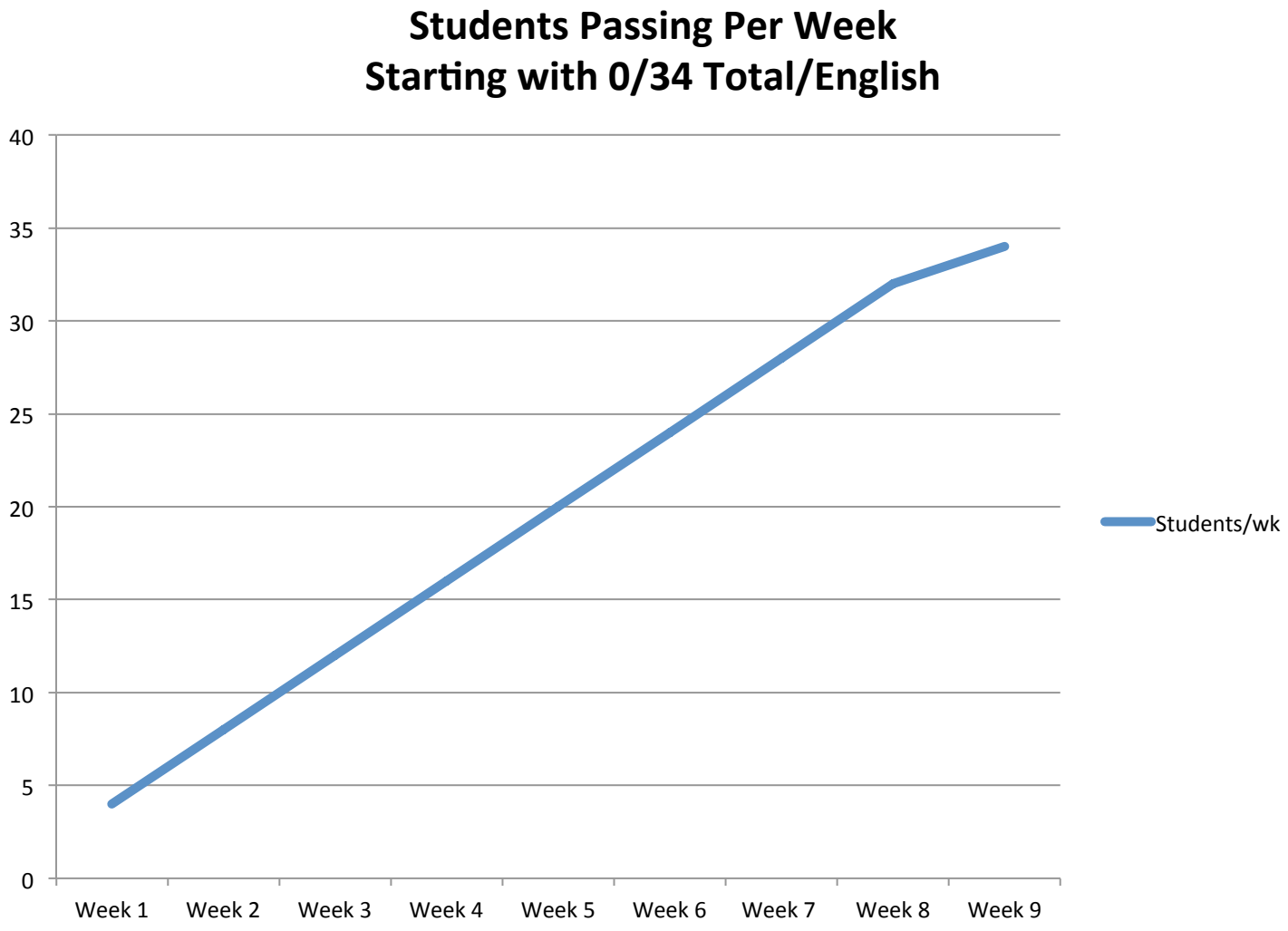
- Look at # of students at each grade level
- 2 or more early warning indicators resulted in a flagging of student.
- Analysis of trends of EWS indicators
- Problem solve reasons as to why trends exist and plan
- Identify targeted interventions to improve academic performance & engagement in school
- Identify targeted instructional practices to improve academic performance & engagement in school

Current 9th graders in April

English	Total	867	714 82%	64 7%	89 10%
	09	223	180 81%	9 4%	34 15%
	10	240	196 82%	18 8%	26 11%
	11	200	173 87%	15 8%	12 6%
	12	204	165 81%	22 11%	17 8%

Data-Based Determination of Expectations English 9

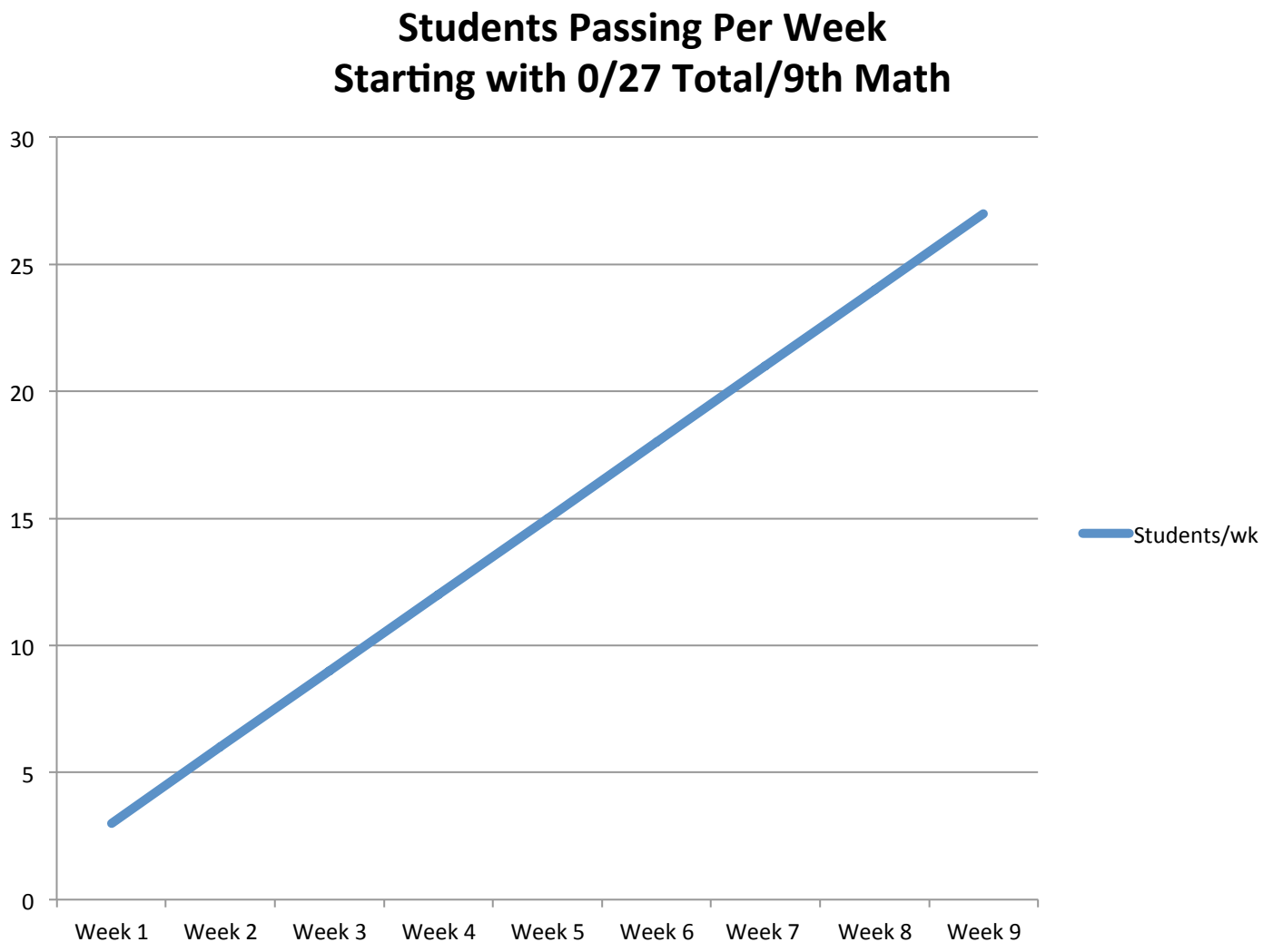
- Current- 34 Students Failing
- Benchmark Level- 0 Failing
- Date- 9 weeks
- Calculate-
  - Difference between current and benchmark level- 34
  - Divide by # Weeks- 9
  - Result: # of student increased passing - 4 per week


Students Passing Per Week
Starting with 0/34 Total/English
40
35
30
25
20
15
10
5
0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Students/wk

Mathematics	**Total**	**925**	**742** **80%**	**89** **10%**	**94** **10%**
	09	**220**	**170** **77%**	**23** **10%**	**27** **12%**
	10	**248**	**209** **84%**	**21** **8%**	**18** **7%**
	11	**228**	**169** **74%**	**34** **15%**	**25** **11%**
	12	**229**	**194** **85%**	**11** **5%**	**24** **10%**

Data-Based Determination of Expectations
Math 9

- Current- 27 Students Failing
- Benchmark Level- 0 Failing
- Date- 9 weeks
- Calculate-
  - Difference between current and benchmark level- 27
  - Divide by # Weeks- 9
  - Result: # of student increased passing - 3 per week

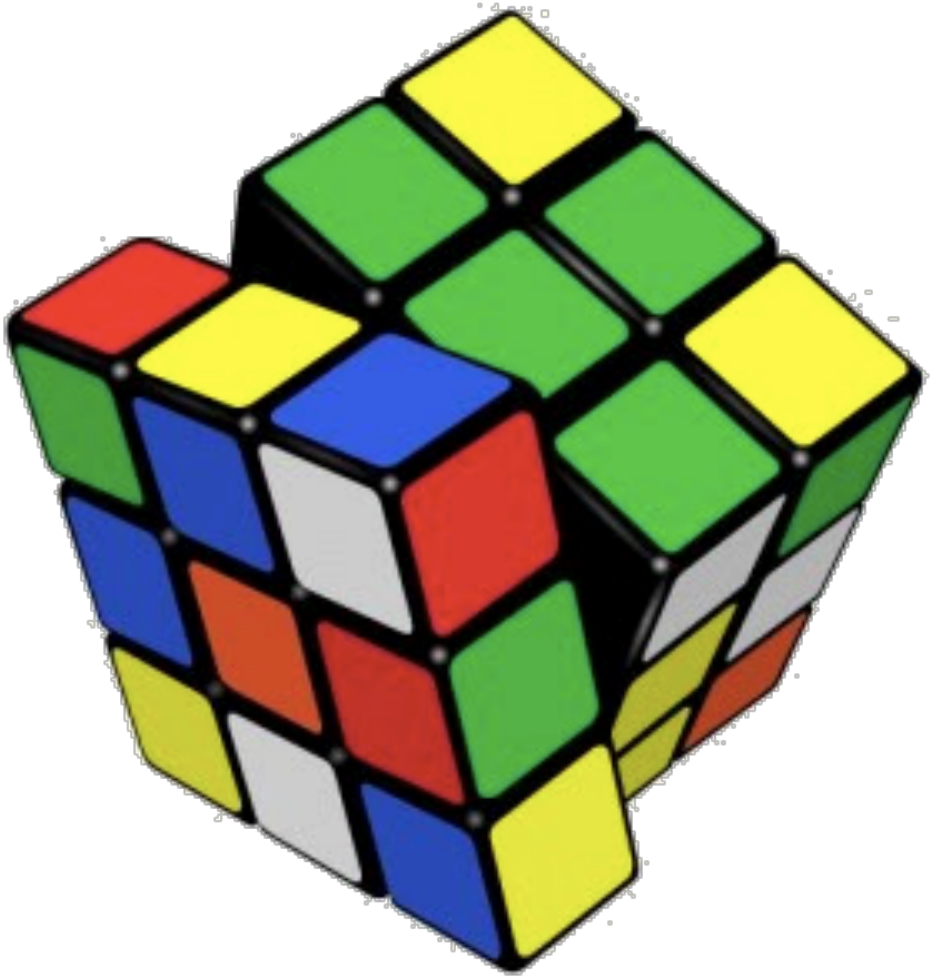

Students Passing Per Week
Starting with 0/27 Total/9th Math
30
25
20
15
10
5
0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Students/wk

How To Use Data: It *must* Be Integrated

- Data are used to answer the questions that **you** want to answer
  - "What percent of student receiving only Tier 1 instruction are proficient?"
  - "What percent of students have 1 or more number of Fs?"
  - "What percent of students with high behavior referrals are proficient?"
  - "What is the impact of interventions on different student demographic groups?"

Problem-Solving is the Engine That Drives Instruction and Intervention

It is the MOST Critical Skill A Leader Can Possess

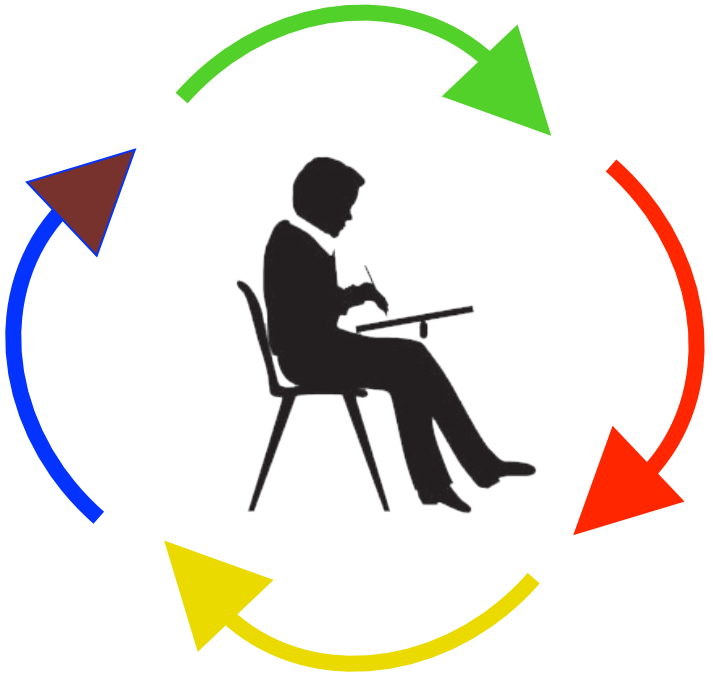


K. Leithwood, 2007

Problem Solving Process

Define the Problem. Identify the goal

•What do we want students to know and be able to do ?



Problem Analysis

Why is the goal *not* being attained?

•Validating Problem
•Identify Variables that contribute to Problem
•Hypotheses/Data Collection

Implement Plan

What are we going to do about it?

•Implement as Intended
•Progress Monitor
•Modify as Necessary

Evaluate

Did it work?

•Response to Instruction & Intervention

Steps in the Problem-Solving Process

1. Define the Problem
(What is the Goal?)

- Determine the gap or difference between the expectation and what is actually occurring in terms of student performance or behavior

2. Problem Analysis
(Why is it occurring)?

- Hypothesize possible root causes
- Analyze supplemental data to support or refute each hypothesis
- Validate whether your hypothesis is true based on the additional data

3. Implement Plan
(What can be done to solve it?)

- Select the intervention(s) or strategies that will address the problem
- Develop and implement the plan with fidelity

4. Evaluate
(Did it work?)

- Collect and use school-wide, small group, and individual student data to determine if the plan is working to address the problem
- Progress monitor and modify, if necessary
- Evaluate the response: good, questionable, poor

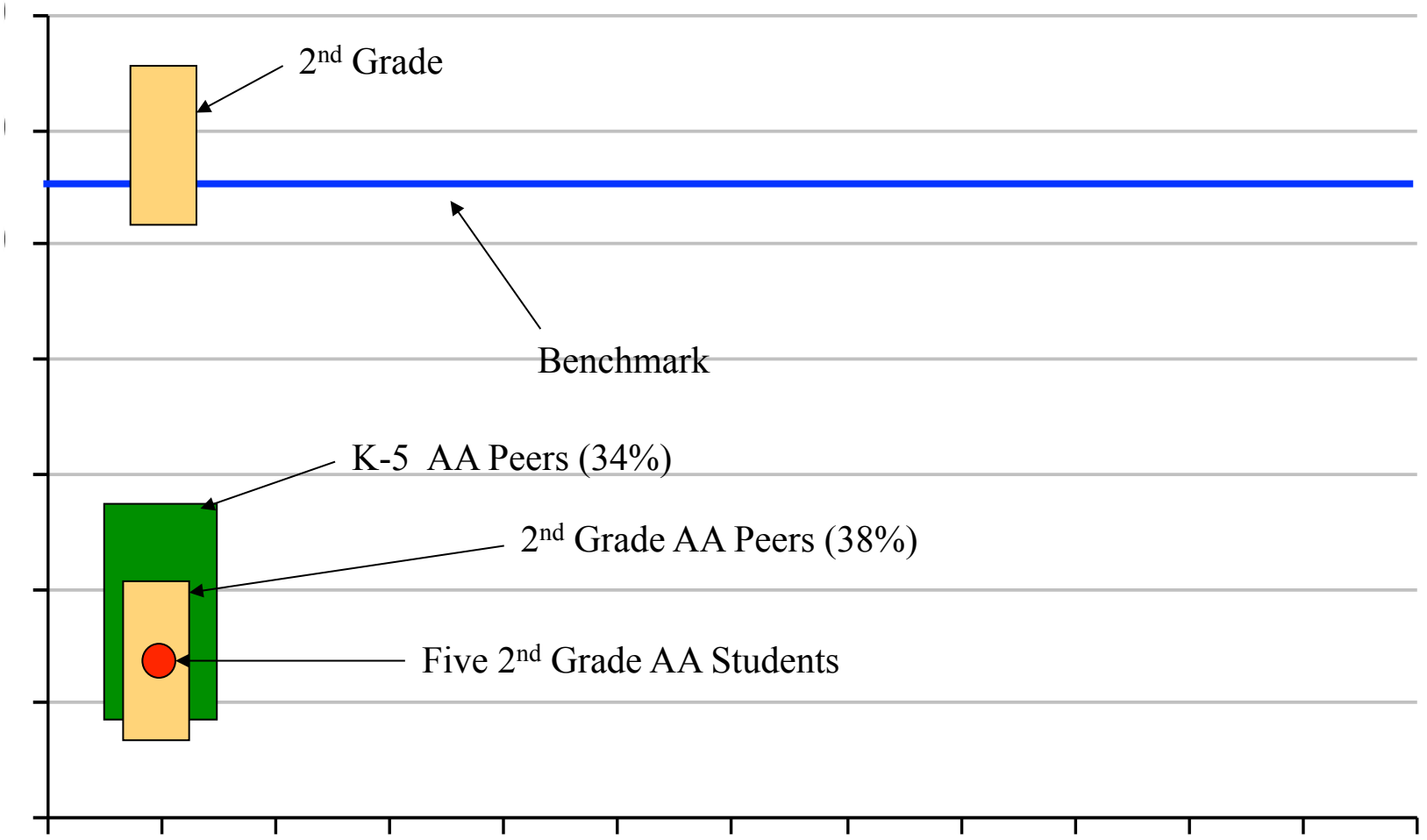
Steps in the Problem-Solving Process

1. **Goal Identification**
   - Identify replacement behavior
   - Data- current level of performance
   - Data- benchmark level(s)
   - Data- peer performance
   - Data- GAP analysis
2. **Analysis**
   - Develop hypotheses (brainstorming)
   - Develop predictions/assessment

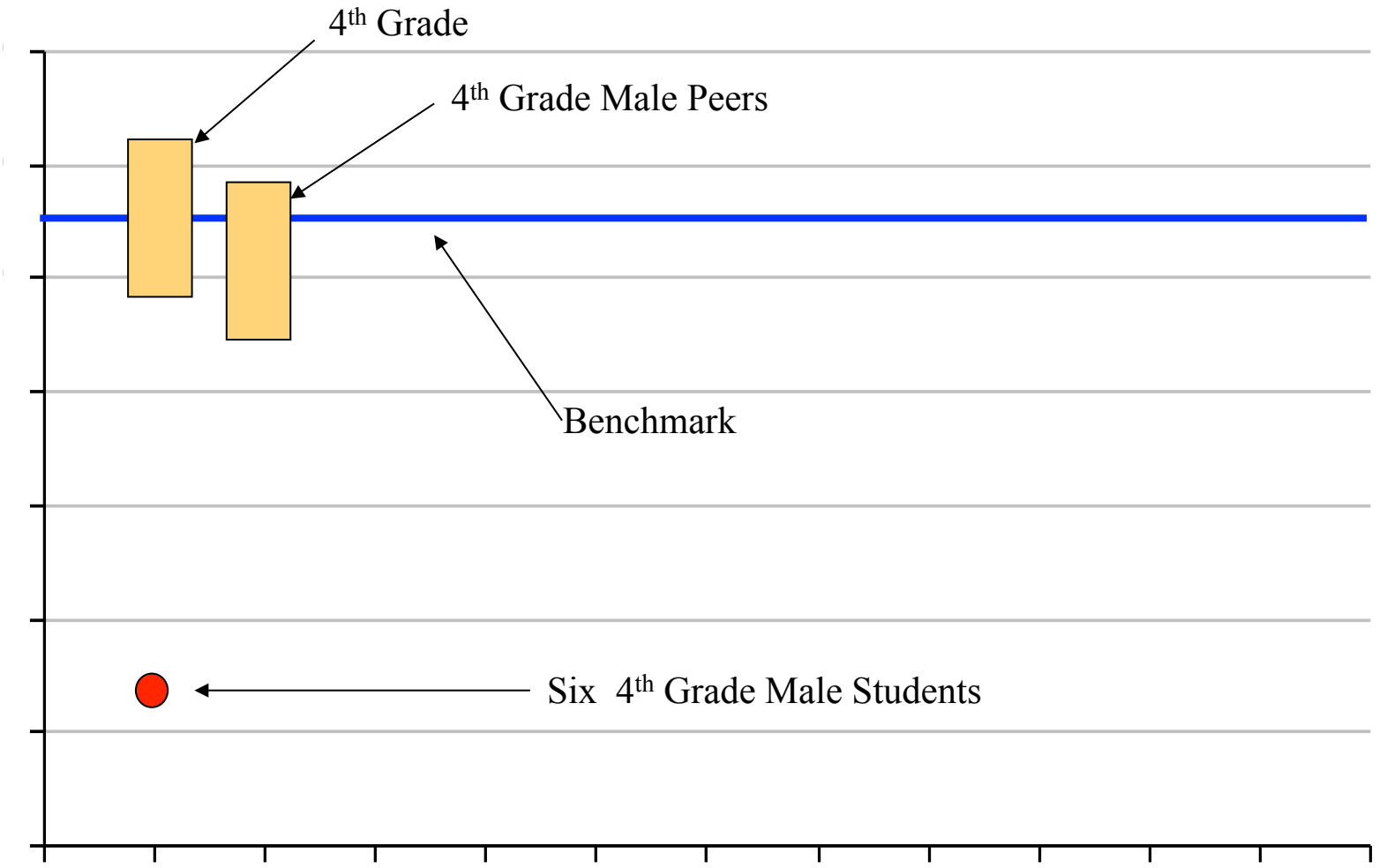
Replacement Behaviors/Goal Behaviors

- Robert is reading below grade level
  - Robert needs to improve his reading fluency rate from 42 wcpm to 75 wcpm
- Sally is aggressive to her peers
  - When provoked, Sally will use appropriate words (define), walk away or ask for help
- Rafael is disrespectful to adults
  - Rafael will respond to teacher questions or statements with positive words (define)

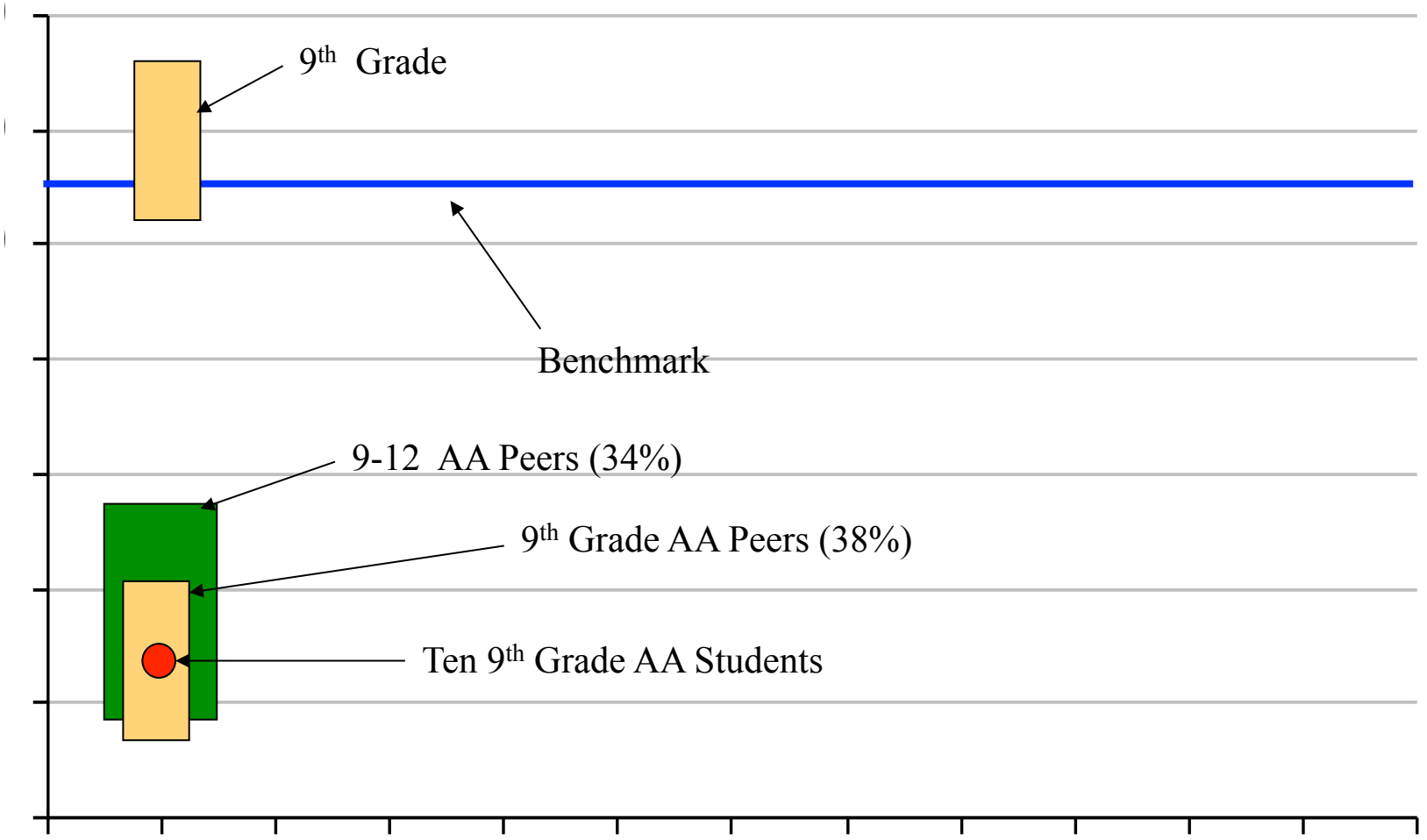
Elementary Example



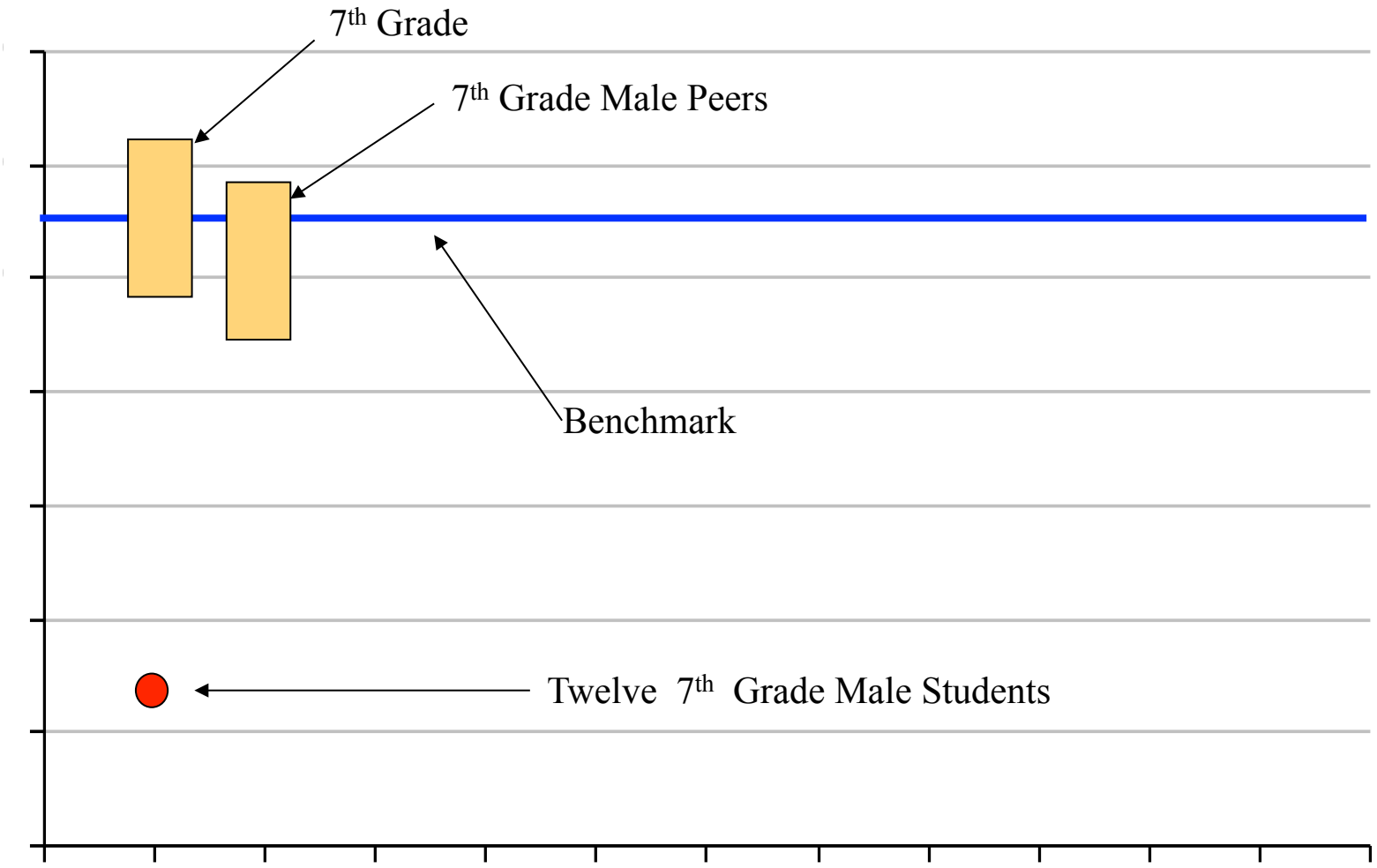
Elementary Example



Secondary Example



Secondary Example



Behavior Example

- Current Level of Performance:
  - Complies 35% of time

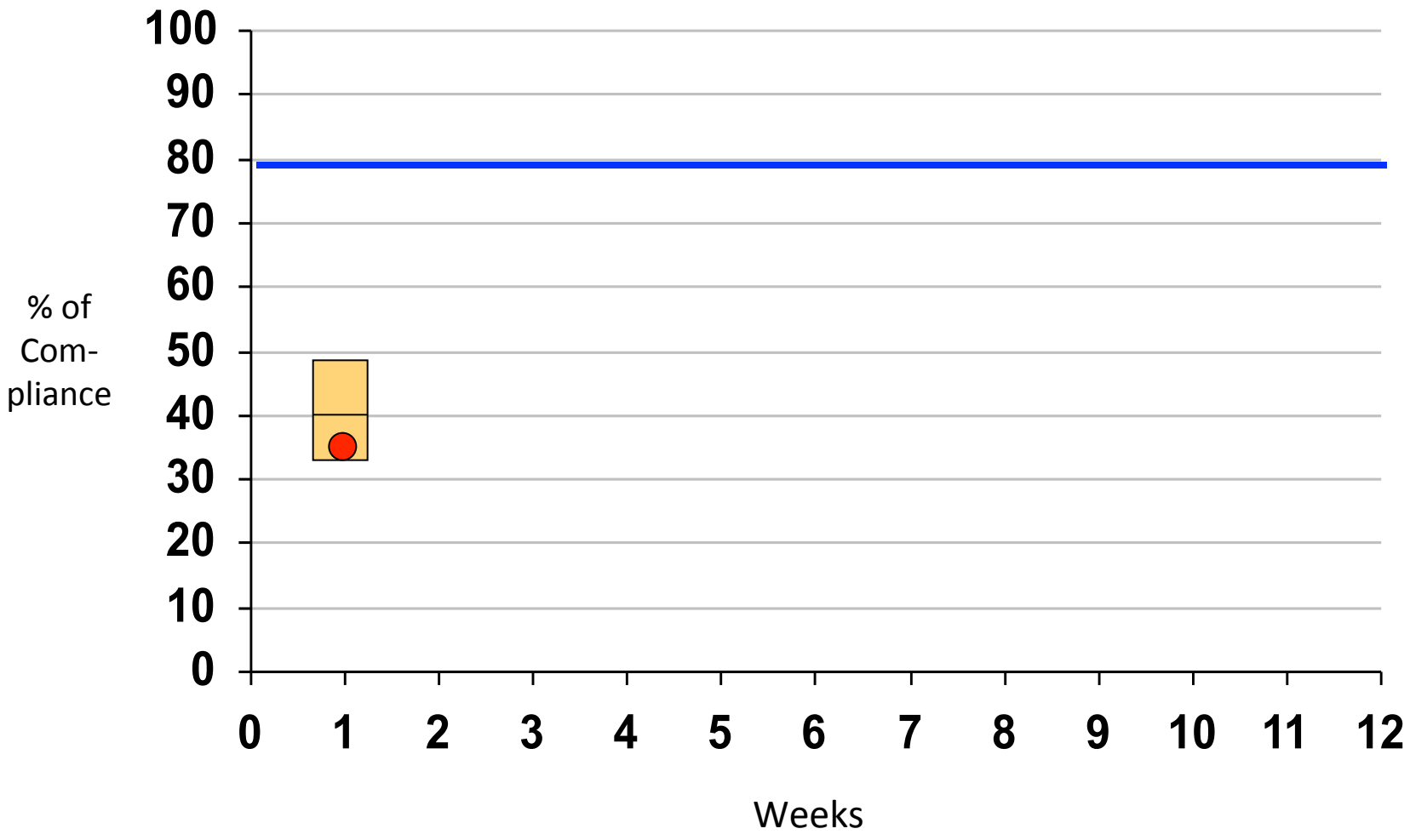
- Benchmark (set by teacher)
  - 80%

- Peer Performance
  - 40%

- Gap Analysis:
  - Benchmark/Target Student SIGNIFICANT GAP?
  - Peer Group/Target Student SIGNIFICANT GAP?
  - Benchmark/Peer Group SIGNIFICANT GAP?

Is the instructional/behavioral program effectively meeting the needs of all students? Is this a student, class issue or both?

Problem Id/Goal Review



Our Example

Hip High School

In reviewing the Hip High School data, it was discovered, by the new Principal, that there was a high rate of absenteeism for freshman.

Most prominent is the difference between low income and ‘advantaged’ freshman attendance rates.

Grade 9 Class Absences by Department and Academic Level
Income Level

	Total	Low Income					Advantaged			
		Total	AP	College	Honors	Standard	Total	College	Honors	Standard
Total	13564	10166	1	4665	1940	3560	3398	1118	1413	867
Business	514	413		44	20	349	101	2	14	85
ELL	1811	1811		1307		504				
English	1551	1051		686	365		500	211	288	1
History & Soc St	1436	963	1	463	322	177	473	218	235	20
Mathematics	1329	852		482	370		477	183	291	3
Music	233	128				128	105			105
PE/Health & Wellness	1125	867				867	258			258
Science & Technology	2296	1606		896	618	92	690	251	406	33
Special Education	1086	902				902	184			184
Visual Arts	719	541				541	178			178
World Languages	1464	1032		787	245		432	253	179	

Steps in the Problem-Solving Process

1. **Goal Identification**
   - Identify replacement behavior
   - Data- current level of performance
   - Data- benchmark level(s)
   - Data- peer performance
   - Data- GAP analysis
2. **Analysis**
   - Develop hypotheses (brainstorming)
   - Develop predictions/assessment

MTSS/RTI Problem-Solving Team Protocol

Step 1: Define the Problem/Identify Goal *(What is the Goal?)*

GOAL:

Identify initial concern (What data raised concerns?)	
What is the desired replacement behavior?	
Using data, what is the current level of performance?	
Using data, what is the benchmark level?	
Using data, what is the peer performance?	
What is the gap?	

MTSS/RTI Problem-Solving Team Protocol

Step 1: Define the Problem/Identify Goal *(What is the Goal?)*

GOAL: **Reduce disproportionality in attendance rates between Low Income (LI) and Advantaged 9th gr students**

Identify initial concern (What data raised concerns?)	While grade 9 LI students comprise 58% of the student population, they account for 75% of school wide absences. The high rate of absences are impacting grades/passing rate.
What is the desired replacement behavior?	Student attendance patterns will align proportional population rates (e.g. 58% LI, 42% Advantaged).
Using data, what is the current level of performance?	LI students account for 75% of school absent rate (even tho they account for 58% of student pop) while Advantaged students account for 25% (42% of student pop)
Using data, what is the benchmark level?	The percent of the absent rate will be at or below 58% LI students.
Using data, what is the peer performance?	Advantaged students attendance rate is at 75%. They account for 42% of the student population.
What is the gap?	Current gap is 17% disproportionate attendance rates (75%-58%=17%) between LI and Adv 9th grade students. In other words, LI students are 17% more likely to be absent than advantaged.

Step 2 Problem Analysis
(Why is it occurring?)

- Develop root cause hypotheses

- Using data validate or invalidate hypotheses

Developing a Hypothesis involves…

- **Answering**: Why isn't the goal being attained?
- **Identifying** possible root causes
- **Analyzing** and **validating** supplemental data to support or refute each hypothesis

Develop Hypothesis: ICEL

- We must ask questions to form a hypothesis regarding"What is the goal not being attained?"
- We ask questions across four domains.

Tier II & III

Developing a Hypothesis: Things to Consider

- A hypothesis is an explanation for what the data and your experience tell you.
- Data can only give part of the picture.
- An **accurate hypothesis** is crucial to designing solutions that will be effective.

Developing a Hypothesis

Developing informed statements about ***why*** the desired behavior(s) are not occurring.

Example: The (desired behavior) is not occurring because…

Low Income students are not attending classes at expected rates because…

The problem is occurring because _____ .

Develop Hypotheses using the ICEL

Test/Validate your Hypotheses using the RIOT

Develop Hypotheses using ICEL Domains:

Instruction
Curriculum
Environment
Learner

Test your Hypotheses using the RIOT process

Review
Interview
Observe
Test

Key Domains of Learning

I	**Instruction**	Instruction is **how** the curriculum is taught.
C	**Curriculum**	Curriculum refers to **what** is taught.
E	**Environment**	The environment is **where** the instruction takes place.
L	**Learner**	The learner is **who** is being taught.

Test and Validate Hypotheses

R	eview	Review of historical records and products
	and/or	
I	nterview	Interviews of key stakeholders
	and/or	
O	bserve	Observe performance in real time functional settings
	and/or	
T	est	Test through careful use of appropriately matched measurement strategies/methods

The ICEL by RIOT Matrix

Problem-Solving using the ICEL/RIOT Matrix

Domain		Variables	Review	Interview	Observe	Test
Instruction	Instruction is how curriculum is taught. How content is presented to students can vary in many different ways: Level of Instruction Rate of Instruction Presentation of Instruction Is the curriculum being differentiated to meet the needs of the learners? Consider: • instructional techniques • presentation style • clarity of instruction • questioning • feedback technique • cooperative learning • use of graphic organizers • instructional conversations • development of academic language/ vocabulary	**Group/System** • Instructional decision making regarding selection and use of materials • Use of progress monitoring • Explicit Instruction • Differentiated Instruction • Sequencing of lesson designs to promote success • Use of a variety of practice and application activities • Pace and presentation of new content • Block of time allotted per subject **Individual** • Instructional decision making regarding placement of the student • in groups • Use of progress monitoring Communication of expectations and criteria for success • Differentiated Instruction • Direct instruction with explanations and cues • Use of a variety of practice and application activities • Pace and presentation of new content	• Unit/Lessons Plans • Permanent products (e.g. written pieces, worksheets, projects) for skill/degree of difficulty requirements • Benchmarks / standards • Assignments (calculate % of assign turned in, average amount-%- of assignments completed), • Length/time required to complete assignments	Stakeholders about: • Effective teaching practices • Instructional decision making regarding choice of materials, placement of students, instructional strategies • Sequencing/pacing of instruction • Choice of screening, diagnostic and formative assessments • Product methods (e.g. dictation, oral retell, paper pencil, projects) • Grouping structures used • Accommodations/ modifications used • Reinforcement management/ engagement strategies • Allowable repetition for mastery/ understanding • Who is providing the supplemental/ intensive instruction • Use of supportive technology • Student/group performance compared to peers • Patterns of performance errors/ behavior • Setting(s) where behavior is problematic • Significance of academic, speech, social, task or motor difficulties • Onset and duration of problem • Consistency from day to day, subject to subject • Interference with personal, interpersonal, and academic adjustment • Performance using different modes of expression (e.g. verbal, written, kinesthetic) • Teacher perceptions/hypotheses regarding why the student is unable to demonstrate the desired behaviors- academic and/or behavioral • Philosophical orientation of curriculum (e.g. whole language, phonics) • Expectations of district for pacing/coverage of curriculum	• Teachers' instructional styles/preferred styles of presenting • Clarity of instructions/ directions • Effective teaching practices • Communication of benchmarks/expectations and criteria for success • How new information is presented • Percent of time with direct instruction, whole group instruction, practice time, differentiated instruction, etc. • How teachers gain/ maintain student attention • Academic engaged time • Transitions • Large group instruction • Small group instruction • Independent work time • Group work time • Teachers use of positive reinforcement, student-teacher interaction quality/quantity, (use of direct observation protocols) • Time on task • External supports necessary to sustain engagement	Classroom environment survey Develop checklists on effective instruction "Things to Look For" and "Ask About"

The schedule does not provide time/opportunity for practice and instruction necessary to “catch up”.

The instruction does not emphasize explicit strategies, sufficient feedback, guided instruction, or differentiation.

Expectations (home/school community)for performance are low

Materials are not aligned with standards and instructional sequences are not sufficiently explicit and inconsistent across teachers.

Key Domains of Learning

I	**Instruction**	Instruction is **how** the curriculum is taught.
C	**Curriculum**	Curriculum refers to **what** is taught.
E	**Environment**	The environment is **where** the instruction takes place.
L	**Learner**	The learner is **who** is being taught.

Once you have brainstormed your hypotheses, the next step is to use the ICEL by RIOT Matrix to identify which domain your hypotheses fall under-

ICEL Domains:

Instruction

Curriculum

Environment

Learner

ICEL Sort

Instruction	Curriculum	Environment	Learner
Instruction is how curriculum is taught. How content is presented to students can vary in many different ways: • Level of Instruction • Rate of Instruction • Presentation of Instruction Is the curriculum being differentiated to meet the needs of the learners? Consider: • instructional techniques • presentation style • questioning • feedback technique • cooperative learning • use of graphic organizers • instructional conversations • development of academic language/ vocabulary	Curriculum refers to what is taught. Scope and sequence would be included here as well as pacing within and between topics. Is curriculum appropriate for student? Consider: • sequencing of objectives • teaching methods • materials provided • difficulty • presentation • length • format • relevance	The environment includes the classroom/school, family/community, and peers. How is the environment impacting learning? Consider: • what may distract or inhibit student learning • peers • home/family support • expectations • beliefs/attitudes • transience • attendance/tardies • class size	The learner is who is being taught. This is the last domain that is considered and is only addressed when the curriculum and instruction are found to be appropriate and the environment is accommodating. Variables include motivation, attendance, prerequisite skills, organization/study habits, abilities, impairments, and history of instruction.

ICEL Sort

Hypothesis

The problem is occurring because _____ .

Prioritizing Hypotheses

- You can't do them all at once
- Prioritize most critical
- Prioritize for the 'domino effect'

Hypothesis / Prediction Statement

Hypothesis:

Low Income students are not attending classes at expected rates because…

Prediction Statement:

If/When _____ occurs , then (the desired behavior/s will occur).

Step 2: Problem Analysis *(Why is the goal not occurring?)*

Generate multiple hypotheses addressing why the goal is not occurring.

Hypothesis sentence frame: *The goal is not occurring because _____.*

HYPOTHESIS 1 **I C E L**	
Prediction **If… , then…**	
Relevant Data **R I O T**	
Validated? *Yes/No*	

Step 2: Problem Analysis ***(Why is the goal not occurring?)***

Generate multiple hypotheses addressing why the goal is not occurring.

Hypothesis sentence frame: *The goal is not occurring because _____.*

HYPOTHESIS 1 **I C E L**	Low Income students are not attending classes at expected rates because they are failing.
Prediction **If…, then…**	
Relevant Data **R I O T**	
Validated? ***Yes/No***	

Hypothesis / Prediction Statement

Hypothesis:

Low Income students are not attending classes at expected rates because…

Prediction Statement:

If/When _____ occurs , then (the desired behavior/s will occur).

Step 2: Problem Analysis *(Why is the goal not occurring?)*

Generate multiple hypotheses addressing why the goal is not occurring.

Hypothesis sentence frame: *The goal is not occurring because _____.*

HYPOTHESIS 1 **I C E L**	Low Income students are not attending classes at expected rates because they are failing.
Prediction **If…, then…**	When LI students are passing classes, their attendance rates are higher (than when they are failing).
Relevant Data **R I O T**	
Validated? *Yes/No*	

Three criteria to consider while writing your hypotheses

1. **Hypotheses are observable,**

2. **Hypotheses are measurable, and**

3. **If validated will lead to an intervention/ action step**

Hypotheses Validation

- **Why do Problem Solving Teams need to Validate a Hypothesis?**

If the hypothesis is inaccurate and the wrong intervention is implemented valuable time is wasted on an intervention that was not an appropriate instructional match for the student/s.

Check Up

Check and Review your **hypotheses**

Do they meet the 3 criteria?

If validated will they lead to and help develop an intervention?

Test/Validate your Hypotheses using the RIOT

Key Domains of Learning

I	**Instruction**	Instruction is **how** the curriculum is taught.
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Now talk about how you will RIOT your identified hypotheses…

What data will you potentially look at to validate or invalidate your hypotheses?

Problem-Solving using the ICEL/RIOT Matrix

Domain		Variables	Review	Interview	Observe	Test
Instruction	Instruction is how curriculum is taught. How content is presented to students can vary in many different ways: Level of Instruction Rate of Instruction Presentation of Instruction Is the curriculum being differentiated to meet the needs of the learners? Consider: • instructional techniques • presentation style • clarity of instruction • questioning • feedback technique • cooperative learning • use of graphic organizers • instructional conversations • development of academic language/ vocabulary	**Group/System** • Instructional decision making regarding selection and use of materials • Use of progress monitoring • Explicit Instruction • Differentiated Instruction • Sequencing of lesson designs to promote success • Use of a variety of practice and application activities • Pace and presentation of new content • Block of time allotted per subject **Individual** • Instructional decision making regarding placement of the student • in groups • Use of progress monitoring Communication of expectations and criteria for success • Differentiated Instruction • Direct instruction with explanations and cues • Use of a variety of practice and application activities • Pace and presentation of new content	• Unit/Lessons Plans • Permanent products (e.g. written pieces, worksheets, projects) for skill/degree of difficulty requirements • Benchmarks / standards • Assignments (calculate % of assign turned in, average amount-%- of assignments completed), • Length/time required to complete assignments	Stakeholders about: • Effective teaching practices • Instructional decision making regarding choice of materials, placement of students, instructional strategies • Sequencing/pacing of instruction • Choice of screening, diagnostic and formative assessments • Product methods (e.g. dictation, oral retell, paper pencil, projects) • Grouping structures used • Accommodations/ modifications used • Reinforcement management/ engagement strategies • Allowable repetition for mastery/ understanding • Who is providing the supplemental/ intensive instruction • Use of supportive technology • Student/group performance compared to peers • Patterns of performance errors/ behavior • Setting(s) where behavior is problematic • Significance of academic, speech, social, task or motor difficulties • Onset and duration of problem • Consistency from day to day, subject to subject • Interference with personal, interpersonal, and academic adjustment • Performance using different modes of expression (e.g. verbal, written, kinesthetic) • Teacher perceptions/hypotheses regarding why the student is unable to demonstrate the desired behaviors- academic and/or behavioral • Philosophical orientation of curriculum (e.g. whole language, phonics) • Expectations of district for pacing/coverage of curriculum	• Teachers' instructional styles/preferred styles of presenting • Clarity of instructions/ directions • Effective teaching practices • Communication of benchmarks/expectations and criteria for success • How new information is presented • Percent of time with direct instruction, whole group instruction, practice time, differentiated instruction, etc. • How teachers gain/ maintain student attention • Academic engaged time • Transitions • Large group instruction • Small group instruction • Independent work time • Group work time • Teachers use of positive reinforcement, student-teacher interaction quality/quantity, (use of direct observation protocols) • Time on task • External supports necessary to sustain engagement	Classroom environment survey Develop checklists on effective instruction "Things to Look For" and "Ask About"

Step 2: Problem Analysis *(Why is the goal not occurring?)*

Generate multiple hypotheses addressing why the goal is not occurring.

Hypothesis sentence frame: *The goal is not occurring because _____.*

HYPOTHESIS 1 **I C E L**	Low Income students are not attending classes at expected rates because they are failing.
Prediction **If… , then…**	When LI students are passing classes, their attendance rates are higher (than when they are failing).
Relevant Data **R I O T**	**Review** attendance data and grades across all 9th grade classes **Review** grades of LI students.
Validated? *Yes/No*	

REVIEW:

Attendance and Grades:
Is There a Relationship?

	All Students	Low Income	% Total Abs	Hi/Lo Attend	Expected	Actual	Difference		Passing Rate
	13564	10166			0.58	0.74948393	0.16948393		All Students
Business	514	413	0.04062561	10	0.58	0.80350195	0.22350195	2	98%
English	1551	1051	0.10338383	3	0.58	0.67762734	0.09762734	7	85%
Hist/SS	1436	963	0.09472752	5	0.58	0.67061281	0.09061281	8	93%
Math	1329	852	0.08380877	8	0.58	0.64108352	0.06108352	9	88%
Music	233	128	0.01259099	10	0.58	0.54935622	-0.0306438	LI better	93%
PE/Health	1125	867	0.08528428	7	0.58	0.77066667	0.19066667	3	94%
Sci/Tech	2296	1606	0.15797757	2	0.58	0.69947735	0.11947735	6	94%
SPED	1086	902	0.08872713	6	0.58	0.8305709	0.2505709	1	94%
Visual Arts	719	541	0.0532166	9	0.58	0.75243394	0.17243394	4	98%
World Lang	1464	1032	0.10151485	4	0.58	0.70491803	0.12491803	5	98%
ELL	1811	1811	0.17814283	1					82%
				1= Most abs 10=Fewst Abs				1-biggest gap 9= least gap	

Step 2: Problem Analysis *(Why is the goal not occurring?)*

Generate multiple hypotheses addressing why the goal is not occurring.

Hypothesis sentence frame: *The goal is not occurring because _____.*

HYPOTHESIS 1 **I C E L**	Low Income students are not attending classes at expected rates because they are failing.
Prediction **If… , then…**	When LI students are passing classes, their attendance rates are higher (than when they are failing).
Relevant Data **R I O T**	**Review** attendance data and grades across all 9th grade classes **Review** grades of LI students.
Validated? *Yes/No*	**Invalid.** Regardless of attendance patterns across 9th grade classes, grades do not vary significantly. In fact there is no real correlation or relationship to attendance and passing. In classes that have the highest abs rate (Sci/Tech and Eng) passing rates are 94% and 85%, respectively.

Table Talk

- Reflect on reasons why absences are not strongly related to grades.

- A wondering - If absences are not related to grades are they strongly related to the state assessment or other college and career indicators?

Your Turn…

Using your own data or areas of concern, complete Step 1

Or use another provided example…

MTSS/RTI Problem-Solving Team Protocol

Step 1: Define the Problem/Identify Goal *(What is the Goal?)*

GOAL:

Identify initial concern (What data raised concerns?)	
What is the desired replacement behavior?	
Using data, what is the current level of performance?	
Using data, what is the benchmark level?	
Using data, what is the peer performance?	
What is the gap?	

Step 2: Problem Analysis *(Why is the goal not occurring?)*

Generate multiple hypotheses addressing why the goal is not occurring.

Hypothesis sentence frame: *The goal is not occurring because _____.*

HYPOTHESIS 1 **I C E L**	
Prediction **If… , then…**	
Relevant Data **R I O T**	
Validated? *Yes/No*	

Reflecting on Hypotheses and Predictions

- How does Step 1 & 2 compare to other experiences/practices for your school's current structure for identifying and prioritizing root causes?

- What is the value of doing this as a team?

Step 3: Develop & Implement Plan (*What can be done to solve it?)*

- Select the intervention(s) or strategies that will address the problem and meet the goal
- Develop and implement the plan with fidelity

Fidelity = Sufficiency + Support

Intensified Instruction

- **What** will be done?
- **Who** will do it?
- **When** will it be implemented and for how long?
- **What** data will be collected to monitor intervention on student performance
- **How** often will the data be reviewed?

Principles of Instruction/ Intervention Design

The purpose of Intensified Instruction is to create an instructional match to *accelerate* student learning.

Principles of Intensified Instruction

… should be designed to

adjust <u>what</u> is being taught and/or <u>how</u> it is taught.

Principles of Intensified Instruction

- **Explicit**- strategy/instruction to be used are specified clearly (What, who, when, where, how long)
- **Focused on instructional environment-** actions taken to modify the environment *not* the individual
- **Operationalized –** target behavior that is observable and measureable, includes conditions and criteria for success (how know effective?)
- **Interventions must be linked** to Tier 1 focus, materials, performance criteria

Plan Development

Lots of different formats, but some critical elements needed

Plan Development

Description of Intervention & Expected Outcomes Tier 1 2 3

Implementation

Frequency (How Often):
Amount of Time (Duration):
When:
Who:

Support

Who:
How Often:
Description/Type:

Data Collection

Type:
Frequency:
Review Dates: Expected Performance on Review Dates:
Responsible Party:

Review:

Data:
Decision: Positive Questionable Poor
Next Steps

Step 3: Plan Development *(What are we going to do about it?)*

Description of Intervention & Expected Outcomes	**Tier: 1 2 3**

Implementation

Frequency (How often):

Amount of Time (Duration):

When:

Who:

Step 3: Plan Development *(What are we going to do about it?)*

Description of Intervention & Expected Outcomes **Tier: 1 2 3**

Math department teachers will utilize at least 2 active engagement strategies during instructional delivery/class period. Consensus was reached on the following strategies: turn and talk, partner share, think-pair-share, quick writes (and shares), thumbs up/down

Use of these strategies will increase active student participation, increase accuracy and completeness of class and HW, reduce the amount of time spent in explicit instruction (T) and independent practice (S)

Implementation

Frequency (How often): During daily Math I classes and Math Intervention classes.

Amount of Time (Duration): During the 60 minute Math classes, teachers will provide at least 3 active engagement strategies/opportunities per class period.

When: Strategies used at the beginning, middle and end of class time

Who: Math I and Math Intervention teachers

Support

Who:

How Often:

Description/Type:

Support

Who: Math teachers and/or Math Coach;

How Often: Bi-weekly

Description/Type: Math teachers/Math coach will conduct peer observations using walk through protocol to check for use and delivery of engagement strategies (at begin, middle, end) and level student participation.

Data Collection

Type:

Frequency:

Review Dates: **Expected Performance on Review Dates:**

Responsible Party:

Data Collection

Type:

Walk through protocol - collect evidence of the use of elements of instruction (e .g., explicit instruction, guided practice, independent practice, reflection/extension/integration etc) and % of time used over the class period.

Collection of the amount/percent of time students are actively engaged during the observed elements of instruction (see protocol)

Frequency: Bi-weekly, weekly, daily as agreed upon

Review Dates: Walk through data will be shared at weekly PLT meetings

Expected Performance on Review Dates: Increased in % of time spent modeled practice, guided practice with teacher support, guided practice with support. Increase in % of time students engaged during elements of instruction. Ultimately- improvement in classwork and homework accuracy and completeness.

Responsible Party: Math Coach, Math Department Head

Plan Development

Description of Intervention & Expected Outcomes Tier 1 2 3

Implementation

Frequency (How Often):
Amount of Time (Duration):
When:
Who:

Support

Who:
How Often:
Description/Type:

Data Collection

Type:
Frequency:
Review Dates: Expected Performance on Review Dates:
Responsible Party:

Progress Monitoring

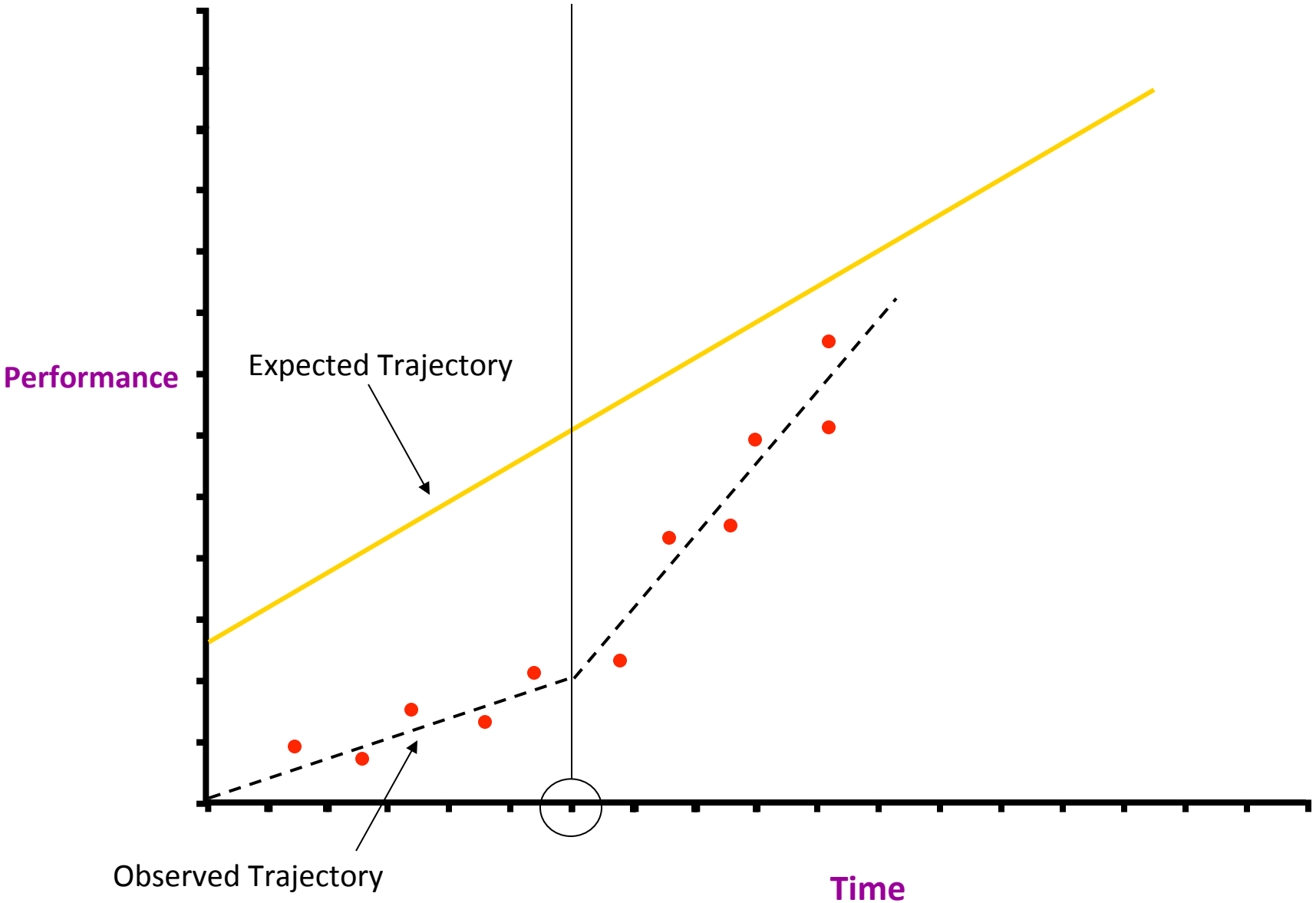
- How frequently?
- With what data?
- How often is instruction modified?
- Relationship to high stakes assessments?
- Individual? Group?

Decision Rules:

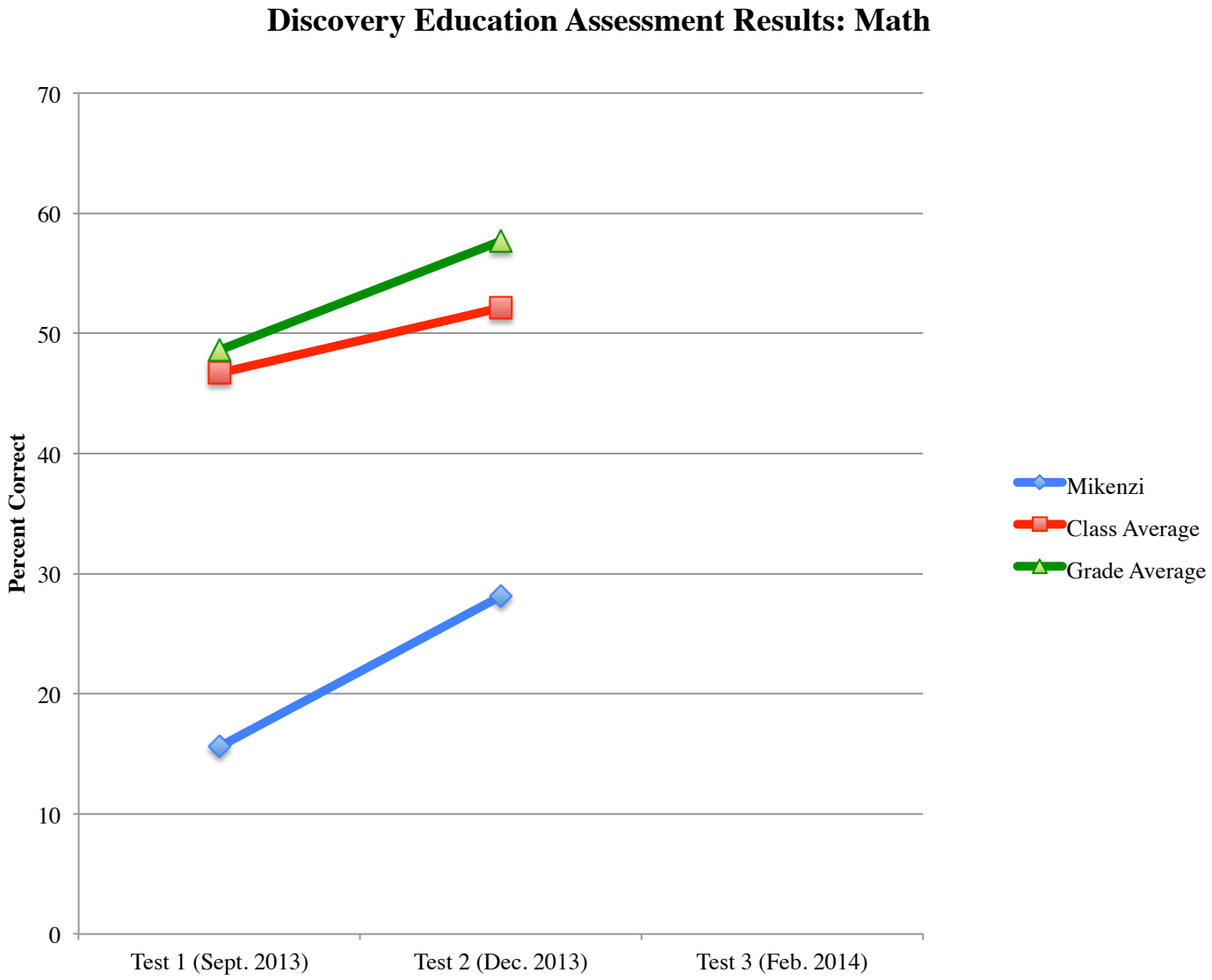
What is a "Good" Response to Intervention?

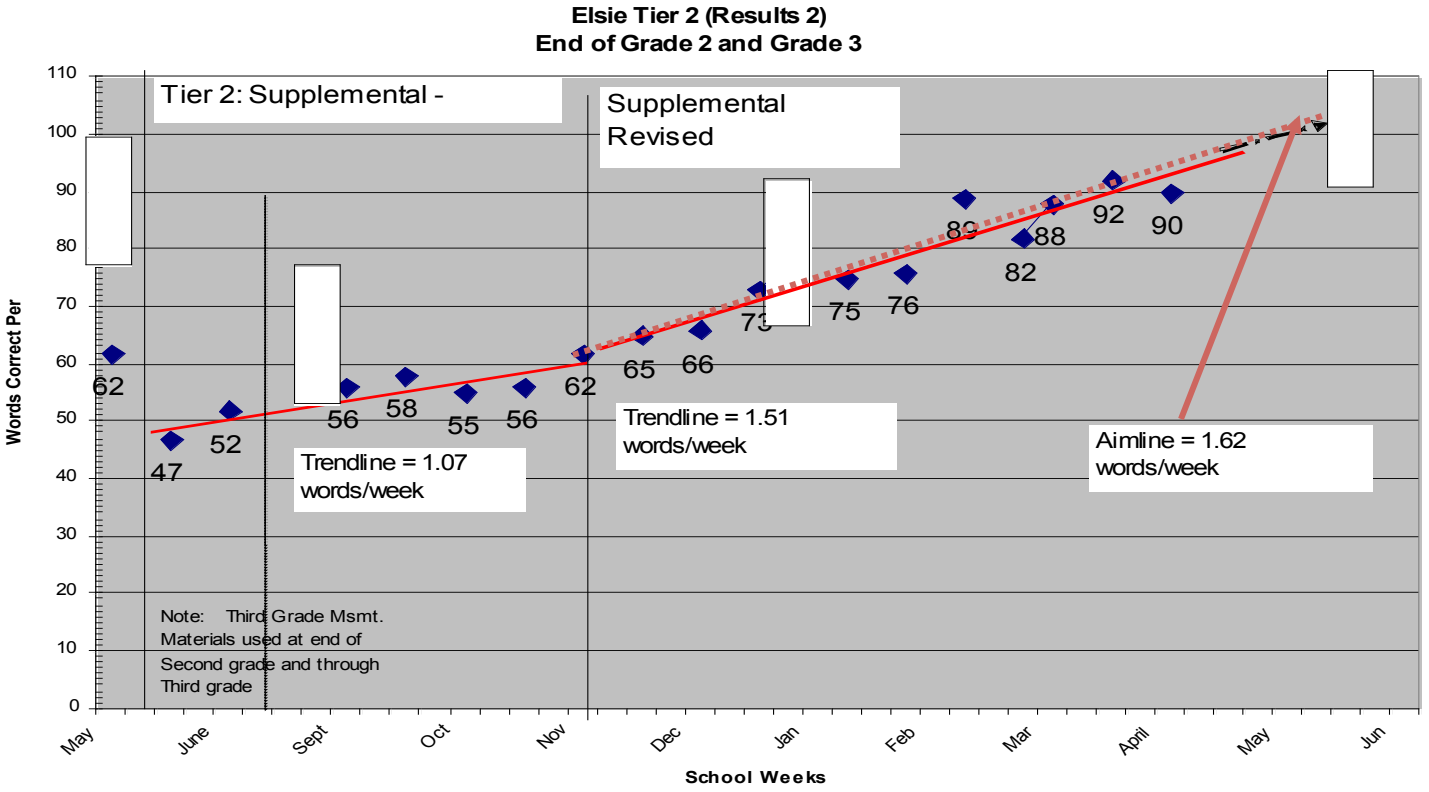
- ***Positive Response***
  - Gap is closing
  - Can extrapolate point at which target student(s) will "come in range" of target--even if this is long range
  - Level of "risk" lowers over time
- ***Questionable Response***
  - Rate at which gap is widening slows considerably, but gap is still widening
  - Gap stops widening but closure does not occur
- ***Poor Response***
  - Gap continues to widen with no change in rate.

Positive Response to Intervention



Rate of Growth

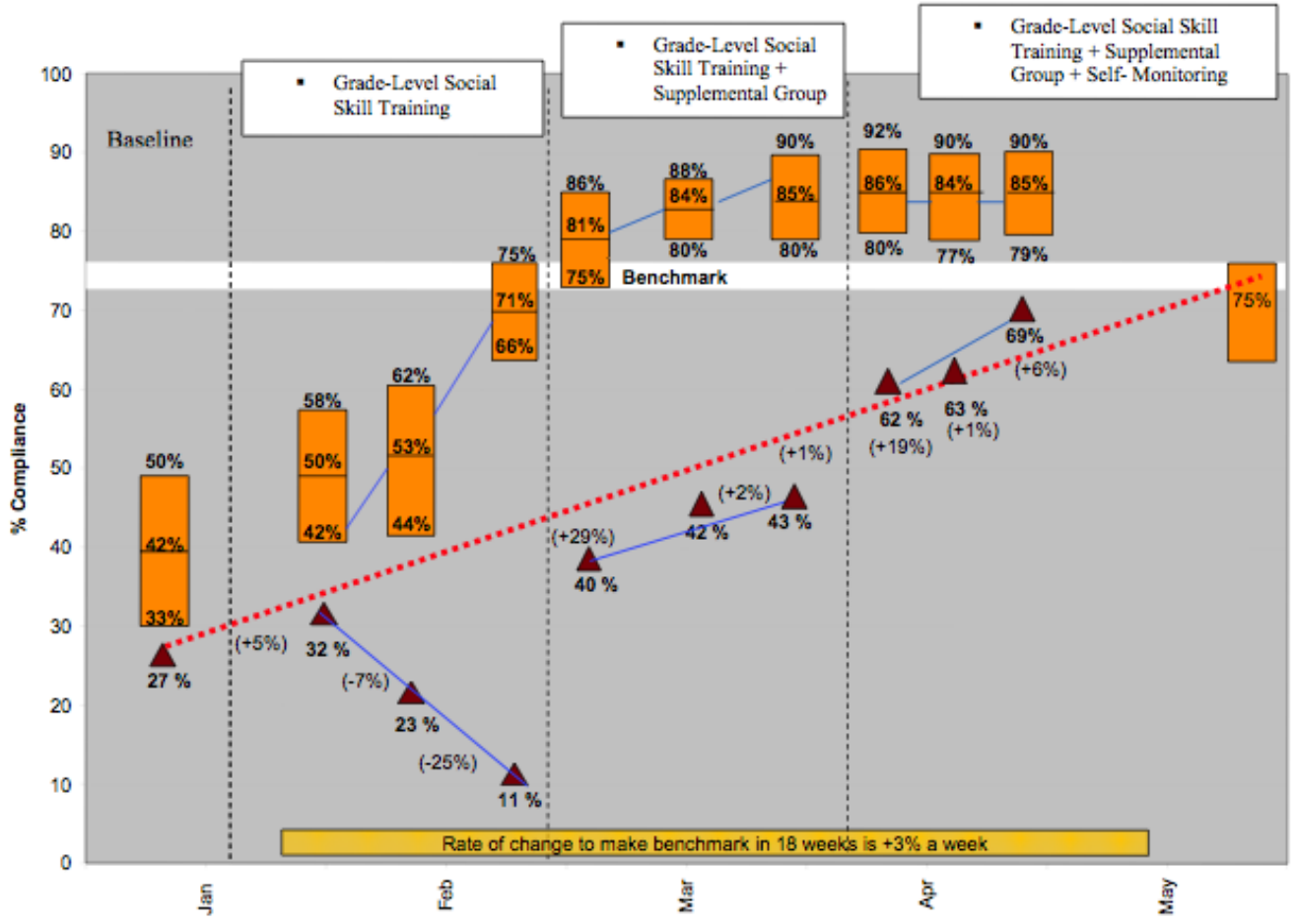



Elsie Tier 2 (Results 2)
End of Grade 2 and Grade 3
Tier 2: Supplemental -
Supplemental Revised
Trendline = 1.07 words/week
Trendline = 1.51 words/week
Aimline = 1.62 words/week
Note: Third Grade Msmt. Materials used at end of Second grade and through Third grade
Words Correct Per
School Weeks
May
June
Sept
Oct
Nov
Dec
Jan
Feb
Mar
April
May
Jun
47
52
56
58
55
56
62
65
66
75
76
82
88
92
90

Good RtI

Tier I (Universal) and Tier I (Supplemental) Interventions

Victor D.



= Peer Group

= Target Student

= Aimline

= Trendline

*Rate of change required each week for target student to reach benchmark is (+3 %)

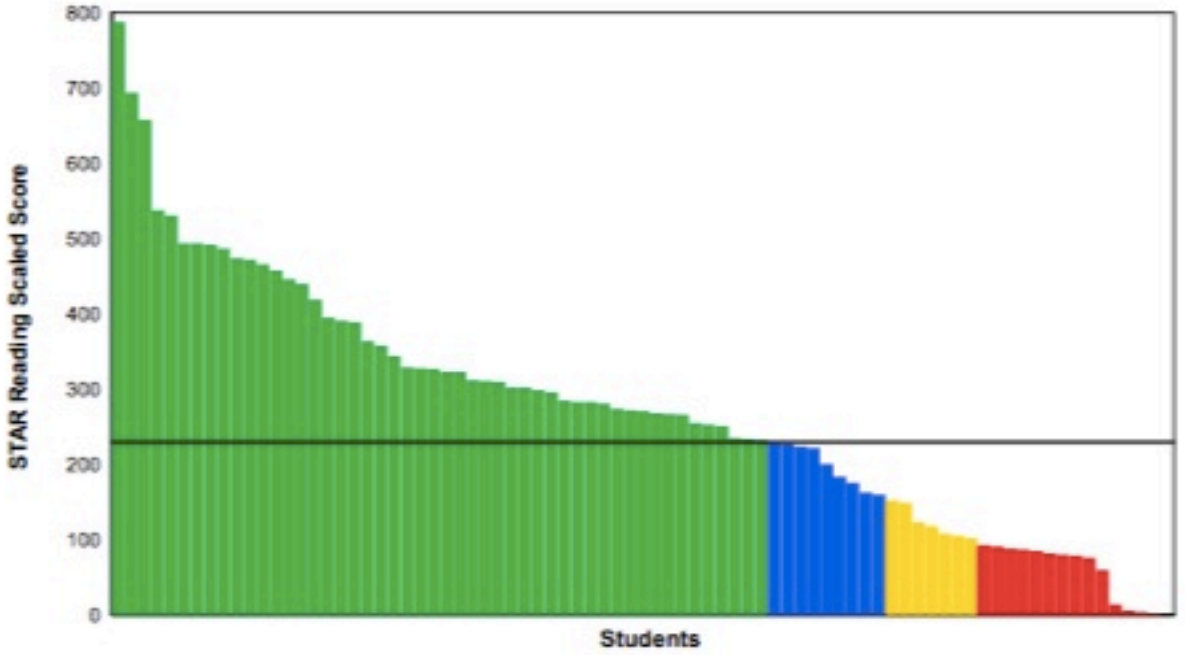
Fall Data

School: Centerville Elementary School

Reporting Period: 9/2/2015 - 9/30/2015 (Fall)

Report Options
Reporting Parameter Group: All Demographics [Default]

Grade: 2



Categories / Levels	Benchmark		Students	
	Scaled Score	Percentile Rank	Number	Percent
At/Above Benchmark				
At/Above Benchmark	At/Above 230 SS	At/Above 50 PR	50	63%
Category Total			50	63%
Below Benchmark				
On Watch	Below 230 SS	Below 50 PR	9	11%
Intervention	Below 156 SS	Below 30 PR	7	9%
Urgent Intervention	Below 97 SS	Below 15 PR	14	18%
Category Total			30	38%
Students Tested			80	

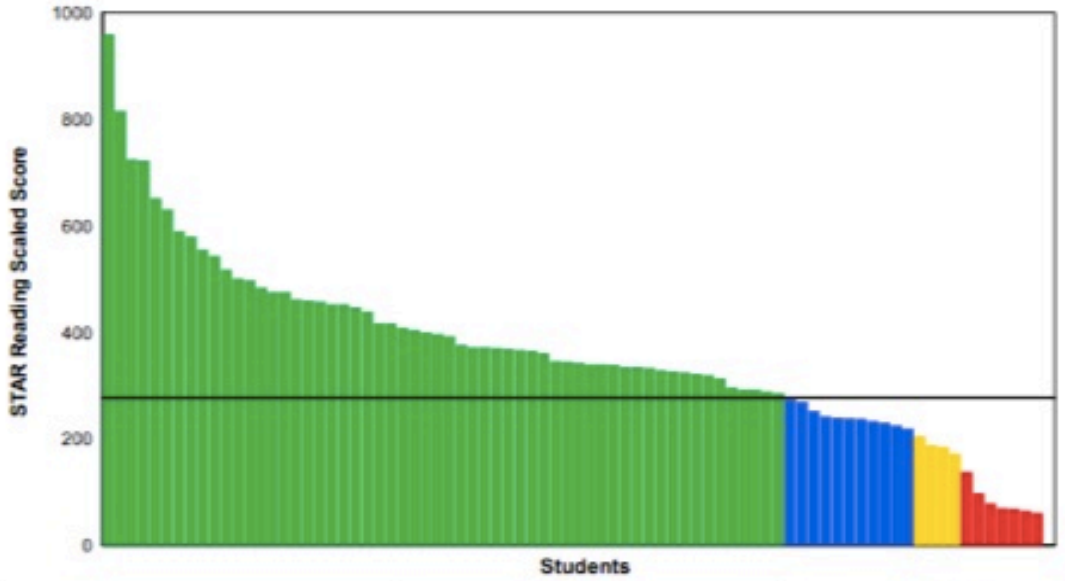
Winter Data

School: Centerville Elementary School

Reporting Period: 1/6/2016 - 1/22/2016 (Winter)

Report Options
Reporting Parameter Group: All Demographics [Default]

Grade: 2



Categories / Levels	Benchmark		Students	
	Scaled Score	Percentile Rank	Number	Percent
At/Above Benchmark				
At/Above Benchmark	At/Above 277 SS	At/Above 50 PR	58	73%
Category Total			58	73%
Below Benchmark				
On Watch	Below 277 SS	Below 50 PR	11	14%
Intervention	Below 207 SS	Below 30 PR	4	5%
Urgent Intervention	Below 142 SS	Below 15 PR	7	9%
Category Total			22	28%
Students Tested			80	

Fall/Winter Comparisons

	Fall	Winter	
At/Above Proficiency	63	73	+10
On Watch	11	14	+3
Intervention	9	5	-4
Urgent Intervention	18	9	-9

Decision Rules:
Linking RtI to Intervention Decisions

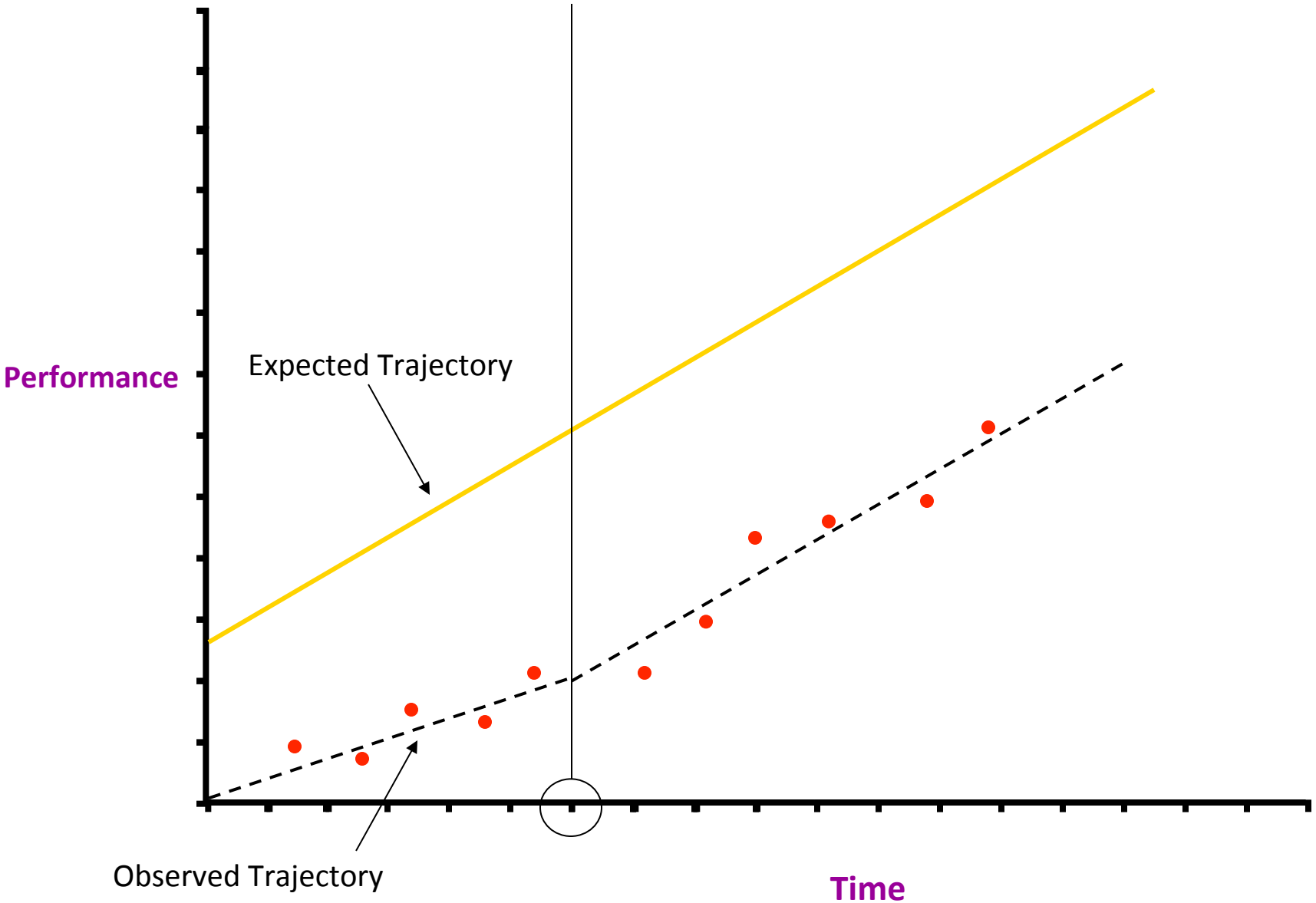
- ***Positive***
  - Continue intervention with current goal
  - Continue intervention with goal increased
  - Fade intervention to determine if student(s) have acquired functional independence.

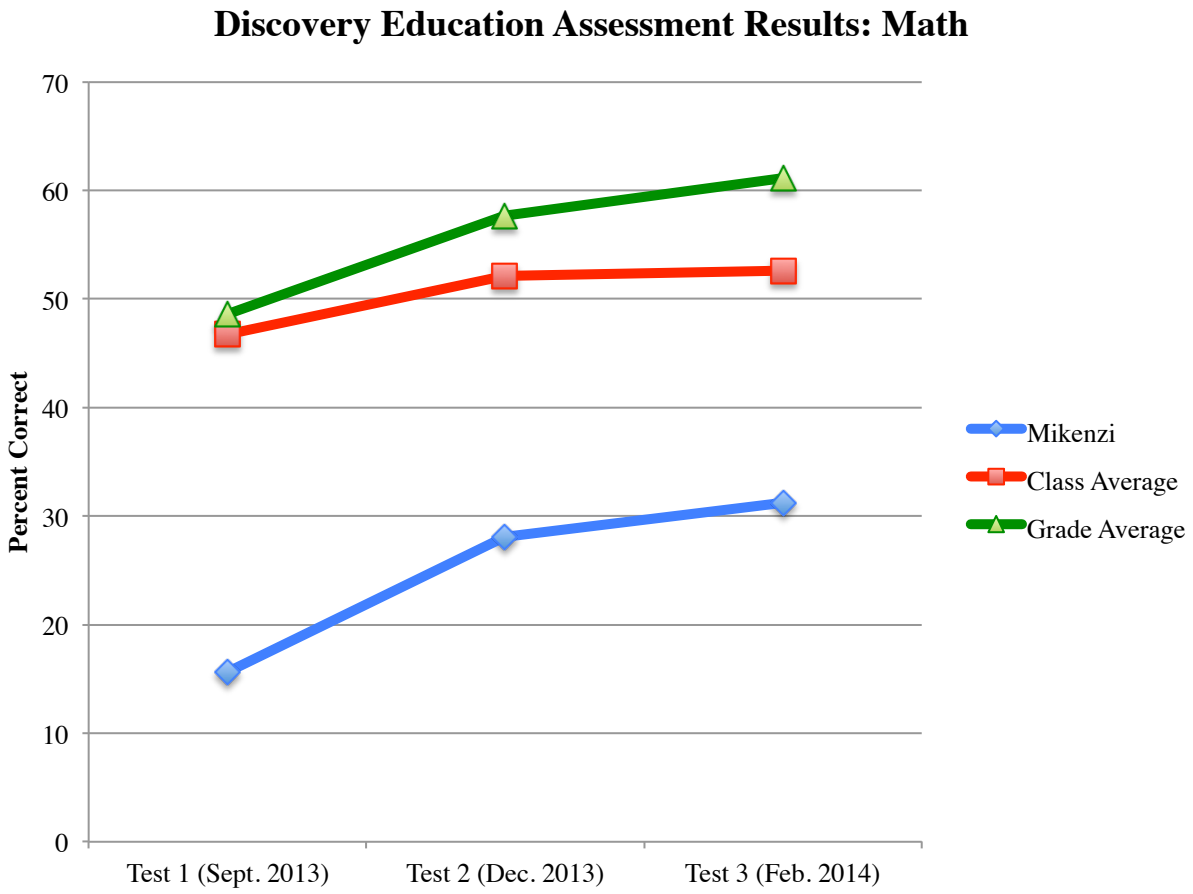
Decision Rules:

What is a "Questionable" Response to Intervention?

- ***Positive Response***
  - Gap is closing
  - Can extrapolate point at which target student(s) will "come in range" of target--even if this is long range
- ***Questionable Response***
  - Rate at which gap is widening slows considerably, but gap is still widening
  - Gap stops widening but closure does not occur
  - Level of "risk" remains the same over time
- ***Poor Response***
  - Gap continues to widen with no change in rate.

Questionable Response to Intervention

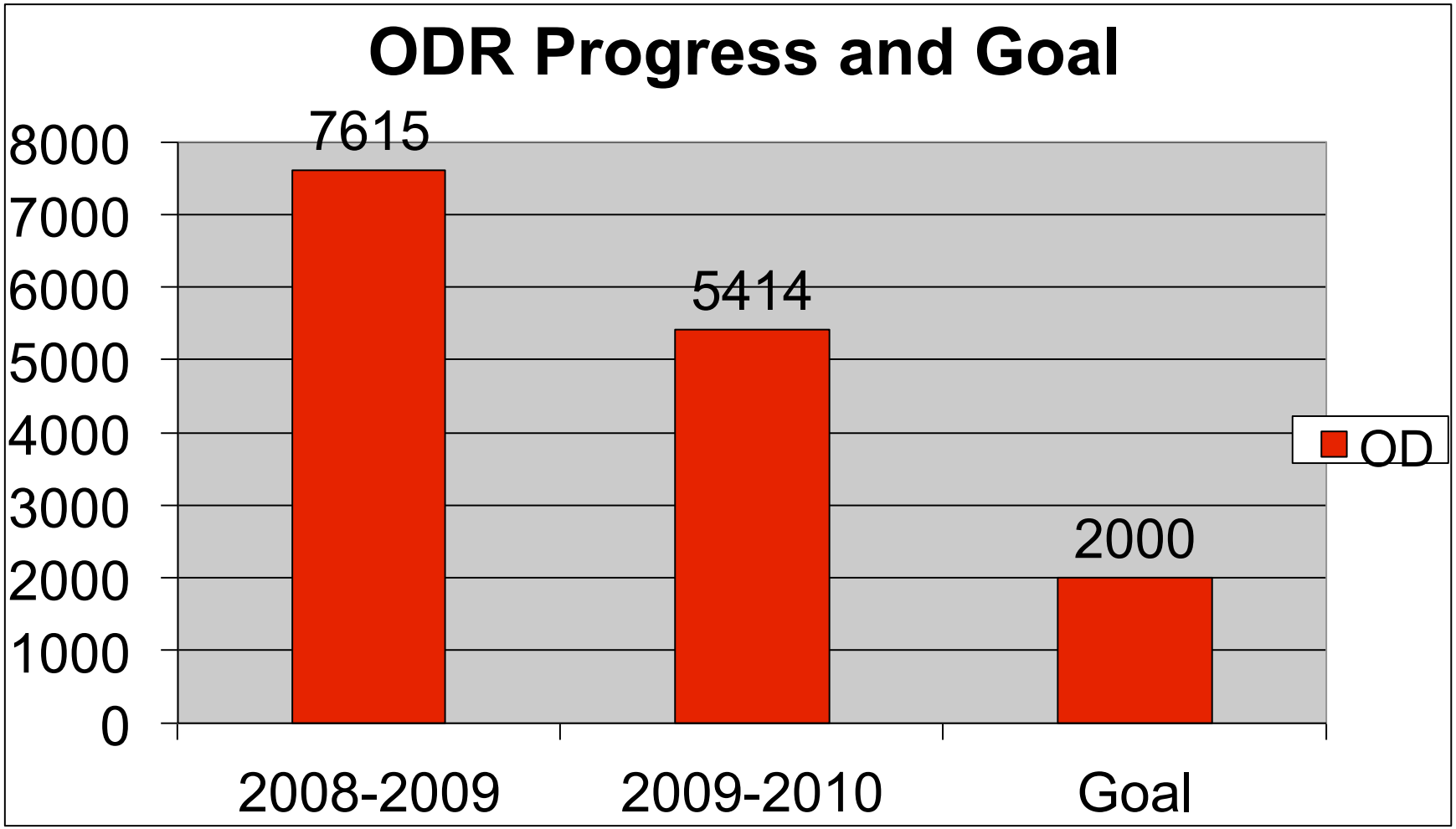



Discovery Education Assessment Results: Math
Percent Correct
70
60
50
40
30
20
10
0
Test 1 (Sept. 2013)
Test 2 (Dec. 2013)
Test 3 (Feb. 2014)
Mikenzi
Class Average
Grade Average

Reduce ODRs
Goal and Aim Line:
School Level

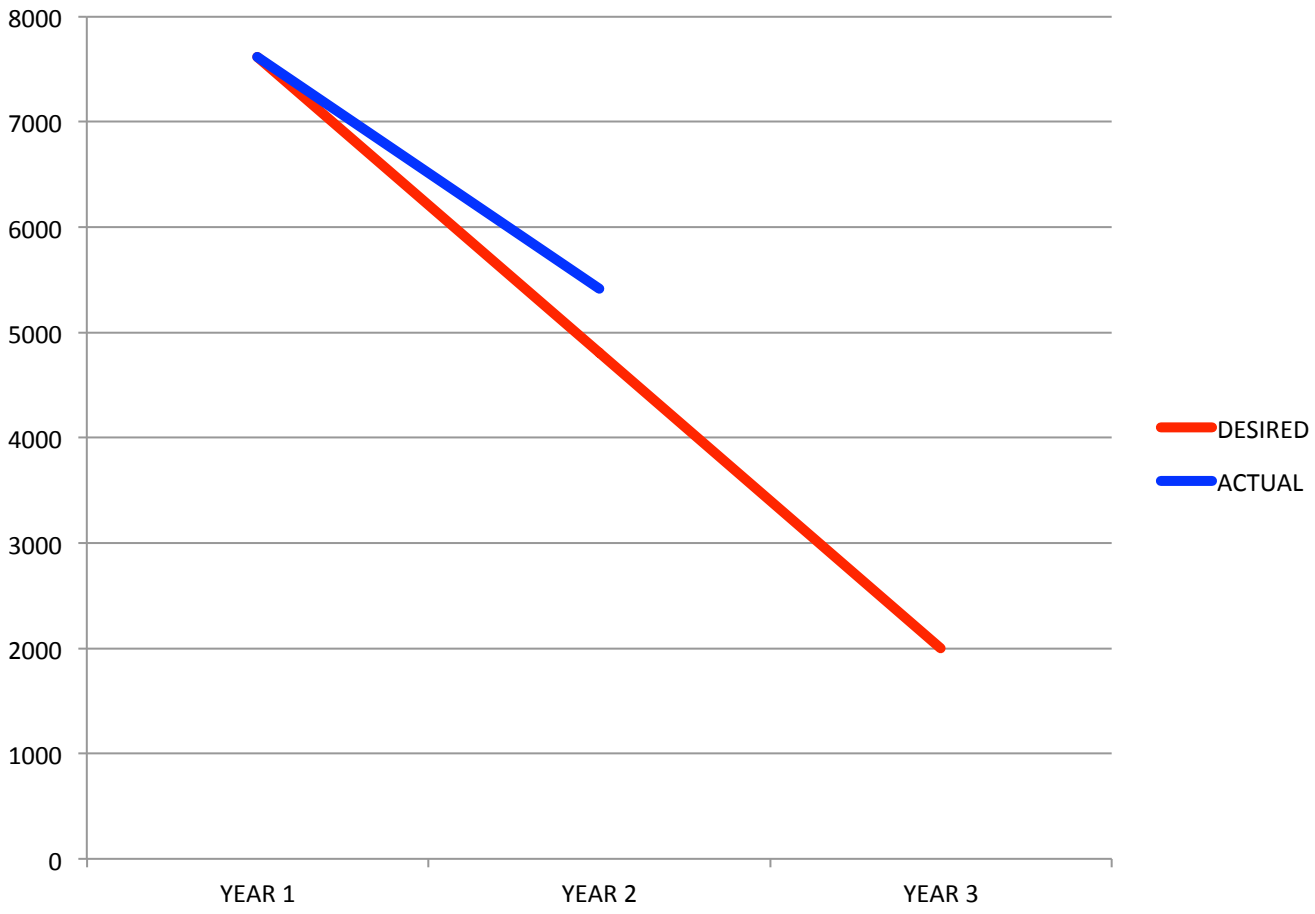
- Current Level: 7615
- Desired Level: 2000
- Timeline: 2 years
- Rate/Year: 7615-2000= 5615
  - 5615/2= 2807/year

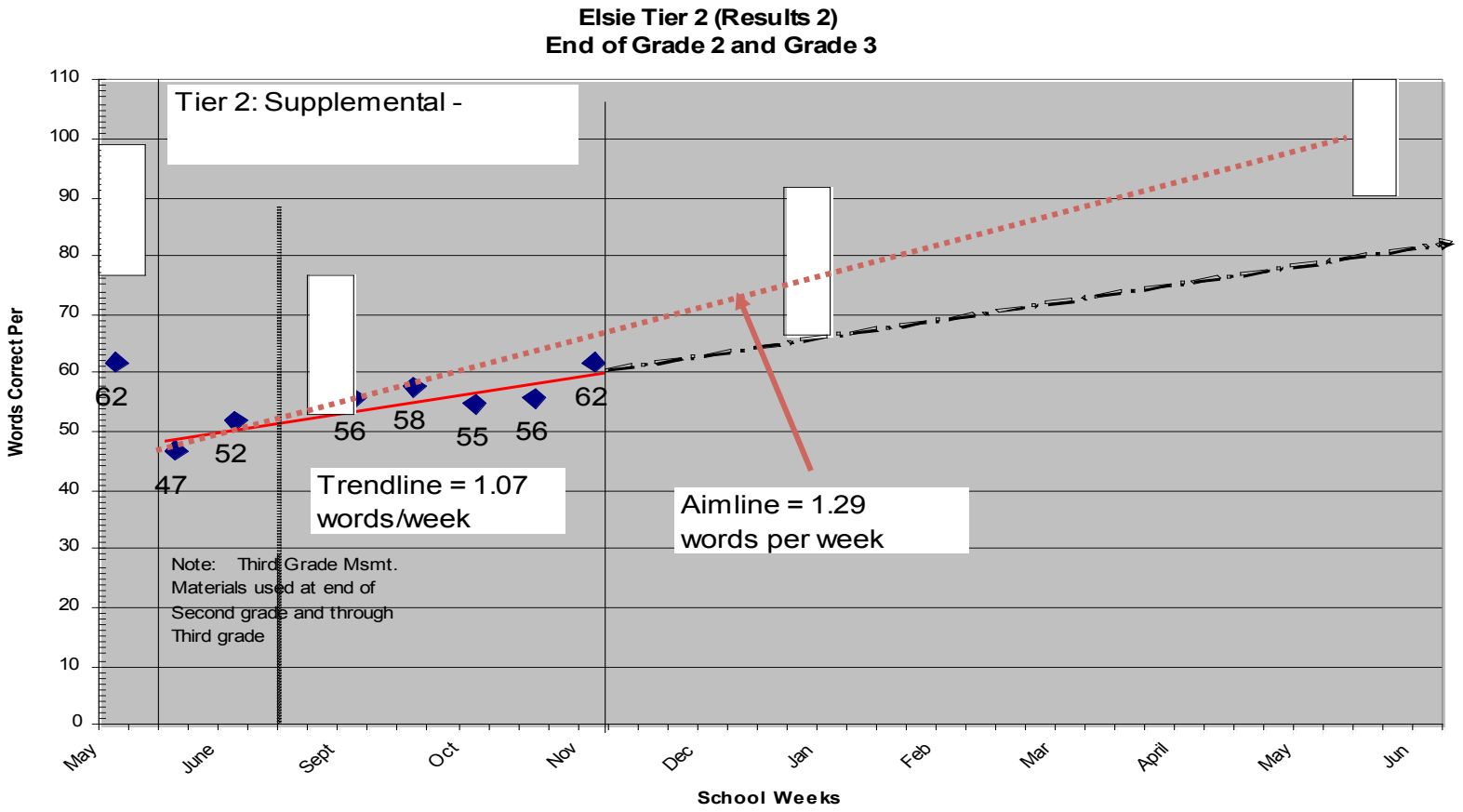
XXX High School



More than 2100 Hours (351 Days) of Instructional Time Recouped during 2009-2010 School Year

Aim Line and Trend Line Data—School Level





Questionable RtI

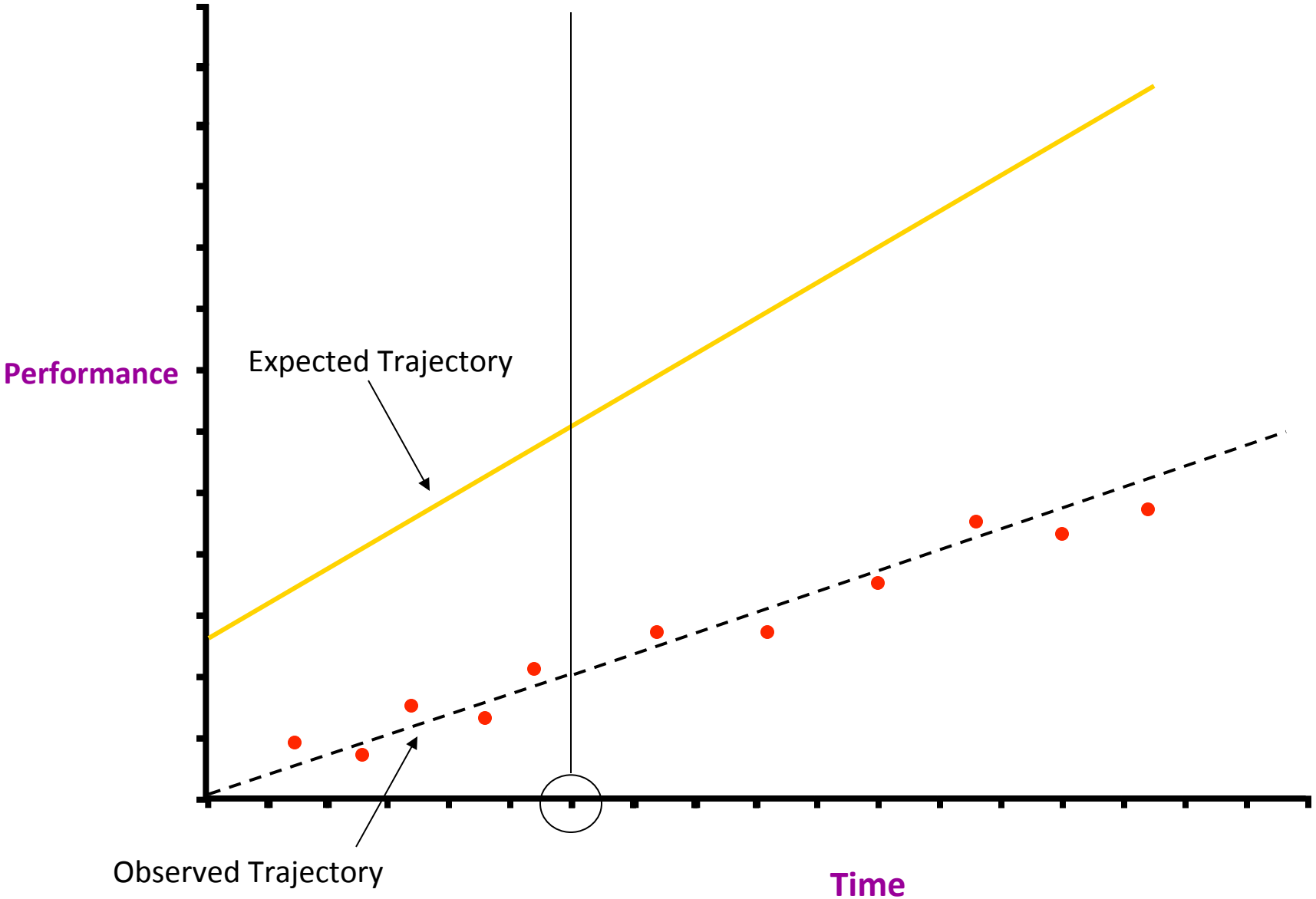
Decision Rules:
Linking RtI to Intervention Decisions

- ***Questionable***
  - Was intervention implemented as intended?
    - If no - employ strategies to increase implementation integrity
    - If yes -
      - Increase intensity of current intervention for a short period of time and assess impact. If rate improves, continue. If rate does not improve, return to problem solving.

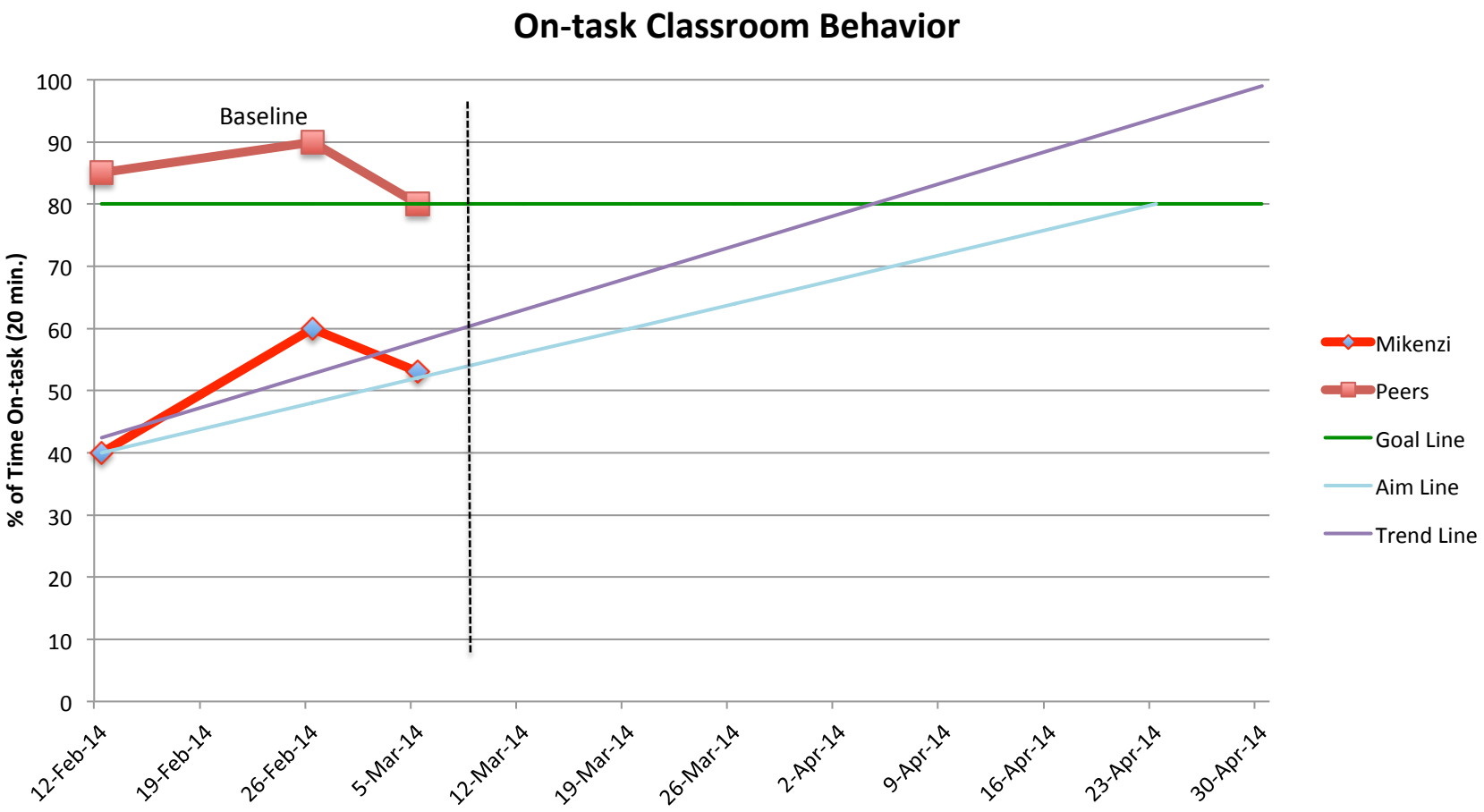
Decision Rules: What is a "Poor" Response to Intervention?

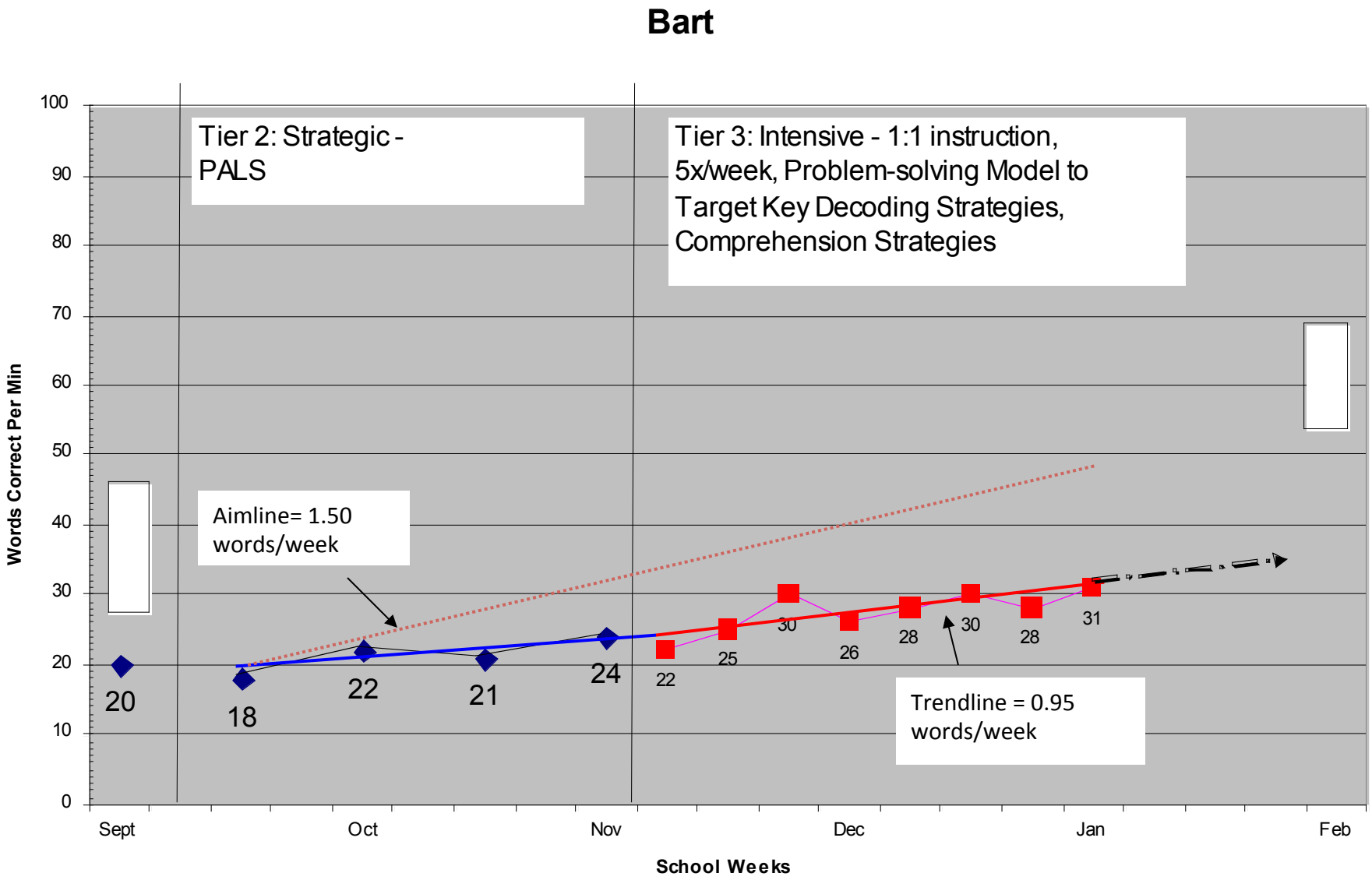
- ***Positive Response***
  - Gap is closing
  - Can extrapolate point at which target student(s) will "come in range" of target--even if this is long range
- ***Questionable Response***
  - Rate at which gap is widening slows considerably, but gap is still widening
  - Gap stops widening but closure does not occur
- ***Poor Response***
  - Gap continues to widen with no change in rate.
  - Level of "risk" worsens over time

Poor Response to Intervention



Rate of Growth

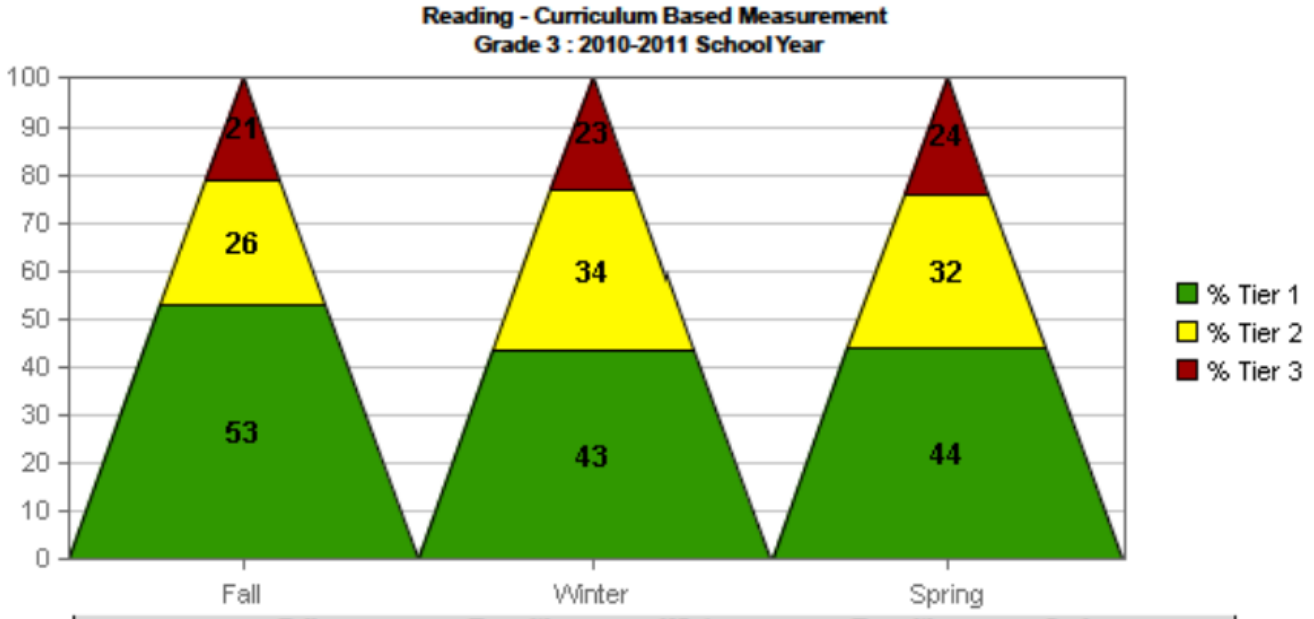



Bart
Tier 2: Strategic - PALS
Tier 3: Intensive - 1:1 instruction, 5x/week, Problem-solving Model to Target Key Decoding Strategies, Comprehension Strategies
Aimline= 1.50 words/week
Trendline = 0.95 words/week
Words Correct Per Min
School Weeks
Sept
Oct
Nov
Dec
Jan
Feb
0
10
20
30
40
50
60
70
80
90
100
20
18
22
21
24
22
25
30
26
28
30
28
31

District Level

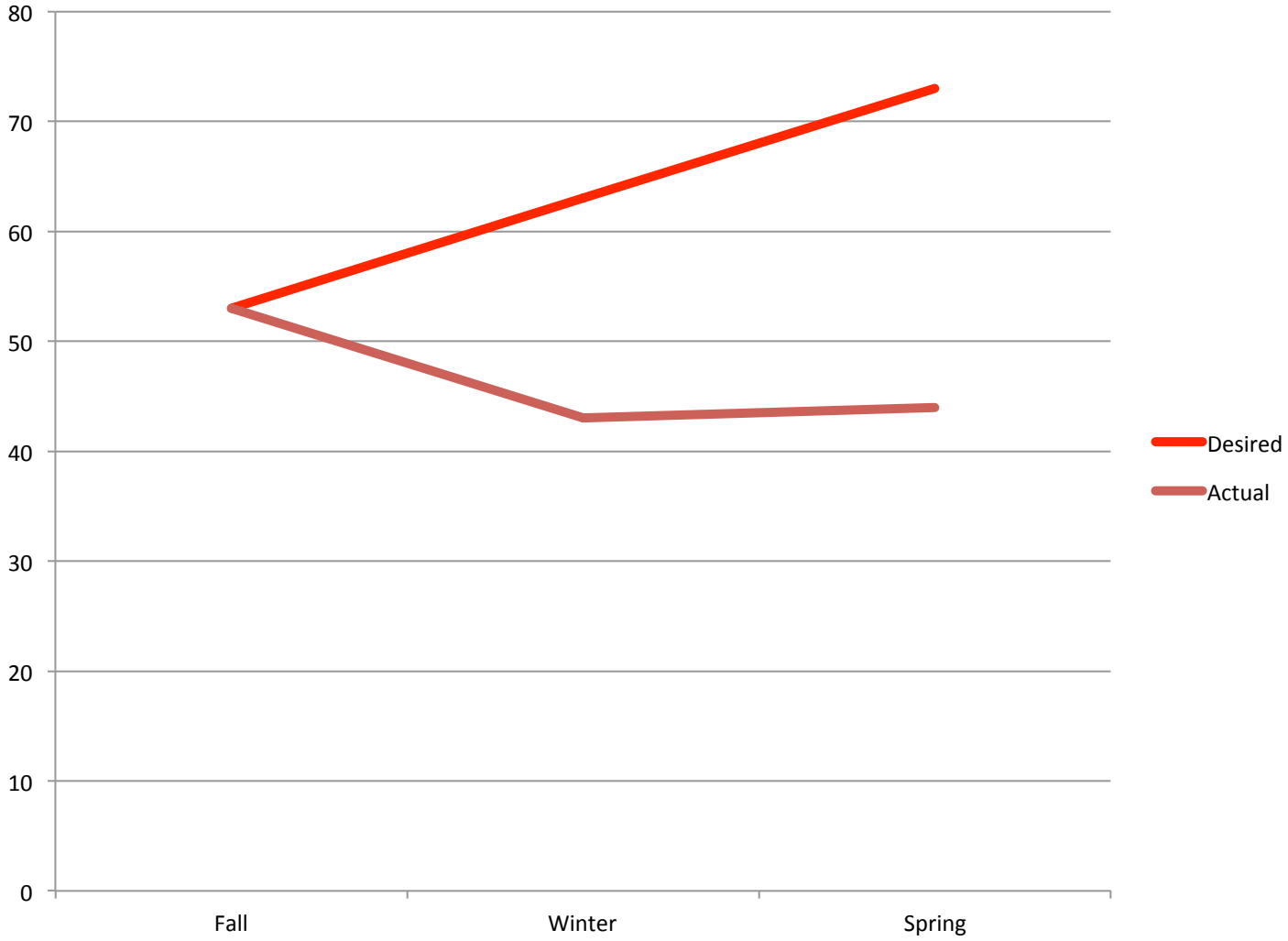
- **Desired Goal**: 73% Proficiency
- **Current Level**: 53%
- **2 more Assessment Windows:** 73-53= 20%
- **Rate of Improvement**: 20% / 2 = 10% improvement per remaining 2 windows

District Example

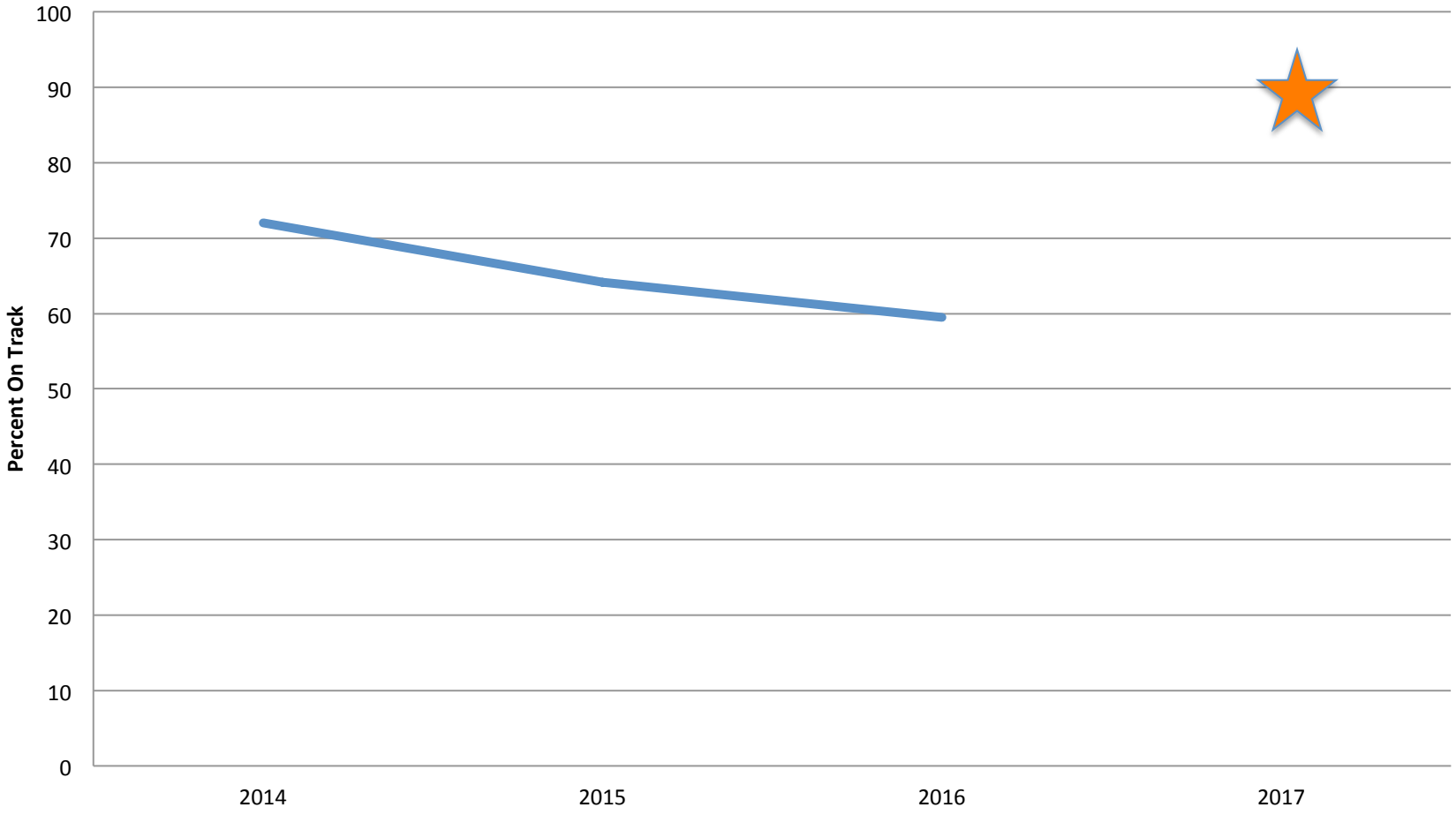


	Fall	Transition	Winter	Transition	Spring
Tier 3	81 (21%)	70 11 0	91 (23%)	76 11 0	92 (24%)
Tier 2	101 (26%)	19 73 8	133 (34%)	15 94 24	124 (32%)
Tier 1	206 (53%)	0 39 160	168 (43%)	0 18 146	170 (44%)
New Student		14		2	
Unscored		8		8	
Total Students	388		392		386

Note: Unscored also includes any students who may have been transferred.


80
70
60
50
40
30
20
10
0
Fall
Winter
Spring
Desired
Actual

Freshmen on Track



Decision Rules: Linking RtI to Instruction & Intervention Decisions

- ***Poor***
  - Was intervention implemented as intended?
    - If no - employ strategies in increase implementation integrity
    - If yes -
      - Is intervention aligned with the verified hypothesis? (Intervention Design)
      - Are there other hypotheses to consider? (Problem Analysis)
      - Was the problem identified correctly? (Problem Identification)

Happy High School
Evaluating Intervention Plan

- Was the H_0 Confirmed?

The difference between expected and current levels of performance in Common Core Math I exist because insufficient instruction is not maintaining high levels of student engagement

- Was intervention/instruction effective for students?
- Do you have clear direction for intervention revision?

HAPPY HS

Step 4: Evaluate Response to Instruction & Intervention *(Did it work?)*

Review/Evaluation of Progress **Date:** ____Dec _____

Data: Improvement on formative assessments, teacher-made assessment, and homework completion and accuracy rates has improved from 71% to 76% (Quarter 1 to Quarter 2). Overall improvement from the baseline of 61% shows a 15% increase in passing rates.

Student engagement improved from 73% to 77%, respectively. Starting with the baseline of 67% an overall improvement in student engagement = 9%.) Change in instructional delivery focused is having a positive impact on student performance and growth.

Is the Response to Instruction/Intervention: **X** 1. Positive ___2. Questionable __3. Poor

1. If Response to Instruction/Intervention is *POSITIVE*:

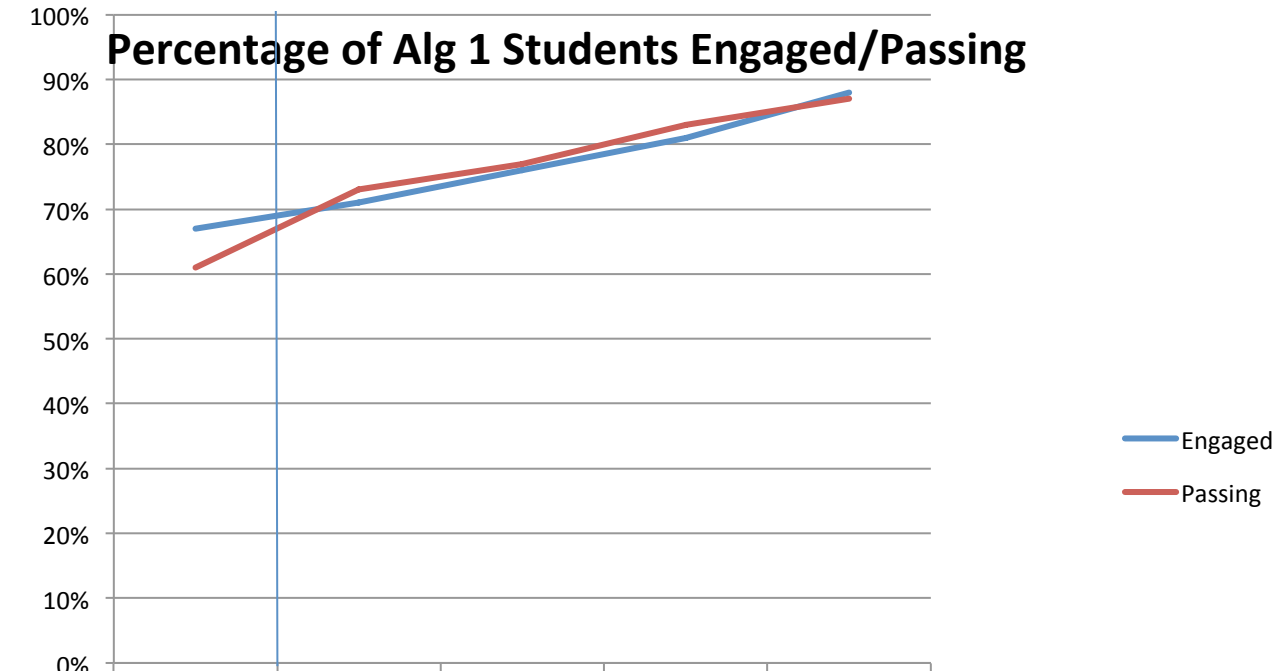
A) Continue current instructional supports B) Adjust goal upward C) Fade supports

Comments/Actions: Students that are not achieving at least 75% will be grouped at least 1x per week during class for preview, review, reteach opportunities. (All students will be given a 1x/week extension or extra scoop opportunity.)

Cooperative learning activities will be strategically utilized to provide opportunities to practice with peers. As needed other "reinforcement time" will be created to ensure students are given sufficient time to build skills and conceptual understanding.

Happy High School

Step 4: Evaluate Response to Instruction



	Baseline	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Engaged	67%	71%	76%	81%	88%
Passing	61%	73%	77%	83%	87%

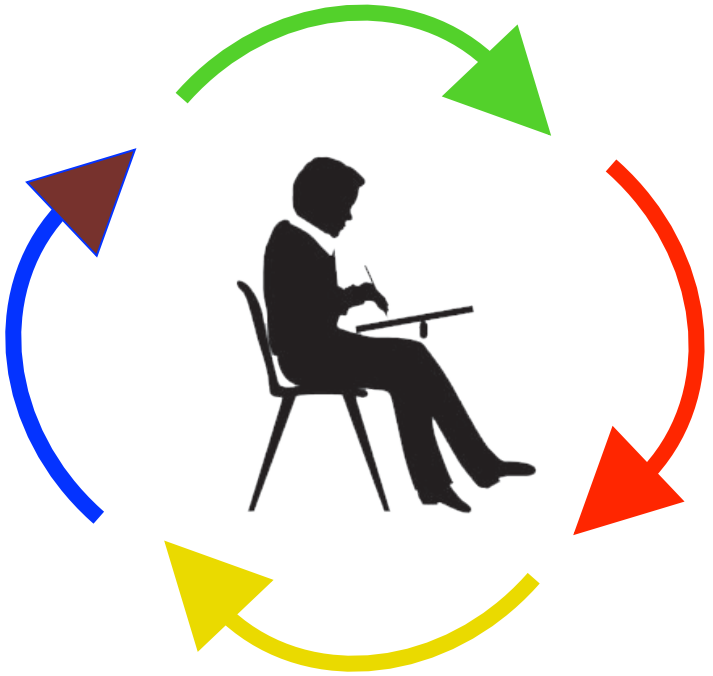
Thinking about Step 4

- Based on the rough idea of Step 3, assuming your hypothesis is validated, talk about the data you will collect to evaluate whether the plan is working
  - What data will you collect?
  - How will you know you have positive, questionable, or poor RtI?

Problem Solving Process

Define the Problem. Identify the goal

•What do we want students to know and be able to do ?



Problem Analysis

Why is the goal *not* being attained?

•Validating Problem
•Identify Variables that contribute to Problem
•Hypotheses/Data Collection

Implement Plan

What are we going to do about it?

•Implement as Intended
•Progress Monitor
•Modify as Necessary

Evaluate

Did it work?

•Response to Instruction & Intervention


KEEP
CALM
AND
PROBLEM
SOLVE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