The Problem Solving Process: An Overview

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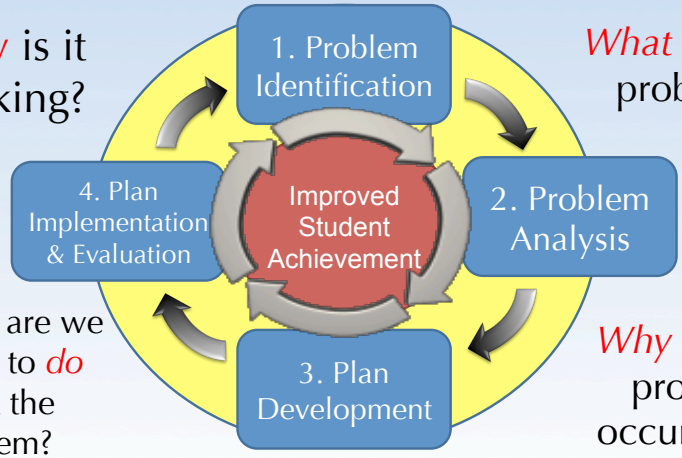
COSA Summer Assessment Institute
August 6, 2014

Oregon Response to Intervention

The Problem Solving Process

How is it working?

What are we going to *do* about the problem?



What is the problem?

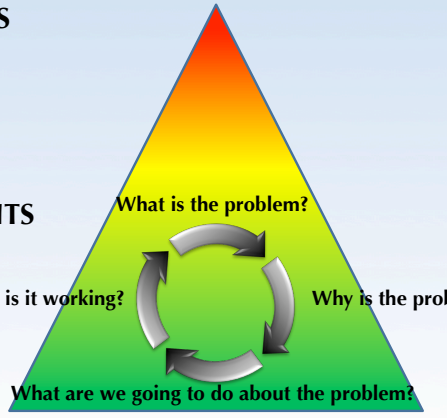
Why is the problem occurring?

Problem Solving Across Levels of Support

Tier 3:
Individual Problem Solving Meetings
FEW STUDENTS

Tier 2/3:
EBIS Meetings
SOME STUDENTS

Tier 1:
100% Meetings
ALL STUDENTS



The Water…

Focus on "the water"-

- _____
- _____
- _____

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ICEL

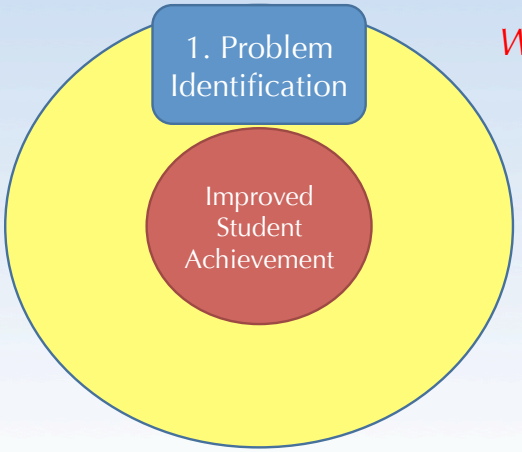
I – Instruction
C – Curriculum
E – Environment
L – Learner

Why proactive problem solving?

*"Problem solving assessment typically takes a more direct approach to the measurement of **need** than has been the case…"* Reschley, Tilly, & Grimes (1999)

"Intervention studies that address the bottom 10-25% of the student population may reduce the number of at-risk students to rates that approximate 2-6%" Fletcher, Lyon, Fuchs, & Barnes (2007)

Step 1: Problem Identification



What is the problem?

Step 1: Problem Identification

Problem Definitions should be:

1. Objective – observable and measurable (based on data/evidence)
2. Clear – passes "the stranger test"
3. Complete

Step 1: Problem Identification

A problem is defined as a discrepancy between:

Expected performance

Current performance

} Problem Definition

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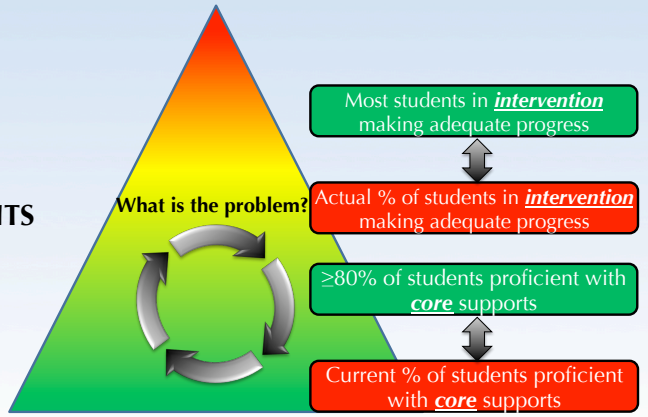
1. Problem Identification

Tier 2/3:
EBIS Meetings
SOME STUDENTS

Tier 1:
100% Meetings
ALL STUDENTS



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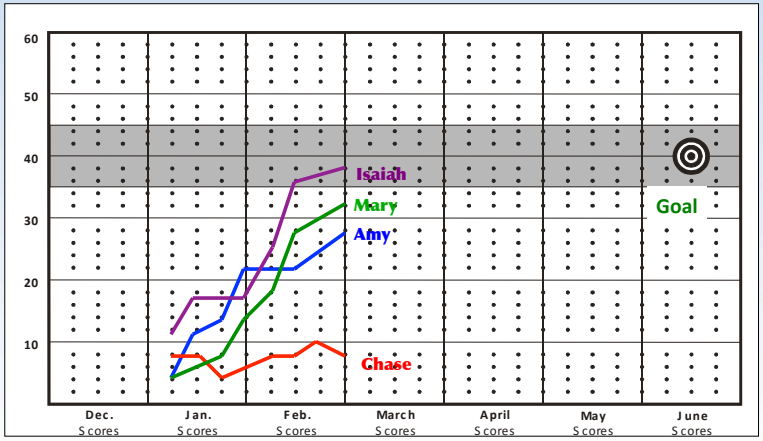
Intervention Groups



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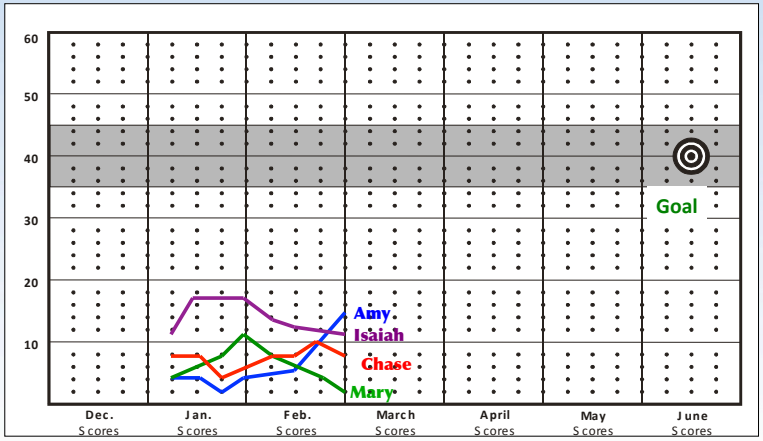
Intervention Groups



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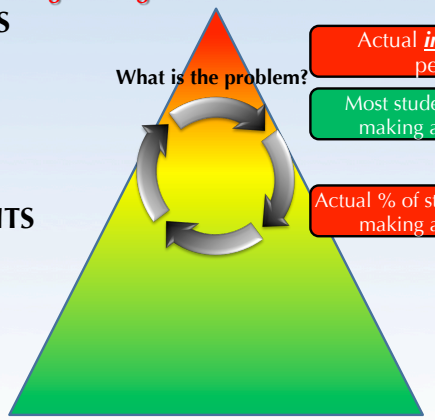
1. Problem Identification

Tier 3:
Individual Problem Solving Meetings
FEW STUDENTS

Tier 2/3:
EBIS Meetings
SOME STUDENTS

Tier 1:
100% Meetings
ALL STUDENTS



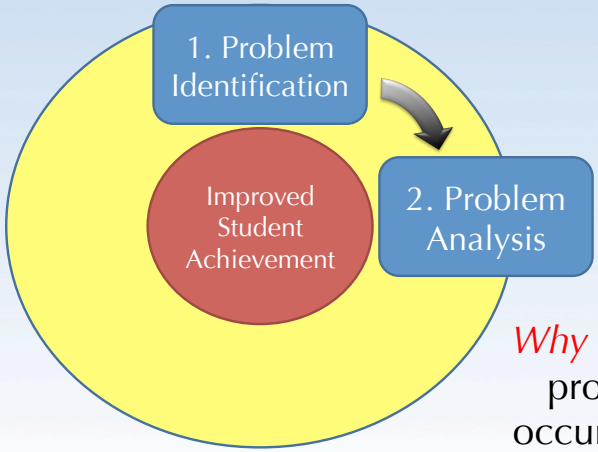
Expected Student Performance

Actual ***individual*** student performance

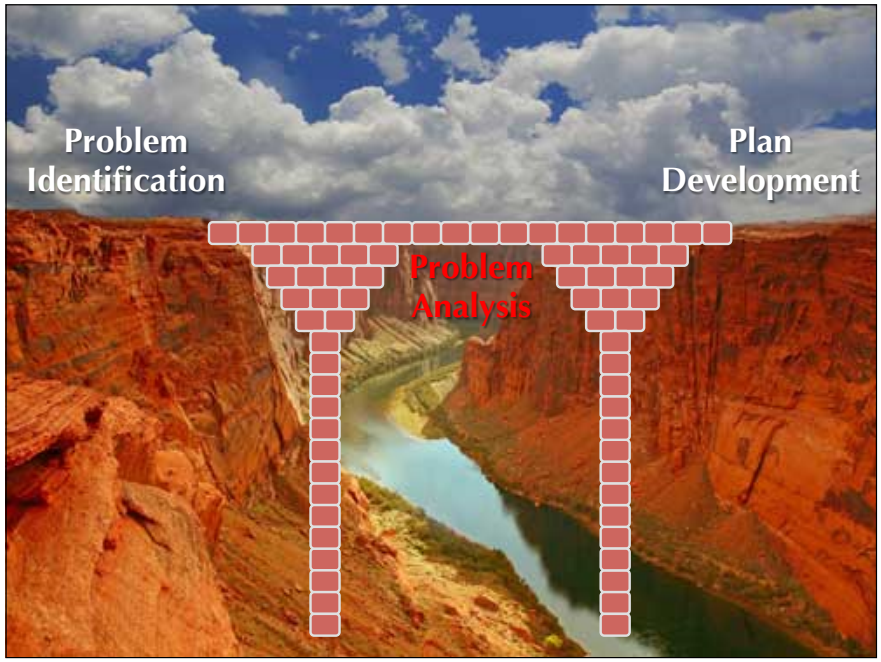
Most students in ***intervention*** making adequate progress

Actual % of students in ***intervention*** making adequate progress

The Problem Solving Process



Why is the problem occurring?



Student Learning

Instruction: ***How*** you teach	**Curriculum:** ***What*** you teach
Environment: ***Where*** you teach	**Learner:** ***Who*** you teach

We can control the ***how***, ***what***, and ***where***.

We don't have much control over the ***who***.

What impacts student achievement?

Effective *teaching* variables	Effect size	*Other* variables	Effect size
Formative Evaluation	+0.90	Socioeconomic Status	+0.57
Comprehensive interventions for students with LD	+0.77	Parental Involvement	+0.51
Teacher Clarity	+0.75	Computer based instruction*	+0.37
Reciprocal Teaching	+0.74	School Finances	+0.23
Feedback	+0.73	Family Structure	+0.17
Teacher-Student Relationships	+0.72	Whole Language	+0.06
Direct Instruction	+0.59	Retention	-0.16

John Hattie, *Visible Learning*, 2009

Hypothesis Development

Instruction: ?	**Curriculum:** ?
Environment: ?	**Learner:** ?

2. Problem Analysis

Tier 3:
Individual Problem Solving Meetings
FEW STUDENTS

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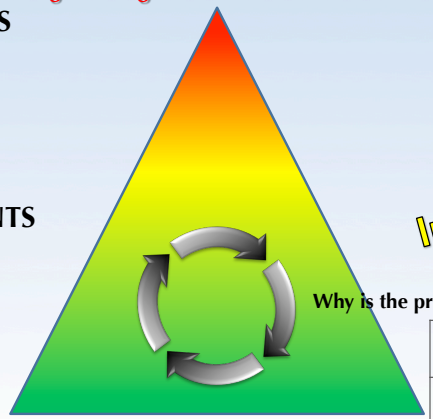
100% Meetings
ALL STUDENTS



Individual students

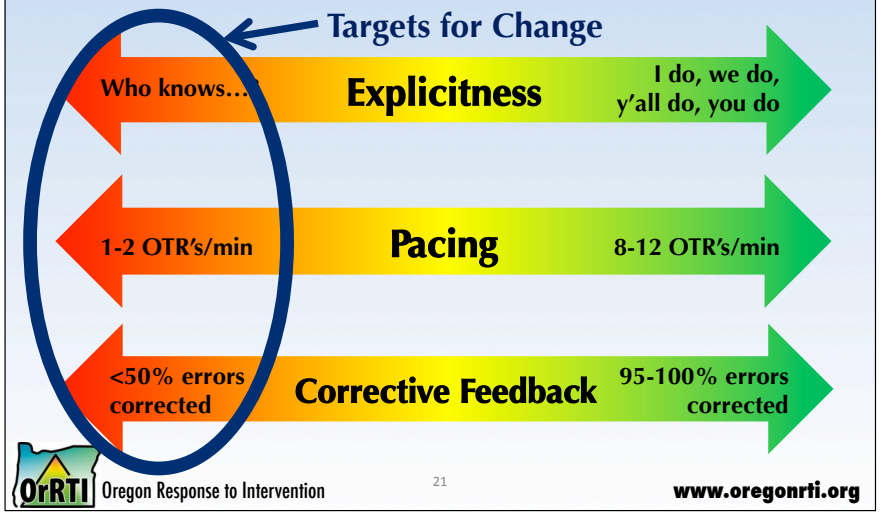
Intervention Groups

Core

Why is the problem occurring?

Instruction	Curriculum
Environment	Learner

Instruction: Examples

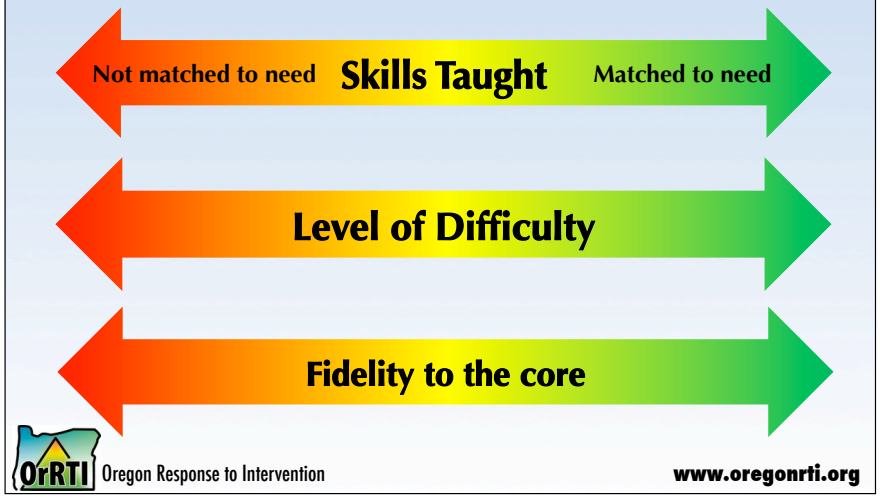


When it comes to teaching…

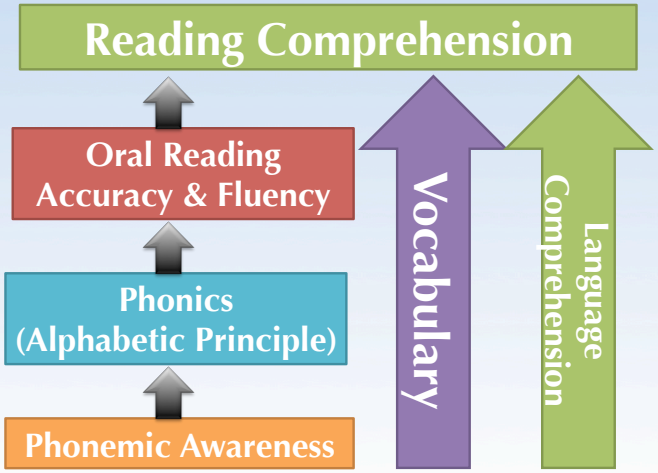
*"It is clear that the program is less important than **how it is delivered**, with the most impressive gains associated with more intensity and an **explicit, systematic** delivery"*

Fletcher & colleagues, 2007

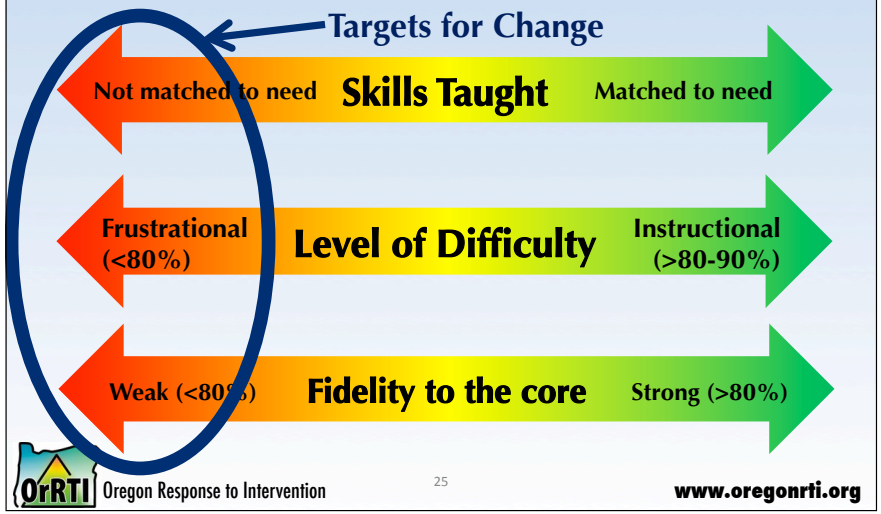
Curriculum: Examples



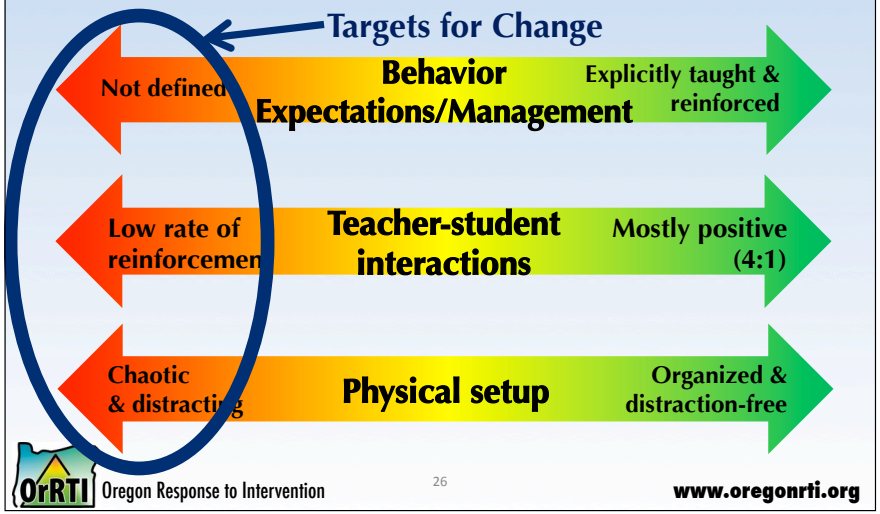
Reading Skills Build on Each Other



Curriculum: Examples



Environment: Examples



Academic Learning Time: Typical School

Hours	
1170	School Year (6.5 hours x 180 days)
- 65	*Absenteeism (1 day/month x 10 months)*
= 1105	Attendance Time (Time in School)
- 270	*Non-instructional time (1.5 hrs./day for recess, lunch, etc)*
= 835	Allocated Time (Time scheduled for teaching)
- 209	*(25% of allocated time for admin, transition, discipline - 15 min/hour)*
= 626	Instructional time (time actually teaching)
- 157	*Time off task (Engaged 75% of time)*
= 469	Engaged Time (On task)
- 94	*Unsuccessful Engaged Time (Success Rate 80%)*
= 375	**Academic Learning Time**

Efficiency Rating = 32%

Education Resources Inc., 2005

Academic Learning Time: Effective School

Hours	
1170	School Year (6.5 hours x 180 days)
- 65	*Absenteeism (1 day/month x 10 months)*
= 1105	Attendance Time (Time in School)
- 270	*Non-instructional time (1.5 hrs./day for recess, lunch, etc)*
= 835	Allocated Time (Time scheduled for teaching)
- 125	*(15% of allocated time for admin, transition, discipline - 9 min/hour)*
= 710	Instructional time (actually teaching-710 vs. 626)
- 71	*Time off task (Engaged 90% of time)*
= 639	Engaged Time (639 vs. 469 On task)
- 64	*Unsuccessful Engaged Time (Success Rate 90%)*
= 575	**Academic Learning Time**

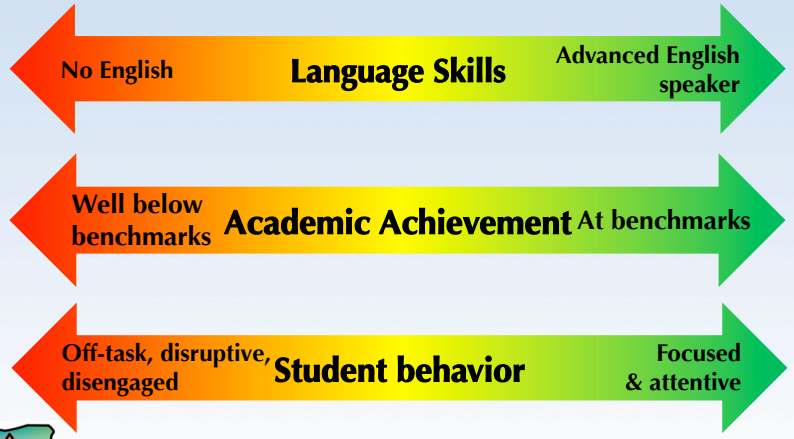
Efficiency Rating = 49%

Education Resources Inc., 2005

The Difference: Typical vs. Effective Schools

Variable	Typical School	Effective School	Time gained	How the time is gained
Allocated Non-instructional Time	25% (15 min/hr)	15% (9 min/hr)	+84 more hours	Teaching expectations, teaching transitions, managing appropriate and inappropriate behavior efficiently
Engagement Rate	75%	90%	+86 more hours	Better management of groups, pacing
Success Rate	80%	90%	+30 more hours	Appropriate placement, effective teaching
Academic Learning time	375 hours	575 hours	= ***200 more hours (53% more)*** ***OR*** ***95 more school days (4-5 months!)***	

Learner: Examples



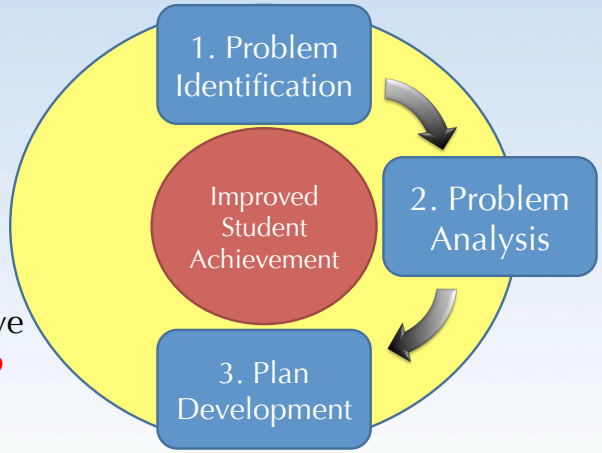
Hypothesis Development

- What can ***we*** do that will reduce the problem (decrease the gap between what is expected and what is occurring)?

Expected performance

Current performance

Step 3: Plan Development



What are we going to *do* about the problem?

3. Plan Development

Tier 3:
Individual Problem Solving Meetings
FEW STUDENTS

Tier 2/3:
EBIS Meetings
SOME STUDENTS

Tier 1:
100% Meetings
ALL STUDENTS

Individual students

Intervention Groups

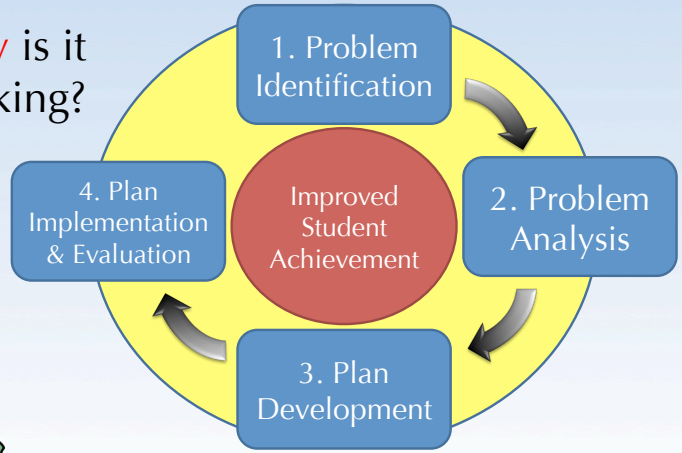
Core

Instruction

Learner

Step 4: Plan Implementation & Evaluation

How is it working?



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4. Plan Implementation & Evaluation

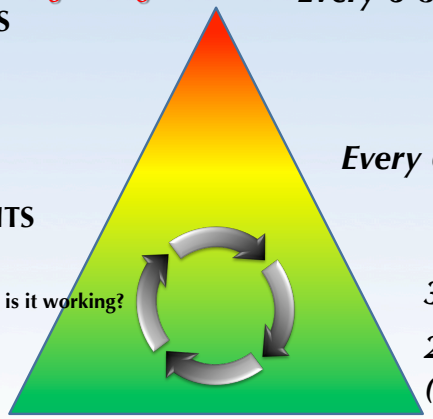
Tier 3:
Individual Problem Solving Meetings
FEW STUDENTS

Every 6-8 weeks

Tier 2/3:
EBIS Meetings
SOME STUDENTS

Every 6 weeks

Tier 1:
100% Meetings
ALL STUDENTS



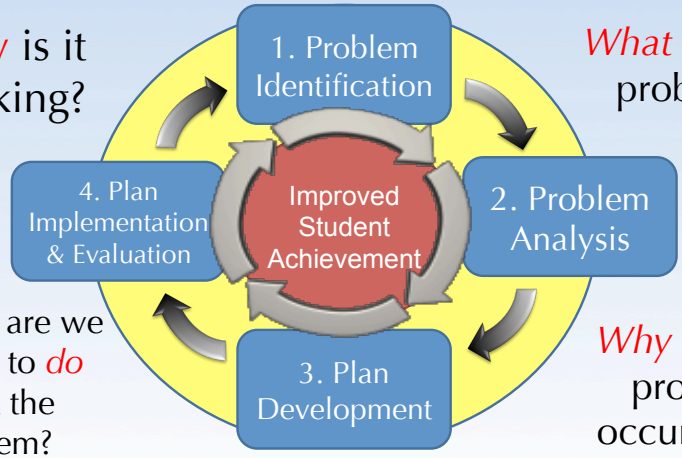
3 times/year

2 times month (PLC's)

The Problem Solving Process

How is it working?

What is the problem?



What are we going to *do* about the problem?

Why is the problem occurring?

Big Ideas

- Follow the problem solving steps/questions:
  1. *What is the problem?*
  2. *Why is it occurring?*
  3. *What are we going to do about it?*
  4. *How is our plan working?*
- The steps/questions are the same at each tier
- Focus on what ***we can control*** (The ICE)
- Use data/evidence for all steps at all tiers

Acknowledgements

- Florida Problem Solving & Response to Intervention Project
- Heartland Area Education Agency 11

Contact Info

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