

Problem Solving

Target: An increase in test scores by a specified amount.

Result Statement: All students will be able to solve multi-step problems using mathematical language, clearly explain their thinking in writing, and successfully connect mathematical ideas.

<p>Changes in student learning behavior: What will students do to reach the identified results? What new things will they do to learn? What things will they do more of?</p>	<p>Changing Instruction: What will teachers do to ensure students learn and develop the learning behaviors identified in the first column? (Be sure that the instructional practices you identify will address every student learning behavior.)</p>	<p>Monitoring Progress with Timelines and Adjustments: How will we measure progress towards the changes in learning behavior and teaching that we want? How often will this occur? How will we keep the principal, parents, and SIT informed and involved?</p>	<p>Collaboration and Support: When will we use the information we get from monitoring to improve learning and teaching? When will we discuss the progress we are making?</p>	<p>School and District Support and Resources: What support and resources will the school and district provide in order to achieve the results of this action plan? (List the support and resources below and then use the attached template to finalize this column.)</p>	<p>Evaluating Results/Reporting to Families and Community: How will the school know if their students reach the intended results? In light of what we have learned, how will we revise the plan for next year? Reporting to families and the Community: How will we share results of this plan with the entire school community?</p>
<p>Students will:</p> <ol style="list-style-type: none"> Practice problem solving in all disciplines Consistently solve multi-step problems using various strategies, such as make a table, make it simpler, work backwards, etc. Justify their solutions in math journals and discussions (small group), using content-appropriate language Routinely share their solutions and build on the knowledge of their peers Use rubrics to evaluate and revise their solutions Produce responses 	<p>Teachers will:</p> <ol style="list-style-type: none"> Teach and model various problem solving strategies in all disciplines Teach and model how to develop and share clear justifications and solutions to problems Differentiate their instruction to meet the needs of all children by modifying problems Provide opportunities for students to share exemplary work and explain why it is exemplary Have clear expectations and assessments for student success through the use of problem solving rubrics and criteria Routinely incorporate written response activities that enable students to 	<p>Teachers will:</p> <ol style="list-style-type: none"> Collaboratively look at student work Use exit slips to gauge student progress Score student work using a common problem or task at each grade level on a monthly basis <p>Teacher leaders will:</p> <ol style="list-style-type: none"> Lead and facilitate the scoring of student work at grade level meetings Coordinate the collection and analysis of data from monitoring activities Communicate monitoring results to SIT and principal <p>Administrators will:</p> <ol style="list-style-type: none"> Collaboratively develop a calendar for monitoring Participate in and ensure monitoring activities occur 	<p>When we will collaborate:</p> <ol style="list-style-type: none"> Faculty meetings Scheduled common planning time Grade-level meetings Site-based professional development days After school professional development hours 	<p>The school will supply the following support and resources:</p> <ol style="list-style-type: none"> Continue to schedule common planning time during grade level meetings Reference books for common tasks Job-embedded professional development Monitoring schedule and leadership to support the problem solving action plan <p>The central office will supply the following support and resources:</p> <ol style="list-style-type: none"> Examples of common tasks An additional instructional coach Funds to implement the 	<p>Evaluating results:</p> <ol style="list-style-type: none"> Student work over time will demonstrate that students successfully revise their work, use content-appropriate language, use a variety of strategies to solve problems, explain their thinking both orally and in writing (portfolios for common tasks) Improved scores on the state and local assessments Comparison of results from self-study protocols for problem solving will show improvement in student performance <p>Reporting to the community:</p> <ol style="list-style-type: none"> School Report Night and newsletters

Pilot SIP/PD Plan EXAMPLE

July 23, 2007

<p>that are complete, clear, concise, and organized and include connections across concepts and ideas</p>	<p>demonstrate their understanding of concepts and ideas g. Develop problem of the week to address problem solving</p>	<p>c. Communicate results of monitoring activities to families and the community</p>		<p>d. Problem Solving Academy Professional development session on written response prompts and follow up learning walks</p>	<p>b. School committee presentations c. Parent Teacher conferences</p>
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SCHOOL IMPROVEMENT PROFESSIONAL DEVELOPMENT ACTION PLAN TEMPLATE

Action Plan: Problem Solving

Activity/Series: Writing Prompts

Changes in Instruction: What will teachers do to ensure students learn and develop the learning behaviors identified in the first column? (Be sure that the instructional practices you identify will address every student learning behavior and connect to the Rhode Island Beginning Teacher Standards.) Include all formal Professional Development activities/series that support the implementation of this action plan.

a. Routinely incorporate written response activities to enable students to demonstrate their understanding of concepts and ideas

<p>Professional Development (PD) in support of Changing Instruction: For each formal Professional Development activity/series that support the implementation of this action plan, detail the PD that will support making those changes. Include: 1. Describe the PD; 2. Who will facilitate the PD; 3. When the PD is scheduled to take place; and 4. How will the professional development implementation be monitored?</p>	<p>Sustained and Job Embedded: For each formal Professional Development activity/series that support the implementation of this action plan, describe how teachers will be provided opportunities for learning a skill(s) needed to insure the change in student learning behavior, time to implement the skill in the work setting, and time to reflect upon the implementation.</p>	<p>Resources, School and District: What school-wide and district supports and resources will be necessary to implement the PD? Indicate the source of funds for each program of PD. (e. g., Article 31, Title I, etc.).</p>	<p>Evaluating Results: What evidence will the school use to draw conclusions about the impact and effectiveness of each major PD program? Who will be responsible for organizing the evaluation? When will the evaluation activities take place and when will they be completed?</p>
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Pilot SIP/PD Plan EXAMPLE

July 23, 2007

<p>1 Provide two half day professional development sessions regarding developing written response prompts that allow students to demonstrate their understanding of concepts and ideas and providing the teaching skills needed to allow for student success.</p> <p>2 The PD will be facilitated by the district Literacy Curriculum Coordinator</p> <p>3 The PD will be conducted to the entire school on the November 8, 2007 professional development. In February grade level teams will meet for ½ day to reflect upon implementation</p> <p>4 The Literacy Curriculum Coordinator will monitor the implementation through evaluating exit surveys of teachers. After the first evaluations are completed the Literacy Curriculum Coordinator will meet with the Professional Development Sub Committee to review the evaluations and set the topics for the one half day team meetings. The information will be shared with the participants after approved by the sub committee. One month after the first session the Literacy Curriculum Coordinator will lead a focused walk about focusing on written responses of students. Finally, teachers will complete a reflection after the second session based on the intended changes in instruction. This information will be evaluated by the Sub-committee and shared with participants.</p>	<p>The educators involved will be given the opportunity to learn the skills necessary to teach students how to create effective responses as well as the skills to create written response prompts that allow students to demonstrate understanding of concepts and ideas. They will be given 2 ½ months to implement the skill and then allowed to reflect upon implementation during small group grade level meetings.</p>	<p>Article 31 funds- \$850</p>	<p>1 Student responses to prompts will be examined to discern change Teacher surveys will be administered prior to the PD, after the first session and upon culmination to assess impact Student writing NECAP scores will be examined to assess impact</p> <p>Taken together the data will allow us to determine if the PD impacted daily student work, teacher practice and state test results</p> <p>2 The Professional Development sub-committee of the School Improvement Team will be responsible for collecting, aggregating and analyzing the data. They will share the results with the SIT as well as the entire educational community. The sub-committee consists of two teachers, a parent and the principal.</p> <p>3 A sample of student responses will be examined once after the November training. Grade level teams will examine responses during the February training. Samples will also be collected in April</p> <p>The survey will be administered in September, after the November 8th training and in April</p> <p>NECAP will be examined when the data is available</p>
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SCHOOL IMPROVEMENT PROFESSIONAL DEVELOPMENT ACTION PLAN TEMPLATE

Action Plan: Problem Solving

Activity/Series: Problem Solving Academy

Changes in Instruction: What will teachers do to ensure students learn and develop the learning behaviors identified in the first column? (Be sure that the instructional practices you identify will address every student learning behavior and connect to the Rhode Island Beginning Teacher Standards.) Include all formal Professional Development activities/series that support the implementation of this action plan.
List all the Changes in Instruction from the Action Plan that apply:

- a. Teach and model various problem solving strategies in all disciplines
- b. Teach and model how to develop and share clear justifications and solutions to problems

<ul style="list-style-type: none"> c. Differentiate their instruction to meet the needs of all children by modifying problems d. Provide opportunities for students to share exemplary work and explain why it is exemplary e. Have clear expectations and assessments for student success through the use of problem solving rubrics and criteria 			
<p>Professional Development (PD) in support of Changing Instruction: For each formal Professional Development activity/series that support the implementation of this action plan, detail the PD that will support making those changes. Include:</p> <ol style="list-style-type: none"> 1. Describe the PD; 2. Who will facilitate the PD; 3. When the PD is scheduled to take place; and 4. How will the professional development implementation be monitored? 	<p>Sustained and Job Embedded: For each formal Professional Development activity/series that support the implementation of this action plan, describe how teachers will be provided opportunities for learning a skill(s) needed to insure the change in student learning behavior, time to implement the skill in the work setting, and time to reflect upon the implementation.</p>	<p>Resources, School and District: What school-wide and district supports and resources will be necessary to implement the PD? Indicate the source of funds for each program of PD. (e. g., Article 31, Title I, etc.).</p>	<p>Evaluating Results: What evidence will the school use to draw conclusions about the impact and effectiveness of each major PD program?</p> <p>Who will be responsible for organizing the evaluation?</p> <p>When will the evaluation activities take place and when will they be completed?</p>
<ol style="list-style-type: none"> 1. A Problem Solving Academy will be developed including a study group, lab classroom, and grade level meetings focused on learning teaching skills in relation to problem solving in all disciplines and reflection on implementation. During lab classroom visits, peer coaching sessions and grade level meetings teachers will take some time to analyze student work to establish exemplary work and to discuss differentiation techniques and opportunities. 2. The facilitation will be varied. The study group will be facilitated by the district math coordinator. The lab classroom will be facilitated by the XYZ Collaborative. All employees of XYZ Collaborative are MA level educators with at least 10 years practical experience. They will work with the lab classroom teachers and facilitate the classroom visitation through the use of various protocols. Finally, the grade level meetings will be facilitated by the building principal and the grade level lead teacher. 3. The initial “kick off” of the Problem Solving Academy will be during our September 5 in-service day. The study group will meet monthly after school. The lab classroom teachers will receive 5 days of in-service at XYZ Collaborative. The lab classroom visits will occur throughout the year to insure all teachers get a chance to observe the lab classrooms and debrief with the teacher. Grade level teams will meet for ½ day once a 	<p>Each of the components of the Problem Solving Academy are job embedded. The kick off will provide educators with skills to begin this important work. The study group will take time to review skills through literature review. They will reflect upon the literature and how the information will impact practice. Lab classrooms are designed as a job embedded endeavor. Lab teachers will receive extensive training including skill building, implementation and reflection. The visiting teachers will be provided with ample time to reflect upon the observation and make connections to their own practice. The grade level meetings are ongoing and embedded. Each meeting will build upon the next allowing teachers to examine student work from the implementation of new strategies to determine effectiveness and reflect upon the practice.</p>	<p>Article 31 (18) Professional Development funds- \$8000</p> <p>School Based Funds- \$1000</p> <p>Title IIA Funds- \$1000</p>	<ol style="list-style-type: none"> 1 The school will conduct another Following a Student protocol in September of 2008. We will look specifically for evidence regarding the increased use of and confidence in problem solving skills among the student population. Staff Chart G.2 of the SALT Survey will be examined to compare how teachers ranked Problem Solving as a professional development need Investigations Unit Assessments will be examined to compare student results District yearly math assessment will be examined to compare student results Teachers will be surveyed to assess their use of and comfort with problem solving techniques across the discipline areas 2 The Professional Development Sub Committee of the SIT will be responsible for gathering all the data, analyzing the data and reporting back to the SIT as well as the educational community. The Sub Committee consists of two teachers, a parent and the principal. 3 Following a Student protocol: September of 2008 <p>Analyzing SALT Survey protocol:</p>

Pilot SIP/PD Plan EXAMPLE

July 23, 2007

<p>month.</p> <p>4. Teacher reflection sheet will be administered after each study group. Responses will be compiled to highlight lessons learned from the discussions and reviewed with the PD sub committee and disseminated to participants. Also, the lab classroom will be attended by the principal and the observations reported to the sub committee after each session. Finally, the grade level teams will summarize student work samples and highlight lessons learned. This will be given to all sub committee members and shared with participants.</p>			<p>When 2007/2008 data is released</p> <p>Investigations Unit Assessments; Collected at the end of each unit at each grade level and will be aggregated after each assessment is administered</p> <p>District Math Assessment is administered in April and assessed at by the end of June</p> <p>Survey of teachers will be conducted in May and analyzed by the end of June</p>
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