Liberty Elementary School

Improvement Goal:
All students will use problem-solving skills to think critically and apply knowledge and reason to solve problems.

Expectation(s) for Student Learning:
• All students will think and reason effectively.
• All students will solve problems accurately and efficiently.
• All students will communicate clearly using mathematical language and representations by demonstrating skills and knowledge.
• All students will use technology research tools to locate, evaluate, and collect information in order to process data, report results, and make decisions for solving problems.

Target Participants:
All students in Liberty Elementary School
Students who are achieving below proficiency level
Students who are achieving above proficiency level

Interventions:
Assessment/Differentiated Instruction for Conceptual Understanding
Reasoning and Critical Thinking To Solve Problems
All students will increase mathematical skills by using technology tools across the curriculum
Students will participate in Response to Instruction (RTI) Tiers based on achievement and behavior levels.

Evaluation:
ISTEP
Standards Based Report Card
Conferring
Checklists/Rubrics
School City of Hobart's Balanced Assessment System Framework:
Classroom Assessments- running records, formal scales, rubrics, checklists, quizzes, unit tests, final exams
Common Formative Assessments- CFAs- Department/ Grade Level CFAs, Odyssey Compass Learning, quality core, rubrics, checklists
Benchmarks Assessments-, quarterly standards based assessments, Quantile(SMI)PIVOT
External Summative Assessments-DIAL, ISTEP, ISTAR, , LAS Links, PIVOT

Timeframe for Implementation:
2012 – 2017

Target Area of Improvement: Problem Solving

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ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
Intervention: Assessment/Differentiated Instruction for Conceptual Understanding 1. All students will increase problems solving skills through monitoring progress on Indiana Academic Standards to determine instructional needs A. School City of Hobart's Balanced Assessment System Framework B. Classroom Assessments (1-5 will be administered to determine instructional areas for students 2. All students will increase mathematical skills though differentiated instruction across the mathematics curriculum that emphasizes conceptual understanding. A. Students will know basic math facts (These help in acquisition and speed of performing math not in understanding math). (1-5) B. Students will understand units of measurements and apply appropriate techniques and formulas. C. Students will understand and solve algebraic equations and understand patterns and relationships between numbers. D. Students will identify, describe and compare geometric shapes E. Students will construct and interpret graphs throughout the curriculum as part of data analysis, (1-5) F. Students will demonstrate the ability to compare and contrast different values 3. All students have the opportunity to practice and demonstrate proficiency. 4. Students receive guided group instruction 5. Students receive small group instruction for	2012-2017	Central Office Principals Teachers 1-5	School City of Hobart's Balanced Assessment System Framework Classroom Assessments Formal Scales Journals Checklists/Rubrics Conferring Item analysis PIVOT FastMath	School City of Hobart's Balanced Assessment System Framework - Classroom assessments -Manipulatives -Calculator -Software -Flash Cards -Classroom Texts -Time for data analysis, manipulatives, creating and interpreting graphs, tangrams and puzzles -Saxon Math Series -ENVISIONS -Grade 1: Math Journals, -Grade 2: Daily Word Problems (Evan Moor pub.); Read It, Draw It, Solve It, (Dale Seymour pub.) Math-Worksheets.com Grade 3: Daily Math Review (DMR) www.superteacher.com -Grade 4: www.multiplication.com Daily word problems www.superteacher.com -Grade 5: Daily Math Warm Ups; Drops in the Bucket Review sheets: Teacher developed units on geometry and Measurement;

proficiency				Math Manipulative Cart; workbooks -Professional Development calendar -TRC(District Web site) -Indiana Academic Standards
Intervention: Reasoning and Critical Thinking To Solve Problems 1. All Students will use reasoning and critical thinking to solve problems through applied mathematics across the curriculum that provides relevant, concrete and everyday problems. A. Students will build academic vocabulary across the curriculum B. Students will understand and choose the correct mathematical operation to solve problems across the curriculum (Example: Similarities and Difference/Graphic Organizers – Marzano) C. Students will use mental math/estimation to understand when an exact answer or an estimate is sufficient. D. Students will develop a set of problem solving strategies across the curriculum. Example: 1. READ-What is the question? 2. REREAD – What is the necessary information? 3. THINK Putting together = addition Taking apart=subtraction Do I need all the information? Is it a two-step problem?	2012-2017	Teachers 1-5	-Classroom Assessments -Rubrics -ISTEP -PIVOT	*Building Academic Vocabulary* by Robert Marzano -Manipulatives -Textbook -small groups -FastMath -PIVOT -Fraction Nation _ENVISIONS

4. SOLVE Write the equation. 5. CHECK – Recalculate 6. LABEL & COMPARE E. Students will construct and interpret graphs with data analysis. (2-5) F. Students will construct and interpret graphs along with data analysis (1-5)				

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Intervention: Technology Tools All students will increase mathematical skills by using technology tools across the curriculum. A. Students will construct and interpret graphs using spreadsheets along with data analysis A. Students will use calculators to calculate, analyze and interpret mathematical equations. (2-5) B. Students will utilize web –based math programs (2-5) C. Students will use computer simulations to solve problems		Teachers 1-5 RTI Team	-Classroom Assessments -Formal Scales -Teacher Observation -Student Presentations	-Responders -SmartBoards - Calculators -Computers & Software -Internet -Tablets -iPads -Document Cameras -Google Apps -Vbrick -Khan Academy -ENVISIONS -Google Apps -Compass Learning Odyssey -Chrome Books -Challenger Learning Center -Professional Development Calendar -FastMath -Fraction Nation -Hour of Code

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ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
Intervention: Response to Intervention (RTI) 1.Students will participate in RTI Tiers based on achievement and behavior levels A. A district-wide RTI policy is implemented with guidelines B. Tier II will be implemented through the intervention of "Increased Academic Learning Time" within the classroom including the following: -Achievement groups-Strategy groups -Summer School -Double Blocked Subjects -Counseling C. Tier II and Tier III will be implemented through intense intervention with additional support services. -Small Group Instruction -Individual Instruction -Small Group Counseling	2012-2017	-Lead: Central Office Administrators -Principals -Northwest Indiana Special Education Cooperative (NWISEC) Director -1-5 Teachers -Interventionists -RTI Teams	-School City of Hobart's Balanced Assessment System Framework -RTI Forms -RTI Meetings	-School City of Hobart's Balanced Assessment System -Professional Learning Communities -Common Planning Time -RTI Forms _RTI Meetings _Harmony -RTI Policy and Guidelines -Professional Development RTI -Curriculum Materials -RTI -TRC -Compass Learning Odyssey -Khan Academy
Intervention: Family/Community Involvement 1. students will increase problem solving skills through opportunities for family/community participation A. HSkyward-Assignments/Grades/Discipline/Attendance B. Family Nights-Math Games C. Website – Homework Help and Tips D. Compass Learning Odyssey E. Parent Teacher Meetings	2012-2017	-Lead: Central Office Administration -Principals -School Staff -Technology Department	-Parent/Teacher Conference Attendance -Monitoring Skyward Usage -Family Night Attendance	-Skyward Parent Information Packet -District Web Site -Khan Academy

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ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
Intervention: Professional Learning Communities All students will increase problem solving skills as a result of teacher participation in professional learning communities A. Curriculum Planning-Grade Level/Curriculum/Department Meetings -Identification of Critical Standards -Units of Study /Curriculum Calendar/Curriculum Mapping B. Assessment -Continuous data analysis will be implemented by using the School City of Hobart's Balanced Assessment System Framework C. RTI Teams D. Professional Development- In-House Professional Development Calendar, conferences, and Contracted Services, building-based grade level meetings	2012-2017	-Lead: Administrators -1-5 teachers -RTI Teams	-Teacher Professional Goals -Curriculum Maps -Formal Scales -Enrollment in Professional Development -School City of Hobart's Balanced Assessment System Framework -RTI Teams	-School City of Hobart's Balanced Assessment System Framework -Professional Development Calendar -Common Planning Time -Professional Learning Community Meetings -RTI Training _TRC(District website -Interventionists -Contracted Services -Late Start Wednesdays -Data Meetings -Google Aps