Early Learning Center at George Earle Elementary

Action Plan #3 Problem Solving

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 demonstrate computation skills.
- All students will demonstrate problem-solving skills in mathematics.
- All students will use technology research tools practice computation, number sense, and problem solving skills.

Target Participants:
All students at the Early Learning Center at George Earle Elementary.

Subgroups:
English Learners
Special Education-Early Childhood Development Students
Free/Reduced Meal Students

Interventions:
1. All students will increase skills in problem solving through monitoring progress on Indiana Academic Standards to determine instructional needs.
2. All students will increase problem-solving skills through differentiated instruction across the mathematics curriculum that emphasizes conceptual understanding.
3. All students will use reasoning and critical thinking to solve problems through applied mathematics across the curriculum that provide relevant, concrete, and everyday problems.
4. All students will increase problem-solving skills by using technology tools across the curriculum.
5. All students will increase problem-solving skills through opportunities for family/community participation.

Student Support:
Subgroup students with low performance will increase problem-solving skills beyond regular classroom instruction with increased academic learning time.
Subgroup students will participate in after school clubs.

Staff:
All students will increase problem-solving skills as a result of teacher participation in professional learning communities.

Evaluation:
Common Formative Assessments (CFAs)- Grade Level CFAs, Compass Learning Odyssey, Rubrics, Checklists),
Formal scales
Benchmark Assessments- Standards-based Report Cards (Elementary)
External Summative Assessments- DIAL, ESGI
Classroom Assessments – Conferring, Checklists/Rubrics/Data Notebooks

Timeframe of Implementation: 2016-2017

Early Learning Center at George Earle Elementary

Target Area of Improvement: Problem Solving

ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
Intervention: Assessment/Differentiated Instruction for Conceptual Understanding 1. All students will increase skills in problem solving through monitoring progress on Indiana Academic standards to determine instructional needs. A. Classroom Assessments/Conferring/ Checklists/Rubrics/Journals will be administered to determine instructional areas for students. B. ESGI and will be administered each quarter and as needed to determine goal areas for each student. 2. All students will increase problem-solving skills through differentiated instruction across the mathematics curriculum that emphasizes conceptual understanding. A. Students will demonstrate understanding of basic addition and subtraction.	2012-2017	-Curriculum Coordinators -Principal -K teachers -ELC Staff	-Lesson Plans -Classroom assessments -Pivot -Journals -Formal scales/Rubrics -CFAs	-Classroom assessments -Manipulatives -Software -Flash cards -Classroom texts -Time for data analysis -Standard based Report Cards -Indiana Academic Standards -Curricular Maps -iPads -ABC Mouse -ESGI -Pivot -Envision Math -Khan Academy -CFAs

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Target Area of Improvement: Problem Solving

ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
Intervention: Assessment/Differentiated Instruction for Conceptual Understanding (continued) B. Students will demonstrate the process of measuring. C. Students will understand and solve algebraic equations and understand patterns and relationships between numbers. D. Students will identify, describe, and compare geometrical shapes. E. Students will construct and interpret graphs throughout the curriculum as part of data analysis. F. Students will demonstrate the ability to compare and contrast different values.				

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Target Area of Improvement: Problem Solving

ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
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 provide relevant, concrete, and everyday problems. A. Students will build academic vocabulary and comprehension across the curriculum. B. Students will understand and choose the correct mathematical operation to solve problems across the curriculum. (Example: Similarities and Differences/Graphic Organizers-Marzano) C. Students will use mental math/estimation to understand when an exact answer is needed or an estimate is sufficient. D. Students will develop a set of problem solving strategies across the curriculum. E. Students will problem solve by using probability, data analyses, and statistics across the curriculum through developmentally appropriate activities.	2012-2017	-Curriculum Coordinators -Principals -K teachers -ELC staff	-Lesson Plans -Classroom assessments -Journals -Rubrics -Data Notebooks -CFAs -Pivot -Envision Math -Portfolios -ESGI	-Classroom Instruction That Works by Robert Marzano -Building Academic Vocabulary by Robert Marzano -Manipulatives -Textbooks -Inquiry Materials for Math and Science -Everyday Math -iPads -Indiana Academic Standards -ABC Mouse -Pivot -Envision Math -Portfolios -Google Apps

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Target Area of Improvement: Problem Solving

ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
Intervention: Technology Tools 1. All students will increase problem-solving skills by using technology tools across the curriculum. A. Students will construct and interpret graphs and demonstrate concepts such as more and less. B. Students will use computer simulations to solve problems.	2012-2017	-Curriculum Coordinators -Principals -K teachers -ELC staff -Technology Department	-Lesson Plans -Classroom assessments -Envision -Journals -Rubrics -Teacher Observation -Envision Math -CFAs -Pivot -Portfolios	-Professional Development Calendar -Computers and Simulation Software -Tablets -Now Boards -Laptops -iPods -Internet -iPads -Envision Math -Pivot -Khan Academy
Intervention: Increased Academic Learning Time 1. Subgroup students with low performance will increase mathematical skills beyond regular classroom instruction with increased academic learning time. A. Strategy Groups B. Individual Instruction C. English Learners	2012-2017	-Curriculum Coordinators -Principals -K teachers -ELC staff -RtI team	-Lesson Plans -Teacher Observations -Classroom assessment -Standards-based Report Cards -Intervention Logs -Action Plans -ESGI	-Professional Development -Intervention Logs -Action Plans -ESGI Reports -RtI Policy and Guidelines -Curriculum Materials -Teacher Resource Center -iPads

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Target Area of Improvement: Problem Solving

ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
Intervention: Family/Community Involvement 1. All students will increase problem solving skills through opportunities for family/community participation. A. Family Nights- Math Games B. Web Site- Pearson Realize C. Parent Teacher Communication through newsletters, website, phone calls, and conferences. D. Kindergarten & Coffee E. Building Brickies (fka Parents as Teachers)	2012-2017	Central Office Administration -Curriculum Coordinators -Principal -K teachers -ELC staff -RtI team -Technology Department -Building Brickies Staff	Monitoring Website usage -Family Night Attendance -Monitoring Website Usage -Monitoring Skyward Home usage -K & Coffee -K is for Kindergarten booklet -Home Visits	Information packet -School City of Hobart Website -Skyward -Parent Resource Center
Intervention: Professional Learning Communities 1. All students will increase problem solving skills as a result of teacher participation in professional learning communities. A. Data Analysis- NWEA, Classroom Assessments. B. Best Practices- Book Studies, Grade Level/Curriculum C. Professional Development- In-House Professional Development Calendar, Conferences	2012-2017	-Principal -K teachers -ELC staff	-NWEA -Classroom assessments -Teacher Goal Sheets -Professional Development Enrollment -Grade Level Meetings -Formal scales and rubrics ESGI	-Time for Professional Development -Professional Development Calendar -Book Studies -Data Analysis -Training -Late Start Wednesdays -TRC ESGI

Target Area of Improvement: Problem Solving

ACTIONS	SCHEDULE	RESPONSIBILITIES	MONITORING	RESOURCES
Intervention: Instruction Support Services 1. Students who qualify for additional services will be provided extra instructional support. A. Special Education B. English Learners C. 504	2012-2017	Lead: Central Office Administration -Principal -K teachers -EL Coordinator -Special Education Staff -Nurses	School City of Hobart's Balanced Assessment System Framework	School City of Hobart's Balanced Assessment System Framework -Professional Learning Communities -Skyward -504 -Teacher Resource Center (District Website) -IEP Advantage -Case Conference
Intervention: After School Clubs 1. Students will participate in clubs. A. Academic Support B. Academic Enrichment C. Community Support D. Performing Arts E. Maker Faire	2014-2017	-Lead: Central Office Administrators -Principals -K Teachers -ELC Staff	-Club Participation	-Lego Club -Music Club -Helping Hands -Mini Monets -Maker Faire