2017 - 18 Evidence for SDW Math ESAIL

4.6 Problem solving is collaborative and promotes a balance of procedural fluency, conceptual understanding, and mathematical application.		
Beginning	**Approaching**	**Meeting**
• Teachers select mathematical word problems/task that lack **multiple solutions, entry points, or strategies**. • Teachers assign tasks without considering student interest or cultural relevance.	• Teachers select tasks that require a moderate level of cognitive demand, allowing for **multiple solutions, entry points, or strategies**. • Teachers **motivate students' learning** of mathematics through opportunities for exploring and solving authentic and relevant problems that are based on their mathematical work within the unit standards.	• Teachers select tasks that require a high level of cognitive demand, allowing for **multiple solutions, entry points, and strategies.** • Teachers **motivate students' learning** of mathematics through opportunities for exploring and solving authentic and relevant problems to construct new mathematical understanding.
• Teachers take control of the problem solving.	• Teachers **support students** in exploring tasks.	• Teachers **facilitate students** in exploring tasks without taking over student thinking.
• Teacher asks clarifying questions and gives feedback about the correct answer.	• Teachers encourage students to **seek clarification and validation** from one another.	• Students/teacher openly **seek clarification and validation** from one another.
• Students are working in groups.	• Students are **engaged and contribute** to the collaborative work	• Students are **engaged and contribute** to the collaborative work, adding their thoughts, strategies, or suggestions for improvement.
• Students attempt completion of a math task.	• Students show effort in making sense of tasks by drawing on and making connections with their prior understanding and ideas.	• Students **persevere** in making sense of tasks **and are highly engaged and committed to solve the math task.**
Not Observed: No problem solving tasks/CGI problems in journals, during math workshop, or visible in the environment.		

1.9 Elaborated discussions (verbal and written) around specific learning goals are promoted, and all students' thinking is valued and discussed.		
Beginning	**Approaching**	**Meeting**
• Teacher is at the front of the room and dominates the conversation. • Teacher is only questioner and the focus is on correctness. Questions serve to keep students listening to teacher. Students give short answers and respond directly to the teacher. • One or two strategies may be elicited. Teacher may fill in an explanation. Students provide brief descriptions of their thinking in response to teacher probing. • Teacher shows math representations to the students or students are learning to create math drawings and/or written explanations to depict their mathematical thinking.	• Teacher facilitates conversation, by selecting and sequencing student approaches and strategies, encouraging students to ask questions of one another. • Teacher asks probing questions and facilitates some student-to-student talk. Students ask questions of one another and utilize oracy strategies with prompting from teacher. • Teacher probes more deeply to learn about student thinking, eliciting multiple strategies. Students respond to teacher probing and volunteer their thinking, beginning to defend their answers. • Students show varied representations and label their math drawings and/or written justification so that others are able to follow their mathematical thinking.	• Students select and sequence approaches and strategies and carry the conversation themselves. Teacher guides from the periphery of the conversation. Teacher waits for students to clarify thinking of others. • Student-to-student talk is student initiated. Students ask questions, employ oracy strategies, listen to responses and give feedback. Many questions ask "why" and call for justification. Teacher questions may still guide discourse. • Teacher follows student explanations closely. Teacher asks students to contrast strategies. Students defend and justify their answers with little prompting from the teacher. • Students follow and help shape the descriptions of others' math thinking through math drawings and written defenses and may suggest edits in others' math drawings.
Not Observed: Students are all working individually (assessment/technology) - no evidence in math journal or in the environment		

4.3 Daily small guided group lessons and/or conferring are designed to meet the instructional needs of diverse learners.		
Beginning	**Approaching**	**Meeting**
• Teachers meet with small guided groups.There is no evidence of a plan for guided group.	• Teachers meet with a small guided group based on levels of skills/needs. There is evidence of a lesson plan for the guided group.	• Teachers meet with several small guided groups based on assessments/ observations /etc. to determine levels of skills/needs. Teachers have pre-planned lessons based on teacher observations, grade level continuum, and student assessments.
• Teachers check in with students but there is no established schedule/routine for conferring.	• Teachers confer with students around their mathematics inconsistently following a routine/schedule.	• Teachers confer with students around the mathematics following a schedule/routine.
• All guided groups complete the same activities with no differentiation.	• Small guided groups and conferences are teacher directed and controlled allowing for some student voice.	• In conferences and guided groups, teacher is an active listener and strategically prompts students to make meaning of the math.
• Teachers do not take anecdotal notes during groups and/or conferring.	• Teacher takes notes during guided groups and/or conferring without an established system.	• Teachers keep anecdotal records to monitor progress and inform instruction in an organized and established system.
• Materials are not accessible to students.	• Teachers have materials out for students to use.	• Teachers' and students' materials are organized and easily accessible.
Not Observed: Math Workshop opening, mini lesson, reflection, etc. are happening and guided groups/conferring is not appropriate during the time of the ESAIL.		

4.8 Technology is used to help students learn and make sense of mathematical ideas, reason mathematically, and communicate their mathematical thinking.		
Beginning	**Approaching**	**Meeting**
• Teachers/students using technology (SmartBoard, document camera, iPads) during math workshop to share student work. • Students are using technology to practice rote skills.	• Teacher use technology to support the augmentation level of SAMR. • Technology is used to make meaning of the mathematics (for example - DreamBox/TenMarks) • Students understand the purpose for the work to be completed using technology to share their thinking.	• Teachers incorporate modification and redefinition of SAMR through the technology use to encourage higher level thinking. • Teachers use data from TenMarks/DreamBox to inform next steps in instruction. • Students understand the purpose of their work and choose appropriate technology to create their learning.
Not Observed: Technology is not being used for instruction by the teacher and/or students.		