

Teacher _____

Date _____

Student Leaders:
 Everyone in the math classroom is a learner and a teacher. Student leaders facilitate the Daily Routine and Quick Practice segments of math learning. Student leaders are an integral part of math discussion in the classroom. The goal being 70% student talk and 30% teacher talk.

Connections	✓	Teacher Observations	✓	Student Observations
Interacting w/ New Knowledge		Teacher supports students to develop as student leaders.		Student voice is prominent in the classroom.
Helping Students Practice and Deepen New Knowledge		Teacher is comfortable relinquishing some classroom control to students.		Student Leaders are modeling, clarifying, and explaining mathematical thinking to others.
Communicating High Expectations for Each Student to Close the Achievement Gap.		Teacher has become a learner and teacher in the classroom.		Student Leaders accept leadership responsibilities in the classroom.

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Helping Community:

A helping community is a way of doing business in Math Expressions. Teachers have fostered a risk-free environment.

Teachers and students understand that an incorrect answer has value as it allows students to learn ‘why’ and avoid making the same error in the future.

This risk-free environment provides a platform for Math Talk.

Connections	✓	Teacher Observations	✓	Student Observations
Establishing and Maintaining Effective Relationships in a Student-Centered Classroom.		Teacher orchestrates collaborative instructional conversations focused on the students’ mathematical thinking.		Students perceive the classroom as, a risk-free environment.
Communicating High Expectations for Each Student to Close the Achievement Gap.		Teacher supports the sense-making of <i>all</i> classroom members.		Each student takes responsibility for his/her learning.
		Teacher has established a collaborative classroom culture that encourages values such as responsibility and respect for others.		Students show respect for every student in the classroom.

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Building Concepts:

Teachers use an inquiry learning path with three phases of learning:

- Student generated methods
- Research based methods
- Formal math methods

Leading to the knowledge that there are several correct methods for solving every math situation and each has advantages and disadvantages.

Teachers use flexible groupings to maximize student interaction, and sharing of problem understanding and reasoning.

Teachers have an understanding that conceptual understanding leads to procedural fluency. This process includes targeted practice and fluency checks.

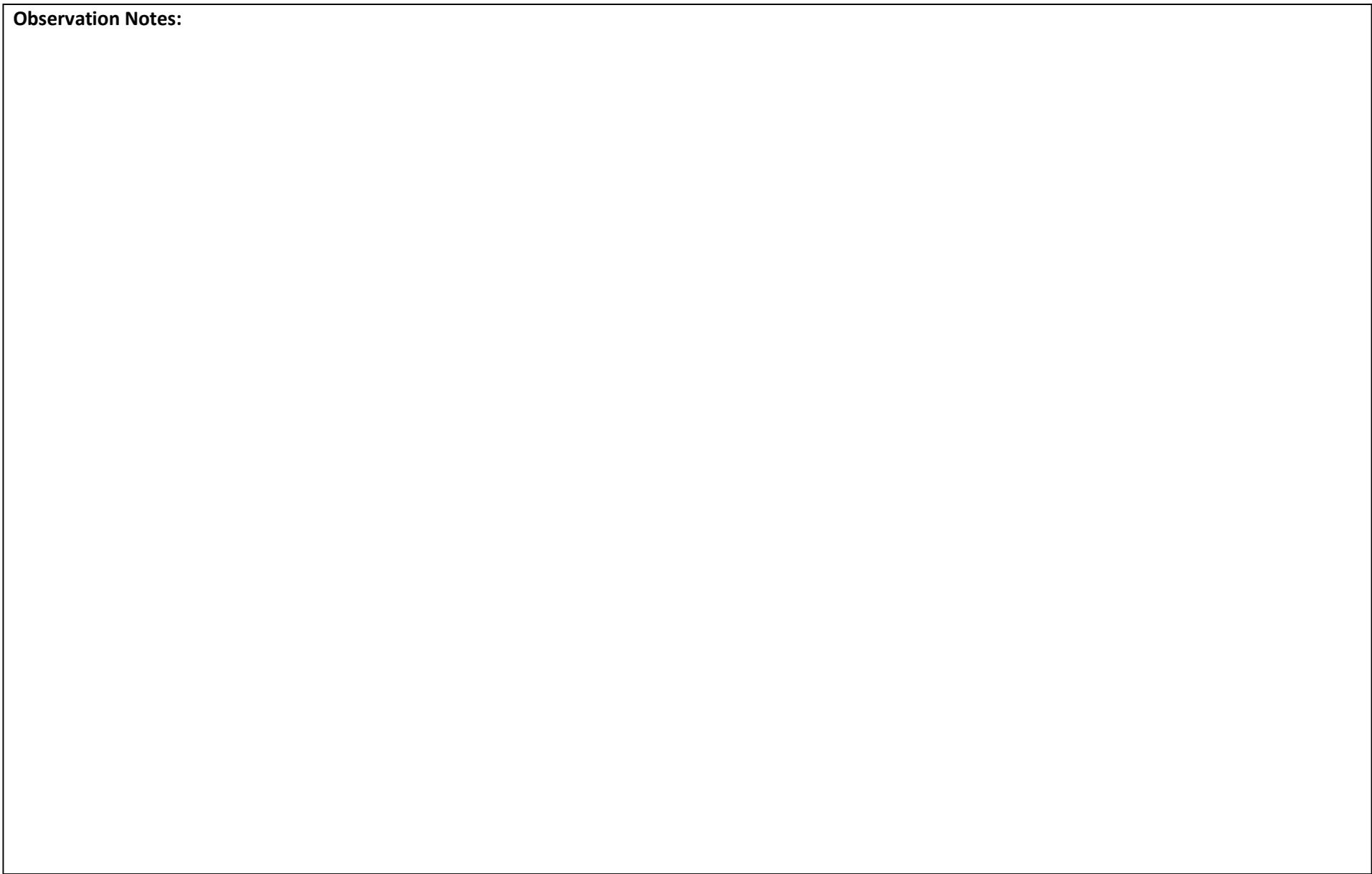
Teachers and students make sense out of story problems through drawings, labels, and equations. Teachers and students understand which story problem type is being used, and are able to explain their thinking.

Connections	✓	Teacher Observations	✓	Student Observations
Communicating Learning Goals and Feedback All levels of Standards-Based Instruction will be utilized. <ul style="list-style-type: none"> • Interacting w/ New Knowledge • Helping Students Practice and Deepen New Knowledge • Helping Students Generate and Test Hypotheses Using Engagement Strategies Using Formative Assessment to Track Progress.		Teacher identifies different solution methods used by students, introduces mathematically desirable and accessible methods, and allows students to choose a method depending on his/her place in the learning path.		Students recognize that there may be several correct methods for solving a math situation, with advantages and disadvantages to each. They are able to choose the one that works best for them.
		There is evidence of teacher planning for flexible groupings (student pairs, small groups, board work) to maximize student differentiation.		Students use math drawings as a sense-making link between formal mathematics and informal sensory experiences.
		Teachers use targeted practice and fluency checks to assess student conceptual understanding and fluency.		Students use math drawings and visual models and tools to represent a word problem situation.
		Teacher understands that knowing about problem types can be useful in solving them.		Students solve word problems by understanding, representing, and solving, and then checking for reasonableness.

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Math Talk:

Teachers use intentional questions and activities to enable student use of Math Talk to exchange mathematical ideas and problem-solving strategies.

Students use Math Talk to ask for and receive help, and errors can be identified, discussed, and corrected.

Math Talk enables students to become active helpers and questioners, creating student-to-student talk that stimulates engagement and community.

Teachers use Math talk to do continual formative assessment, to modify instruction, and address errors or extend good mathematical thinking.

Math Talk = “Solve and Discuss” (Solve, Explain, Question and Justify)

Connections	✓	Teacher Observations	✓	Student Observations
Communicating Learning Goals and Feedback		Teacher uses intentional questioning to promote student Math Talk.		Students exchange mathematical ideas and problem-solving strategies in a variety of situations. (work in pairs, small group, whole class)
All levels of Standards-Based Instruction will be utilized.		Teacher uses Math Talk to identify errors, and discuss and correct them.		Students see mistakes as learning opportunities. They are comfortable asking for and receiving help.
<ul style="list-style-type: none"> Interacting w/ New Knowledge Helping Students Practice and Deepen New Knowledge Helping Students Generate and Test Hypotheses 		Teacher “stays out of the way” to help students interact more directly with each other.		Student math drawings accompany student verbal explanations.
Using Engagement Strategies				
Using Formative Assessment to Track Progress.		Productive student-to-student discussion is monitored and supported by the teacher to determine next steps and assess student understanding.		Using Math Talk, students are active helpers and questioners.
Communicating High Expectations for Each Student to Close the Achievement Gap.				

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