Mathematics Problem Solving Rubric

	1	2	3	4
Making Connections	Does not make any connections to self, world, or other math ideas	Can recognize connections when others bring them up.	Refers to something previously learned or experienced.	Clearly makes connections between problem and prior knowledge and experience.
Academic Language	Cannot communicate ideas through academic language and vocabulary.	Uses alternate (non-mathematical) vocabulary to describe the mathematical situation.	Attempts to use math vocabulary and terminology and reads off prompt once or twice.	Can use math vocabulary, describe the problem using correct terminology, and use language describe in prompts.
Engagement	Makes no attempt to be in the conversation with small or large group.	Briefly explains their own thinking.	Has significant input and offers ideas to contribute to others' thinking.	Actively participating and communicating their thoughts to their peers.
Conceptual Understanding	Has no indication of understanding of the kind of concept addressed in the problem	Can indicate concept, but is unsure how to represent/identify that concept through the problem.	Represents concept through either examples **OR** academic language.	Can interpret, give examples, use multiple representations, and apply language of a concept.
Mathematical Reasoning	Makes no attempt to try to understand what is going on in the situation or what they are doing.	Tries to understand what their process means in terms of the problem and listens to/tries alternatives.	Thinks logically about relationship between concepts and situation (without consideration of alternatives)	Can think logically about the relationship between concepts and the situation with careful consideration of alternatives.
Deepens Own Thinking	Makes no attempt to listen or participate in conversations in small group or large group.	Listens to peers **OR** Only explains their own thinking.	Listens to peers and engages in conversations about their process **AND** explains their own thinking.	Asks questions of peers and considers all alternatives and arguments.