TOOL // Math Inquiry Project Rubric

What is it used for?
The rubric is used to guide teacher evaluation of students' inquiry, math projects. It is also provided to the students to guide their performance and product.

How do you use it?
After discussing with the students what a mathematical inquiry might look like and even possibly sharing some models, the students and the teacher develop a list of success criteria for a mathematical inquiry. Students are guided by the questions like: How will I show my understanding of specific math ideas and concepts? How will I creatively present the results of my inquiry? How will I organize and communicate my ideas and information logically and clearly? What mathematical vocabulary, symbols and algorithms should I include? How will my inquiry questions and product be linked to the real world? These questions will help guide their inquiry. The teacher uses the success criteria and develops a rubric with four levels that will be used to assess the final product. Success criteria and models will clearly define what "effectiveness will look like." The rubric will be used when giving feedback to the students during the process and for the teacher in the final evaluation.

Mathematics Research-based Project (Inquiry)

Categories & Expectations	Level 1	Level 2	Level 3	Level 4
Understanding of mathematical content	The student shows limited understanding of mathematical content (ideas, concepts, terminology).	The student shows some understanding of mathematical content (ideas, concepts, terminology).	The student shows good understanding of mathematical content (ideas, concepts, terminology).	The student shows insightful understanding of mathematical content (ideas, concepts, terminology).
Use of creative/critical thinking processes	The student uses creative/critical thinking processes to connect the final product to math concepts and reflects on their learning in math with limited effectiveness	The student uses creative/critical thinking processes to connect the final product to math concepts and to reflect on their learning in math with some effectiveness	The student uses creative/critical thinking processes to connect the final product to math concepts and to reflect on their learning in math with limited effectiveness	The student uses creative/critical thinking processes to connect the final product to math concepts and reflect on their learning in math with a high degree of effectiveness
Expression and organization of ideas and information in oral, written, and visual forms	The student organizes and presents ideas within their inquiry presentation with limited effectiveness	The student organizes and presents ideas within their inquiry presentation with some effectiveness	The student organizes and presents ideas within their inquiry project with considerable effectiveness	The student organizes and presents ideas within their inquiry project with a high degree of effectiveness
Use of conventions, vocabulary, and terminology	The student uses math conventions, algorithms, vocabulary, and terminology related to making and presenting products for inquiry with limited effectiveness	The student uses math conventions, algorithms, vocabulary, and terminology related to making and presenting products for inquiry with some effectiveness	The student uses math conventions, algorithms, vocabulary, and terminology related to making and presenting products for inquiry with considerable effectiveness	The student uses math conventions, algorithms, vocabulary, and terminology related to making and presenting products for inquiry with a high degree of effectiveness
Making connections within and between contexts	The student makes a limited number of connections between the project and the world outside the school.	The student makes some connections between the project and the world outside the school	The student makes a variety of connections between the project and the world outside the school	The student makes a wide variety of connections between the project work and the world outside the school