Appendix B

Measurement in Design Rubric

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding – worksheet #1 - worksheets #2, 3	**The student:** -demonstrates limited knowledge of operations with fractions -demonstrates limited understanding of conversions, ratios and proportions	-demonstrates some knowledge of operations with fractions -demonstrates some understanding of conversions, ratios and proportions	-demonstrates considerable knowledge of operations with fractions -demonstrates considerable understanding of conversions, ratios and proportions	-demonstrates thorough knowledge of operations with fractions -demonstrates thorough understanding of conversions, ratios and proportions
Application **Application** of **knowledge and skills** in **trigonometry** - worksheet #4 (14, 15, 16) **Transfer of knowledge and skills to new contexts** - worksheet #4 (17) **Making connections** - worksheet #4 (17)	**The student:** -applies knowledge and skills using right-angled and oblique triangles with limited effectiveness -transfers knowledge and skills to new contexts with limited effectiveness -makes connections within and between various contexts with limited effectiveness	-applies knowledge and skills using right-angled and oblique triangles with some effectiveness -transfers knowledge and skills to new contexts with some effectiveness -makes connections within and between various contexts with some effectiveness	-applies knowledge and skills using right-angled and oblique triangles with considerable effectiveness -transfers knowledge and skills to new contexts with considerable effectiveness -makes connections within and between various contexts with limited effectiveness	-applies knowledge and skills using right-angled and oblique triangles with a high degree of effectiveness -transfers knowledge and skills to new contexts with a high degree of effectiveness -makes connections within and between various contexts with a high degree of effectiveness
Thinking **Use of planning and processing skills** - sawhorse design (a) **Use of critical/creative thinking processes** - sawhorse design (c)	**The student:** -develops a plan to solve for missing dimensions and angles with limited effectiveness -creates a 3-d model or drawing with limited effectiveness	- develops a plan to solve for missing dimensions and angles with some effectiveness - creates a 3-d model or drawing with some effectiveness	- develops a plan to solve for missing dimensions and angles with considerable effectiveness - creates a 3-d model or drawing with considerable effectiveness	- develops a plan to solve for missing dimensions and angles with a high degree of effectiveness - creates a 3-d model or drawing with a high degree of effectiveness
Communication **Expression** and **organization** of **ideas** and **mathematical thinking** - sawhorse design (b) **Use of conventions**, **vocabulary**, and **terminology** - assessed throughout the entire project	**The student:** -creates a scale diagram with limited effectiveness -uses conventions, vocabulary, and terminology of the discipline with limited effectiveness	- creates a scale diagram with some effectiveness -uses conventions, vocabulary, and terminology of the discipline with some effectiveness	- creates a scale diagram with considerable effectiveness -uses conventions, vocabulary, and terminology of the discipline with considerable effectiveness	- creates a scale diagram with a high degree of effectiveness -uses conventions, vocabulary, and terminology of the discipline with a high degree of effectiveness