**Stem Design Final Exam Rubric**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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|  | **OMG Yes!** | **Super Good** | **OK** | **Ummm…..Nope** |
| **Sentence or two about the design problem, including the principles and elements of design.**  | Went way above the Super Good category requirements. Total overachiever level effort. | \*Sentence fully explains the design problem and both p&e are stated | \*Design problem not stated clearly and both p&e not identified | \*No sentence explaining design problem and no statement about p&E of design |
| **Research Info** | Went way above the Super Good category requirements. Total overachiever level effort. | \*Product is strongly research based\*Shows definite relationship to research findings  | \*Evidence of research presented\*Refer to research findings  | \*Product has no research basis\*No relationship between research finding and product  |
| **Specifications** | Went way above the Super Good category requirements. Total overachiever level effort. | \*Dimensions and materials clearly stated and explained with additional information. | \*Dimension and materials just listed, with no additional information | \*Dimension and materials not listed |
| **IDEATION****- at least 4 thumbnail sketches****-one final sketch, that shows at least 2 views****- basic sketchup sketch (optional)** | Went way above the Super Good category requirements. Total overachiever level effort. | \*Drawings neat and carefully done.\*At least two views for final sketch.\*Proper notes were used to identify the important parts of the design in final sketch with neat handwriting.  | \*Sketches carelessly drawn.\*Only one view for final sketch\*Some minor notes describing the drawing were left out of final sketch.  | \*Very messy drawings that are hard to understand in terms of the design. \*The drawing is missing important notes. |
| **3D prototype model made out of clay/wood/etc.** | Went way above the Super Good category requirements. Total overachiever level effort. | \*Good choice of materials to get idea of 3d design across to viewers\*The model is very well put together. The amount of effort put into making the model is clearly apparent. \*Cuts are cleanly made with a sharp knife and a straight edge or other appropriate cutting equipment. The edges and corners fit together nicely and there is no excess glue overhanging the edges.  | \*Adequate choice of materials to get idea of 3d design across to viewers, though another choice of materials would have been better.\*The model is put together in a basic way. Only a minimal level of care is apparent.\*Some cuts are jagged because a straight edge was not used. There are few areas where some smudges are apparent from over application of glue  | \*Poor choice in materials in order to convey design to viewer.\*The model is poorly built and falls apart. Most edges to not fit tightly together. \*No straight edges were used when cutting and as a result the cuts are choppy and crooked. Glue hangs over the edges.  |
| **Critique feedback** | Went way above the Super Good category requirements. Total overachiever level effort. | \*Written points fully explains the feedback that was given and your response to the feedback.\*Seeks out and uses feedback and critique to revise product to better meet the needs of the intended audience | \*Written points do not clearly state the feedback that was given and your response to the feedback\*Considers and may use some feedback and critique to revise a product, but does not seek it out | \*Brief or no written feedback and response.\*Does not consider or use feedback and critique to revise product |
| **Redesign statement paragraph** | Went way above the Super Good category requirements. Total overachiever level effort. | \*Written points fully explains things that you changed during the process of designing this object and why you changed them\*Asks new questions, takes different perspectives to elaborate and improve on the selected idea | \*Written points do not clearly state things that you changed during the process of designing this object and why you changed them | \*Brief or no written things that you changed during the process of designing this object and why you changed them |
| **Creativity and Originality** | Went way above the Super Good category requirements. Total overachiever level effort. | \*Completely new idea\*Not a copy of another product\*Innovative \*uses idea-generating techniques to develop several original ideas for product(s)\*carefully evaluates the quality of ideas and selects the best one to shape into a product\*uses ingenuity and imagination, going outside conventional boundaries, when shaping ideas into a product \*is new, unique, surprising; shows a personal touch\*may successfully break rules and conventions, or use common materials or ideas in new, clever and surprising ways | \*Develops some original ideas for product(s), but could develop more with better use of idea-generating techniques\*evaluates ideas, but not thoroughly before selecting one\*shows some imagination when shaping ideas into a product, but may stay within conventional boundaries\*has some new ideas or improvements, but some ideas are predictable or conventional \*may show a tentative attempt to step outside rules and conventions, or find new uses for common materials or ideas | \*Obvious copy of another's idea, lacks innovation \*Stays within existing frameworks; does not use idea-generating techniques to develop new ideas for product(s)\*reproduces existing ideas; does not imagine new ones \*relies on existing models, ideas, or directions; it is not new or unique\*follows rules and conventions; uses materials and ideas in typical waysmay show a tentative attempt to step outside rules and conventions,has some new ideas or improvements, but some ideas are predictable or conventional |