**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 ways  may show a tentative attempt to step outside rules and conventions,  has some new ideas or improvements, but some ideas are predictable or conventional |