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|  | PLTW_M_L_4CP |
| **Rubric 4.2 Graphical Modeling Puzzle Cube Combination Isometric Sketches** | |

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| Elements | Weight | 5 Points | 4 Points | 3 Points | 2 Points | 1-0 Points | Total |
| **Puzzle Cube Combinations** |  | Two combinations with ten unique parts. Each of the five component parts clearly shows how they fit together. | Two combinations with less than ten unique parts. Each of the five component parts somewhat shows how they fit together. | One combination with ten unique parts. Each of the five component parts clearly shows how they fit together. | One combination with less than ten unique parts. Each of the five component parts somewhat shows how they fit together. | One combination with less than ten unique parts. Difficult to determine how component parts fit together. |  |
| **Consideration**  **of Alternatives** |  | Selects most appropriate concept and clearly justifies the choice using the appropriate criteria. | Selects an appropriate concept and is somewhat able to justify the choice using some acceptable criteria. | Selects an appropriate concept and is somewhat able to justify the choice using marginally acceptable criteria. | Selects one using inadequate criteria. | No clear selection or criteria stated. |  |
| Documentation |  | Student signed and dated each combination. | Student signed and dated most combinations. | Student only signed or dated most combinations. | Student signed and dated a few combinations. | Student did not sign and dated each combination. |  |
| **Sketching Technique** |  | Shows excellent line quality. Lines are straight, follow the isometric grid paper and are of the correct line weight. | Shows good line quality. Lines are fairly straight, follow the isometric grid paper and of the correct line weight. | Shows fair line quality. Lines are fairly straight, stray from the isometric grid paper and vary in thickness. | Shows fair line quality. Lines are not straight, stray from the isometric grid paper and vary in thickness. | Lines are feathered; straight lines appear as curves.  Lines converge. |  |
| **Proportion** |  | Elements are sized correctly and communicated effectively. | Most elements are sized correctly and communicate the design in an acceptable manner. | Some elements are sized correctly and communicate the design in an acceptable manner. | Elements are close to the correct relationship with some distortion. | Elements have no relationship with each other. Detail is difficult to ascertain. |  |
| Color |  | Color is appropriately applied.  Color enhances the image. | Color is applied.  The color does make the visual appearance of the object pleasing to the eye. | Color is applied and does not distract from the three dimensional image. | Color is applied.  The color needs improvement. | Color detracts from the three dimensional image |  |