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| --- | --- | --- | --- | --- | --- |
|  | 1 - Beginning | 2- Approaching | 3- Adequate | 4 - Proficient | 5 - Excellent |
| **Required Design Elements** | – structure only includes 2 or less appropriate shapes  – structure design does not include fabric colours | – structure only includes 3 appropriate shapes  – structure uses less than 3 fabric colours | - Structure includes 4 appropriate shapes  - Structure uses all three fabric colours | – structure includes 4 or more appropriate shapes  – structure uses all 3 fabric colours | – structure includes 4 or more appropriate shapes in a very creative design    – structure uses all 3 fabric colours in an appealing way |
| **Procedural Knowledge** | - **major errors** **or omissions** in calculating:  – the area of the different parts of each shape  – the area of the overlaps/openings  – the total surface area of each shape  – fabric cost calculations for each shape  – support cost calculations for each shape  – total cost of each shape  – grand total cost | - **some errors or omissions** in calculating:  – the area of the different parts of each shape  – the area of the overlaps/openings  – the total surface area of each shape  – fabric cost calculations for each shape  – support cost calculations for each shape  – total cost of each shape  – grand total cost | - **few errors or omissions** in calculating:  – the area of the different parts of each shape  – the area of the overlaps/openings  – the total surface area of each shape  – fabric cost calculations for each shape  – support cost calculations for each shape  – total cost of each shape  – grand total cost | **Very few errors** or omissions when calculating:  – the area of the different parts of each shape  – the area of the overlaps/openings  – the total surface area of each shape  – fabric cost calculations for each shape  – support cost calculations for each shape  – total cost of each shape  – grand total cost | - **very few or no errors** in calculating:  – the area of the different parts of each shape  – the area of the overlaps/openings  – the total surface area of each shape  – fabric cost calculations for each shape  – support cost calculations for each shape  – total cost of each shape  – grand total cost |
| **Problem-Solving Skills** | – no entryway has been included  – structure is not cost appropriate for the design | – entryway(s) and cylinder(s) do not safely accommodate a child  – structure is somewhat cost appropriate for the design | – entryway(s) and cylinder(s) accommodate a child, but could be made larger for safety  – structure is cost appropriate for the design | – entryway(s) and cylinder(s) are large enough to safely accommodate a child  – structure is very cost appropriate for the design | - Entryway(s) and cylinder(s) are large enough to accommodate a child without oversizing the structure  - Structure is very cost efficient and appropriate |
| **Communication** | – explanations of unique features, cost appropriateness and why the company should use the design have not been included | – explanations of unique features, cost appropriateness and why the company should use the design are vague or some are not included | – explanations of unique features, cost appropriateness and why the company should use the design are clear | - Explanations of unique features, cost appropriateness and why the company should use the design are very clear and detailed | – explanation s of unique features, cost appropriateness and why the company should use the design are very clear and use appropriate mathematical terms |

**Play Structure Design Rubric Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Final Mark\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Outcomes:**

**N9.3** Extend understanding square roots to include the square root of positive rational numbers.

**SS9.2** Extend understanding of area to surface area of right rectangular prisms, right cylinders, right triangular prisms, and composite 3-D objects.

**Before you hand in your finished product, please self-evaluate yourself in all areas of the rubric to be sure you have met all the required elements.**