

PROJECT-BASED LEARNING:

CHRISTMAS ORNAMENT DESIGN

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| **Description**  **Today, you interviewed for a position with a newly created subsidiary of Bronner’s Christmas Wonderland in Frankenmuth, Michigan.**  **They are looking for ornament designers who will create unique, special order ornaments for customers using SolidWorks, NX and 3D printing.**  **As a pre-employment test, you are being asked to spend the day at the company to come up with a design that will be 3D printed.** | **Requirements**  For the ornament design, an ideal ornament will:  **1.** Have a place for a hanger (hook)  **2.** Have a total volume of no more than 12.5  cubic inches  **3.** Be incredibly eye appealing – all edges  filleted  **4.** Have an easily recognizable theme |
| **Deliverables**   * **Hand Sketch** * **3D Data (Portfolio Page with top, front, side and ISO views)** * **STL File (To be emailed to jmandl@wcskids.net)** * **Executive Summary with Volume** |

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**CPC CAD: PROJECT-BASED LEARNING** | CHRISMAS ORNAMENT DESIGN

**Preliminary Work**

**Directions: (Use this page to sketch your design ideas)**

**Name:**

**Date:**

**Block:**

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**Portfolio Page**

|  |  |
| --- | --- |
| **Insert screen shots of your design**  Image result for camera icon |  |
| **Top View** | **Iso View** |
| **Front View** | **Side View** |

**Name:**

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**Executive Summary (Type a short paragraph using complete sentences describing your design)**

|  |  |
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| **Insert a screen shot of your volume**  Image result for camera icon |  |
| **Ornament Volume Proof** | |

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**Assessment Rubric**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **BEGINNER**  **1** | **INTERMEDIATE**  **3** | **ADVANCED**  **5** |
| **SKETCHES** | Planning sketches are either missing or lacking detail or lacking effort or any combination of the above. | Planning sketches are included, but to not appear to show much effort. | Planning sketches are complete and easy to understand. |
| **DOCUMENTATION** | Documentation is incomplete, missing verbal or Photographic explanation, or both. | Documentation contains explanations and photos, but is not thorough. | Documentation of the design process is clear and thorough with photos and explanation. |
| **DATA FEATURES** | Design is missing all of the following:   * Hanger * Fillets * Theme * Eye Appeal | Design is missing some of the following:   * Hanger * Fillets * Theme * Eye Appeal | Design has all of the following:   * Hanger * Fillets * Theme * Eye Appeal |
| **VOLUME** | Volume of the design exceeds 12.5 cubic inch limit. |  | Volume of the design does not exceed 12.5 cubic inch limit. |
| **TOTAL SCORE: /20** | | | |

**Name:**

**Date:**

**Block:**