Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: \_\_\_\_\_\_\_

**Design Process: 2D & 3D Chair Project**

**Research & Identify the need and constraints**

Scenario: (Your School Name Here) has teamed up with IKEA to replace the aging student chairs. IKEA has agreed to give a $700,000 donation to produce the chair design that most effectively addresses one of the following design constraints:

1) Made 100% with recycled materials

2) Increases students focus

3) Help students stay hydrated

Pick **one** category that your chair design will address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Develop Possible Solutions**

Describe how your selection will benefit (Your School Name Here) students, classrooms, or campus:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Create**

Design a two-dimensional (2D) sketch of your new product:

Project Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Create**

Design a three-dimensional (3D) sketch of your new product using Google SketchUp

**3D Model Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CATEGORY** | **4 – Excellent!** | **3 - Satisfactory**  | **2 - Fair** | **0/1 - Poor** |
| **Realistic Design** | Size of model is accurately proportional to size of average human | Size of model is somewhat proportional to size of average human | Size of model is not proportional to size of average human | Size of model is not proportional to size of average human |
| **Texture** | Student applied appropriate texture to 3D model | Student applied appropriate texture to 3D model, but not to all surfaces | Student applied some texture to 3D model, but not to all surfaces | Student applied inappropriate texture to 3D model |
| **Exit Slip** | Student was able to appropriately defend their design choice within the constraints of the scenario | Student defended their design choice within the constraints of the scenario | Student did not support their design choice within the constraints of the scenario | Student response was not related to their design choice within the constraints of the scenario |
| **Total** |  |  |  |  |

**Final Score: \_\_\_ / 12**