**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hr: \_\_\_\_\_\_\_ Assign #7**

**Criteria and Constraints Practice**

|  |  |
| --- | --- |
| **Define Criteria** | **Define Constraints** |
|  |  |
| **Examples of Criteria** | **Examples of Constraints** |
| **(CAR EXAMPLE)** | **(CAR EXAMPLE)** |
| **(DRUM KIT EXAMPLE)** | **(DRUM KIT EXAMPLE)** |
| **(SCOOTER DESIGN EXAMPLE)** | **(SCOOTER DESIGN EXAMPLE)** |
| **(SPAGHETTI TOWER EXAMPLE)** | **(SPAGHETTI TOWER EXAMPLE)** |

**Tear this page off of your assignment.**

**Cut these cards out along the lines.**

**Glue them on to Assignment #7.**

|  |  |
| --- | --- |
| **Definition: Factors or rules that LIMIT a solution. Usually: money, materials, size, resources. The solution is unacceptable if these are rules are not met. “LIMITS / RULES”** | **Definition: Characteristics that a design or solution should have. These characteristics are *IDEAL* or *IMPORTANT,* and are goals that the design or solution are trying to reach. “WANTS / GOALS”** |
| **The engineer is making a drum kit for a video game. The drum kit should look and feel like a real drum set.** | **The engineering team needs to create a design for a scooter.**  **The company hiring the team wants the scooter to be made from recycled materials.** |
| **The student engineers must build a tower made out of spaghetti noodles.**  **The students may only use 25 spaghetti noodle sticks. They will not get any extra.** | **The engineering team needs to create a design for a scooter.**  **The company hiring the team gave them a budget of $30. If they go over $30 the design will be rejected.** |
| **The engineer is buying a car.**  **The car must not cost more**  **than $25,000. If it is more money, the engineer can not buy it.** | **The engineer is making a drum kit for a video game.**  **The drum kit must not sound like a real drum set because that is too loud. If it is too loud, nobody will buy it.** |
| **The student engineers must build a tower made out of spaghetti noodles.**  **Their goal is to make the tower very tall.** | **The engineer is buying a car.**  **The engineer would like the car to be blue.** |

**PLEASE MAKE SURE ALL SCRAPS GO IN THE GARBAGE CAN. :) THANK YOU**