**Design Worksheet**

**Ask & Research:**

List the criteria, or requirements, that your design must meet.

List the constraints, or limitations, on your design.

What is the independent variable that you are testing?

What is the dependent variable in your test?

What are the control variables in your test?

**Brainstorm:**

Plan what your design might look like.

**Plan:**

Draw your team’s final design.

List the materials and amounts needed to build your design.

**Initial Test:**

What can be improved so that your mint-mobile rolls down the ramp smoothly and straight?

Modified design:

**Testing:**

Run 1:

Independent variable measurement:

Distance traveled:

Run 2:

Independent variable measurement:

Distance traveled:

Predictions:

Run 3:

Independent variable measurement:

Distance traveled:

**Results:**

Complete the table using your data.

|  |  |  |
| --- | --- | --- |
| **Run Number** | **Independent Variable Measurement** | **Distance Traveled** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

What was the effect of changing your independent variable on the distance your mint-mobile traveled?

Plot your data on the provided graph. Label the axis appropriately, with units.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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How does your graph show the effect of changing your independent variable on your mint-mobile’s distance traveled?

**Reflection:**

What worked well about your mint-mobile design?

What could you improve in your design to get your mint-mobile to travel even further?

What sorts of things did you do at each step of the engineering design process?

What else could you design using the engineering design process?