**Pumpkin Time Bomb Experiment Write Up**

**Observations & Results:**

1. Record your measurements (actual number of rubber bands used will be recorded when completing the experiment).

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| **Group Number** | **Circumference of Pumpkin** | **Height of Pumpkin** | **Mass of Pumpkin** | **Thickness of Wall** | **Estimate of Rubber Bands** | **Actual # of Rubber Bands** |
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**Hypothesis:**

1. Which variable(s) do you think will have the greatest influence on the number of bands it will take for the pumpkin to explode? Why?
2. Which variable do you think will have the smallest influence on the number of bands required to make the pumpkin explode? Why?
3. How many elastics do you think it will take to cause your pumpkin to explode? Provide a brief explanation supporting your decision.

**Data Analysis:**

1. How far off was your estimate from the actual number of rubber bands? What factors affected the difference do you think?
2. Collect other groups’ results and graph the data on the following templates. After graphing, make 2 observations about each graph in the space below.

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| **Graph** | **Type of Correlation** | **Reasoning** |
| Elastics by Circumference |  |  |
| Elastics by Height |  |  |
| Elastics by Mass |  |  |
| Elastics by Thickness |  |  |

**Conclusion:** Therefore, after analysis of the graphs, we have found that…

1. What measurements (variables) had the biggest impact on your explosion? Refer to graphs and provide details to support ideas.
2. What measurements (variables) had the least impact on the explosion? Refer to graphs and provide details to support ideas.

**Appendix A: Graph #1 Good Copy**

**Graph #2 Good Copy**

**Appendix B: Graph #3 Good Copy**

**Graph #4 Good Copy**

Graphing Rough Copies - Data About Circumference

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| **Group** | **Class** | **Circumference** | **Actual** |  | **Group** | **Class** | **Circumference** | **Actual** |
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Graphing Rough Copies - Data About Height

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| **Group** | **Class** | **Height** | **Actual** |  | **Group** | **Class** | **Height** | **Actual** |
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Graphing Rough Copies - Data About Mass

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| **Group** | **Class** | **Mass** | **Actual** |  | **Group** | **Class** | **Mass** | **Actual** |
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Graphing Rough Copies - Data About Thickness

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| **Group** | **Class** | **Thickness** | **Actual** |  | **Group** | **Class** | **Thickness** | **Actual** |
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**Pumpkin Time Bomb Data**

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| **Group Number** | **Teacher** | **Circumference of Pumpkin (cm)** | **Height of Pumpkin (cm)** | **Mass of Pumpkin (lbs)** | **Thickness of Wall (cm)** | **Actual # of Rubber Bands** |
| 1 | Hallahan |  |  |  |  |  |
| 2 | Hallahan |  |  |  |  |  |
| 3 | Hallahan |  |  |  |  |  |
| 4 | Hallahan |  |  |  |  |  |
| 5 | Hallahan |  |  |  |  |  |
| 6 | Hallahan |  |  |  |  |  |
| 7 | Hallahan |  |  |  |  |  |
| 8 | Hallahan |  |  |  |  |  |
| 9 | Hallahan |  |  |  |  |  |
| 10 | Hallahan |  |  |  |  |  |
| 11 | Hallahan |  |  |  |  |  |
| 12 | Hallahan |  |  |  |  |  |
| 13 | Saumur |  |  |  |  |  |
| 14 | Saumur |  |  |  |  |  |
| 15 | Saumur |  |  |  |  |  |
| 16 | Saumur |  |  |  |  |  |
| 17 | Saumur |  |  |  |  |  |
| 18 | Saumur |  |  |  |  |  |
| 19 | Saumur |  |  |  |  |  |
| 20 | Saumur |  |  |  |  |  |
| 21 | Saumur |  |  |  |  |  |
| 22 | Saumur |  |  |  |  |  |
| 23 | Saumur |  |  |  |  |  |
| 24 | Saumur |  |  |  |  |  |
| 25 | Saumur |  |  |  |  |  |