Crater Maker Predictions

| Height \& Ball size | Prediction | Experimental Result |
| :---: | :---: | :---: |
| 70 cm small ball |  |  |
| $140 \mathrm{~cm}$ <br> small ball |  |  |
| 210 cm small ball |  |  |
| 70 cm medium ball |  |  |
| 140 cm medium ball |  |  |
| 210 cm medium ball |  |  |
| 70 cm large ball |  |  |
| $140 \mathrm{~cm}$ <br> large ball |  |  |
| 210 cm large ball |  |  |

KEY
Small marble mass ( m ) $=0.005 \mathrm{~kg}$
Medium marble mass ( m ) $=0.05 \mathrm{~kg}$
Large marble mass (m) $=0.5 \mathrm{~kg}$
Gravity $(\mathrm{g})=9.81$ meters per second squared
Height (h) $=70 \mathrm{~cm}, 140 \mathrm{~cm}$, and 210 cm

| Height \& Ball size | Potential Energy=mgh |
| :--- | :--- |
| 70 cm <br> small ball |  |
| 140 cm <br> small ball |  |
| 210 cm <br> small ball |  |
| 70 cm <br> medium ball |  |
| 140 cm <br> medium ball |  |
| 210 cm <br> medium ball |  |
| 70 cm <br> large ball |  |
| 140 cm <br> large ball |  |
| 210 cm <br> large ball |  |

