**General Physical Science - Forces**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_

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| I can… |
| *Explain the effect of gravity and air resistance.* |

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| Bellwork |
|  | *Write which forces are acting in the photograph in the spaces below.* |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| ***Gravity and Falling objects*** |
| 1. A young Italian scientist \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ argued that falling object fall at the same rate.
2. The story goes that he dropped two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the Leaning Tower of Pisa.
3. Observers were amazed that they fell at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
 |
| 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ due to gravity is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. This is the same for all objects because it depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
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| 1. To find the velocity of falling objects, use the equation:
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| A stone is dropped from a cliff and hits the ground after 3 sec. What is the velocity when it hits the ground? |  |
| 1. Air resistance is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that opposes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of objects through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
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|  | ***Label the forces.*** |
| **g=9.8 m/s2****v****t****g**1. **A penny at rest is dropped from the top of a tall stairwell. What is the penny’s velocity after it has fallen for 2 sec?**
2. **The same penny hits the ground in 4.5 sec. What is the penny’s velocity as it hits the ground?**
3. **A marble at rest is dropped from tall building. The marble hits the ground with a velocity of 98 m/s. How long was the marble falling?**
4. **An acorn hits the ground with a velocity of 14.7 m/s. How long did it take the acorn to land?**
5. **Complete the section summary below.**
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