**General Physical Science**

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*** | | |
| * A young Italian scientist \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ argued that falling object fall at the same rate. * The story goes that he dropped two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the Leaning Tower of Pisa. * Observers were amazed that they fell at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | |
|  | | |
| * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ due to gravity is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. * This is the same for all objects because it depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | |
| To find the velocity of falling objects, use the equation: | | |
| A stone is dropped from a cliff and hits the ground after 3 sec. What is the velocity when it hits the ground? |  | |
| * Air resistance is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that opposes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of objects through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | |
|  | | ***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.** | | |