

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Period: \_\_\_\_\_

### Gravity on Other Planets

1. What is your weight on earth? (you can approximate) \_\_\_\_\_
2. Convert your weight to Newtons by first dividing your weight by 2.2 (this converts your weight to kilograms) then multiplying the difference by  $9.8\text{m/s}^2$  (acceleration due to gravity on earth). Show your work.
3. Now imagine you are on a planet exactly the same size as earth, but made of different rocks, so that it's mass is twice that of earth. What is your weight? Show your work.
4. You find the planet just described as unsuitable for colonization, so you move to another planet which has the same mass as earth, but is 3 times smaller. What is your weight on this planet? Show your work.
5. Again, the planet is unsuitable for colonization. You come to a third planet. It has twice the mass of earth, but is also twice as large. What is your weight here? Show your work.