

***GRAVITY* IT'S NOT JUST A GOOD IDEA--IT'S THE LAW!!!**

Many moons ago, 325 years to be more exact, Sir Isaac Newton discovered gravity by watching apples fall from their tree to the ground. You may have even discovered this phenomenon yourself by getting dive-bombed by a sea gull at the beach or by dropping your baby sister. In today's lab we are going to examine a few of the principles of gravity as well as think of a few ways in which the pull of the earth affects us. Read the OBJECTIVES and get to work, my fellow Newtonian Physicists.

OBJECTIVES

YOU'RE ON THE RIGHT TRACK WHEN YOU CAN...

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| 1. | To discover how gravity affects objects of different size. | 1a. | Drop a penny, quarter, and silver dollar at the same time and tell which hits the ground first or whether they all fall at the same rate. |
| 2. | To notice how gravity affects our lives and the earth around us. | 2a. | Think of and list at least 3 ways in which life on earth would be different without gravity. |
| | | b. | Give three examples of how the effects of gravity can be seen in the real world. |

Directions

1. Come up to the "bank" (my desk) and withdraw one penny, one quarter, and one silver dollar.
Take these back to your lab table and get ready to experiment with gravity.
2. First, pick up your penny and quarter, hold them both at the same level (at about 4 feet of the ground,) and drop them. Make sure you let both go at approximately the same time. Record your observations in the space below.
***By the way, you can repeat this procedure several times, if necessary.
3. Now, drop your penny and silver dollar just as you did in step #2. Again, record your observations.
4. Since dropping things is so much fun, kids, we're going to do it again. Only this time we're going to drop a banana and a plastic baggie. When dropped at the same instant, which hits the ground first? Record your findings below, check your coins back into the bank, and answer these thrilling questions below.

??? REALLY FUN & EASY ?????? FUN & EASY ?????? QUESTIONS ???
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1. What did you notice when you dropped objects of different sizes to the ground?
EXPLAIN

2. When you dropped the banana and plastic bag at the same time, did they both hit the ground at the same time? If you were going to jump off a 10,000 ft. cliff, would you want to have a banana or a giant plastic bag in your hand ???

3. Why do objects like plastic bags and parachutes seem to be less pulled by the earth's gravity than coins or bananas? Could the air have anything to do with it?

4. How would our lives on earth be different without gravity ? Does it cause landslides, make rain fall from the sky, and make the roof on Farmer Jones' barn sag? List at least three examples of how we can see gravity in action. BE IMAGINATIVE!!!

EXTRA CREDIT EXTRA CREDIT EXTRA CREDIT

1. While out on the Great Plains Target Shooting Range, Buckskin Burt, the Buffalo-Bruising Bear Hunter is practicing his long-range musket skills. Just for the heck of it, he points his gun, which is 6 inches off the ground. Which will hit the ground first, Burt's "chew," or his bullet ??? **EXPLAIN YOUR ANSWER**

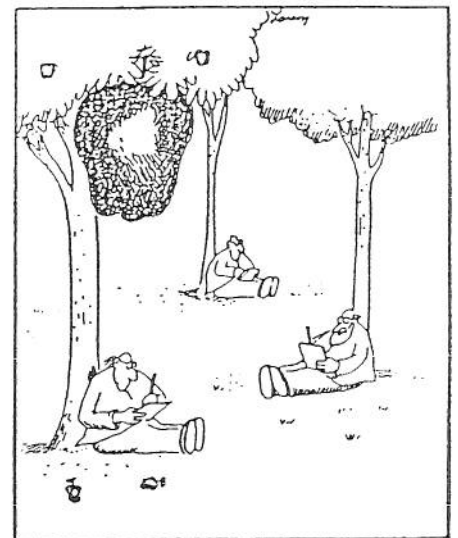
2. Who discovered that objects of unequal mass will fall to the earth at the same rate? Where was this discovery made? **HINT*** It was NOT Sir Isaac "Fig" Newton!!!**

MMMM MILKY WAY

According to the Interplanetary Elvis Presley Weight Chart, Elvis weighed 255 pounds when he winked off... on Earth. But how much would he have weighed on another planet? Here's a handy guide:

Elvis on:

- Mercury: 97 lbs.
- Venus: 232 lbs.
- Mars: 97 lbs.
- Jupiter: 648 lbs.
- Saturn: 775 lbs.
- Uranus: 232 lbs.
- Neptune: 303 lbs.
- Pluto: 13 lbs.
- The moon: 43 lbs.
- The sun: 7,140 lbs.



"Nothing yet... How about you, Newton?"