

## GRAVITY EXPERIMENTS BALANCING ACTS

These gravity experiments are fun to do and use materials found around the house. Three centuries ago Newton discovered gravity. Gravity holds us to the Earth and keeps us from floating out into space. If you weigh 100 pounds on Earth and moved to the Moon to live you would only weigh 17 pounds if you stepped on a scale there.



Fun balancing experiment



The force of gravity is also the reason why if you hold a potato, fork and pencil in your hand and let them go they will fall to the ground. In these intriguing experiments you will be balancing three objects on the edge of a table. The first experiment will be with a pencil, fork and potato. After balancing these three objects you will try to balance other objects.

### MATERIALS

- Pencil
- Potato
- Orange
- Apple
- Other fruits or vegetables
- Fork
- Edge of a table

## DIRECTIONS

1. Place a potato on the ground.
2. Push a sharp pencil through the potato so it reaches the other side.
3. The pencil should stick out from the potato about the width of two fingers.
4. Stick the fork in the potato at an angle.
5. See the picture for an idea.
6. Try to balance the pencil lead on the edge of the table.
7. If it doesn't balance move the fork up or down and try to balance the objects again.
8. Continue moving the fork until the three objects balance on the edge of a table.
9. If your table edge is too wide use a clipboard weighted down instead.
10. After you have balanced the potato try the same experiment with an apple.
11. Notice angle of the fork compared to the potato.
12. How do you think an orange should be balanced?
13. Balance the orange, fork and pencil. Were you right?
14. Try balancing other fruits and vegetables that have different shapes.