

A few examples to illustrate the concept of center of gravity to your child.



You would need to adjust the amount of water in the bottle based on the tilt. Make the hole in the tube (kitchen towel tube used here) a little larger than the bottle top so that it is almost horizontal rather than perpendicular to the tube. The figure on the right illustrates the same idea but using an eraser instead. I figured out the amount of tilt by a trial and error process, starting with least tilt (i.e., the tube almost vertical) till I got to the point where it was easy to balance by just slipping in the eraser.

In the next picture, the heavier part of the hammer is under the counter, keeping the wooden ruler precariously poised. There is nothing holding up the other end of the ruler. In the picture on the right, the weight of the handle/arms balances the weight of the



head of the fork and the spoon. It looks much better in 3-d than in this 2-d picture. From the shadows cast by the handles, you can tell that they are not touching anything and are well above the countertop. It isn't difficult to balance the toothpick end on the rim. (3 more pictures of the fork/spoon from different angles.)



The next two pictures again involve toothpicks and a fork and spoon. It is once again only center of gravity coming into the picture. No glue or any other material was used to hold the pieces together. Once you know the procedure, it doesn't take more than a minute or two to complete this object of art.



