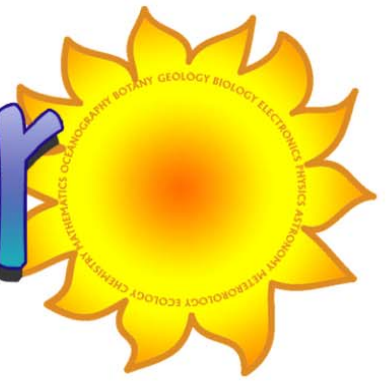


# Science in the Summer



## GRAVITY FIGURE

To show how to balance an object using the center of gravity.

### MATERIALS:

- 2 styrofoam balls, one small, one medium
- 5 round toothpicks
- 1 piece of wire
- 1 small piece plasticine or clay

### WHAT TO DO:

These figures should be people like with the medium ball as the tummy, the small ball as the head and the toothpicks for arms, legs, and neck. Try to keep the body in mind when creating.

Take the medium styrofoam ball and place two toothpicks on opposite sides of the ball, to look like arms sticking straight out.

Take two more toothpicks and stick them coming out of the bottom of the same styrofoam ball, at a slight outward angle, so they look as if the ball is standing with its feet apart for balance.

Take the last toothpick and stick it out of the top of the styrofoam ball to form the neck. Now place the small styrofoam ball on top to become the head of the figure.

Try getting it to stand. Probably won't succeed since the toothpicks don't offer enough stable surface on which to balance the figure.

(Adult help might be needed for this next step.) Take a long wire and make sure there is a 90 degree, right angle bent into the wire about a quarter of the way from each end. This should give you a shape looking like three sides of a rectangle.

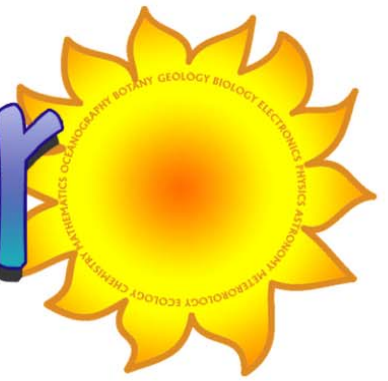
Take one end of the wire and put the piece of plasticine around it, pressing it on.

Take the other end of the wire and stick it into the center back of the larger of the styrofoam balls (center back of the figure).

(continued on back)

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# Science in the Summer



## GRAVITY FIGURE

(continued)

Now try standing the figure near the edge of a table, so the wire hangs down and the plasticine ball part of the wire is under the table. Try to make the minor adjustments needed to get the figure to balance in an upright position.

Adjustments include:

- straightening the bent wire slightly
- evening out the toothpick legs
- adjusting the plasticine piece
- adjusting the angle of the neck; or other minor adjustments to get the figure to stand, even if it rocks back and forth for balance.