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# Prisoner of a Chair

You  
Chair  
**What is Needed**

Sit up straight in a chair.  
Fold your arms over your chest.  
Keep both feet in front of you.  
Knees together.  
Now, without leaning your body forward,  
or pushing back against the back of the chair,  
attempt to stand up.  
What happens?  
Why?

**What to Do**

The quantity of material in a body is called mass. A whale has more mass than a canary.  
The attraction between your mass and the mass of the planet is called your weight.  
Your weight is a measure of the force with which the earth attracts you.

The center of gravity is that point at which all the gravitational attraction or weight of an object may be considered to be concentrated.

The gravitational pull of the earth makes the center of gravity of a body get as close as possible to the center of the earth.  
The direction we call "down" is the direction that leads to the center of the earth.

As you are sitting,  
your center of gravity is pulled toward  
the center of the earth by gravity.  
Most of your weight is now below your waist,  
so you are unable to move.

**What is Happening**

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