A bucket of water has a spring soldered to the bottom, as shown. A cork is attached the spring, and is therefore suspended under the surface of the water.

You are on top of the CN tower, holding the bucket, and step off. While falling towards the ground, do you see the cork move towards the top of the water, towards the bottom of the bucket, or stay where it is relative to the bucket and the water?

1. The cork stays where it is.
2. The cork moves towards the surface of the water
3. The cork moves towards the bottom of the bucket.