Answer #145

The answer is (d): the candle flame will go out, as can be seen in an mpeg video by clicking your mouse on the photograph below.

The tube serves the useful purpose of allowing the hot combustion products to rise out of the graduated cylinder and be lost in the surrounding atmosphere. When the tube is removed, the convection process (air coming down outside the tube and leaving up the tube) is impeded. The necessary oxygen in the tube mixes with the combustion products until there is not enough oxygen left to support the flame and it ceases. It only takes seconds!