

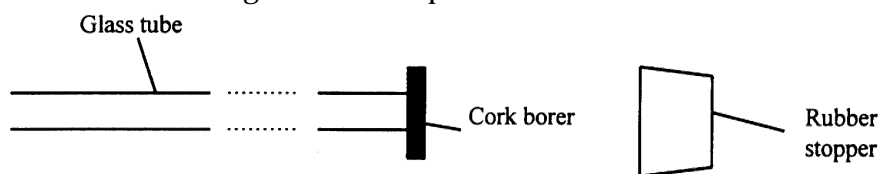


Safety Corner

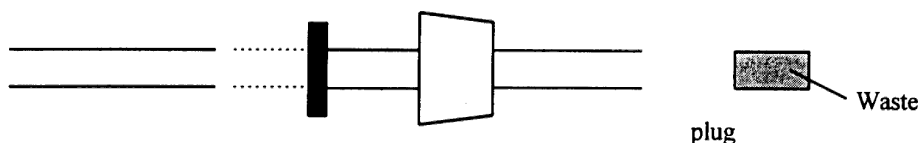
Using a Cork Borer to Assist in Threading Glass Tube through the Hole of a Rubber Stopper

Students are sometimes required to set up apparatus for experiments by themselves that involve the threading of glass tube through the hole of a rubber stopper. In doing so, there is a potential danger of breaking the glass tube and causing injury to the student who is working with it. In order to minimise the occurrence of this kind of laboratory accident, teachers should instruct students to use cork borer to assist in threading the glass tube through the hole of a rubber stopper and to use a towel/leather glove in holding the glass tube. In order to ensure student can master the skill, **demonstration of such skill by teacher before the experiment is recommended.** The following diagrams show the steps involved in threading a glass tube through a rubber stopper.

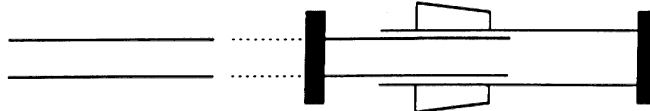
- (i) Select a cork borer and a glass tube of equal diameter.



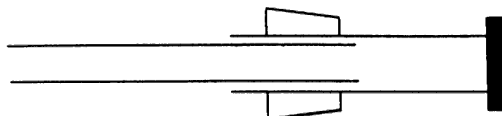
- (ii) Lubricate the cork borer with glycerine. Bore a hole on the rubber stopper from the side you wished to thread the glass tube.



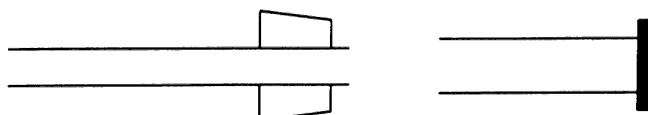
- (iii) Select and lubricate the next largest cork borer and slide it over the first from the other side until it has passed through the rubber stopper.



- (iv) Withdraw the smaller cork borer and replace it with the glass tube.



- (v) Withdraw the cork borer from the rubber stopper.



- Remarks:** (1) Rubber stoppers showing signs of aging (hardening of rubber) are not suitable for this method; and
(2) In setting up apparatus for experiments, students sometimes have to adjust the position of the glass tubing, teacher should remind students to lubricate the glass tubing and rubber stopper with glycerine/running water and hold the tubing with a towel/leather glove near the stopper when applying pressure.

