**Practical Safety Precautions**

**Always wear \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_.**

Sometimes you need to wear **\_\_\_\_\_\_\_\_\_\_** insteadif you are using concentrated acids and alkalis because they are **\_\_\_\_\_\_\_\_\_\_**. You may also need to wear gloves. If you get some dangerous chemical on your gloves you need to **\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_** off and replace them; corrosive chemicals can eat through the glove material!

Using Bunsen Burners

Remember – the **\_\_\_\_\_\_\_\_\_\_** part of the flame is **\_\_\_\_\_\_\_\_\_\_** the blue cone (not directly above the top of the chimney) and the hottest flame is a **\_\_\_\_\_\_\_\_\_\_** flame. You can adjust the heat of the flame by turning down the amount of **\_\_\_\_\_\_\_\_\_\_** that is used and by turning the **\_\_\_\_\_\_\_\_\_\_** so that less **\_\_\_\_\_\_\_\_\_\_** is let in.

Heating solids

Always use **\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_** to store your test tubes and boiling tubes in when you have finished heating. Select an appropriate holder so that you won’t burn yourself or **\_\_\_\_\_\_\_\_\_\_** the test tube when you are heating it.

Select the appropriate flame according to the teacher’s instructions. Either a gentle flame – a **\_\_\_\_\_\_\_\_\_\_** flame or a stronger flame, a **\_\_\_\_\_\_\_\_\_\_** flame. When the solid seems to have finished changing, make sure you stop heating and carefully put it back in the test tube rack to allow it to **\_\_\_\_\_\_\_\_\_\_** down.

Heating liquids

After you have carefully measured out the volumes of the liquids that you need and have mixed them in the **\_\_\_\_\_\_\_\_\_\_** tube, carefully set your Bunsen onto a **\_\_\_\_\_\_\_\_\_\_** flame. You need to heat this very gently so you should aim to constantly be moving the boiling tube into and out of the **\_\_\_\_\_\_\_\_\_\_**. If you feel the boiling tube start to **\_\_\_\_\_\_\_\_\_\_** it is about to “bump”. Immediately take the boiling tube out of the flame. When it has settled down, you can continue to heat it. You must always point your boiling tube towards an **\_\_\_\_\_\_\_\_\_\_** part of the room. Try to make sure nothing is ejected out of it – flying boiling liquids can cause a huge amount of damage. [That’s why you should be wearing **\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_** even if you aren’t doing practical!]

Heating flammable liquids

We always use a **\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_** for these and never heat directly with a Bunsen flame because the flammable liquid can accidentally catch **\_\_\_\_\_\_\_\_\_\_** and the glassware could **\_\_\_\_\_\_\_\_\_\_** and hurt you. Be careful of having flammable liquids near **\_\_\_\_\_\_\_\_\_\_** flames. Always put the **\_\_\_\_\_\_\_\_\_\_** back on the bottles for this reason.

Using toxic chemicals

Toxic chemicals are toxic for a reason! You must do everything in your power to avoid **\_\_\_\_\_\_\_\_\_\_** these chemicals and if you do, you must tell a **\_\_\_\_\_\_\_\_\_\_** and then very conscientiously clear away the **\_\_\_\_\_\_\_\_\_\_** so that none remains. We often wear **\_\_\_\_\_\_\_\_\_\_** if we use toxic chemicals.

**You are now safe and ready to practice chemistry!**