Making soluble salts practical - Justifying the method

Practical Method (*What you did*)	**Justification** (*Explaining why you did each step*)
1. Measure 40 cm^3 sulfuric acid into the 100 cm^3 beaker. The volume does not need to be very accurate, so you can use the graduations on the beaker.	
2. Set up the tripod, gauze and heatproof mat. Heat the acid **gently** using the Bunsen burner until it is almost boiling. Turn off the Bunsen burner.	*Why did you heat the acid?*
3. Use the spatula to add **small** amounts of copper (II) oxide powder. Stir with the glass rod.	*Why did you only add small amounts of copper oxide powder at a time?*
4. Continue to add copper (II) oxide if you cannot see it when **stirred**. When the copper (II) oxide has reacted, the solution is clear blue.	*Why did you stir the copper oxide?*
5. Stop adding the copper (II) oxide when some of it remains after **stirring**. Allow the apparatus to cool completely.	*Why did you keep adding copper oxide until no more would react?*
6. Set up the filter funnel and paper over the conical flask. Use the clamp stand to hold the funnel.	
7. **Filter** the contents of the beaker from step **3**.	*Why did you need to filter the solution?*
8. When filtration is complete, pour the contents of the conical flask into the evaporating basin.	
9. Evaporate this gently using a water bath (250 cm^3 beaker with boiling water) on the tripod and gauze. Stop heating once crystals start to form.	
10. Transfer the remaining solution to the crystallising dish (evaporating dish). Leave this in a cool place for **at least 24 hours**.	*Why did you leave the solution to cool for at least 24 hours?*
11. Remove the crystals from the concentrated solution with a spatula. **Gently** pat the crystals dry between two pieces of filter paper. These are pure dry crystals of copper (II) sulfate.	