

Preface

Participants, instructors and assessors should take note of the conditions as laid down in the Award Handbook.

This programme is for guidance and is not to be taken as a rigid syllabus. To indicate the content appropriate to young people with varying degrees of knowledge and experience, it is arranged under three headings: 'For beginners', 'For those with some knowledge', and 'For the more advanced', and participants are free to select as broad or as restricted an aspect of this skill as they wish, but appropriate social and cultural aspects are to be covered.

COLLECTIONS, STUDIES AND SURVEYS

CHEMISTRY

Introduction

Collecting, studies and surveys provide an excellent opportunity for those who show little interest in creative activities or handicraft skills to take up and develop a worthwhile pursuit from a very wide range of choice.

This activity should give a balance between academic interest and the practical work necessary to present the work done. In this way, the participant's understanding of the historical, social and cultural development of our society can be helped.

Although the opportunity for group work may occur less frequently than in other skills, in many cases both progress and understanding can be best achieved by group practice.

For beginners

Those taking this activity should:

- 1 Make a wall chart showing the distillation of coal and the uses to which it is put.
- 2 Grow a crystal producing as near perfect a crystal as possible. Alum and Copper Sulphate are good examples.
- 3 Describe and demonstrate, where possible, the methods used to separate mixtures. Describe the difference between a mixture and a compound.

For those with some knowledge:

Young people should:

- 4 Be able to manipulate and make a small model able to produce a constant supply of gas.
- 5 Prepare an illustrated study of a metal and non-metal showing their properties, preparation or manufacture and uses.
- 6 Show by practical demonstration the test for chlorides, sulphates, carbonates and nitrates.
- 7 Prepare an illustrated talk on a branch of applied chemistry, e.g. paints, fertilizers, plastics, etc.

For the more advanced:

A participant should:

- 8 Make a study of atomic structure including electrons, neutrons, protons, isotopes, atomic weights, valency, ions. Construct atomic models, e.g. a diamond, sodium chloride.
- 9 Produce a wall chart illustrating an industrial process other than coal.
- 10 Be able to describe and demonstrate the tests for five metal ions in simple solutions of their salts. Be able to identify one compound of any one of these.
- 11 Prepare a gas and test it for its properties.