

## COURSE DESCRIPTIONS

### **BASIC RESUSCIATION—ST JOHN AMBULANCE**

A nationally recognised 4 hour course by a first aid trainer. There will be an assessment at the completion of the course and successful students will be presented with a certificate, which is valid for 12 months.

### **CHEM ALERT TRAINING**

The Department of Education and Training are introducing a new system for managing all chemicals used in schools statewide.

Learn how to use the new software to produce Chemical register, Material Safety Data Sheets and Risk Assessments.

This workshop is recommended for laboratory technicians from country schools

### **IMAGE EDITING [Advanced]**

The manipulation of images using computer software. Bring along some photographs, which can be restored or enhanced. Some scanning techniques will be explored.

### **HOW DO I**

Confused ! Scared to ask? What's this for and how does it work? How do I clean my glassware? Can I recycle my CuSO<sub>4</sub>? How do I make an agar plate? My universal indicator is red what can I do? If these are some of the questions you are asking then this class may be for you.

This workshop will give you tips and advice on running a prep area from cutting glass to making a good starch solution. Basic techniques for school Laboratory Technicians.

### **DR ROSS MARS WORKSHOP**

Workshop with Dr Ross Mars looking at sustainable water use in schools, greywater re-use, irrigation methods, rainwater tanks, water-wise and permaculture gardens. Dr Ross Mars, Candlelight Farm and Candlelight Trust, and Greywater Reuse Systems, Permaculture Designer, Teacher, Author, Consultant.

You might like to have a look at these websites.

<http://www.cfpermaculture.com> and <http://www.greywaterreuse.com.au>

[www.waterinstallations.com](http://www.waterinstallations.com) and [www.redplanetplants.com](http://www.redplanetplants.com) email: [rossmars@waterinstallations.com](mailto:rossmars@waterinstallations.com)

### **MICROSCOPE REPAIR**

Bring along your school's microscopes to learn how to service and maintain your microscopes in good condition to get the maximum life from them.

### **CHEMISTRY CENTRE TOUR CURTIN UNIVERSITY**

Tour of the new chemistry building at Curtin University.

### **WORKING WITH ENZYMES/ BLOOD & FIBRE FORENSICS PETER BALL SOUTHERN BIOLOGICAL**

Enzymes are nature's catalysts. They act to speed up biochemical reactions to make them useful for metabolism in living organisms. However, since they are complex polypeptides, enzymes can be denatured by shifts in temperature and pH, and this in turn can affect the way they work.

Participants in this workshop will experiment with a range of enzymes including amylase, trypsin, lipase, rennin and urease to compare their reactions and discuss their suitability for student experiments. We will also look into troubleshooting enzyme reactions and using a datalogger to measure reaction rates where possible.

Blood and fibres are often collected at a crime scene and used as evidence to track down the perpetrator, so forensic science makes an ideal context to present lessons on these topics. Whilst solving a mystery, students can gain experience with microscopes, understand the need for experimental controls and learn about the composition of blood, and the structure and properties of fibres. Participants will use luminol to find traces of blood then carry out an ABO blood typing exercise on realistic artificial blood. To complete the workshop, various natural and synthetic fibres will be examined to determine their source. Can we identify the guilty party?

### **UWA GEOLOGY**

Earth Science plays a major part in forensic studies. This is your chance to be a forensic scientist and compare sand samples from inside the suspects' cars, soils from their sneakers, pollen from their clothes and chips of gravel from their car tyres, using a range of the microscopes employed in Earth Science, and some simple tests, in a workshop designed to make Earth Science fun. However, to set the scene we will first give you a brief overview of the processes which gave rise to the kinds of samples we are using. We will show you how the Earth recycles its materials, and how the four major components of our planet: rocks and soils; atmosphere and gases; oceans and fresh water; and life itself; interrelate in a holistic way.

### **FUNNY FACES – FACIAL RECONSTRUCTION AND FORENSIC ANTHROPOLOGY IN THE CLASSROOM**

If you are found without fail curled up on a Sunday evening watching the latest adventure of Bones and her crew, then this session should tickle your funny bone (or at least your fancy). Nicole Harris will guide you through Forensic Anthropology and Facial Reconstruction, culminating with a hands-on opportunity for **you** to build a face from skull to skin. This course aims to give theoretical and practical ideas for use in the classroom.

### **INTRODUCTION TO CHEMICAL LABORATORY TECHNIQUES**

Preparing molar & percentage solutions using solids & liquids, diluting acids, gas preparation, cutting reactive metals, filtration and preparing Chlorine and Bromine water.

### **ASTRONOMY NIGHT**

Investigating the sky using computer generated star maps, including demonstration & a hands-on session with free downloadable software. After lunch is free time until 6:00pm when the evening session starts. The presenter will be available for those who wish to investigate further. The evening session includes setting up the telescope, observations and using a Sky Scout to locate and identify stellar objects and will run to about 10:00pm.

### **EARTH SCIENCE "LIFE'S A BEACH" POINT PERON**

Visit Point Peron, fossick for fossils, search for ancient sea levels and root about for rhizoids. On the way Julia Ferguson will describe the country you travel over from an Earth Science (Rocks in her head) perspective.

**SENSIBLE SHOES MUST BE WORN AND SOMETHING FOR THE SUN.**

### **INTRODUCTION TO WORKSHOP TECHNIQUES**

Learn the skills needed to safely use tools such as a drill press, screwdrivers and wire strippers. Use of hook-up wire, banana plugs or alligator clips to construct leads. Design and lay-out a demonstration circuit board before fabricating a working demonstration board to take back to your school.

### **PERTH ZOO**

Overview of secondary education experiences at Perth Zoo Science challenges with breeding threatened native species (group activities)

Tour of Native Species Breeding Program (two threatened species), a guided walk through the African Savannah zone

Note: Due to the increased cost of this excursion participants **MUST** bring their own lunch or purchase it at the zoo.

### **ST JOHN'S PATHOLOGY CENTRE**

A guided tour of the laboratory facilities at the pathology centre in Subiaco looking at the process of making blood films, observing cancer cells and pap slides. A presentation of slides for observation and discussion will be included.

### **NATURALISTE MARINE DISCOVERY CENTRE**

Explore the marine biology and ecology of WA's coastal and inland waterways at Hillary's Boat Harbour.

### **PLASTICS WORKSHOP**

Learn skills necessary for cutting, joining, folding plastic materials including high and low density Polystyrene, Polyethylene, Acrylics [Perspex] and EVA [Ethylene Vinyl Acetate].

### **COSMETIC CHEMISTRY**

This is a hands-on workshop. Learn how to make hand cream, soaps, lip balm with easy no fuss recipes. Most ingredients can be found in the supermarket. The emphasis is on natural allergy free products.

### **LOWER SCHOOL PHYSICS WORKSHOP**

Magnetism & Electricity – simple circuits – series & parallel, interpret circuit diagrams, conductors & non-conductors. Forces & Energy – use of ticker timers, spring balances, dynamic trolleys. Heat – use of ball & ring, bar & gauge, conductivity ring, bar breaker apparatus.

### **BIOLOGICAL LABORATORY TECHNIQUES**

Preparation of agar media for growing microorganisms and tissue culture. Sterilization and aseptic techniques.

Preparation of microscope slides – wet mounts, permanent slides and staining.

Use of monocular and binocular microscopes, preservation of plants and animals.

### **KING'S PARK**

A tour of the Biodiversity Research laboratory and a guided walk through King's Park.

### **REPAIRS WORKSHOP**

Bring along your equipment that needs repair and learn how to fix it.

### **WA MUSEUM / LIBRARY BEHIND THE SCENES TOUR**

See the preparation and design of exhibitions including the role of the Taxidermist at the Museum.. A behind the scenes tour of the conservation laboratory of the Alexander library.