

00 00 Exploring the explorings.



Years Foundation to 10;

Difficulty: ranges from * to ***

National Curriculum codes: added.

These activities lead students to use the Go Micro clip-on microscope to learn about our world.



Explore with Peter Macinnis

Introduction

These notes relate to using the Go Micro clip-on microscope to achieve some of the objectives of the Australian National Curriculum in science. Here you will find activities to be used in Science, from Foundation Year to Year 10, using the Go Micro in classroom and out-of-doors learning. Adept teachers are invited to adopt and adapt these ideas.

The notes

Up front, you will always find an explicit link to the science National Curriculum. Here is a police artist's impression of the National Curriculum, based on the descriptions of victims:



As a wilderness walker, I am at home in tangles like that, so I hope my efforts will be helpful. There is a four-digit number in the heading of each activity: the first two indicate Year, from Foundation (00) to 10, the next two just indicate a sort-of sequence. I plan to use these to help readers jump from one part to another.

(Wearing my gadgeteer hat, there is also a Gadgets and Tricks section, and these are identified by numbers starting with 99.)

Who am I? I am Peter Macinnis, once a high school science teacher, once a bureaucrat, once many other things, always a naturalist and enquirer into curious things, always a gadgeteer and always a writer, the author (among other titles) of *The Rainforest*, 2000 Whitley award winner, shortlisted by the Wilderness Society in 2000; *Australian Backyard Explorer*, Children's Book Council of Australia Eve Pownall Book of the Year, 2010, international White Ravens award 2011; and *Australian Backyard Naturalist*, Whitley award winner 2012, WA Premier's Prize for Children's Literature, 2013.

My *Big Book of Australian History* (one of my six CBCA Notable books) is now in its third edition, and I have two other books in press: *Australian Backyard Earth Scientist*, and *Australian Survivor Kids*, both for the National Library of Australia, my main publisher for the past decade. In my spare time, I am a bush regenerator.

I am also a practising grandfather, and for several years, as part of the CSIRO ‘Scientists in Schools’ program (now branded as ‘STEM Professionals in Schools’), I have been the “visiting scientist” at Manly Vale Public School in Sydney, which is like acquiring 500 extra grandchildren without the usual effort.

My scientist wife, our scientist children and I care passionately about the future—and there is no future quite like children. This is where our battle for the future begins.

About the organisation

In some cases, there are introductory comments, but there will always be **Precautions**, mainly dealing with safety issues. Please consider your class in the light of those precautions, before you choose an activity. Then look at the **What you need** list.

Where it strikes me as a good idea, I have added a section on **Sources**, because I happen to be quite useful in that area. In the same way, I am a master of trivia, so when I add a section labelled **Background for teachers**, this is to help them understand the principles. Having to stay ahead of bright, wonder-filled students is *good* for young teachers, but a bit of help saves them from becoming old before their time, and it helps them kindle even greater wonder.

This is all about the practical, so don’t look for pedagogical theories here. Instead, you will find examples of what to expect, or how to do it, and external links that may provide extra leads. Almost everything in these items has been tested within the last six months, and there are photos to prove it. The partly-baked ideas where testing has not been done (like 02 02, raising silkworms) are clearly flagged, and even those are based on old experience.

These ideas are linked to particular sections of the National Curriculum, but nothing is compulsory, nothing is prescriptive.

Paper shuffler: “But where does this belong in the curriculum?”

Me: “In the slot marked wonder...”

Paper shuffler: “But there *isn’t* any slot marked wonder...”

Me: “Then *make one!*”

Please: jump in, enjoy—and share what you learn with others. I am old, I am cunning, this is my legacy, and I need your help in sharing it. That way, we will keep the spark, the flame, the conflagration of wonder alive.



Please share your student projects in

