This workshop will provide educators in various levels with ideas that can help with creating learning resources and lessons that can help with the issue of integration. The main ideas that will be presented in the workshop will come from established environmental education curricula that have been used in the United States for over 10 years – Native Seasons, Project WET, WILD, and Learning Tree. Through developed in another country, the activities presented in these learning materials are vey flexible and can be easily adapted to the context of its learners. Grounded in environmental education, these curricula used what7s available in the learner's community environment to understand the concepts in science. The workshop will begin with a brief description of the tenets of environmental education and the background of each of the curricula.

The rest of the session will consist of hands-on and lively activities that are mostly geared to some topics in the new Philippine K-12 Grade 6, 7, and possibly Grade 8 (if time permits) science curricula in science. Attendees from other countries might want to prepare a list of topics for their Grade 6- or 7-equivalent levels for referencing with the learning materials.

The proponent of this workshop neither in any way represent the organizations that developed the mentioned learning materials nor is connected with the same organizations. The proponent just wants to share options that became useful during his teaching career. It is a workshop where teachers can share ideas to help cope with the demand of the new curriculum.

Prof. John Paolo Dalupang, Ateneo de Manila University, Qezon City, Philippines

A Simple Laboratory Work on DNA Extraction at Secondary School Level

Yoshihiko Yonezawa, Noriko Banba
Naruto University of Education, Japan

For a biology class at the secondary school level, a simple method for DNA extraction from flower buds of broccoli was developed using a mixture of 4% NaCl solution and 1% SDS (sodium dodecyl sulfate) solution (24:1) as an extraction medium. However, this simple method is unsuitable for the DNA extraction from fruits of banana and strawberry, because the UV absorption spectrum of the ethanol precipitate from the extracts of banana and strawberry did not show the typical absorption curve of DNA. Therefore, we propose broccoli, which can be obtained at any time and by the reasonable cost, as a plant material. In addition, the diphenylamine-colorimetric method is also proposed for detecting extracted DNA. In this workshop, we demonstrate this simple method for DNA extraction from flower buds of broccoli.

Prof. Yoshihiko Yonezawa, Department of Biology, Naruto University of Education, Tokushima, Japan

****

Publication

A book, ***Biology Education for Social and Sustainable Development***, was published in 2012 by Sense Publishers, Rotterdam, Netherlands. Some papers presented at **the 23rd Biennial Conference of the AABE** which was held in Singapore in October 2010 were compiled in this book by the co-organizers of the conference, Dr. Mijung Kim and Dr. C. H. Diong. You can refer to the abstracts of these papers in **the sixth volume of the *Asian Journal of Biology Education*** (2012).

****