

Designing Effective Science / STEM Instruction

4 day FREE* Professional Learning Program for Primary & Secondary School Teachers

This is a FREE workshop and open to all Government School Teachers

Session1: 10-11 May 2018

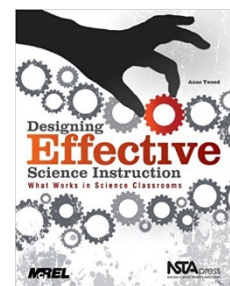
Venue: Earth Ed, Olympic Ave 3350

Session2: 30-31 July 2018

Total cost: \$100 plus GST per person for catering only

Looking... For 35 secondary and primary teachers including science specialists

To participate in 3 month professional development program



Energize... Your teaching with effective instructional strategies through...

CONTENT – Improve your content instruction by learning and applying a GVC (Guaranteed and Viable Curriculum) process to create and/or revise science/math curriculum maps based on the Victorian Standards to create content storylines and determine performance expectations;

UNDERSTANDING – use the curriculum maps to identify/revise sample lessons that teachers will experience to help build their capacity to effectively support student understanding through inquiry, formative assessment and STEM practices. The PD will link the learning experiences to research findings that form the basis of Designing Effective Science Instruction (Australian Version); and

ENVIRONMENT – support the development of positive classroom environments where students are engaged and motivated to learn along with the integration of STEM project-based lessons into each of their units of study.

Expect...

- A copy of the Designing Effective Science Instruction (Tweed, 2014) book.
- Opportunities to work with others to align curriculum maps with the Victorian Standards.
- Ongoing learning experiences that include engaging in model pracs, receiving sample lessons and activities that support STEM learning, intersession online learning sessions, and formation of a professional learning community to help sustain the program implementation.

* The professional learning program is free due to it being 100% subsidised. The only cost is the catering, which is \$100 per participant for the 4 days.



ABOUT THE PRESENTER

Anne Tweed is the STEM Director with McREL International, which has an office in Melbourne. Her work at McREL supports professional development in the areas of effective science and maths instruction, inquiry-based instruction, formative assessment, high quality instructional practices, teaching reading in the content areas, analyzing instructional materials, and audits of science and maths curricula and programs. Ms. Tweed is a past president of the National Science Teachers Association (NSTA; 2004-2005) and a 30-year veteran science and maths educator and supervisor. Ms. Tweed has received the Distinguished Service Award and the Distinguished High School Science Teaching Award from NSTA, the Outstanding Biology Teacher Award for Colorado, and is a state Presidential Award honoree. She is the author of *Designing Effective Science Instruction*; (Australian Edition 2014) *Hard-To-Teach Biology*

Anne Tweed will facilitate sessions that work to create curriculum maps featuring essential content that aligns with the Victorian Standards for science. The documents will guide lesson planning for teachers by identifying the essential unit learning goals (key concepts), the lesson level learning targets, the success for students, and activities that link to the targets and reflect the guidance in the Victorian Curriculum. The participants will, with guidance:

- Analyse the Victorian standards to clearly articulate what all students must know, understand, and do to meet the standards. Determine units and a scope and sequence for primary year levels and generate a proposed timeline by year level that provides opportunities for students to learn the essential concepts.
- Write the unpacked standards as measurable learning goals and targets with clear, specific language. (*Example: Topic – Probability: Understand that the number of trials in an inquiry can produce a wide variation in results*)
- Identify the key concepts and learning goals and targets as declarative knowledge or procedural knowledge. (*Example: Topic – Probability: Understand that organisms can be grouped based on physical characteristics – Declarative Knowledge; Through discussion compare observations with predictions – Procedural Knowledge*)
- Generate a list of lesson activities that form the basis of lessons aligned to the learning targets. Include one STEM project-based lesson for each unit.
- Identify an initial list of important vocabulary from the standards. This list may be associated specifically with content or with process. (*Example: organisms, non-living, prediction, observe*)
- Participate in STEM pracs to build the capacity of teachers to implement STEM that links both to literacy goals and to the science concepts.

For more information contact:

Scarlett McLean admin@earthed.vic.edu.au
Administration Manger +61 3 5337 2090

For bookings fill in the attached form and post it to PO Box 257, Ballarat, VIC, 3353 or go online to <http://earthed.vic.edu.au/index.php/professional-development-bookings/>

Booking Form

Designing Effective Science / STEM Instruction 4 day FREE Professional Learning Program for Primary & Secondary School Teachers

This is a FREE workshop and open to all Government School Teachers

Session1: 10-11 May 2018

Session2: 30-31 July 2018

Time: 8:30am – 3:30pm

Total cost: \$100 plus GST per person for catering only

RSVP: 20th April 2018

Venue: Earth Ed, Olympic Ave 3350

School: _____

Address : _____

Telephone : _____ Fax : _____

Teacher Name (s): _____

Email (s): _____

Special Dietary Requirements: _____

Yes, I /We would like to attend the 4 Day
Teacher Professional Learning Program

Number of places