

What sustainable practises happen at 'home'?

Short showers, lights off when leaving a room, public transport, food garden?
Farms are both homes and businesses, so what about farm management for sustainable food production?

Where can you find biodiversity?

Zoos, and National and State Parks?
What about (Wimmera) farms?

Challenge – How to raise awareness and pride, among farm children, their classmates, teachers and community that (Wimmera) farmers employ many sustainable practises to produce food and look after (remnant) biodiversity on farms.

National Science Week Program – Sustainability in our Wimmera Farmlands

This program provided sessions for National Science Week using resources* made by the S1 SPP recipient school.

It was presented as in-class PD's for small primary schools covering living things on farmlands, sustainability, with literacy/communication interpretation and discussion based on the resources*, and a reflection about the learning.

*The resources are the St Joseph's P. S. Hopetoun Senior Class Science Talent Search (STS) Picture Book entries:



Click on an image to read the book, or go to <http://www3.sjhopetoun.catholic.edu.au/sts-resources-2012.html> for these and the questions sheets. All have been suggested to FUSE. The first and last books in this line later won major STS bursaries.

This program, a (partial) solution to the challenge above, went to seven small Wimmera primary schools during National Science Week (NSW) 2012 - the Australian Year of the Farmer (AYF).



e1 – The local and regional theme, particularly **engaged** farming boys, who eagerly shared their knowledge making for very authentic learning. They well used this opportunity to contribute confidently to discussions about sustainable solutions to the farming issues addressed by the resources* - enriching the learning experience for all: themselves, their class mates and teachers.



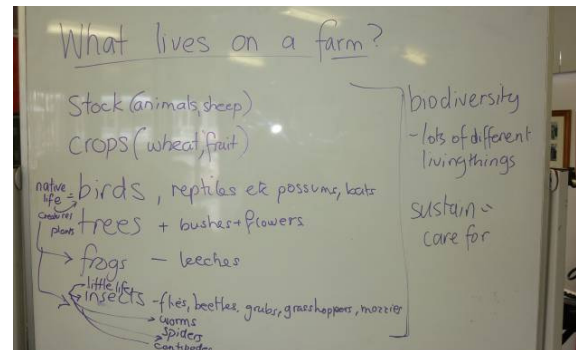
e2 - For the initial **exploration** of what lived on farms, children provided the expected answers of stock and crops – and held props for these out the front.

Then we **explored** deeper and the range of living things expanded to cover native and introduced creatures and plants. Each brought another child to the front to hold a prop and gave a visual increase in the diversity of living things on farms –



"Children were actively involved in the session which allowed them to be quickly engaged and stimulated" St Mary's P.S., Donald.

So that the biodiversity of local farmlands described came from the experiences of the children contributing.

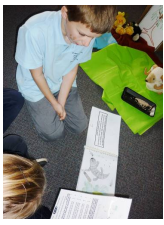


e3 With the concept of sustainability being covered in schools, the application to farmlands required only a quick **explanation** to lead into the St Joseph's PS "Yes we can farm sustainably" books* as the main activity.

e4 In six groups, with teachers, aides and the Wimmera HUB SPP environmental educator circulating to help, the children shared one of the six books*.



Each book **elaborated** both the idea of biodiversity by specifying native species and of sustainability by describing farm practises that would care for them or for the farm in general when under threat by dry times or pests.



The St JPS books* really resonated with the children in their groups. They were not perfect, but they were perfect for stimulating discussion. Children clearly enjoyed reading the stories out loud and looking for extra (Science) information in the pictures.

Learning Outcomes

What did you gain most?
"Watching someone else in action deliver the class. Students were really engaged and the content was very appropriate" Birchip P-12



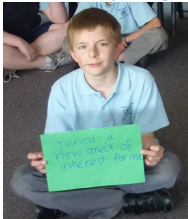
A sheet of [questions](#) prepared by the SPP EE specific to each book guided groups to find the key Science information that the illustrator/authors (children) had put into their stories. Answers were shared in discussion.

What did you most gain? *"That children's writing can make other children aware of the world around them and how they are as much 'in charge' of looking after it, as adults."* Our Lady Help of Christians P.S., Murtoa

Back as a whole class, each group reported on the content of their book for its biodiversity/sustainability problem, solution and, importantly, gave their opinion of if it would work and if they knew of alternatives. There were some thoughtful contributions from farm children. Their sharing of practical experiences showed how sustainability and biodiversity concepts apply on local farmlands.



What did you gain most? *"Just how relevant this topic is to my class"* St Peters LS, Dimboola



e5 Did 2012 NSW have an impact on you? (It aims to 'ignite the imagination!') This SPP program contributed 7 events across the Wimmera.

The session [evaluation](#) for the children took the form of a colour card reflection [1]. Were imaginations ignited? The green card showed they were with a new area of interest And overall, 1/10th of children chose the green!

"The message 'got through'." St Mary's P.S., Donald.

Other colours covered how much was new? An 1/8th reported that 'all to lots' of it was new- making a 1/4 learning many new things. About 1/8th reported 'nothing new' – most being the contributors of farm knowledge to the other children's learning.

Participants:

- 9 teachers
- 10 teacher aides
- 7 small P.S.
 - 1 Govt,
 - 1 Lutheran,
 - 5 Catholic
- 144 children from
 - 3 @P-6 classes
 - 1 @2-3 class
 - 3 @5-6 classes
- From the towns of
 - Birchip,
 - Dimboola
 - Donald,
 - Murtoa,
 - Nhill,
 - Stawell,
 - Warracknabeal.

"Sustainability and our Wimmera Farmlands" supported a suite of DEECD programs [3]:

- VELS levels 1-4 in the Dimensions of Science, Humanities, English, Arts, Communication, Personal and Interpersonal Development, and Sustainability [4] in these multi-level classes
- the e5 instructional model
- Principals of Learning and Teaching.
- Literacy as a DEECD Grampians Region Focus,
- Science Talent Search as a priority Science Program in the *Energising Science and Mathematics Education in Victoria Strategy*[#]
- Actions 14 (needs) and 20 (others) in the Blueprint,
- reforms 3 (innovative ideas) and 4 (from outside the school gate) in 'Victoria as a Learning Community'.
- Registered as PDi C5H45833, it addressed many Standards of Professional Practise and Principles of Effective Professional Learning. [5]

This in-class PD had aimed to [6]:

- 1 extend sustainability ideas into farming.
- 2 introduce the STS Picture Story Book genre
- 3 introduce the 2012 special years
- 4 use images as well as text for discovering Science.

Aims 1 and 4 were shown to have been successful in the NSW feedback [2]. The Wimmera HUB feedback [7], added that this PD was seen as very useful for its training in: STS Values for Science; STS structure; sustainable concepts for farming and using farm children's knowledge.

The full learning community for this project comprised each school learning community of teachers and children, with St Joseph's PS, Hopetoun. It was extended further by school newsletter reports to the wider community of families and supporters, e.g. from Birchip P-12 [8].

"Your session yesterday was wonderful. Thank you very much for offering us the chance to do it." OLHC PS Murtoa



With thanks to St Joseph's PS y3-6 author / illustrators for their inspiring books to share. J.C.

Most teachers also completed two feedback surveys as formal [evaluation](#). The NSW survey [2] revealed that although all teachers saw this topic as important, none had had investigated it before, but most now would now find out more. The PD increased their interest in Science and provided a new way of thinking about Science – including looking for information in pictures.

The Wimmera has had a low participation rate in the annual STS. Teachers in this SPP program had had no previous contact with STS. Thus, this SPP also built their capacity, by raising awareness of what STS entries are like and their potential for enriching Science and Literacy education.



Supporting pdf links: [1] = full reflection results [2] = NSW survey analysis [3] = relevance to DEECD documents [4] = relevant VELs domains [5] = PDi registration [6] = Session aims and plan for teachers [7] = HUB survey analysis [8] = Birchip P12 newsletter story