

## News

### Cream of the Crop competition

Students are invited to create a PowerPoint presentation about a unit of their studies, why it matters and how it's relevant to everyday life. The competition is open to students in NSW secondary schools and tertiary institutions involved in agriculture, primary industry and natural resource management related studies. Great cash prizes are on offer. See: [www.dairyouthaustralia.com.au/competition](http://www.dairyouthaustralia.com.au/competition)

### New video on-line

It's well known that growing trees absorb carbon dioxide from the atmosphere through photosynthesis and store the carbon. But did you know a high proportion of the carbon in forest products remains stored in the product for a period of at least 50 years - much longer than previously thought. Join researcher Fabiano Ximenes as he talks about wood, carbon and climate change in our latest video for schools. To view the video go to: <http://www.landlearnsw.org.au/production-chains/video-case-studies>

### Events calendar

Did you know World Fisheries Day is on November 21? Find more natural resource related special dates and events for teachers and students in our new calendar. <http://www.landlearnsw.org.au/events>

### Spotlight: Tocal Field Days

Held each year, this event has been running for over 20 years. Enjoy the agricultural exhibits and participate in schools education activities.



Next year the event will run from 30 April-2 May

<http://www.tocalfielddays.com/>

## Websites

### Focus on school gardens

**Australian School Gardens Network**

<http://australianschoolgardensnetwork.ning.com/>

**Australian Plant Society**

<http://www.austplants-nsw.org.au/index.htm>

**Australian Association of Environmental Education**

<http://www.aaea.org.au/docs/2004conference/Knight%20D.pdf>

**Junior Landcare**

<http://www.juniorlandcare.com/>

**Life is a garden**

<http://www.lifeisagarden.com.au/>

**Stephanie Alexander Kitchen Garden Foundation**

<http://www.kitchengardenfoundation.org.au/>

**Fresh for Kids**

<http://www.freshforkids.com.au/>

## Meet Michele Gairn

### What do you do?

I am responsible for managing a range of Royal Agricultural Society of NSW (RAS) schools education programs both inside and outside the Sydney Royal Easter Show.

### Best part of my job?

The opportunity to network with the primary, secondary and tertiary education sectors to raise the profile of agriculture and the exceptional career opportunities associated with the primary industries and natural resources sector.



# Activity

## How much Vitamin C can you see?

**Duration:** 30 minutes

**Objective:** To gain an understanding of the importance of vitamins in our diets, especially Vitamin C, and learn how to simply test for its presence.

**Background:** Vitamins need to be included in our diets because our bodies don't produce vitamins by themselves. Vitamins are essential in small amounts to maintain good health.

Vitamin C is the most commonly used vitamin supplement in Australia. It can't be stored or produced by the body, so it needs to be included in our diet.

Citrus fruits such as oranges, grapefruit and lemons contain Vitamin C as well as tomatoes and green peppers (capsicums).

Other vegetables providing an excellent source of Vitamin C include potatoes, peas, cabbage and cauliflower, snow peas and spinach.

Vitamin C has a reputation for preventing colds and flu. Medical science suggests that it may reduce the symptoms or the duration of the cold but not prevent it.

A lack of Vitamin C has plagued our history with a disease called scurvy, common until the 1900's - especially among sailors and those coming to Australia by boat.

Scurvy is caused by a lack of Vitamin C and the symptoms are - lack of appetite, bleeding gums, loose teeth, swollen ankles and tiny bleeding spots or haemorrhages on the skin.

Scurvy killed 2 million sailors between 1500-1800. By 1800's it was recognised that eating citrus fruits prevented scurvy but it was not until 1928 that scientists discovered the role of Vitamin C.

**Student activity:** Cooking and processing can destroy much of the Vitamin C in our foods so let's check how much you can see or detect in some different juices and drinks.

Vitamin C reacts with iodine because it uses the iodine up. If starch and iodine are combined the mixture turns a blue black colour. When a food containing Vitamin C is added, the Vitamin C uses up the iodine so the blue-black colour of the starch-iodine combination disappears.

### Materials:

- Iodine
- Eye droppers or small plastic teaspoons
- Starch solution (1 teaspoon cornflour dissolved in 1 cup of boiling water). Make up in advance and allow to cool. This solution will be enough for 8 students.
- Enough small containers/cups/test tubes to hold liquids (1 for each food item tested)
- A range of juices to test such as: freshly squeezed lemon juice and orange juice; other fruit and vegetable juices (packaged and fresh, if available), commercial juice drinks and soft drink, crushed vitamin C tablets.

### What to do:

1. Predict whether each food/drink will contain Vitamin C.
2. Place paper towel/newspaper on a table.
3. Using eye dropper put about 20 drops or small teaspoon of the starch solution in your cup/test tube.
4. Add 1 or 2 drops of iodine - the water should turn slightly blue.
5. Add food/drink to the starch-iodine solution.
6. If the blue disappears the food contains Vitamin C.

**Student Connections:** Students are able to explore the world of vitamins through this simple experiment. Some points for discussion and further investigation:

1. Were there any surprising results?
2. Compare the information on the packaged materials with your results - do you agree?
3. Can you devise a way of testing solid foods?
4. Explain why Vitamin C is important in our diet.
5. Investigate why Aboriginal people didn't get scurvy before European Settlement. (Discuss the background to this question, i.e. which, if any, of the foods tested are native in Australia?)

