FLEMINGTON FOOD FOREST - TEACHER'S NOTES

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Lesson 6 – Nutrient cycles

Objective:

This lesson explores the concept of nutrient cycles and provides students with the understanding that in the Food Forest, and life in general, you can't only take but must give back to maintain a healthy ecosystem.

Activities

1. Discuss soil with students, in particular how it is used by plants to access nutrients with their roots. This link may be helpful http://www.soils4kids.org/about
2. Ask students to suggest what would happen to the soil if all humans did was harvest fruit root and leaves and didn't return anything to the soil. You might explain using the example of a bird which eats fruit and seeds and fertilises the soil with their droppings and also spreads seeds this way. Discuss natural materials that can be added to gardens to maintain their fertility e.g. manure, seaweed, mulch such as straw, compost made from kitchen scraps, worm castings, fallen leaves, etc.
   http://www.extension.umn.edu/garden/fruit-vegetable/nutrient-cycling-and-fertility/
   http://eartheasy.com/grow_backyard_vegetable_garden_03.html
   http://www.sustainabletable.org/207/soil-quality
   https://www.youtube.com/watch?v=uB61rfeeAsM&list=PLoJZL8o7YDT5J7yBkLhOOuLXetLznNWrW

Extra challenge

a. Discuss topsoil and the role of plants to stop erosion. Explain that topsoil is the top most layer of soil and has the highest concentration of organic matter and microorganisms, plants generally concentrate their roots in, and obtain most of their nutrients from this layer.
b. In small groups get students to measure the depth of topsoil by digging small holes until they reach the clay (vigilant supervision required). Together students should compare depth measurements and their location. They will find that the food forest has the deepest topsoil and it decreases at the edges until it meets the oval where it is hard clay.