

# AG9 - How do soils and plants relate?

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## Geography Stage 6 – 8.2.1 Biophysical Interactions

What are the biophysical interactions that occur between soils and the distribution of vegetation communities in the upper Parramatta River catchment?

### Principal focus

The focus of this study is a geographical investigation of biophysical processes and how an understanding of these processes contributes to sustainable management.

### Outcomes

P7 formulates a plan for active geographical inquiry

P8 selects, organises and analyses relevant geographical information from a variety of sources

P9 uses maps, graphs and statistics, photographs and field work to conduct geographical inquiries

P10 applies mathematical ideas and techniques to analyses geographical data

P11 communicates geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms

### Content

Students learn to:

- \* investigate and communicate geographically
- \* construct a transect to describe the variety and distribution of plants in a specific area.

### How do soils and plants in the UPRC relate?

Use topographic maps and aerial photos to map distribution of vegetation communities in the school sub-catchment - overlay vegetation maps and soil maps from GIS to investigate this relationship.

### Endangered vegetation communities in UPRC

Cumberland Plain Woodland, Coachwood Forest, Blue Gum Forest

### Student Background Reading

Background reading UPRCT Education Kit:

- C 9 - Soil Types
- C 10 - Vegetation Communities
- Sub-catchment information sheets
- E5 - Impacts of Urban Development

### Student Activities

1. What % of original bush cover remains in the upper Parramatta River catchment?
2. (a) What is a green belt?  
(b) Why are they important?  
(c) What are the main green belts in the upper Parramatta River catchment?

3. What factors influence the distribution of flora and fauna in the upper Parramatta River catchment?
4. Examine the maps and transparencies of:  
Soil Profile, Vegetation Communities, Management Status and Endangered Species and Conservation Status.
  - (a) What is the correlation between soil type and vegetation communities?
  - (b) What is the relationship between endangered species and vegetation communities?
  - (c) How do you account for this relationship?
  - (d) What is the relationship between management status and vegetation communities?
  - (e) How do you account for this relationship?

### Field Trip Activities

Vegetation transect  
Soil profile  
Habitat assessment

### Field Trip Sites

Lake Parramatta  
Loyalty Road flood basin  
Blacktown Creek (Norman Street)  
John Silverthorne Park

### Resources and Links

- UPRCT website [www.uprct.nsw.gov.au](http://www.uprct.nsw.gov.au)
- National Parks and Wildlife Service website [www.npws.nsw.gov.au/wildlife/threaten.htm#1Listing](http://www.npws.nsw.gov.au/wildlife/threaten.htm#1Listing)

### UPRCT Education Kit Information Sheets

C 9 - Soil Types  
C 10 - Vegetation Communities  
E5 - Impacts of Urban Development  
Sub-catchment information sheets