

Year 8 Aussie Biodiversity Test 2003 (1)

Class size 32 students, representing 21 different schools around Sydney.



What is biodiversity ?

A – Variability among living organisms and the ecological environment of which they are a part. 28 Correct, 4 Incorrect

How can bio-diversity be preserved ?

A – Conserve, or maintain the environment which sustains the original variability of living organisms. Keeping indigenous plants is the basis for sustaining indigenous animals. 6 Correct, 26 Incorrect

Students were then asked to identify indigenous plants from representative samples of bark, leaves, fruit, flowers, seed, or photographs. Actual species are noted in *italics*. These plant families are (or were) significant species in the Homebush-Strathfield area, prior to white settlement in 1788. These 18 species chosen are samples of our 2,000 indigenous Sydney plant species.

Tree	- Can identify a Eucalypt ? (<i>Eucalyptus moluccana</i>)	8 Yes	24 No
Tree	- Can identify a Eucalypt ? (<i>Eucalyptus longifolia</i>)	9 Yes	23 No
Tree	- Can identify a Turpentine Tree ? (<i>Syncarpia glomulifera</i>)	0 Yes	32 No
Tree	- Can identify a Wattle ? (<i>Acacia floribunda</i>)	25 Yes	5 No
Tree	- Can identify a Paperbark ? (<i>Melaleuca quinquenervia</i>)	13 Yes	19 No
Tree	- Can identify a She-Oak ? (<i>Allocasuarina torulosa</i>)	0 Yes	32 No
Tree	- Can identify a Grevillea ? (<i>Grevillea longifolia</i>)	0 Yes	32 No
Tree	- Can identify a Bottle-brush ? (<i>Callistemon rigidus</i>)	23 Yes	9 No
Bush	- Can identify Indigofera australis ? (<i>Indigofera australis</i>)	0 Yes	32 No
Bush	- Can identify Hop bush ? (<i>Dodonea triquetra</i>)	0 Yes	32 No
Bush	- Can identify Tick bush ? (<i>Kunzea ambigua</i>)	0 Yes	32 No
Bush	- Can identify Blackthorn ? (<i>Bursaria spinosa</i>)	0 Yes	32 No
Shrub	- Can identify Dillwynia ? (<i>Dillwynia sieberi</i>)	0 Yes	32 No
Creeper/flower	- Can identify False Sarsaparilla ? (<i>Hardenbergia violacea</i>)	0 Yes	32 No
Creeper/flower	- Can identify Blue Scurvy Weed ? (<i>Commelina cyanea</i>)	0 Yes	32 No
Fern	- Can identify Bracken ? (<i>Pteridium esculentum</i>)	9 Yes	23 No
Grass	- Can identify Kangaroo Grass ? (<i>Themeda australis</i>)	19 Yes	13 No
Grass	- Can identify Blady Grass ? (<i>Imperata cylindrica</i>)	13 Yes	19 No

Score 119 / 576

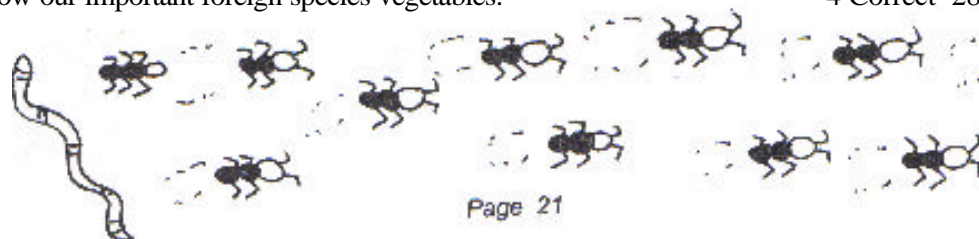
Food - How many plants mentioned above can provide food for humans ?

A – Acacias, Commelina, Kangaroo grass, & Bracken

Soils - What is the soil type of the Homebush - Lidcombe area ?

A – Clay, Wianamatta Shale (soft rock formed by clays), and sandstone outcrops 6 Correct 26 Incorrect

Worms or Ants ? - Which animal helps propagate and promote native plant growth more, and is also indicative of a healthy native plant environment ? A – Ants ! Ants help pollinate Australian plants, and take seeds from many plants into their underground nests. After a bushfire, these underground seeds will sprout. Worms are more common in the wetter Northern Hemisphere soils, but have been cultivated here to help grow our important foreign species vegetables. 4 Correct 28 Incorrect



Year 8 Aussie Biodiversity Test 2003 (2)

Water - What is the annual rainfall of the Homebush – Lidcombe area and its wettest season ?

A – About 900mm, wettest season is autumn, driest is winter. 2 Correct 30 Incorrect

Fire - What is the minimum fire frequency to preserve dry Eucalypt woodlands, and what other factors need to be included in the “time consideration” ? A (a) Many native plants require fire to start new growth. (b) About 25 years between bushfires, allows all plants time to grow and produce seeds. (c) The plants may take as long as 200 years to regrow to their original canopy height. (d) Depending on the size and heat of the fire, the insects, and wildlife animal populations, may also take up to 200 years to return to pre-bushfire population levels. Fires more frequent than 25 years may kill off the native vegetation (and wildlife). 0 Correct 29 Incorrect

Foreign Species

Tree - Can identify a pine (from California, USA) ? 5 Yes 27 No
 Tree - Can identify a Jacaranda (from Brazil) ? 12 Yes 20 No

What are the names of your favourite plants ?

Indigenous

3x Wattle
 2x Eucalyptus
 2x Melaleuca

Indigenous

2x Waratah
 1x Bottle-brush
 1x Lillypilly

Foreign

3x Roses
 1x Cactus

17x No answer

Score 11 / 32

Results :

Bio-diversity x Local plant x Enthusiasm for => Future Aussie
 Understanding knowledge local plants Bio-diversity

$$\frac{28}{32} \times \frac{119}{576} \times \frac{11}{32} \Rightarrow$$



Did you know ?

- After 230 years of white settlement, only 5% of Australia’s indigenous vegetation cover remains. And the last 5% of Australia’s botanical heritage, is under constant threat by housing, farming, timber, and mining demands.
- Australia is the only continent in the world where the people do not regularly eat any indigenous vegetation. Our foreign livestock species (cattle, pigs, sheep, poultry) also mainly eat foreign species grasses introduced here over the past 230 years.
- There is only one food plant grown commercially in Australia, the Macadamia nut. But the Americans were the first to grow it ! Only after this, did Australian farmers follow them. Another vegetable
- Why is it that the English happily consume a native Australian vegetable, that Australians seem to know nothing about ? – Warrigal Spinach, or *Tetragonia tetragonoides*.
- Aside from biodiversity issues, how many other business opportunities are we Australians missing out on, through not knowing about our native vegetation ? We hope our students may yet grow, manufacture, and export; Dianella muffins, Lomandra picnic bars, Commelina salad, Kangaroo-grass bread or cereal, Bracken roots, Exocarpos cherry dessert, and more !

