

Lesson 14: Transparency 14.1

http://openlearn.open.ac.uk/file.php/1646/S103_1_002i.jpg

Guppy Variation



Lesson 15: Transparency 15.1

http://openlearn.open.ac.uk/file.php/1646/S103_1_002i.jpg

Guppy Variation



Lesson 15: Transparency 15.2

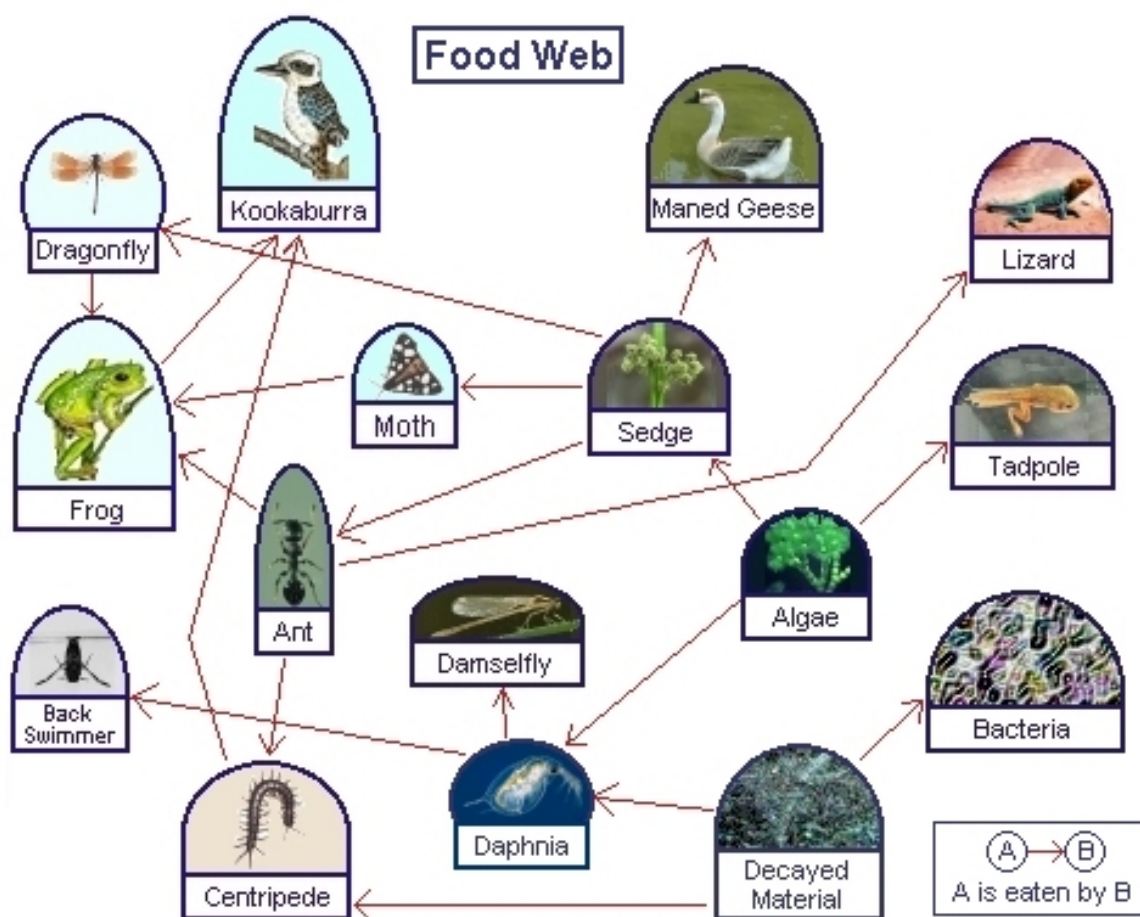
http://upload.wikimedia.org/wikipedia/commons/thumb/a/a9/Peacock_courting_peahen.jpg/250px-Peacock_courting_peahen.jpg

Male Peacock Plumage



Lesson 16: Transparency 16.1

http://www.arcytech.org/java/population/images/food_web.jpg



Lesson 17: Transparency 17.1

Is It a Cat?



Lesson 17: Transparency 17.2

Total Number of Species Known to Exist Now In the World:

(<http://www.currentresults.com/Environment-Facts/Plants-Animals/number-species.php>)

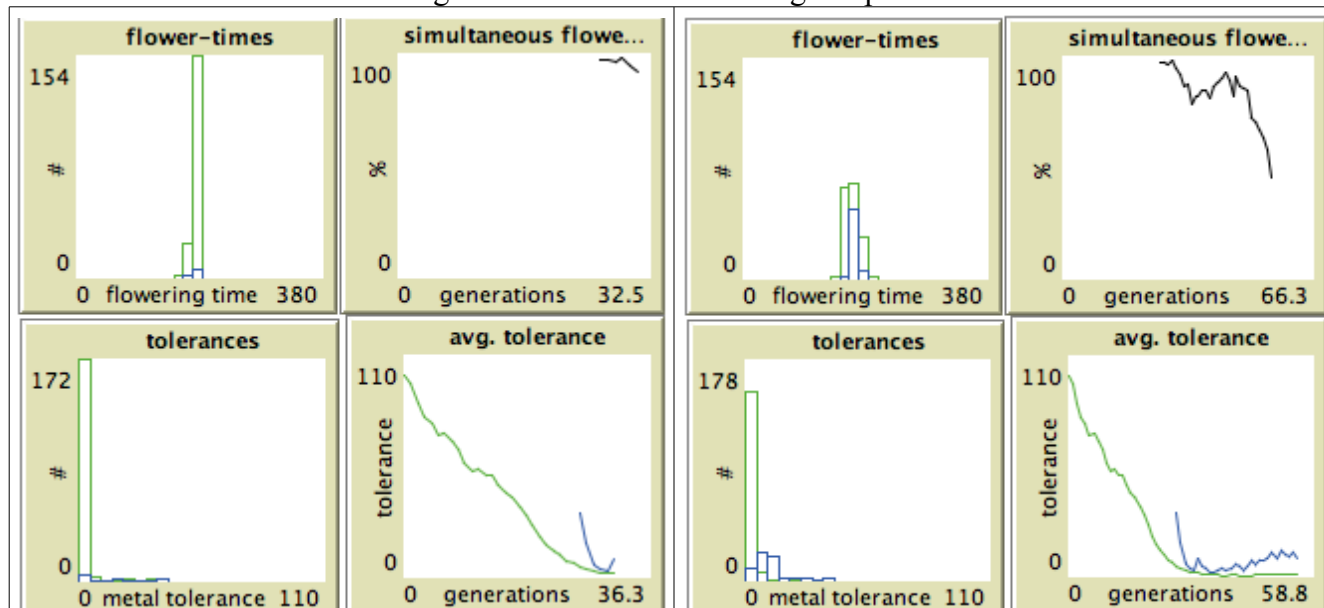
Category	Species	Totals
Vertebrate Animals		
Mammals	5,416	
Birds	9,956	
Reptiles	8,240	
Amphibians	6,199	
Total Vertebrates		59,811
Invertebrate Animals		
Insects	950,000	
Molluscs	81,000	
Crustaceans	40,000	
Corals	2,175	
Others	130,200	
Total Invertebrates		1,203,375
Plants		
Flowering plants (angiosperms)	258,650	
Conifers (gymnosperms)	980	
Ferns and horsetails	13,025	
Mosses	15,000	
Red and green algae	9,671	
Total Plants		297,326
Others		
Lichens	10,000	
Mushrooms	16,000	
Brown algae	2,849	
Total Others		28,849
1,589,361 TOTAL SPECIES		

Transparency 17.3**Discoveries and Insights:**

Factor	Which species would be at the highest risk of extinction in the near future?	
1. Population size	A. A few individuals	B. Many individuals
Why?:		
2. Distribution	A. In many different ecosystems	B. In one ecosystem
Why?:		
3. Trait variation	A. Lots of variation between individuals	B. Individuals are nearly identical
Why?:		
4. Gene Pool	A. Only one allele for most genes	B. Many alleles for most genes
Why?:		
5. Changes in the environment	A. are gradual and small	B. are sudden and dramatic
Why?:		
6. Rate of reproduction	A. very slow (many years)	B. very fast (within minutes)
Why?:		
7. food web	A. will interact with the same species it has interacted with for a long time in the past	B. new species are introduced to the food web that it has never interacted with before
Why?:		

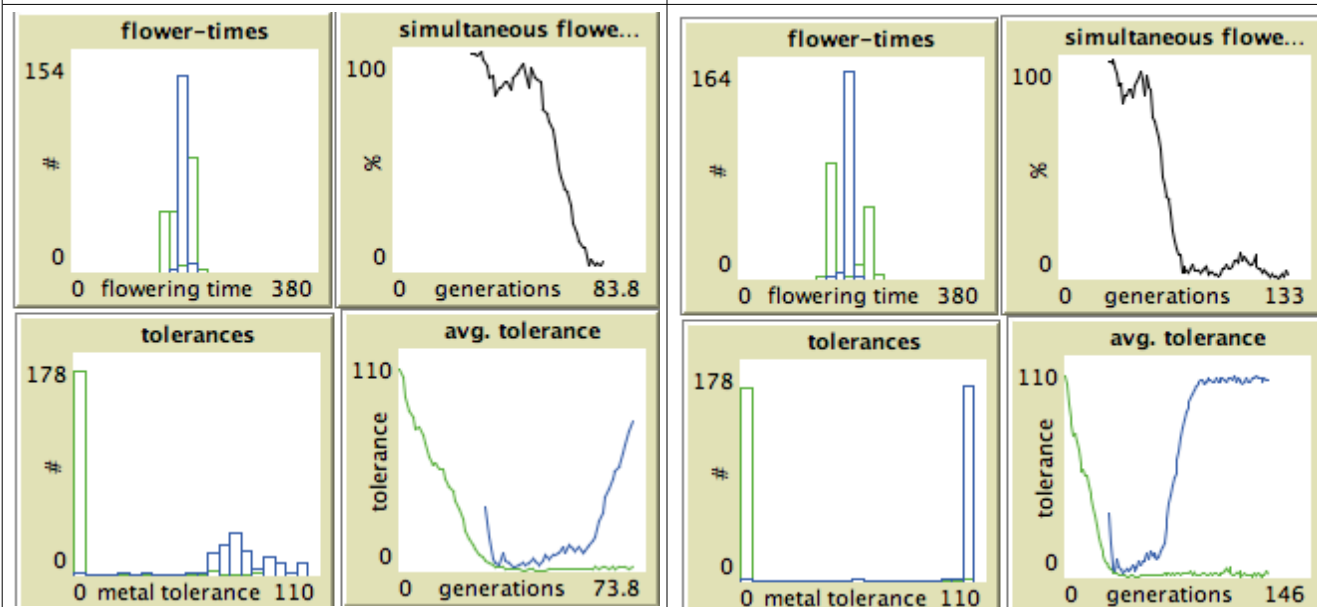
Lesson 18: Transparency 18.1

Changes in Flower Times Leading to Speciation



A) No observable decrease in simultaneous flower time occurs at first, as metal tolerance decreases in regular soil, and there only a few offspring of these plants just starting to migrate into the contaminated soil

B) Simultaneous flower times are starting to decrease as some tolerance differences are accumulating from mutations between regular soil and contaminated soil plants



C). Three separate species are forming as tolerances are increasing in the metal soil region and flower times have split into three different groups.

D) In this model run, three separate species have formed, 1) early blooming regular soil plants, 2) mid season blooming contaminated soil plants, and 3) late blooming regular soil plants.

Lesson 19: Transparency 19.1

Class Results:

Bird Species A	Bird Species B	Bird Species C	Bird Species D	Bird Species E	Bird Species F
Beak Shape:					
Chopsticks	Turkey Baster	Large Pliers	Needle Nose Pliers	Tweezers	Clothes Pin
Station Color _____					
Station Color _____					
Station Color _____					
Station Color _____					

Lesson 19: Transparency 19.2

Why are there so many different types of pliers?



Lesson 19: Transparency 19.3

Why so many species of finches on the Galapagos Islands?

