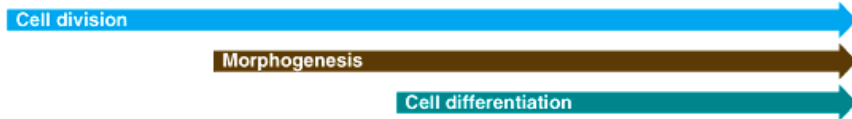
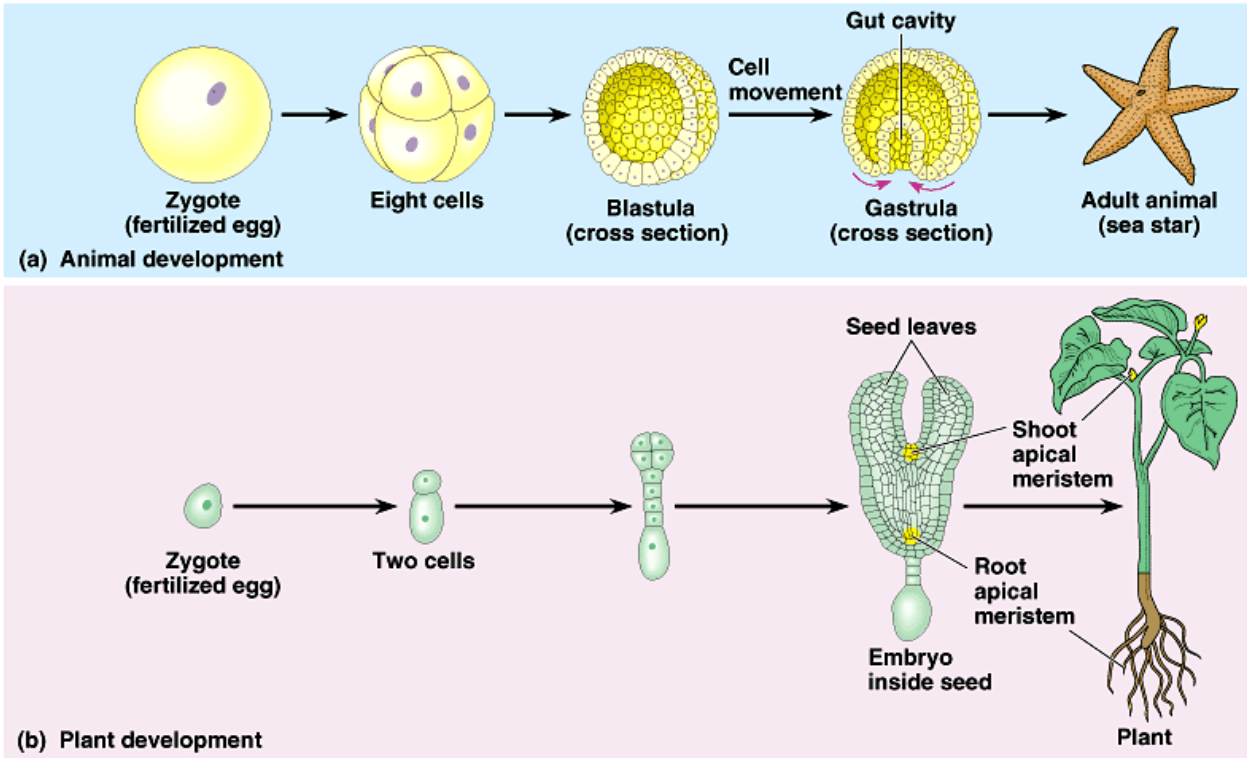


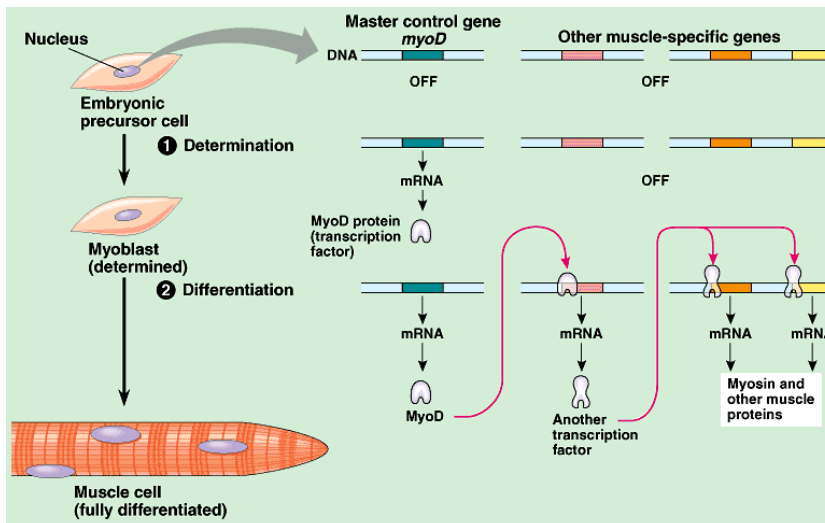
18.4 Differential Gene Expression



Morphogenesis -

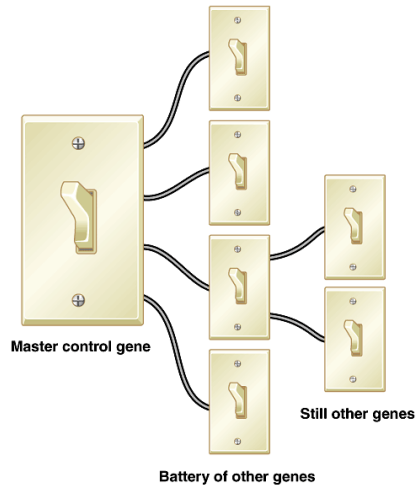
Cell differentiation -

Apical meristems -



What would happen if a mutation in the myoD gene resulted in a myoD protein that could not activate the myoD gene?

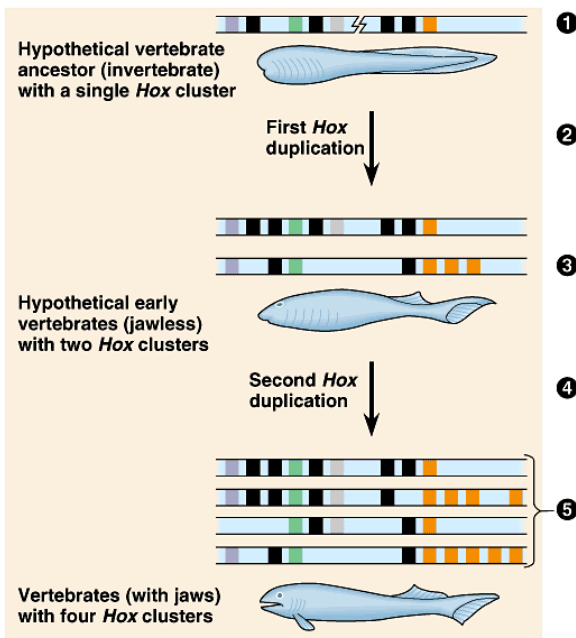
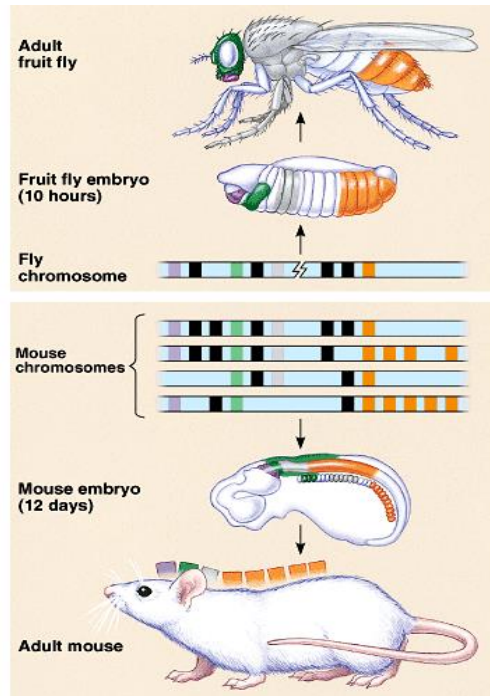
Homeotic gene –



21.6 Genome Sequences give clues about development and evolution

Homeobox-

HOX gene -



25.5 Major changes in body form

Heterochrony –

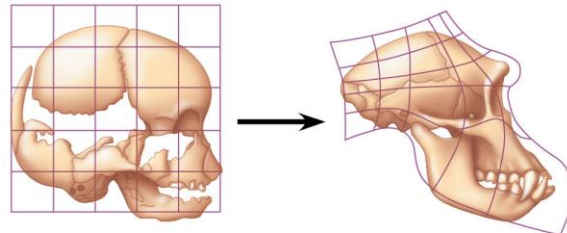


(a) Ground-dwelling salamander



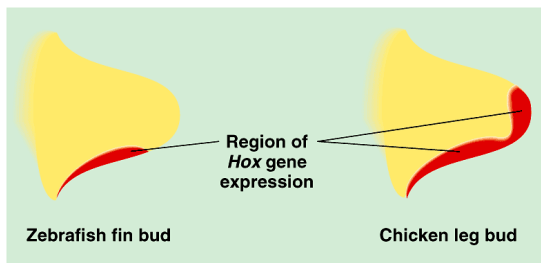
(b) Tree-dwelling salamander

Paedomorphosis-



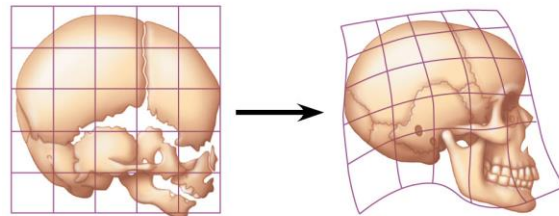
Chimpanzee fetus

Chimpanzee adult



Zebrafish fin bud

Chicken leg bud

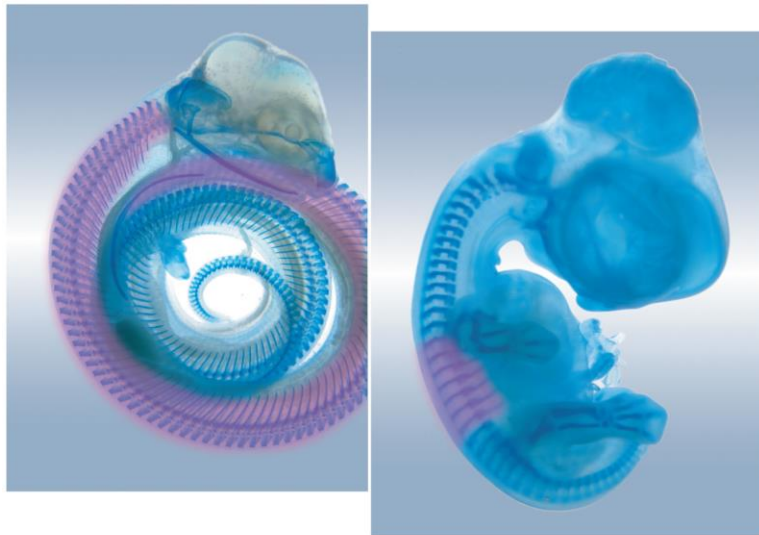


Human fetus

Human adult

What type of effect does a single change in one of the following cause:

- 1) regulatory gene
- 2) Hox Gene
- 3) Gene Expression Timing



© 2011 Pearson Education, Inc.

HoxC6 gene expression correlates with limbless regions.

26.1 Phylogeny and the tree of life

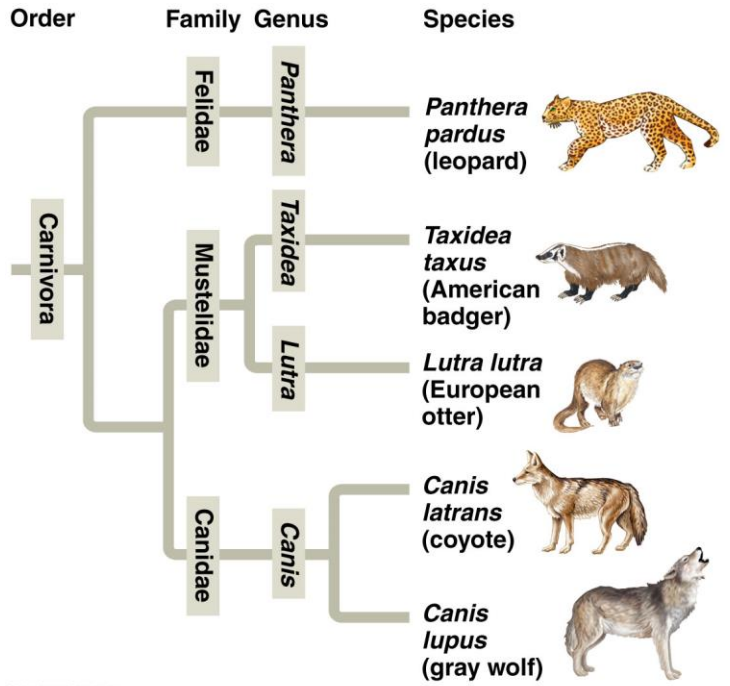
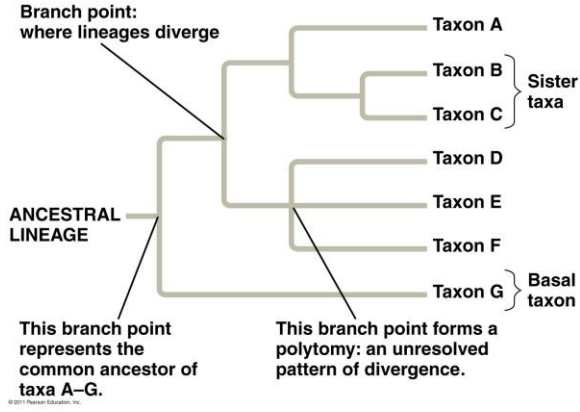
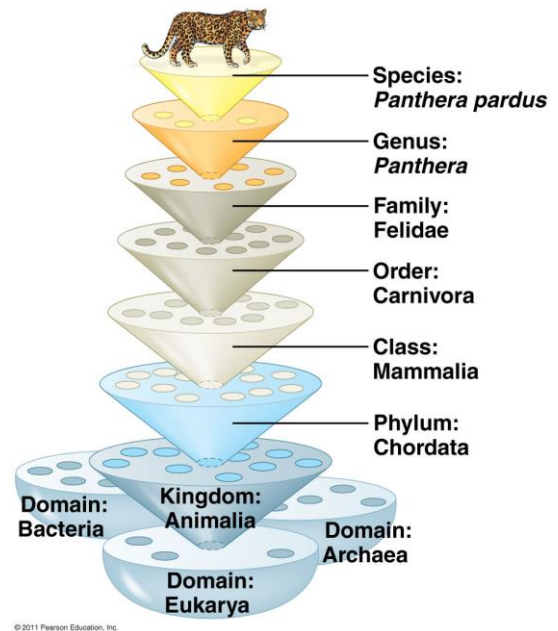
Phylogeny –

Systematics –

Taxonomy –

Taxon –

Phylogenetic Tree –



26.3 Shared Characters and Cladistics

Cladistics –

Clade –

Shared ancestral Character –

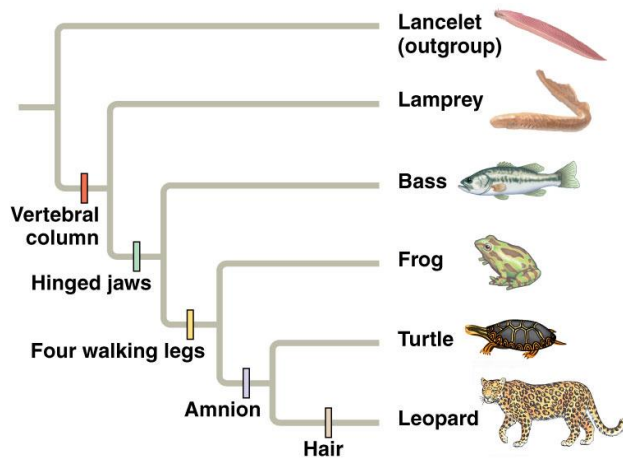
Chared Derived character –

Outgroup –

		TAXA					
		Lancelet (outgroup)	Lamprey	Bass	Frog	Turtle	Leopard
CHARACTERS	Vertebral column (backbone)	0	1	1	1	1	1
	Hinged jaws	0	0	1	1	1	1
	Four walking legs	0	0	0	1	1	1
	Amnion	0	0	0	0	1	1
	Hair	0	0	0	0	0	1

(a) Character table

© 2011 Pearson Education, Inc.

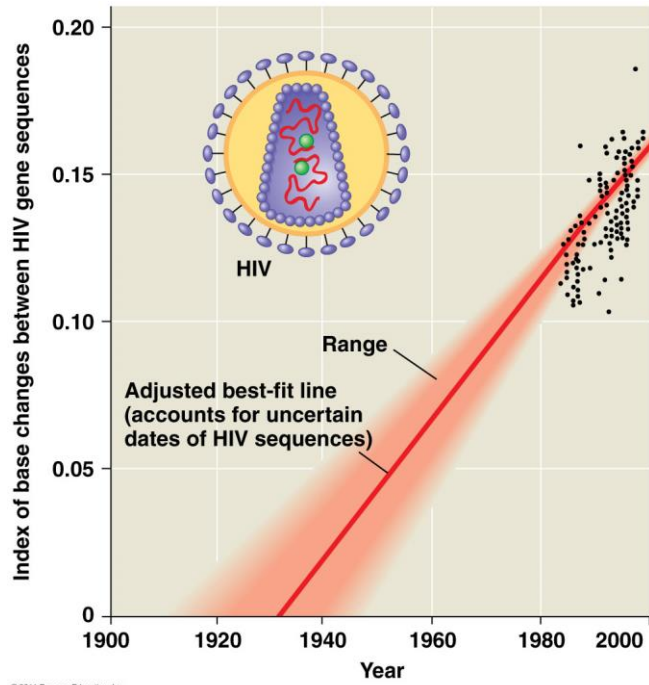


(b) Phylogenetic tree

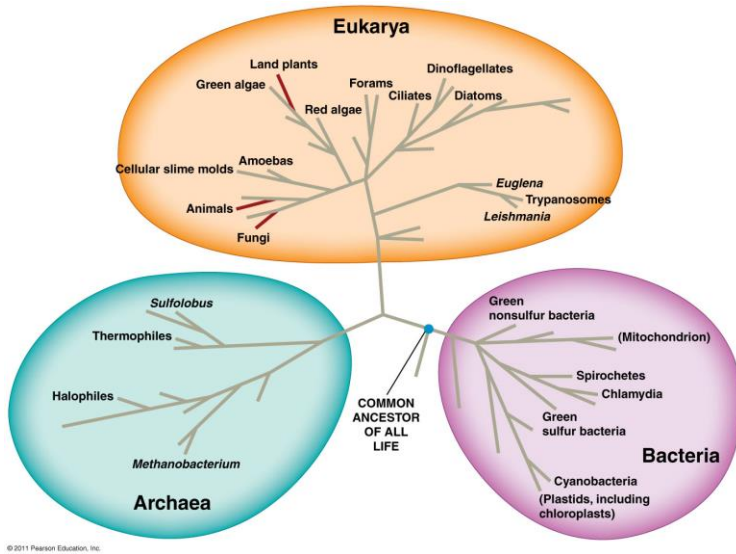
DRAW A phylogenetic tree for Question 9 part (a) on pg 555.

26.5 Molecular Clocks

Molecular clock -



26.6 Revising the tree of life



Who are Eukaryotes most related too?

What is the idea behind a ring for early life?

