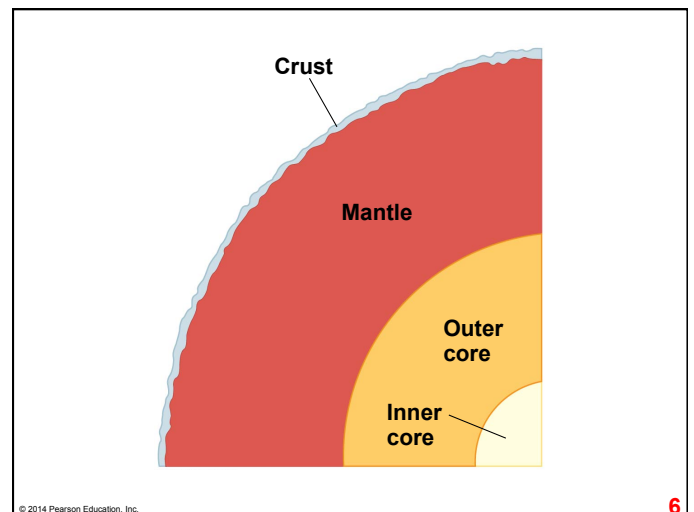
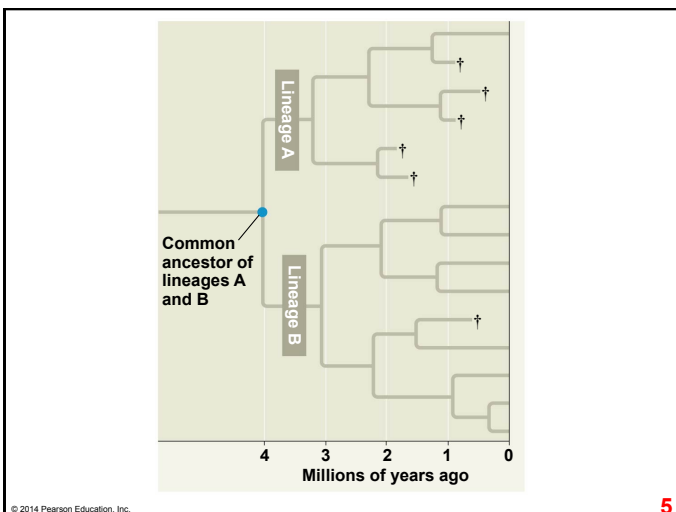
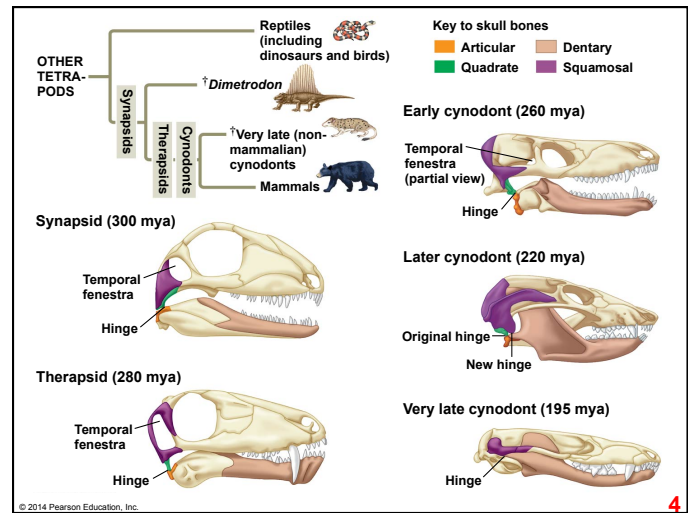
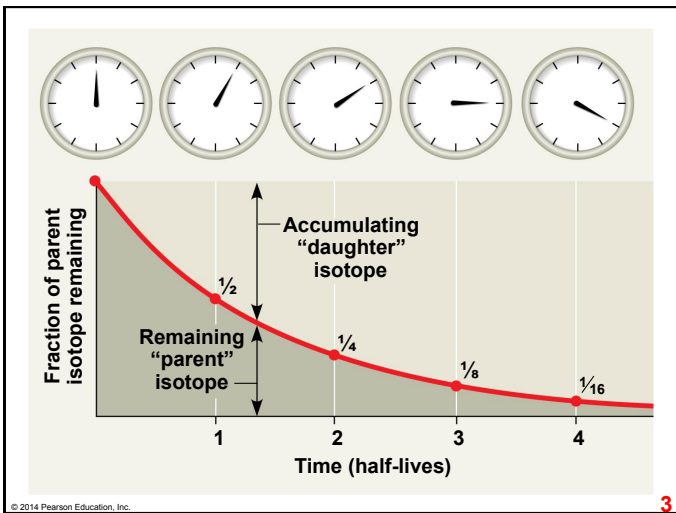
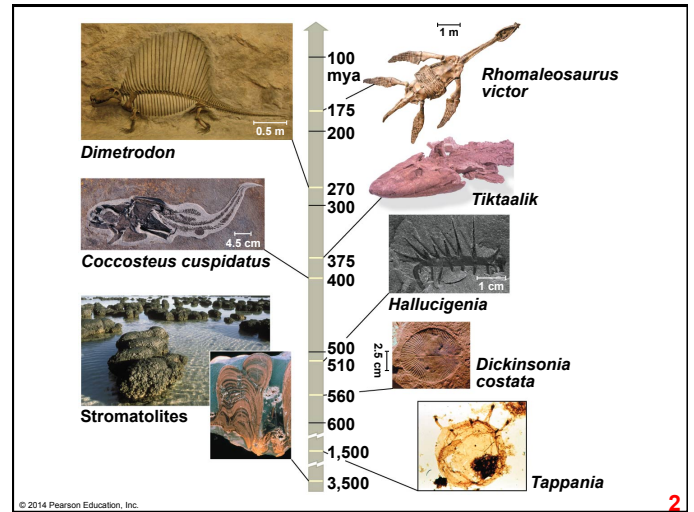
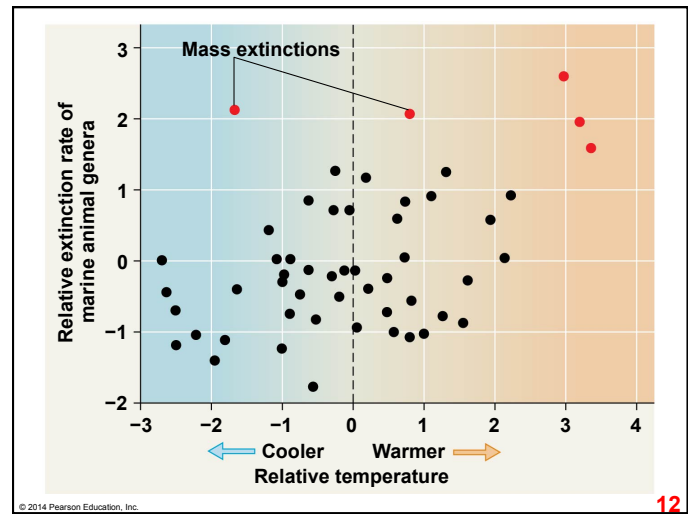
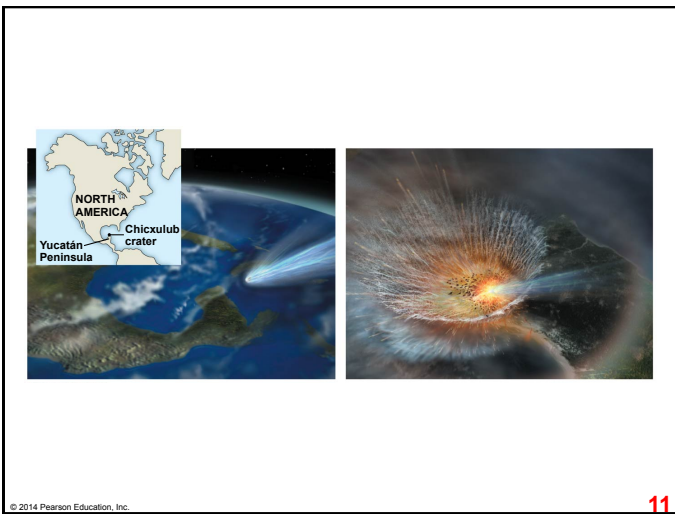
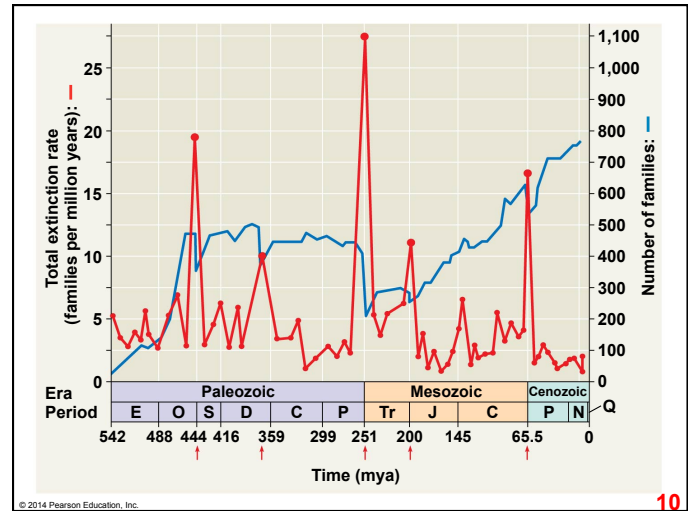
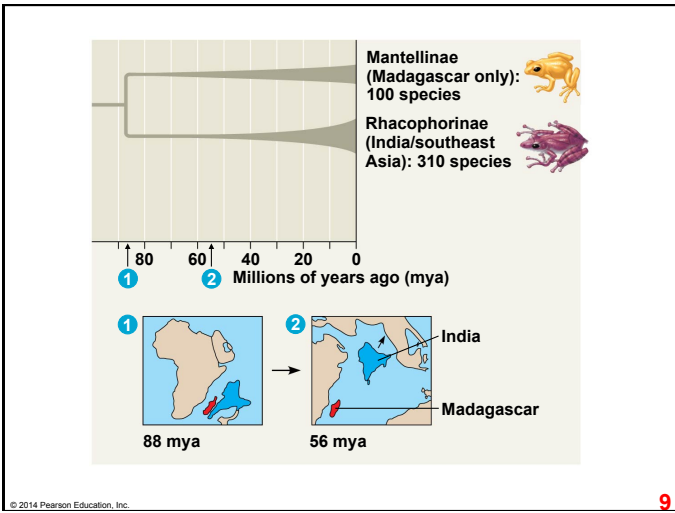
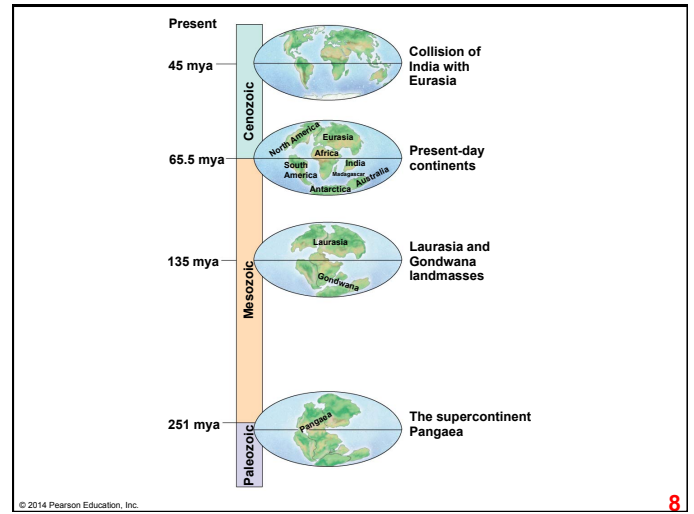
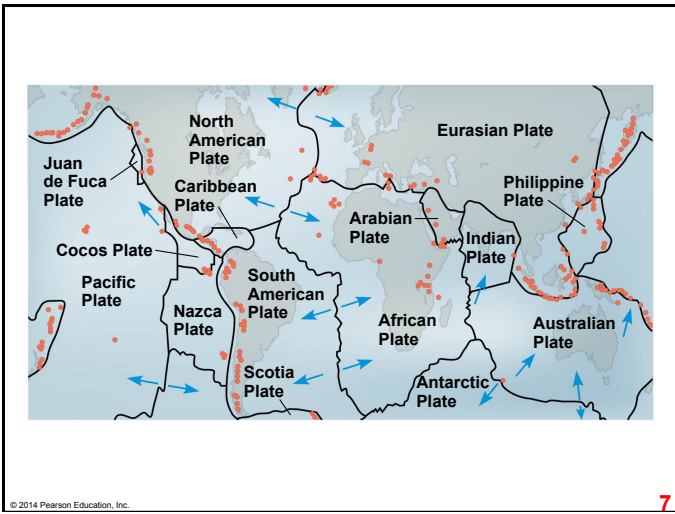


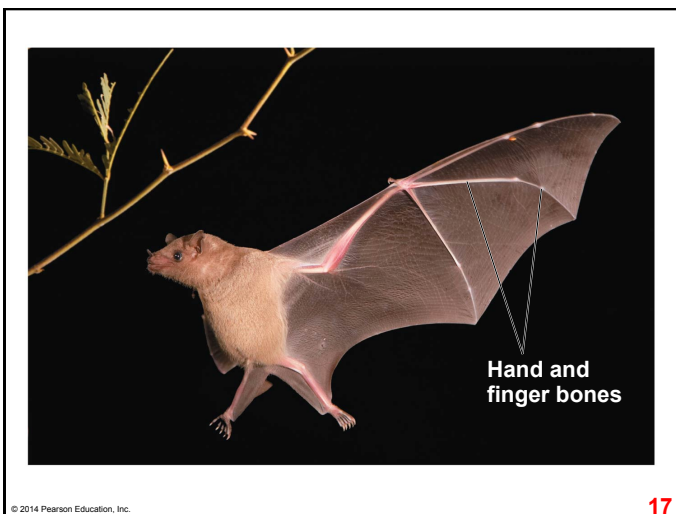
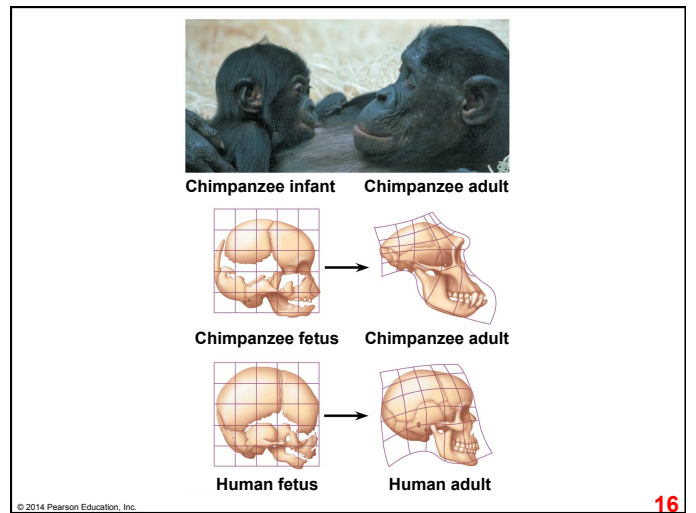
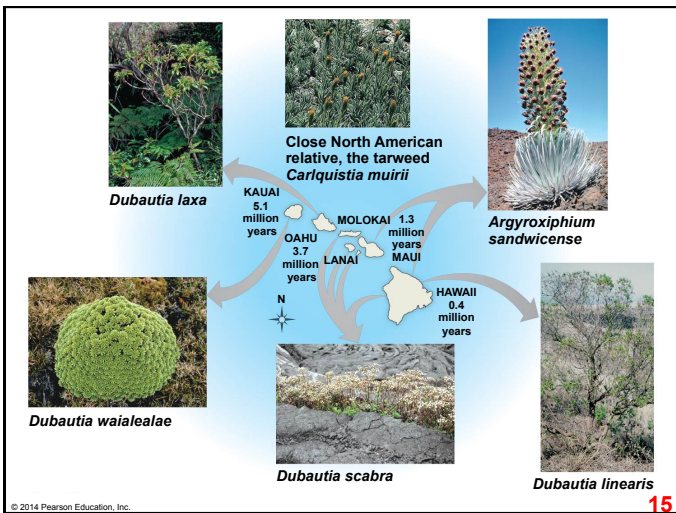
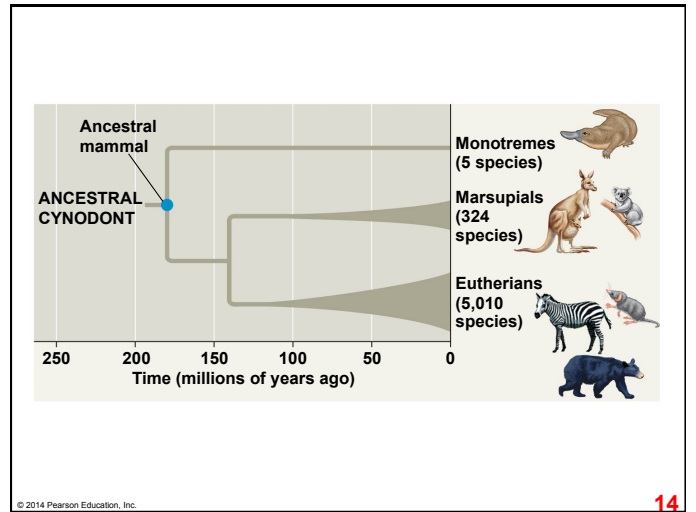
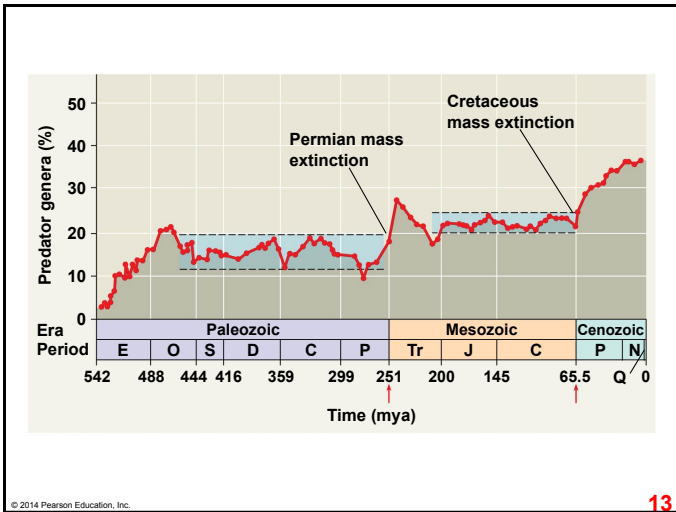
Table 23.1 The Geologic Record

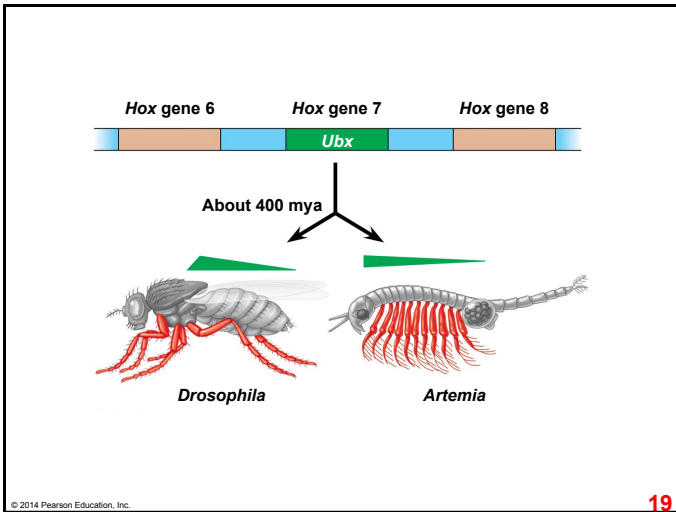
Relative Duration of Eons	Era	Period	Epoch	Age (Millions of Years Ago)	Some Important Events in the History of Life	
Phanerozoic	Cenozoic	Quaternary	Holocene	0.01	Historical time Ice ages; origin of genus <i>Homo</i>	
			Plistocene	2.4		
			Pleistocene	2.4		
		Neogene	Miocene	5.3	Continued radiation of mammals and angiosperms; earliest direct human ancestor	
			Pliocene	2.3		
		Paleogene	Oligocene	33.9	Origins of many primate groups	
			Eocene	55.8		
			Paleocene	65.5		
		Proterozoic	Mesozoic	Cretaceous	145.5	Angiosperm dominance increases; continued radiation of most present-day mammalian orders
					100	
Jurassic	199.6			Major radiation of mammals, birds, and primates begins		
Triassic	251					
Permian	299					
Paleozoic	Carboniferous		359	Evolution of reptiles; origin of most present-day groups of insects; extinction of many marine and terrestrial organisms at end of period		
			416			
	Devonian		416	Evolution of vascular plants; first land plants appear; origin of reptiles; amphibians dominant		
	Silurian		444			
	Ordovician		488			
Archaean	Cambrian	542	Diverse algae and soft-bodied invertebrates appear			
		635				
	Ediacaran	635	Diverse fossils of eukaryotic cells appear			
	2,500					
	3,500					
Hadaean	Archaean	4,860	Oldest known rocks on Earth's surface			
		4,860				

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Results

Hypothesis A: Differences in sequence
 Result: No
 The 283 amino acids of the *Pitx1* protein are identical.

Hypothesis B: Differences in expression
Marine stickleback embryo:
 expression in ventral spine and mouth regions

Lake stickleback embryo:
 expression only in mouth regions

Red arrows indicate regions of *Pitx1* expression.

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