Biological Evidence of Evolution

- **A.** Evidence for Evolution
 - **1.** Evolution does not occur in a straight line with one species

______ another in a series of orderly steps.

a. Living species that are closely related share a common ______ .

b. How closely related two species are depends when they

_____, or split, from their common ancestor.

- 2. The study of similarities and differences among structures of living species is called ______.
 - **a.** Body parts of organisms that are similar in position but different in function are called ______. The forelimbs of different mammals are examples.
 - **b.** If species have homologous structures, this suggests that the species are _____.
 - **c.** The more similar two structures are to each other, the more likely it is that the species have evolved from a recent ______.
 - _____ are body parts that perform a similar function but **d**. differ in structure. The wings of flies and birds are examples.
 - e. The existence of analogous structures indicates that the species are not ______ related.
- **3.** Body parts that have lost their original function through evolution are called

_____. The ______ of flightless birds are an example.

- **a.** The best explanation for _______ is that the species that have vestigial structures are _____ ______ to ancestral species that still use the structures for a specific purpose.
- **b.** Whales have a tiny ______ bone, which is a vestigial structure for walking on land.

Lesso	on Outline continued
4.	Studying the development of can also provide scientists with evidence that certain species are related.
	a. is the study of the development of embryos from fertilization to birth.
	b. All species of have pharyngeal pouches at some stage during their development.
	c. The similarities in location and function of the is a sign that the vertebrate species share a common ancestor.
5.	The study of gene structure and function is called
	a. The existence of provides evidence of evolution because they have been shown to be the source of variation upon which
	dCls.
	b. The more closely related two species are, the more similar their
	and are.
	c. Studies in molecular biology have shown that some stretches of
	time at steady, predictable rates like a kind of molecular clock.
	d. Scientists use this molecular clock to estimate the time in the past when living
	species from common ancestors.
B. The	e Study of Evolution Today
1.	Since the publication of Darwin's theory, scientists have
	, refined, and his work.
2.	Scientific studies of fossils, anatomy, embryology, and molecular biology have
	provided evidence of relatedness among and
	species.
3.	The continuous discovery of new that have features of species that lived before and after them is strong evidence of evolution of species.
4.	Scientists today are studying how can be reorganized in simple ways that cause dramatic changes in organisms.
5.	Though scientists now study evolution at the level, the basic principles of Darwin's theory of evolution by natural selection have remained