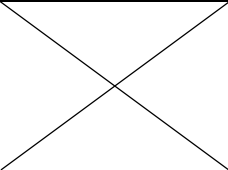
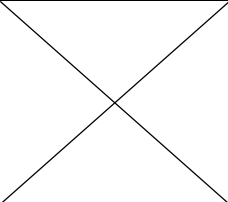


## Mechanisms of Evolution

Evolution: the change in organism over time often noted as a changes in the gene pool

Gene Pool: the different genes found in a population

Mechanism	Information	Diagram
<b>Natural Selection</b>	Organisms are born with variations in their traits caused by mutations The environment selects which organisms have the best traits for survival and reproduction These “best fit” organisms are able to pass their genes to the next generation	
<b>Genetic Drift</b>	Changes in the frequency of appearance of different alleles in a population due to chance The frequency of different alleles is relatively constant in a large population, a small population has a high chance of losing alleles	
<u>Founder Effect</u>	Occurs when a small sample of a larger population settles in a location separated from the rest of the population The settlers contain only a small number of the different alleles found in the larger population Alleles that were uncommon in the original population might be popular in the new population	
<u>Bottleneck</u>	Occurs when a population declines to a very low number of individuals then rebounds The gene pool of the rebound population is similar to the original population right before the population increased Genetic diversity potentially reduced	
<b>Gene Flow</b>	New alleles are introduced to a population by migration of breeding individuals The new alleles could become part of a populations gene pool Genetic diversity potentially reduced between the populations, but can increase genetic diversity within a population	
<b>Nonrandom Mating</b>	Random mating occurs when individuals mate by chance and not based on their genotype or phenotypes Nonrandom mating – inbreeding – changes the number of heterozygous individuals and increases homozygous individuals	
<u>Assortative Mating</u>	Occurs when individuals tend to mate with those that have the same phenotype	
<u>Sexual Selection</u>	Occurs when females select males based on their phenotypes	

