

Activity 2: *Solving the Puzzle of Evolution*

Puzzle Board

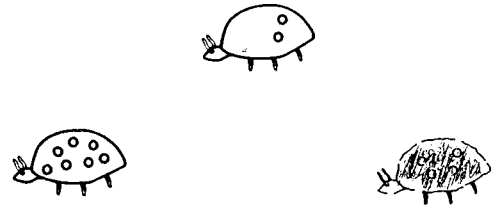


Resources needed for survival are limited in the real world. (Source: Repeated observations of real systems)

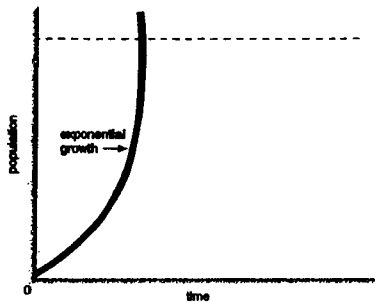


"The glass is only half full."

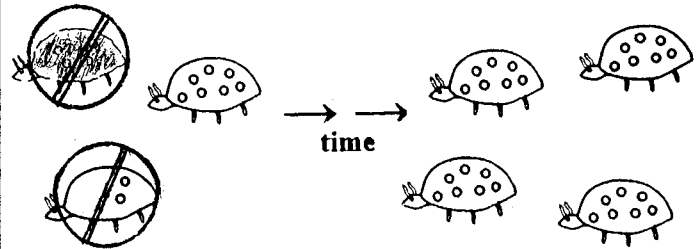
All individuals in a population vary one from the other. That is, individual variation exists. (Source: Repeated observations of animal breeders and taxonomists)



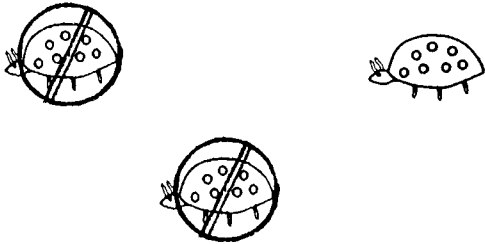
Populations have the potential for unlimited (exponential) growth in size if resources are unlimited (Source: Repeated observations of Malthus and naturalists)



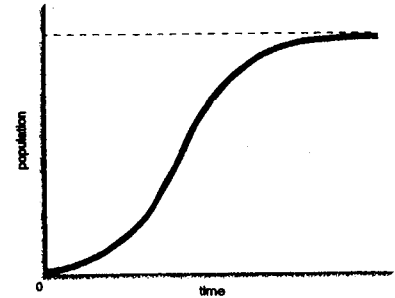
Natural selection of better adapted individuals across generations causes the population as a whole to evolve (change) in the direction of better adaptation. Eventually, the changes result in a new species. (Source: Darwin)



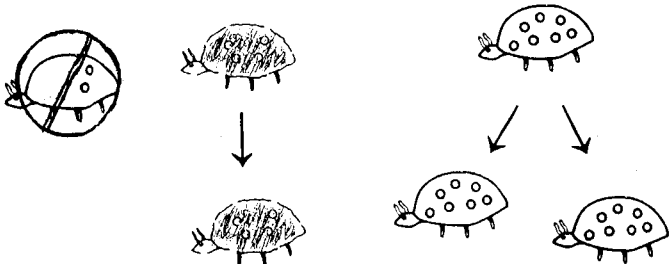
Not all individuals in the population survive and reproduce; there is a "struggle for existence" among individuals. (Source: Malthus)



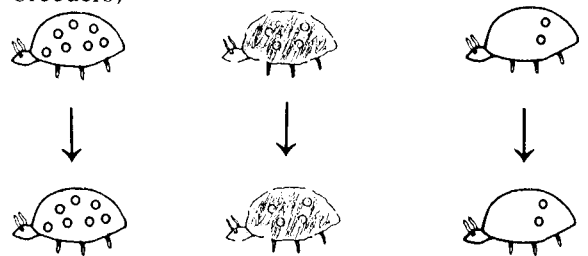
Real populations in nature reach a more or less stable size. (Source: Repeated observations of natural populations by naturalists)



Differential (non-random) survival among individuals. This is natural selection. In other words, individuals with variations well-suited (adapted) to the environment tend to survive and reproduce more often. (Source: Darwin)



Many of the variations among individuals are transmitted genetically from parent to offspring. (Source: Repeated observations of animal and plant breeders)



Fact 1

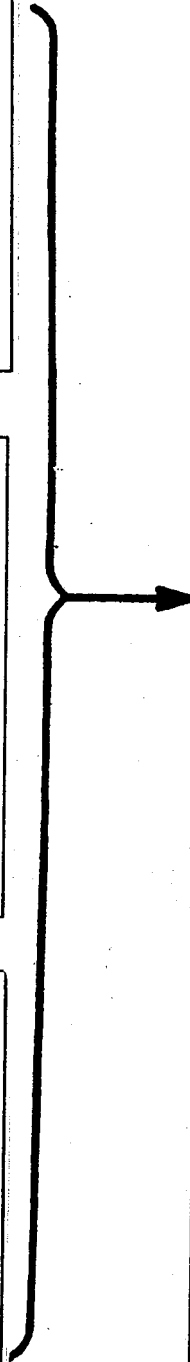
Fact 2

Fact 3

Inference 1

Fact 4

Fact 5



Model of Evolution

