10.3 Power Notes

Artificial selection:

The process by which humans change a species By breeding it for certain

Heritability:

The ability of a trait to be passed down from one generation to the next.

Struggle for survival:

Populations would grow geometrically if resources were unlimited. Instead, disease and a limited food supply keep the population smaller.

Key insights led to Darwin's theory.

Natural Selection Explains How Evolution Can Occur.

Natural Selection is:

A mechanism by which individuals that have inherited beneficial adaptations produce more offspring on average than do other individuals.

The 4 main principles of natural selection are:

Variation:

The heritable differences that exist in every population are the basis for natural selection.

Overproduction:

Having many offspring increases the chance of survival but also results in competition for resources.

Adaptation:

A certain variation that allows an individual to survive better than other individuals it competes against.

Descent with Modification:

Heritability of adaptations. More individuals will have the trait in every following generation, as long as the environmental conditions remain beneficial for the trait.