Darwin was not the first to consider evolution as a process but he did come up with the first effective explanation for how it happens. Describe Darwin’s theory of evolution by natural selection. Explain how this theory was a major advance over prior ideas as to how organisms changed over time. Give evidence in support of evolution and describe the driving forces for evolutionary change.

Evolution is the process where living organisms’ develops physical or inheritable characteristics over time. This changes enables the organism to survive in ever dynamic environmental conditions and to fit there ecological niches. Scientist have been working to evolution since in the ancient time though Charles Darwin is considered the father of evolution simply because he formulated proved theory of evolution.

Among dawins theories of evolution. “Theory of natural selection “was its famous theory. In this theory he said that in a population, the organisms that are well adapted to the environment outcompete the once that are not well adapted. Well adapted species survived while the weaker species were unable to survive the unfavorable environmental conditions hence they were lost forever.

Natural selection can be very small changes but brings about a big change in a species, they change can change in size, color or resistance to environmental conditions. This small change can lead to existence an entire different species for example apes can turn into humans. According to Darwin changes can occur due to random genetic changes that can result into an organism in the population having slightly different phenotypic characteristics. The resulting changes in the physical characteristics always favors the survival of the organism. A good example of random genetic variation is nostrils development of whales at their back of their head this adapt them comfortably to their marine lifestyle.

Darwin described other form of this theory that rely on the ability of the organism to attract mates. During mating the organism prefer mating with individuals having dominant physical characteristics. The once with poorly developed physical characteristics can’t be passed to the next generation. Over time the dwarf characteristics will disappear completely leady to healthier individuals within a species. A good example of sexual evolution presses is the colorful plumage in the peacock.

There are evidence supporting this theory of natural selection despite the absence of fossils evidence to prove the argument. Recently paleontologist found the fossils evidence of a remains of the *Abulocetus natans* a whale who could walk and at the same time swim. The forelimbs of *Ambulocetus natans* had finger-like structures with poorly developed hooves. Its hind limbs were huge. It showed clearly adaptation to move clumsily on land but could also swim. The ancient creature move by pushing up with its hind limbs and undulating the tail.

Today’s whales move through the water by use of powerful beats on their lateral tail flukes. Unlike the *Ambulocetus natans* who had to use the tails and their limb to provide them with the propulsive force. The continuous transition on this animals have provided more proves to support this theory of evolution.

With advancement in technology and more understanding of molecular biology, scientist are able to prove dawins theory of natural selection. We can vividly describe how changes in the genetic makeup brings about observable changes within a species. Since genes carry genetic messages that codes for various traits they can be passed to offsprings to represents such traits. The use of genetics to explain Darwin’s theory makes it real.

Most likely the traits that makes about natural selection are likely to happen at the DNA or gene level. This changes are called mutations they are caused by spontaneous changes in the DNA by chemical and radiation damages. Some of the genetic changes are harmful or can be neutral in effect. If the mutation is of advantage to the organism it will develop to be dominant and can be passed to the next generation and hence bringing about evolution. Natural selection preserves and add beneficial characteristics to a species.

Darwin’s theory of natural section advanced more than the prior theories because he provide evidence to support his theory. He showed that life can develop into complex form to meet the existing demands. He proved using examples that the development can be brought out by both internal and external designs.

There are scientific evidence to support Darwin’s theory of evolution unlike other theories that can’t be proven scientifically. Sexual evolution process postulated by Darwin in the theory of natural selection have been proven through the knowledge of genetics and inheritance of genetic characteristics from parents to offsprings.

The fossils evidence of *Abulocetus natans* that was discovered in 1994 confirmed some ancestral relationships with the modern whales. This serve to prove to support the theory of natural selection, unlike other prior theories of evolution that lack fossils evidence to ascertain the claim of the possibilities to have occurred.

Some believers have used Darwin’s theory to prove that God is ever working. They use this theory to convince believers that God did not created the world and stop. He proves His forever working through evolutions. Some have even went to an extent of believing that God Himself was the one who started evolution rather than believing that life started by itself.

Organisms changed over time developing structures that enabled the live in the existing conditions. Characteristics that proved to be disadvantageous to the organism diminished over time and ceased to exist over time. Structure developed and become dominant depending on their contributions to organisms life.

Evolution is dynamic it must occur over time. Organisms develops different features over time to enable them survive in the planet due to various threat such as limited resources and unfavorable environmental conditions. Predators are threaten the live of other organisms forcing them to acquire features that help to avoid being eaten.

Human activities ends up polluting the environment that was meant to accommodate all living things. The pollutants make habitats unfavorable for the organisms to flourish hence have to develop features that help the encounter the environmental challenges. Hazardous chemical and physical waste may injure or even kill the organism leading to their extinctions.

The limited resources such as food, light and water make the organisms to evolve more advance characteristics that enable them fit their environment. They have to develop features that enable them compete favorably with others depending on the same resources otherwise they risk being outcompeted. Nature support survival those who deem fit for the environment. Due to environmental pressure the organism have to evolve to survive.

Some organisms depends on others for as their sole source of food. Hence others are forced to have features that hibernate them from their potential enemies. To avoid being eaten as food they have to develop protective feature. For example plants that are eaten as food by foragers develops thorns to protect themselves.

Flexibility of the genes may another cause of evolution. Genes are designed in a way that they can easily change are replace some nucleotides to bring out desirable changes at the moment of need. Genes make such changes to accommodate environmental changes. For example organism may be of the small species with the same genome but some may have their extra genes activated to have different characteristics.

In conclusions Darwin theory of evolution have solid evidence to supports the fact that evolution might have occurred through natural selection. Its advancement over other theories depends on its ability to provide scientific evidence of evolution. Modern technology appreciated Darwin’s theory of natural selection.