**NATURAL SELECTION AND ADAPTATIONS WORK PACKAGE!**

**SPECIES**

**In the space below write the definition of a species:**

**Charles Darwin proposed that new species could occur as a result of natural selection.**

**Define natural selection in the space below:**

**Within each species there must be variation. Variation is……**

**Genetic variations allow natural selection to occur. Genetic variation describes the differences in alleles within a population.**

**For example: different coat colours, eye colours and blood groups.**

**Variation within a species gene pool is bought about by:**



**ADAPTATIONS**

**Animals and plants need to have special features to help them survive and reproduce in their environment. These special features are called ADAPTATIONS.**

**There are 3 main groups of adaptations:**

|  |  |  |
| --- | --- | --- |
| **STRUCTURAL** | **BEHAVIOURAL**  | **PHYSIOLOGICAL** |
| ***Features* of an organism’s construction that helps it to survive.** | ***Actions* of an organism that help it to survive.** | **Ways in which an organism’s *body works* that help it to survive.** |
| **Examples:** | **Examples:** | **Examples:** |

**The environmental facts that acts on the population is called the ‘selective pressure’.**

**Selective pressures select adaptations that help an organism survive in its environment**

**The selective pressure may be biotic (living) such as predation, bacterial infection or competition. Or it may be abiotic (physical) such as temperature, water, fire or soil nutrients.**

**Those species which are not affected by this pressure breed and pass on their favourable genes to the future generations.**

**Using the key words: Selective pressure, adaptations and species describe the *peppered moth* example of natural selection (you may like to draw a diagram to help you):**

**SPECIATION**

**Speciation is the process where one species separates into two or more separate species. Speciation is responsible for the high biodiversity around the earth.**

**In the space below name and describe** **the three steps involved in speciation (use a diagram to assist you):**

**EVOLUTION**

**All of the factors mentioned above contribute to the process of evolution.**

**Evolution is described as the gradual change in a species characteristics over time.**

