**Review Worksheet: Evolution by Natural Selection**

**Name: ……………………………………………………………..**

*Do these questions, using your learning resources. Look at the “marks” to give you an idea of the level of detail required in the response (formative only – does not count towards your grade). At the end, mark your work, correct it, and fill in the reflection section. Questions marked \* require you to use reasoning, inferring and application of knowledge, or perhaps extra research to get the answer. It won’t be right there in the text.*

1: Give a modern-day definition of natural selection

(2 marks)

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2: List the 6 principles of evolution through natural selection.

(6 marks)

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3: Use the example of the Peppered Moth to provide evidence of evolution through natural selection using the table below.

(6 marks)

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| **Principle** | **Evidence** |
| There is variation within populations |  |
| More offspring are produced in the population than survive to maturity. |  |
| Limited resources cause a struggle for existence – there is competition for survival. |  |
| Individuals with characteristics best suited to the environment have more chance of surviving and reproducing – “survival of the fittest” |  |
| Characteristics that assist survival are more likely to be passed down to the next generation |  |
| In the gene pool the proportion of alleles that produced favourable characteristics gradually increases. |  |

4: Genetic drift is non-directional, whereas Natural Selection is directional. Describe what is meant by this.

(8 marks)

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5: Define speciation

(2 marks)

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6: Describe in detail the process involved in speciation.

(10 marks)

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7: Darwin noted that the many different finch species on the Galapagos Islands had beak adaptations to suit local food sources. He hypothesised that the ancestor population of finches were blown over from mainland South America during a storm and settled on the islands.

1. Once on the islands, what was the barrier that isolated the populations of finches and prevented interbreeding?

(2 marks)

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1. How did the selection pressures differ between the islands?

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1. What effect did these different selection pressures have on the finches?

(4 marks)

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8: Describe in detail the process involved in producing synthetic Growth Hormone using recombinant DNA technology.

(15 marks)

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Go back and mark your work using the marking key provided. What score did you get? /57

*I included enough detail in my answers.*



*I was able to find information in the text/powerpoint presentation.*

*I was able to reason and infer where the information wasn’t directly in the text (questions with \*).*

*I marked my work and wrote down any answers where I missed marks.*