**Review Worksheet: Adaptations for Bipedalism**

**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: Define the terms bipedalism and quadrupedalism.

(2 marks)

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2: Discuss the environmental changes that contributed to the evolution of bipedalism.

(6 marks)

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3: Why was bipedalism a selective advantage in open grassland environments?

(3 marks)

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4: What additional factor caused a struggle for existence in the environment, placing selection pressure?

(2 marks)

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5: List anatomical adaptations for erect posture/bipedalism seen in humans and bipedal human ancestors.

(5 marks)

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6: Fill in the tables on the following pages giving detailed explanation for adaptations for bipedalism, advantages of each adaptation and comparison with related quadrupeds.

(32 marks)

|  |  |  |  |
| --- | --- | --- | --- |
| **Structure** | **Adaptations for Bipedalism** | **Advantages of the Adaptation** | **Comparison with Related Quadrupeds** |
| Position of Foramen Magnum and Skull |  |  |  |
| Curvature of Spinal Column |  |  |  |
| Jaw (reduced prognathism) |  |  |  |
| Pelvis |  |  |  |
| Carrying Angle |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Structure** | **Adaptations for Bipedalism** | **Advantages of the Adaptation** | **Comparison with Related Quadrupeds** |
| Knee |  |  |  |
| Foot (and lower leg) |  |  |  |
| Centre of Gravity |  |  |  |
| Stance and Muscle Tone |  |  |  |
| Striding Gait |  |  |  |



13: Describe the Bottleneck Effect on allele frequency and give an example.

(15 marks)

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Go back and mark your work using the marking key provided. What score did you get? /65

*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.*