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***PLEASE can you mark this worksheet as accurately as possible

Question 1 [12]

1. Multi-region hypothesis – *Homo sapiens* spread out from Africa (2 mya); and *Homo sapiens* evolved from regional *Homo erectus*; in many different parts of the world/ Europe/ Asia around the same time. Some independently evolved.
Out-of-Africa hypothesis – *Homo sapiens* evolved in Africa/ Sudan/Ethiopia; and emigrated to different regions; and they replaced *Homo erectus*. *H. erectus* also moved out at different times (6)
2. Man changed from scavenger to a hunter-gatherer; and so followed the herds/ searched for new habitats/ as they searched for food; change in climate in Africa; and with drought man would migrate to temperate regions for more food; local competition. Any 2 short points or one elaborated. (2)
3. Personal view stated (For example, Creationism/Intelligent design/traditional belief/African cultural belief/evolutionists). Explanation –evidence focused on the belief; logical thought, good reasoning. (4)

Question 2 [22]

1. One that shows a combination of features of more highly evolved and less evolved/ earlier species /difficult to classify /cannot be put into one group / between two known forms/species (any 2 =) (2)
2. Paleontologist = Study of ancient life particularly through fossils.
Anthropologist = Study of human society and culture. (2)
3. Bipedalism – Walk on two legs. Upright posture, freed hands for toolmaking/firemaking/allowed manipulation of environment for own use. (3)
4. *A. sediba* was able to walk upright, but could also climb trees to escape predators. (3)
5. Find a lot more evidence, e.g. that it lived at the right time, in the right place, more fossils, when most scientists accept that at this time it fits into the human evolutionary tree and no other possible contenders. (any 2 =) (2)

MEMO

Life Science 12

Week 18+19

6

<i>H. sapiens</i>	<i>A. sediba</i>
Small brow ridges	Big brow ridges – attachment of strong jaw muscles
Large cranium – house big brain	Small cranium
Flatter face – finer features	More protruding face
Smaller jaw	Larger upper jaw
(any 2 + 2 =)	

MEMO

Life Science 12

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- 7a) Extinct with no descendents, end of evolutionary line. (any 2 =) (2)
- b) Between Homo habilis and Homo erectus /between Australopithecus afarensis and Homo habilis. (2)
- c) Fence off area, so no unskilled people damage fossils. Remove to lab with whole section of rock or soil intact around fossils. Use soft paintbrushes to remove soil. Skilled people to chisel rock away from fossils. (and any other reasonable methods) (any 2 =) (2)

Question 3 [10]

1. F
2. G
3. I
4. H
5. L
6. B
7. A
8. E
9. C
10. J (10)

Question 4 [10]

1. chimpanzee (1)

2. narrow thin elongated pelvic girdle – does not support upright weight of body above pelvis/narrow pelvis – weight also supported on forehands/ quadrupedal divergent big toe – indicates tree climbing/arboreal ability/opposable big toe – used for grasping branches/climbing trees Foot bones/ sacrum smaller cannot support body weight (include other suitable answers). (4)

3. hands freed; greater dexterity carry food make and use tools make and control fire therefore greater brain development

Habitat changing to savannah: move across grasslands more efficiently find/see new sources of food therefore greater brain development

Upright posture: could see over grass more easily observe predators/prey more intimidating to predators stay cooler in sun as less of body exposed to direct heat (greater brain development – concept = 1 mark only)

Accept any 5 good facts and different wording meaning same as above (5)

[Total: 54 Marks]