CAMBRIDGE INTERNATIONAL EXAMINATIONS

Joint Examination for the School Certificate
and General Certificate of Education Ordinary Level

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INSTRUCTIONS TO CANDIDATES

This insert contains the passage for comprehension.

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Our Earliest Ancestors

1 For many years scientists have been piecing together the story of our ancestors on their long road to human civilisation. Part of the story begins in East Africa, at a gorge called Olduvai, where scientists stumbled across the fossilised remains of animals. Their bones and tissue had, over thousands of years, turned into stone, and so provided an invaluable link with the past. The large numbers of the remains suggested that other creatures might have deliberately killed these animals. What is more, quantities of strangely-shaped stones were found nearby, which could have been crude tools for cutting and slicing meat. Then came other significant discoveries there – the fossilised remains of skulls, not altogether human, but with features markedly similar to those of humans. Such finds, together with the strangely-shaped stones, were likely evidence of creatures which were developing a primitive intelligence, and not relying just on jaws and teeth to get their food.

2 Even so, discoveries such as these were painfully few and slow in coming. This is not surprising when we consider how rare it is to find a few bones of anything that perished countless years ago. When a creature died on the open plains of Africa, the scent of its decay sooner or later attracted other animals of all kinds. They devoured the soft tissue and crushed the bones in their jaws. Hardly any trace of its existence would be left. A very few carcasses, however, suffered a different fate. They sank into the muddy shores of lakes or rivers, where they lay hidden from other animals. Then the gradual process of fossilisation began. Ever so slowly, bone and tissue turned into stone. Meanwhile, as the centuries passed, wind and rain sent layers of earth drifting over the fossils, burying them deep for ever, it seems.

3 Yet the wind can help uncover these fossils as it scours the land. Eventually, it will flush the last bit of dirt away and the fossils will be exposed once more. A great deal of luck is needed to spot them. If the sun is slanting down at just the right angle, it may reveal a piece of bone gleaming against the dull-coloured soil, and if at that moment a fossil hunter should look down, he may see that fragment gleaming at his feet. Then he is a very lucky person indeed.

4 Fossil finds alone will not tell the whole story, however. Scientists have to take into account what the world was like when our earliest ancestors began to appear. Two million years ago, the gorge at Olduvai would have held a great lake, and around its shores animals would have swarmed in abundance. But their world was slowly changing as the planet underwent major alterations of climate. A drastic cooling of the earth's surface meant that the rich forests of Africa began to die off, and the almost endless canopy of trees broke up into scattered areas, each isolated from the other. So, too, the lush plants and vegetation began to dwindle; the forests no longer provided an ever-ready supply of food for the creatures that roamed them, as bare, open grassland took over the landscape. Now, in their struggle to survive, they had to keep moving to where food could be found. It was about that time, so scientists believe, that our ancestors emerged. They faced the same problems as their fellow creatures; they, too, had to learn how to search out food in the wide plains of Africa and acquire essential skills of survival.

5 But these ancestors of ours did not acquire these skills overnight, nor did they enter these open plains like people rushing to stake a claim in empty territory; they were competing for a place in an environment already significantly populated with other animals, experts by now in exploiting the food resources of the open plains. Our ancestors shared the same habitat with creatures that would snap at their feet, trying to steal their meal as they were eating it, or would pace menacingly around nearby. Then there were the big cats or packs of sly hyenas. It was physically impossible to master them; our ancestors simply had to stay out of their reach.

6 Besides, life on the African plains was very much at the mercy of the different weather seasons. The dry season meant lean times, and many animals had to be content with tough, low-quality vegetation, which was the only food around in any quantity. But our ancestors did not go on depending on this poor quality food. They began looking for new opportunities to get at tastier foods.

7 What they discovered was that the African plains contained plants that hid their juicier parts underground. In the dry season, when other edible plants above ground grew scarce, the roots and bulbs of these special plants provided rich and healthy eating – but all of it below the surface, available only to animals that could claw it out. Scientists have to guess a little at this point. They believe that our early ancestors, lacking the specialised claws and teeth needed to get at these prized foods, learnt instead a more efficient means to extract them – in fact, how to fashion a stick to dig out the succulent roots of plants. No doubt the strangely-shaped stones found at Olduvai are evidence of how far down this road of invention early humans would go. The stones would serve as simple tools to dig out roots more efficiently, as well as cut the flesh from dead animals or hammer the marrow out of their bones.

8 By now our ancestors were clearly acquiring an even more valuable skill, that of knowledge – not just in knowing how to make simple instruments, but in knowing their own habitat in close detail. Take a journey by plane and travel beyond the gorge at Olduvai. You will look down on a dark ribbon of forest threading between a lake and the highlands to the west. Round the fringes of the lake, elephants will be browsing, and in its shallows hippos will be wallowing. Hidden in the trees, lions will be sleeping, while smaller creatures pick out a living in the sunlight or are curled up in their burrows, waiting for dark. It is not so hard to imagine our early ancestors in a world of this sort. They would be small, naked figures darting quickly among the shadows of the trees, drawn to the lakeside because they knew that was where stores of energy-giving food resided – in the trees, in the ground, or in places where no other creatures thought to look. They came to recognise the habits of other creatures, and to turn them to their advantage. Circling vultures promised the remains of some animal killed not far away, a meal for the taking if they got there soon enough. They knew that adult antelopes, while impossible to catch, sometimes left their young in grass and went off to browse. Our hungry ancestors could pluck the infant like ready fruit, if they knew where to look.

9 In time they probably came to rely a great deal on communicating knowledge such as this to one another. This communication undoubtedly gave them the edge over many of their four-footed rivals in prising out the secret scraps of energy-giving food that dotted the landscape. They could make something of a living that way, if they relied on each other and carefully avoided known dangers. Our early ancestors managed to survive, but only barely. A hard road lay ahead on their progress towards dominion over the Earth.

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