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Chapter 10

1. 10.2 The digs at Olduvai have turned up some interesting things, but more importantly the layering has allowed scientists to date these findings. The volcanic rock contained in the layers can be dated which allows scientists to infer the age of the fossils contained.
2. 10.4 Humans and apes are very similar but also have some major differences. For example, humans have an arched foot without a thumb like appendage, humans have a double S shaped backbone while apes have less curvy spine, and humans have much longer, which is the opposite of our ape cousins who have much longer arms than their legs.
3. 10.8 Wear on a gorilla’s canines is very different than the wear on a human’s canines. Gorilla teeth lock into each other when they close their mouths while humans do not. The wear on the gorilla canine is on the side because of the teeth rubbing together when they lock down. Wear on a human canine is on the portion of the tooth where it meets with the opposing side’s teeth. This makes human canines dull over time.

Chapter 11

1. 11.6 Fossils of Homo Erectus have been found all over the old world, this is important because it shows that Homo Erectus moved around a lot and can help us on our goal to trace our common ancestry back to a single species.
2. 11.17 Homo Erectus was the first to migrate from Africa, this graphic shows the migration pattern that Homo Erectus took when leaving Africa.
3. 11.20 shows how the cave that housed the Peking Man’s remains would have formed over time. Without the environment provided by the cave we would not have such well-preserved fossils and artifacts to find; stone tools were also found in the same cave.

Chapter 12

1. 12.4 There are two major hypotheses about modern human origins. “Out of Africa” explains how humans originated in Africa but didn’t stay there. “Multiregional Continuity” says that Homo Erectus evolved into modern Homo sapiens in different locations.
2. 12.9 This diagram shows three different European Early Archaic Homo sapiens, it points out that the cranial capacity for these individuals is larger than others but still has features of earlier hominins.
3. 12.15 Shanidar 1 Neandertal is an example of how the majority of Neantertal skeletons have injuries. This individual has wear on his teeth that that they were being used as tools, his right humerus has atrophied that might have resulted in an injury, and his lower arm was likely amputated. It is interesting that many of these individuals are injured and show signs of living for many years after these injuries. Some of this is evidence to support a social structure that takes care of it’s injured.

Chapter 14

1. 14.2 Mount Kilimanjaro has a major ice sheet on it and it has begun to melt. This is important because it will likely be gone within the next several decades if the earth keep warming like it is.
2. 14.3 This diagram shows the nitrogen dioxide concentration in the atmosphere. It is interesting to see where the “hot points” are. This diagram also explains that fossil fuels are adding to global warming by adding certain gases to the atmosphere. This diagram shows what regions of the world are adding the most amounts of these gasses.
3. 14.9 Hip fractures in Hong Kong’s female population increased rapidly from 1966 to 1988. The diagram states that Hong Kong’s population take in a low amount of calcium and is partly to blame, but also what is to blame is the inactivity brought about by technology. Technology might have a large impact on how humans evolve in the future.