Exercise 1 page 330

* Origin of the species
* Evolution
* Genes
* Monkey and Man
* Survival
* Natural selection
* Adaptation to an environment
* Galapagos Islands
* Surviving of the strongest
* Instability of the Victorian Age

Exercise 2 page 331

The picture is a caricature of Charles Darwin. Darwin as a man with the body of a monkey to express disdain for his theory. The caricature ridicules the scientist using his own theory. Darwin’s theory was in opposition to the previous beliefs.

Exercise 3 page 331

Darwin vs God?

About two hundred years ago, Charles Darwin, the bearded Victorian sage on the ten pound note, was born. Many people believe he was the man who discovered that we come from monkeys. Yet he did no such thing. **(1 – G)** Writers before Darwin had made connections between humans and apes and monkeys because of our obvious physical similarities. Instead, Darwin set out to answer the questions: How are new species formed? Where do they come from? What is their origin? His theory was not about the origin of life itself. Although Darwin believed that this question too would turn out to have a perfectly natural explanation, he thought that it was, then, beyond the power of science to answer. We often hear that when *On the Origin of Species* was published there was much protest and an historic clash of science and religion. **(2 – C)** It is probably more fantasy than fact. The Victorian public that first read or read about *On the Origin of Species* were, for the most part, not biblical literalists. For decades the most enlightened writers in the fields of science and religion had accepted that much of the Old Testament, and Genesis in particular, had to be read in a metaphorical sense. So Victorian readers were confronted with one of the leading men of science of the day publishing a work that claimed that, contrary to long-held belief, new species were not somehow created in each new geological age to fit the new conditions. Instead, they were the lineal descendants of earlier species. **(3🡪F)** These had gradually changed as the environment changed around them. Thus all living and extinct species were related on a single genealogical family tree — the tree of life. Darwin's theories inspired lots of reactions. **(4🡪A)** Among the scientific community they ranged from contemptuous rejection to enthusiastic support. Darwin's wide variety of arguments and evidence persuaded many that he had found the hidden bond that naturalists had been seeking which explained how all the different genera and species were related. Other writers felt that Darwin's views were an attack on the role of a Creator in nature. Instead of tracing a lineage to the son of God, Darwin's theory suggested man had only beastly origins. Others, like the Reverend Charles Kingsley, felt differently. He wrote enthusiastically to Darwin about his theory. To religious thinkers like Kingsley, Darwin had uncovered a new law by which God governed the natural world. **(5 🡪H)** For such thinkers, it was quite reasonable to reconcile Darwin's views with their religious beliefs. As the years passed and reviews and counter-reviews appeared, the fact of Darwinian evolution – the common descent of species – became increasingly recognized. Yet, the other key Darwinian idea – natural selection – was much less welcome. As scientific and non-scientific readers came increasingly to accept the Darwinian concept of common ancestry for species, the view that natural selection was the primary mechanism was often sidelined or rejected. **(6🡪B)** Many suggested instead that the variations that natural selection picked out were themselves divinely guided or caused. The bottom line seemed to be: was there a meaning or intention behind how life changed? According to Darwin there were only natural reasons. The fact that Darwin’s views were largely accepted throughout the international community within ten to fifteen years is remarkable. **(7🡪D)** Scientists found that new avenues were thrown open to their particular fields of research. Countless confirmations and refinements were published. New fossil forms were discovered which filled the gaps between already known groups, just as Darwin had predicted.