DNA Replication

Here are some notes summarising all you need to know about DNA replication. Unfortunately, they are in the wrong order...

... nucleotides in a 5’ → 3’ direction (In the ....

... is needed for building up a complementary strand for this template.

To this primer, DNA polymerase III adds nucleotides in a 5’ → 3’ direction, moving...

... sealed up by DNA ligase which makes a sugar-phosphate bond between adjacent DNA fragments.

The DNA double helix is uncoiled and the two strands are...

... DNA polymerase III can follow along behind it, adding nucleotides in one continuous strand., however...

... a short length of RNA to the template strand of DNA, which acts as a prime.

... away from the replication fork as it does so. In this way...

... replication fork will be opening up in the 3’ → 5’ direction: another method, therefore,...

... short lengths of DNA – called *Okazaki fragments* - are formed between RNA primers.

... separated by the enzyme *Helicase*, producing a *replication fork*.

... reproduce or ‘replicate’ a double helix with anti-parallel strands.)

... the RNA primer and replaces it with DNA. A nick is left where...

...because the template strands are anti-parallel, for the other template strand, the...

At regular intervals along the 3’ → 5’ strand, RNA primase adds ...

Behind the replication fork, the enzyme DNA polymerase III adds...

Next, DNA polymerase I removes...

... two nucleotides are still left unconnected – this nick is...

... opposite direction to the direction of the bases in the template strand, so as to...
As DNA helicase moves along *one* of the anti-parallel template strands in a 5’ → 3’ direction...