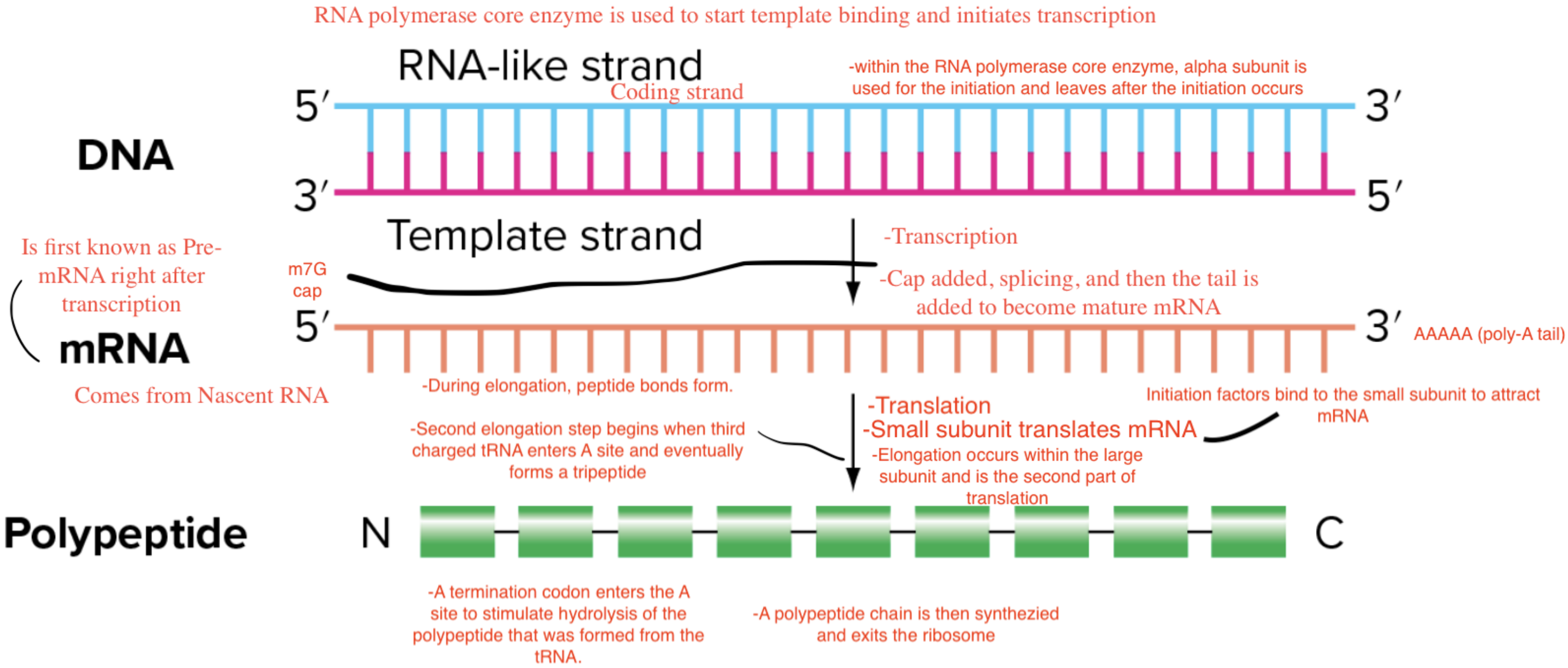
RNA polymerase core enzyme is used to start template binding and initiates transcription
RNA-like strand
Coding strand
-within the RNA polymerase core enzyme, alpha subunit is used for the initiation and leaves after the initiation occurs
5′
3′
DNA
3′
5′
Template strand
-Transcription
-Cap added, splicing, and then the tail is added to become mature mRNA
Is first known as Pre-mRNA right after transcription
m7G cap
5′
3′
AAAAA (poly-A tail)
mRNA
Comes from Nascent RNA
-During elongation, peptide bonds form.
-Translation
-Small subunit translates mRNA
Initiation factors bind to the small subunit to attract mRNA
-Second elongation step begins when third charged tRNA enters A site and eventually forms a tripeptide
-Elongation occurs within the large subunit and is the second part of translation
Polypeptide
N
C
-A termination codon enters the A site to stimulate hydrolysis of the polypeptide that was formed from the tRNA.
-A polypeptide chain is then synthezied and exits the ribosome